A Companion to Albert the Great
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VOLUME 38

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A Companion to Albert the Great

Theology, Philosophy, and the Sciences

Edited by

Irven M. Resnick

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2013
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ACKNOWLEDGEMENTS

I would like to express my special thanks and appreciation to David Twetten (principal editor), Francisco J. Romero Carrasquillo, and Bruno Tremblay for their contributions to the sections on Albert the Great’s Metaphysics. Without their efforts and the authorial contributions of an international team of scholars, the extensive investigation of Albert’s metaphysical doctrines could not have been achieved.
ABBREVIATIONS AND CONVENTIONS

CLASSICAL WORKS: ARISTOTLE

Arist.  Aristotle
An.    De anima
Anal. Post. Analytica posteriora
Anal. Pr. Analytica priora
Cael.   De caelo
Cat.    Categoriae
Col.    De coloribus
Div. Somn. De divinatione per somnum
Eth. Eud. Ethica Eudemia
Eth. Nic. Ethica Nicomachea
Epist.  Epistulae
Gen. An. De generatione animalium
Hist. An. Historia animalium
Inc. An. De incessu animalium
Insomn. De insomniis
Int.    De intrepretatione
Iuv.    De iuventute et senectute
Lin.    De lineis insecabilibus
Long.   De longitudine et brevitate vitae
Mech.   Mechanica
Mem.    De memoria et reminiscencia
Metaph. Metaphysica
Meteor. Meteorologica
Mag. Mor. Magna moralia
Mot. An. De motu animalium
Mu.     De mundo
Oec.    Oeconomica
Part. An. De partibus animalium
Phgn.   Physiognomica
Phys.   Physica
Plant.  De plantis
Poet.   Poetica
## Abbreviations and Conventions

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<th>Abbreviation</th>
<th>Work</th>
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<td>Rhet.</td>
<td>Rhetorica</td>
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<td>Sens.</td>
<td>De sensu et sensibilibus</td>
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<td>Somn. Vig.</td>
<td>De somno et vigilia</td>
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<td>Soph. El.</td>
<td>Sophistici elenchi</td>
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<td>Top.</td>
<td>Topica</td>
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<td>Virt.</td>
<td>De virtutibus et vitis</td>
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<td>Alb.</td>
<td>Albert the Great/Albert the Great</td>
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<td>Averr.</td>
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<td>De causis propr. elem.</td>
<td>De causis proprietatum elementorum</td>
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<td>Super Job</td>
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ABBREVIATIONS AND CONVENTIONS

Super Ioh.  Super Iohannem
Super Isa.  Super Isaïam
Super Luc.  Super Lucam
Super Marc.  Super Marcum
Super Matt.  Super Matthaeum
Super Proph. minor.  Super Prophetas minores
Super Thren.  Super Threnos
Top.  Topica

ABBREVIATIONS TO SERIES TITLES


BGPTM  Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters

CCSL  Corpus Christianorum Series Latina

CCCM  Corpus Christianorum Continuatio Mediaevalis

CSEL  Corpus Scriptorum Ecclesiasticorum Latinorum

PG  Patrologia Cursus Completus. Series Graeca (reference by volume and column number. E.g., PG 99: 424B)

PL  Patrologia Cursus Completus. Series Latina (reference by volume and column number. E.g., PL 144: 321A)

SChr  Sources Chrétienes
# General Abbreviations

<table>
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<td>Treatise; tractate</td>
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ALBERT THE GREAT: BIOGRAPHICAL INTRODUCTION

Irven M. Resnick

To many students of the history of medieval thought, St Thomas Aquinas seems to tower over all other figures. But in reality, among his contemporaries it was Thomas's teacher, Albert the Great (Albertus Magnus), whose reputation overshadowed that of his distinguished younger disciple. It was not merely national pride, then, that led the 19th-century German philosopher G.W.F. Hegel to describe Albert the Great as “the most celebrated German schoolman”.¹ In his own lifetime, Albert's teaching achieved an authority in the schools that equaled that of the ancients. Another of Albert's students, Ulrich of Strasbourg (d. 1277), described him as “so godlike in every branch of knowledge that he can properly be called the wonder and marvel of our age”.² A 15th-century biographer, Rudolph of Nijmegen, remarks that Albert's far-reaching intellect illuminated the entire world.³ The praise and renown Albert enjoyed during his lifetime only increased following his death. An epitaph at his tomb in the Dominican church of Cologne described him as a prince among philosophers, greater than Plato, and hardly inferior to King Solomon in wisdom.⁴ James A. Weisheipl noted that “Not only was Albert the only man of the High Middle Ages to be called ‘the Great,’ but this title was used even before his death. Before the canonization of Thomas [Aquinas] in 1323, the prestige of Albert was higher than that of any other scholastic of the thirteenth century.”⁵

Albert’s prominence stems in part from his contributions to Christian theology, some of which are treated in this volume. But his legacy also depends upon on his contributions as a natural scientist and philosopher,

⁴ “Philosophorum Princeps… Maior Platone/ vix inferius Salomone….” Ibid., 94.
for which Lynn Thorndike justly called Albert “the dominant figure in Latin learning and natural science of the thirteenth century…”.6 Bernhard Geyer, the late director of the Albertus-Magnus-Institut, remarked that Albert was “unique in his time for having made accessible and available the Aristotelian knowledge of nature (already enlarged by the Arabs) and for having enriched it by his own observations in all branches of nature. Preeminent place in the history of science must be accorded to him forever.”7 Furthermore, according to William Wallace, “Albert the Great is justly regarded as one of the outstanding forerunners of modern science in the High Middle Ages.”8 With good reason, then, after Pope Pius XI had elevated Albert to the status of saint and doctor of the church, Pius XII proclaimed Albert to be the patron saint of scientists.9

Perhaps because it is easier to think of the age of the Schoolmen as the “age of faith”, Albert the Great—whose subsequent reputation depended more on his role as a naturalist and philosopher than as a theologian—is often overlooked. One finds an appreciation, however, for the Universal Doctor’s many important contributions to the intellectual history of the West more often in Europe—and especially in German-speaking lands—than in the United States. This can be discerned merely by browsing a recent bibliography of scholarly publications treating Albert.10 One of the goals of the contributions to this volume, therefore, is to introduce students of philosophy, science, and theology—and especially in the United States—to the current state of research on various aspects of the work of Albert the Great. As a sort of prolegomenon, however, we shall first present a brief summary of Albert’s life.

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9 The two papal decrees are In thesauris sapientiae (16 December 1931) in which Alb. is canonized and recognized as a doctor of the church, and Pius XII’s decree Ad Deum (16 December 1941).
Albert's Early Years

A variety of sources provide material for a study of Albert's life and work. In addition to Albert's own personal statements scattered throughout his writings, there are archival materials that include episcopal acts, correspondence relating to his activities on behalf of the Dominican order, municipal documents, and so forth. An early although brief biographical account is found in the *Vita Fratrum Ordinis Praedicatorum* (ca. 1260);11 the primary medieval sources for a complete life of Albert, however, first appear in the late 14th and 15th centuries. These include Henry of Herford’s *Liber de Rebus Memorabilibus* (ca. 1355),12 Luis of Valladolid’s *Tabula Alberti Magni* (1414),13 the *Legenda Coloniensis* (mid-15th century),14 Peter of Prussia’s *Vita B. Alberti Doctoris Magni* (ca. 1485),15 and Rudolph of Nijmegen’s *Legenda Alberti Magni* (ca. 1488).16

These sources reflect a consensus regarding the date of Albert's death on 15 November 1280. The precise date of his birth remains unknown, however, and scholars have proposed a range from 1193 to 1207, although 1200 seems to be most commonly accepted for the year of Albert's birth.17

Just as there is uncertainty surrounding the year of Albert’s birth, so too with regard to the place of his birth and his family name. Albert contributes to this by referring to himself at one time as Albert of Lauingen—Lauingen is a small town in Schwaben situated on the Danube—and at another as Albert of Cologne.18 Contemporary or near contemporary documents complicate matters further by identifying him as Albert the

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14 This text was published by Paul von Loë in “De vita et scriptis B. Alberti Magni,” *Analecta Bollandiana* 20 (1900), 272–284.
15 Edited with *De adhaerendo Deo* in *De adhaerendo Deo libellvs. Accedit eiusdem Alberti vita, Deo adhaerentis exemplar* (Antwerp: 1621), 61–341.
17 In “The Life and Works of St. Albert the Great,” in *Albertus Magnus and the Sciences 1980*, ed. James A. Weisheipl (Toronto: 1980), 13–51, Weisheipl reviews the evidence to establish the date of Albert’s birth and suggests that “the only reasonable birthdate consistent with the rest of Albert’s chronology is ca. 1200” (p. 17).
18 In *Paradiso* X, 98 Dante refers to Alb. as *Alberto di Cologna*, placing him alongside his student, Thomas Aquinas.
German (\textit{Albertus Teutonicus}) or simply as Albert the Great (\textit{Albertus Magnus}).\textsuperscript{19} Although most medieval chroniclers suppose that Lauingen is the place of Albert’s birth, some modern historians maintain that Lauingen is Albert’s family name and not his birthplace,\textsuperscript{20} while others regard Lauingen as the place in which Albert was born.\textsuperscript{21}

The names of Albert’s mother and father are unknown to us. Medieval sources suggest, however, that he was born to a knightly family, perhaps associated with the castle of Bollstadt.\textsuperscript{22} Most historians accept that Albert was sent to Padua as a young man where, under the care of an uncle,\textsuperscript{23} he studied the arts in the precursor to the University of Padua. During the summer of 1223, Jordan of Saxony, master general of the Order of Preachers after the death of St Dominic (d. 1221), visited Padua in order to recruit students for this new mendicant movement. After a time, Jordan remarks, ten did seek admission to the order,\textsuperscript{24} including two that were sons of German lords. Some medieval sources identify Albert as one of these Paduan students, leading the normally cautious Weisheipl to remark that “it is certain that Albert joined the Dominican order when he was a student in Padua, receiving the habit from Jordan of Saxony around Easter of 1223 . . .”.\textsuperscript{25} Yet other medieval sources suggest that Albert first entered the order not in Padua but in Cologne, creating a “double tradition . . . [that] is something of an embarrassment to Albert’s biographers”.\textsuperscript{26}

Seemingly contradictory traditions among medieval sources, then, make it difficult to establish with certainty either when or where Albert entered the Dominican order. One can determine from his own works

\textsuperscript{19} Or sometimes as simply the \textit{Doctor Universalis} or \textit{Doctor Expertus}. For these different titles, see especially Adolf Layer, “Namen und Ehrennamen Alberts des Grossen,” \textit{Jahrbuch des historischen Vereins Dillingen an der Donau} 81 (1979), 41–43.
\textsuperscript{20} See John B. Freed, \textit{The Friars and German Society in the 13th Century}, (Mediaeval Academy of America) 86 (Cambridge, Mass.: 1979), 63.
\textsuperscript{22} For example, Rudolph of Nijmegen (\textit{Legenda Beati Alberti Magni}, 8) remarks that Albert was “ex piis parentibus de militari familia de Bolsteter dicta . . .”.
\textsuperscript{23} See Adolf Layer, “Namen und Ehrennamen Alberts des Grossen,” 42, who surmises that this uncle was a merchant or in service in the Italian town.
\textsuperscript{25} Weisheipl, “The Life and Works of St. Albert the Great,” 19.
\textsuperscript{26} Simon Tugwell, \textit{Albert and Thomas: Selected Writings} (New York: 1988), 4.
that he spent time in Italy;\textsuperscript{27} that he was in Lombardy in 1222;\textsuperscript{28} and that he was acquainted with Padua. But it is not possible to establish beyond any doubt that Albert entered the Order of Preachers in 1223 in Padua. Having reviewed this complicated situation, Simon Tugwell concludes that it is quite probable that Albert did meet Jordan of Saxony in Padua and was then sent almost immediately to Cologne, where he was received by the prior Leo. But Tugwell rejects the 1223 date for Albert’s entry to the order and revives instead an older claim that Albert first heard Jordan preaching in 1229, while Albert was studying in Padua, and suggests as a result that Albert arrived at Cologne later in 1229 or early 1230.\textsuperscript{29} According to this chronology, Albert would likely have been 30, or perhaps even older, at his entry to the Order of Preachers.\textsuperscript{30}

Once Albert arrived in Cologne, located on the west bank of the Rhine River, he would have discovered one of the largest German cities, probably with about 40,000 inhabitants. It is likely that Albert was sent here to study theology, becoming a lector (whose role was to give theological lectures to the members of the community on a book of the Bible). As the precise date of his entry to the order remains controversial, however, the exact chronology of his period of study in Cologne and his career immediately following also remains difficult. According to Henry of Herford, Albert appeared as lector in Hildesheim, and then went to teach at Freiburg, Regensburg, Strasbourg, and finally to Paris.\textsuperscript{31} The date of Albert’s arrival in Paris is also uncertain, with Weisheipl accepting either 1243 or 1244,\textsuperscript{32} while Tugwell suggests that Albert arrived in Paris as early as 1240.

\textsuperscript{27} Alb., Mineral. 2.3.1, Borgn. 5, 48.
\textsuperscript{28} Albert describes an earthquake that devastated the region in the winter of 1222. See Meteora 3.2.12, Borgn. 4, 629.
\textsuperscript{29} Simon Tugwell, Albert and Thomas: Selected Writings, 7.
\textsuperscript{30} And not 16, as Henry of Herford, Peter of Prussia, and others insist. For the relevant passages see Paul von Loë, “De vita et scriptis B. Alberti Magni,” Analecta Bollandiana 20 (1901), 276–277.
\textsuperscript{31} “In Hildenshem primo fuit lector, post in Vriburgo, post in Ratisbona duobus annis, et post in Argentina; et exinde Parisius ivit….” Henry of Herford, Liber de Rebuis Memorabiliornibus, cap. 94, 201.
\textsuperscript{32} One notes that Weisheipl also seems uncomfortable with 1243/44 for Albert’s arrival in Paris. In an earlier work—“Albert the Great,” in The New Catholic Encyclopedia, vol. 1 (Washington, D.C.: 1967), 254–258, citing 254—he suggests 1241 as the year in which Albert was sent to Paris to prepare to become a master in theology.
Albert in Paris

That Albert was sent to Paris by the Dominican order sometime around 1240, where he would lecture on the Sentences and later receive his license as a master in theology, can only be interpreted as an indication of the esteem in which he was held. In Paris, opportunities for study were restricted only to those who held the greatest promise. If it was difficult to enter as a student, one must suppose that it was even more difficult to be installed as a master in theology there. At the time of Albert’s arrival in Paris the Dominicans possessed only two chairs in theology, occupied by Godfrey of Bléneau and Guerric of Saint-Quentin.

In Paris, Albert lectured on the Bible, prepared his commentary on the Sentences, and found a community of students and teachers that included Ambrose of Siena, Dionysius of Viterbo, and Odericus Francigenus. In the fertile intellectual environment in Paris, Albert would have encountered a new corpus of philosophical literature that was to be decisive in his own development: namely, translations of Aristotle accompanied by commentaries of Jewish and Muslim scholars. Albert would also have found in Paris a revived Platonism (or Neoplatonism) in the pseudo-Aristotelian Liber de causis as well as in a renewed interest in the works incorrectly attributed to Dionysius the Areopagite. Perhaps because he understood well that “You cannot be a complete philosopher without knowing both philosophies, Aristotle’s and Plato’s,” Albert commented upon the writings of Pseudo-Dionysius, and Albert’s commentary on the Pseudo-Dionysian Divine Names stands as perhaps the most important Neoplatonic work of the Scholastic era. Albert is the only Scholastic to have commented upon both the works of Pseudo-Dionysius and all the works of Aristotle.

Albert’s lectures on the Dionysian corpus began after he incepted as master in Paris, probably filling the chair left vacant by Guerric of Saint-Quentin (d. ca. 1244 or 1245). Albert was the first German Dominican to

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33 On the history of this foundation in Paris, the opening of other studia generalia, and the requirements and course of study necessary to incept as master of theology, see William A. Hinnebusch, The History of the Dominican Order, 2 vols (New York: 1966–73), vol. 2: 37–82.

34 Metaph. 1.5.15, quoted in Tugwell, Albert and Thomas: Selected Writings, 31.

hold this chair, and he remained in Paris as regent master until 1248.\textsuperscript{36} He studied and taught in Paris alongside a truly remarkable group of scholars including Roger Bacon, Robert Kilwardby, William of Auvergne, Jean de la Roche, Odo Rigaud, and John of Fidanza (St Bonaventure), whose presence indicate the quality of intellectual life at a university whose students and faculty numbered no more than 200 or 250.\textsuperscript{37}

Among Albert’s students was also the 20-year-old Thomas d’Aquino (Thomas Aquinas), who arrived in Paris toward the end of 1245. It is certain that Thomas heard Albert’s lectures on the works of Pseudo-Dionysius, which Thomas then copied down.\textsuperscript{38} The manuscript survives in Naples, Bibl. Naz. I B 54. Albert’s assessment of Thomas’s intellectual potential has become famous, asserting that although the taciturn Thomas may be known as the “dumb ox”, one day his bellow will resound throughout the whole world.\textsuperscript{39} Although Thomas was canonized in the early 14th century, almost seven centuries passed before Albert’s canonization in 1931, perhaps because Albert’s name had been associated with false accusations of sorcery, necromancy, and magic, rooted in suspect or spurious works attributed to him in the later Middle Ages. That Peter of Prussia, Albert’s 15th-century biographer, devotes a great deal of energy to defend him against these charges indicates their gravity.\textsuperscript{40}

\section*{Departure for Cologne}

After spending three years as regent master in the chair for externs in Paris, Albert was sent to Cologne in order to open a \textit{studium generale}, an

\textsuperscript{36} The date of Albert’s inception is impossible to determine precisely. Henry of Herford indicates that he left Paris for Cologne after serving for three years as master. If he left in 1248, then one may assume that he incepted in 1245.

\textsuperscript{37} For this estimate, see James A. Weisheipl, “The Structure of the Arts Faculty in the Medieval University,” \textit{British Journal of Educational Studies} 19 (1971), 263–271, citing 266.

\textsuperscript{38} Weisheipl, in “The Life and Works of St. Albert the Great,” 29, notes that “Albert wrote or lectured on \textit{De caelesti hierarchia} while he was still in Paris before the summer of 1248, lectured on \textit{De divinis nominibus} in 1249–50 (which we have in Thomas’s own hand) . . . [and] finished his exposition of the Dionysian corpus by the time Thomas left [Cologne] for Paris in the fall of 1252.”

\textsuperscript{39} “Nos vocamus istum bovem mutum, sed ipse adhuc talem dabit in doctrina mugi- tum, quod in toto mundo sonabit.” This is reported in numerous medieval hagiographical sources, including the work of Thomas’s first biographer, William of Tocco, prior of Benevento in the early 14th century. For citations, see Paul von Loë, “De vita et scriptis B. Alberti Magni,” \textit{Analecta Bollandiana} 20 (1901), 280.

institute of higher learning, for Dominicans. Other *studia generalia* were opened in Oxford, Bologna, and Montpellier. Thomas Aquinas accompanied Albert to Cologne, where Ulrich of Strasbourg and Giles of Lessines became Albert’s pupils.

From this point on, Albert appears more and more often in public settings, making it possible to document his movements. In 1252 he and Hugh of Saint-Cher resolved a dispute between the archbishop of Cologne (Conrad of Hochstaden) and the burghers of that city. In 1254 Albert was elected prior provincial of the German Dominicans and given responsibility for a religious order that was scattered over Switzerland, Austria, Belgium, the Netherlands, Germany, parts of France, and even north to Riga. In addition, Albert presided over provincial chapters in Regensburg and Erfurt (1255 and 1256 respectively) and attended the general chapter in Milan in 1255 and in Paris in 1256.

After having served as prior provincial from 1254 to 1257, Albert returned to his teaching responsibilities at the *studium generale* in Cologne. His teaching career was again interrupted, however, in January 1260 when Pope Alexander IV appointed Albert to the vacant bishopric of Regensburg. The see of Regensburg was no sinecure for Albert. The diocese was virtually bankrupt and beset by a series of scandals. Albert addressed both, sought to improve the moral condition of its clergy, and left the diocese in better financial condition than he found it. Yet in 1261 he set off for Rome where Urban IV, the successor to Pope Alexander IV (d. 1261), allowed Albert to resign his bishopric in 1262. The following year, however, the pope ordered Albert to preach the crusade in all lands in which the German language was spoken in order to generate support for a plan to liberate the holy places in the East. In addition, Albert became a sort of papal troubleshooter in Germany, and served as vicar general for the archdiocese of Cologne. Despite his now advanced age, Albert traveled extensively in order to satisfy both the letter and the spirit of his papal commission.

When Urban IV died in 1264, Albert’s work as preacher of the crusade came to an end. From 1264 until 1267 Albert was likely in residence among the Dominicans in Würzburg. In 1267 Albert traveled to a monastery of Cistercian nuns at Burtscheid; in 1268 he consecrated a Dominican church in

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Esslingen, and then appeared in Strasbourg (at the request of Clement IV) in order to resolve a dispute between the bishop and the townspeople. From 1269 or 1270 Albert resided once more in Cologne at the Dominican cloister of the Holy Cross (Heiliges Kreuz) as lector emeritus, where he would remain until his death in 1280.

Albert’s body was interred at the Dominican convent of Cologne and remained undisturbed until 1482, when Pope Sixtus IV ordered his tomb opened. Albert’s right arm was sent to the pope, while other relics remained in Cologne, enclosed in a glass case, to be viewed by the people. In 1804 his tomb was opened once again, and Albert’s body was transferred to the parish church of St Andrew in advance of the Napoleonic invasion. When this church was damaged by bombs during World War II, Albert’s remains were removed to a plain white chapel built in a crypt under the choir and placed in a 3rd-century Roman sarcophagus under the altar.

**Literary Production of Albertus Magnus**

Albert’s literary output is quite simply enormous. Meersseman identifies over 470 distinct titles (many of them sermons or homilies) attributed to Albert, including some 70 philosophical, scientific, and theological treatises comprising more than 20,000 pages in manuscript. Although Meersseman’s calculation includes treatises that were subsequently found to be inauthentic, Fernand van Steenberghen does not exaggerate when he remarks that Albert was the most prolific author of the whole of the Middle Ages. Two incomplete printed editions of Albert’s *opera omnia* have been published. The first was edited by Peter Jammy, OP (1651) and the second by Abbé Auguste Borgnet (1890–99). A critical edition projected for 40 volumes, the Cologne edition, is now in progress under the direction of the Albertus-Magnus-Institut in Bonn.

At the center of Albert’s work must be his series of commentaries on Aristotle. Beginning about 1250, Albert proceeded deliberately and...
systematically to paraphrase and comment upon the *whole* of Aristotle’s corpus, creating a complete “teachers’ manual” to the philosophy of Aristotle and the Peripatetics for a Latin audience. In reality, Albert included in this project a number of texts falsely ascribed to Aristotle, such as the *Liber de causis proprietatum elementorum*, and *De plantis*. Nonetheless, his achievement is stunning, and the fact that he accepted some treatises as genuine works by Aristotle that were subsequently discovered to have been written by others does not detract from its significance.

As Aristotle’s writings fall into different categories, however—logic, natural philosophy, moral philosophy, and speculative philosophy or metaphysics—so too will Albert’s. Albert is one of a very few Scholastics, however, to comment not only on Aristotle’s logic and metaphysics, but even on Aristotle’s biological works that circulated under the title *De animalibus*, as well as the (pseudo-Aristotelian) *De plantis*.47

While his commentaries upon Aristotle alone would entitle Albert to a position of the first rank among Scholastics, Albert did not confine his efforts to interpreting the works of the “Master of those who know”. He also commented, as already noted, on the writings of Pseudo-Dionysius the Areopagite. In addition, he devoted himself to writing sermons, theological treatises, liturgical works, and scriptural exegeses and commentaries, including commentaries upon each of the four Gospels, as well as upon many of the prophetic books of the Hebrew Bible. Here too Albert was moved by the pleas of his brethren; he wrote his *Summa theologiae*, he says, in response to their needs.49

While Albert may have been in his own mind a theologian more than a philosopher, his literary corpus is far more heavily weighted toward

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46 For this text in translation with discussion, see Albert the Great’s *On the Causes of the Properties of the Elements* (*Liber de causis proprietatum elementorum*), trans. and annotated by Irven M. Resnick, (Mediaeval Philosophical Texts in Translation) 46 (Milwaukee, Wis.: 2010).

47 Albert, like his contemporaries, believed *De plantis* to be an authentic work by Aristotle, and commented upon it in his own *De vegetabilibus et plantis*. In the 17th century, however, Haggi Halifa showed that *De plantis* is a work of Nicholas of Damascus. Albert’s error in attributing the work to Aristotle does not detract from the importance of his commentary. For a discussion of this text, see esp. the contribution below by Gilla Wöllmer, “Albert the Great and His Botany”.

48 See esp. Henryk Anzulewicz’s discussion, below, and Markus Führer’s discussion in his contribution on “Albert the Great and Mystical Epistemology.”

49 *Summa de mir. scient. dei* 1.1.prol., Ed. Colon. 34/1, 1.

philosophical and scientific interests, and his fame and reputation both during his own lifetime and after his death reflect this. Weisheipl correctly notes that “Albert was best known to his countrymen as a philosopher, rather than a theologian… In fact, he was far more famous than Thomas [Aquinas] ever was during his short lifetime.”51 The contributions in this volume provide insight into the reasons for his fame, and should provide a strong foundation for further study.

PART ONE

THEOLOGY
THE SYSTEMATIC THEOLOGY OF ALBERT THE GREAT

Henryk Anzulewicz

INTRODUCTION

The theological oeuvre of Albert Great is not only extensive, but also exceedingly complex in structure and content. Although scholars have generally devoted less attention to it than to the philosophical writings of the Doctor universalis, his concept of theology, his understanding of the science of theology, and his perception of the relationship between theology and philosophy have been the focus not only of past studies, but—with increasing frequency—of present ones as well.1 This chapter will concentrate on some formal aspects of his view of theology receiving less attention than his more general concept of theology as a science, including brief discussions of the scope, differentiation, and unity of the

subject matter constituting theology, as well as the formal structure of his theological works and the criteria for their categorization. We will then direct our attention to the form and content of that portion of Albert’s theological works that theological-historical scholarship subsumes under the general term theology, or attempts to specify with the aid of modern terms, such as “speculative”, “Scholastic”, or “systematic” theology. From the perspective of these later specifications, we must first of all examine the scope of Albert’s understanding of theology, a question that, in the Middle Ages, would have arisen in the discussion of the term’s definition and differentiation. Recent and older studies on Albert the Great’s concept of theology seldom differentiate two main areas—biblical and systematic theology—or discuss them only marginally in a way that does not always fully coincide with our own findings. The opinion that the medieval concept of theology “encompassed not only the doctrine of God, but the entire field of material dogmatics”, may be essentially correct—excepting the exclusion of biblical exegesis—but it is voiced from the perspective of the distinctions and rubrics employed by modern theology faculties. Scholars have yet to focus their attention on this topic to

2 The term “speculative theology” seems inappropriate for this purpose, since it denotes the theoretical nature of this science, a view not shared by all medieval authors. The term “Scholastic theology” is too general to convey precise details of the features and areas of the subject; although the term “systematic theology” is anachronistic, it corresponds best to the subject matter to which it refers and is today considered the appropriate terminus technicus.


clarify the full range of the concept of theology in the 13th century. We will therefore begin by briefly outlining the scope of Albert’s concept of theology as a science, and then, picking up on the discussions of High Scholasticism, attempt to elucidate it in the light of his own statements on the subject. The main objective of this study is, however, as mentioned above, to describe that portion of Albert’s theology that we have referred to here—utilizing modern terminology—as his “systematic” theology.

I

A. Older scholarship already portrayed medieval theology as having developed, in the course of the second half of the 12th century, a systematic reflection upon the principles of the Christian faith according to the scientific principles of Aristotle, and that it reassured itself of its scientific nature by means of its own scientific doctrine. Most recent studies emphasize that the heightened perception of Christian doctrine as a science occurred in the wake of the reception of Aristotle’s scientific ideals and the evolution of a notion of theology in a “unitary sense of ‘theology’ as a ‘theological’ science distinct from other sciences”. What seems to be of primary importance in this context is the fact that in the 12th and in the early 13th century, the term theologia was not univocal in its usage nor entirely parallel to the older terms sacra pagina or divina pagina. Furthermore, these latter terms were at the same time synonymously in use for “Holy Scripture” and “theology”. The evolution of a distinct concept of theology and the consideration of its subject matter, methods, and goals necessarily led to the differentiation of its areas of study: of Holy Scripture and exegesis on the one hand, and, on the other, a systematic presentation of the doctrines of faith built upon this foundation, organized according

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8 For this and the following, see Geyer, “Facultas theologica,” 142; see also, Richard Heinzmann, “Die Entwicklung der Theologie zur Wissenschaft,” in Aufbruch—Wandel—Erneuerung, ed. Georg Wieland (Stuttgart: 1995), 124.
to objective criteria. This differentiation of a discipline hitherto dominated and united by Holy Scripture had already been heralded by Alain of Lille and Richard of St Victor, when they employed the term *sacra pagina* to mean *sacra scriptura*, not *theologia*. Not until the formation of theology’s own “self-awareness”⁹ as a science, however, did it become apparent that its subject matter, which, until the 13th century, was nominally and factually considered to be synonymous with *sacra scriptura*, was, in effect, divided into two disciplines.¹⁰ Before discussing this problem in greater detail, I would like to underscore that to define the subject matter of theology signified its internal delimitation and external demarcation from philosophy and the other sciences. Albert the Great was the first to recognize this necessity, as well as its consequences: the self-limitation of theology, a scientifically valid demarcation of philosophy, as well as a redefinition of the relationship between theology and philosophy. Albert recognized and devoted himself to this cause;¹¹ his writings addressing the issue represent a monumental achievement in the history of science. From the modern perspective, it is his “holistic” conception of theology as an affective science that may be regarded as epoch-making. Not only does his concept take, like no other, the Aristotelian standards for science into consideration, but by encompassing the will, also makes allowance for man’s psychological structure, his capabilities, perceptions, and actions. According to Albert, the will is the cause of actual knowledge in that it transfers habitual knowledge accumulated on the subjective side to actual knowledge.¹² In theology, the “affective intellect” (*intellectus affectivus*) formed by the will is the active cause integrating the theoretical and practical aspects of this science into one whole, with the goal of

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¹² Alb., *De homine*, Ed. Colon. 27/2, 442, Ins. 23–25: “Si autem quaeritur, quid sit reducens possibilem (intellectum) de habitu in actum, dicendum quod nihil nisi voluntas.” Ibid., 492 Ins. 57–59: “nulla causa est, cum intelligibile est in anima, quare quandoque actu intelligit et quandoque non, nisi voluntas.” Regarding the fundamental nature of a free human action and the role of the free will, see Alb., *De homine*, Ed. Colon. 27/2, 53, Ins. 45–54: “quattuor succedunt sibi in opere rationalis animae. Quorum primum est actus rationis, qui considerando proponit animae appetibilita et decernit, quid appetibile sit. Secundum est voluntas consentiens in unum appetibilium. Tertium est id quod eligit amatum a voluntate, et hoc vocamus liberum arbitrium. Et quartum est perfecta voluntas quae movet ad consecutionem appetibilis decreti per rationem et optati per voluntatem et electi per liberum arbitrium.”
directing man towards “delighting in God”. As will be demonstrated in
the following, Albert is just as committed to this holistic approach in his
scientific-theoretical reflections on the subject of theology and the differ-
entiation between the two main areas of one science: “biblical” and “sys-
tematic” theology. Let us now examine how Albert goes about defining
theology’s subject matter in this context, its range and its goals, and how
he elucidates these according to theology’s own principles and scientific
doctrines. Of which formal principle does he avail himself to differentiate
the areas of this science without sacrificing its integrity?

Albert’s first general discussion of theology’s subject matter, and other
relevant fundamental scientific-theoretical questions posing themselves
in this context, appears in his commentary to Book 1 of Peter Lombard’s
Sententiae. Almost 30 years later, Albert reverts to them once again in part
one of his Summa theologiae sive de mirabili scientia Dei. The topics are
also examined in the introductory remarks to his commentary on the writ-
ings of Pseudo-Dionysius the Areopagite, which immediately followed the
commentary on Lombard’s Sententiae. In the former works, Albert’s main
concern was to develop a scientific doctrine of theology that not only did
justice to the individual works of Pseudo-Dionysius, but was naturally in
accord with both theology as such and scientific-theological doctrine in
general. Since his arguments in the Sentences commentary parallel those
in the Summa theologiae sive de mirabili scientia Dei, 1, we shall consult
both of these related texts. In the second portion of this chapter, we shall
then take a brief glance at the scientific doctrine contained in the com-
mentary of the corpus Dionysiacum.

Peter Lombard’s four books of Sentences had become, since the Fourth
Lateran Council (1215) at the latest, the textbook and basis and model for
all systematic compendiums of Christian theology founded on the Bible
and the church fathers. In the prologue of his commentary, Albert opens
his explication of the subject matter (materia) of Lombard’s Sentences
by echoing a citation from Eccles. 24:5–6. He describes the contents

Ethikkonzeption des Albertus Magnus im Lichte einer neuen Forschungsarbeit: Zur Studie
14 Alb., Super I Sent. praef., Borgn. 25, 1: “Ego ex ore altissimi prodii primogenita ante
omnem creaturam, ego feci in caelis ut oriretur lumen indeficiens, et sicut nebula texi
omnem carnem.” (The text of Borgnet’s non-critical edition has been amended here
according to the manuscripts Sigienza, Bibl. del Cabildo 6 [210] and Troyes, Bibl. Munici-
as follows: Book 1 is on how the divine persons differ and relate to one another; Book 2 is on the creatures according to their origin from God and their individual nature; Book 3 is on the mystery of the Incarnation and the Passion; and Book 4 is on sacramental grace, the sacraments, as well as the glory of the Resurrection. This systematic breakdown of the topics of the four books of Peter Lombard’s *Sententiae* still provides no response to the question of a more general definition of theology. It does, however, establish from the start the scope of the term theology in the *argumentatio* mode, the method of scientific debate, and specifies its four topics, designated by the systematic arrangement of the contents of Peter Lombard’s four books of *Sententiae*. In the introductory commentary to Book 1, while discussing theological method, Albert makes it perfectly clear that he is speaking of the earlier domain of one theological science, which eventually was to divide into two branches because of differing objectives and methods. Only since the 17th century has this branch been referred to as “systematic” or “dogmatic” theology. Albert also underscores the holistic nature of his concept of theology and the unity of this science in the prologue of the *Summa theologiae sive de mirabili scientia Dei*, 1, by equating theology, which “is entirely about God”, with *scientia sacrarum litterarum*. Here Albert stresses the excellence of this science and how it is superior to all other sciences with regard to authority, its certitude stemming from faith, its clarity, and veracity.

Albert precedes the question he poses regarding theology’s subject matter at the beginning of the *Sentences* commentary with an even more fundamental scientific-theoretical consideration, inspired by Aristotle (*Analytica Posteriora* 1.1, 71a11–13) and Avicenna (*Philosophia prima* 1.1). The purpose is to determine whether theology assumes or proves its subject. Albert appears to be the first commentator of the *Sententiae*...
to pose this question.¹⁹ In his reply, Albert distinguishes, in accord with Aristotle (Analytica Posteriora, as quoted above, and Ethica Nicomachea 6.3, 1139b25–26), between science itself (proprie scientia) and science as doctrine (prout est doctrina). For the former, the existence of its subject matter, of which it is the science, is essential: it does not seek it, but presumes it. Science as doctrine, on the other hand, must orient its method according to the principles of ordinary learning, which is why some sciences seek to determine their subject matter, especially when it is not evident. Such is the case for the higher sciences, of which theology is the most exalted.²⁰ In conclusion, Albert applies both portions of his reply—a discerning view of science as scientia and doctrina—to theology. This is, on the one hand, a science in the proper sense that presumes its subject matter. On the other hand, it is doctrine that, like other sciences, seeks its subject matter to facilitate learning. With this dual differentiation of theology under the aspect of whether it presumes its subject matter and gives deductive testimony of it as a science in the strict sense, or whether it determines its subject matter inductively like science in the sense of doctrine, Albert demonstrates that theology conforms in two ways to the Aristotelian principles of science.

Albert establishes the subject matter of theology in his Sentences commentary within his discussion of the positions of Augustine and Peter Lombard, who stated theology’s subject matter as being realities and signs (res et signa). This Albert contrasts first with the opinion of Hugh of St Victor, then with a determination of the science’s subject matter derived from an etymological definition of theology, with a statement from Aristotle on how the dignity of a science is rooted in the dignity of its subject matter (An. 1.1, 402a1–2), and with a designation of the subject matter as the letter and spirit that no authority has proven—an obvious allusion to Holy Scripture—which is most likely Albert’s original idea. He continues by examining the unity of theological science, its theoretical and practical nature, and its methodology.²¹ Parallel, as it were, to his definition of theology as a science in the strict and in the broader sense, as a doctrine to be learned and taught, he differentiates between a narrowly defined specific subject and a broadly conceived range of theological subject matter. The latter he defines, in analogy to Holy Scripture and in concurrence

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¹⁹ See Köpf, Die Anfänge, 81.
²⁰ Alb., Super I Sent., 1.1, 15a–b.
²¹ Ibid., 1.2, 15b.
with Augustine and Peter Lombard, as the entire real and symbolic reality which theology considers from the perspective of its goal. This perspective is directed towards heavenly bliss (beatitudo). Theology’s specific subject, however—God as “Alpha and Omega, Beginning and End” of all things—is the most sublime subject this science explores, from whom it derives its name and whose properties it proves according to its own principles.22

Albert discusses theological subject matter in a similar fashion, although more extensively and thus more elaborately, but with essentially the same result in his Summa theologiae sive de mirabili scientia Dei, 1. He establishes it from three perspectives: (1) inasmuch as the prime concern in this science is to strive for knowledge of Him and everything else is treated with regard to this; (2) inasmuch as theology demonstrates His attributes and thereby gives Him determination; and (3) inasmuch as theology considers Him for the sake of the clarity and the quality of its doctrine concerning the aforementioned primary subject or other theological subject areas. The primary subject is God, while the other two subject areas are Christ, including the sacraments and the church on the one hand, and the “realities and signs”—subjects of Holy Scripture—on the other hand.23 The parallels to the holistic concept of theology presented in the Sentences commentary are even more evident in the prologue to Summa theologiae sive de mirabili scientia Dei, 1. From the perspective of theology’s formal object, simultaneously a reference to its origin and starting point, Albert defines and unifies the primary subject, the science’s de quo principle, also called materia circa quam qua, and theology’s entire range of subject matter, including its transcendental goal, which is identical to its de quo principle.24 This holistic perspective, simultaneously illuminating the entire scope of its subject matter, is also evident in the definition of theology presented in the Summa theologiae sive de mirabili scientia Dei, 1. Albert emphasizes in succinct terminology that theology, which is nominally scientific knowledge or speaking about God, not only speaks of the existence and nature of God, but speaks of Him insofar as He is the origin and end of all things, since He would not be fully recognized otherwise. He is the origin and end because all things originate from Him.

22 Ibid., 16a–b.

23 See Alb., Summa de mir. scient. Dei, 1, 1.3.1, 10, ln. 66–p. 11, ln. 11.

24 Ibid., prolog., 2 lns. 61–65: “Est etiam ‘scientia tua’ ut subiecti de quo, quia de ipso est. Et si obicitur, quod materia cum efficiente et forma non concidit in idem, ut dicit Aristoteles in II Physicorum, dicimus, quod hoc intelligitur de materia ex qua et non de materia circa quam.” Ibid., lns. 68–69: “Dicitur etiam ‘scientia tua’, quia ad deum est sicut ad finem.”
and return to Him. Since all of this is relevant to man’s salvation, it is a subject of the affective science, theology.\textsuperscript{25}

Although the broadly conceived range of subject matter and theology’s specific subject are generically different, this does not impair the unity of this science, according to Albert in his \textit{Sentences} commentary. In contrast to Aristotle, for whom the unity of a science is dependent on the generic unity of its subject,\textsuperscript{26} Albert establishes the unity of theology not in the \textit{one} subject to which it testifies, nor by the genus of the subject matter of this science, but by its orientation toward \textit{one} blissful end (\textit{finis beatificans}).\textsuperscript{27} This orientation not only unifies theology, but the extensive scope of its subject matter as well, which includes, in addition to existing reality (\textit{res creatae}), individual human acts—actually separate objects in terms of content and subject—insofar as they are relevant to man’s participation in eternal bliss.\textsuperscript{28} Thus Albert succeeds in making objective, precise distinctions regarding theology’s subject matter on the one hand, while treating it formally as one and safeguarding its unity on the other. The specific subject of theology—God—and its broadly conceived range of subject matter—encompassing all of reality, inferred in symbols, things and human acts, insofar as it is perceived, in its references to God as its origin and goal as well as from the internal perspective, as being conducive towards man’s participation in eternal bliss—are analogically united through their relation to the \textit{one} goal and establish the unity of the science. In \textit{Summa theologiae sive de mirabili scientia Dei}, 1, Albert further elaborates that the analogical unity of a subject matter ensures the unity of a “general” science, while the generic uniformity of a subject Aristotle requires for a science ensures the unity of a “specific” science.\textsuperscript{29} Thus, the

\begin{footnotesize}
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\item \textsuperscript{25} Ibid., 1.2, 9 ins. 10–18: “dicendum, quod theologia nomine ipso non dicit nisi rationem vel sermonem de deo, sermo autem de deo debet esse declarativus dei, non secundum esse et substantiam tantum, sed secundum quod est principium et finis eorum quae sunt, quia aliter imperfecte cognoscitur. Non autem est principium et finis nisi per ea quae ad exitum rerum ab ipso et ad reductionem rerum ad ipsum pertinent. Et haec sunt quae pertinent ad salutem hominis.” Ibid., 8, ins. 52–54, 72–p. 9 ln. 5.
\item \textsuperscript{26} Arist., \textit{Anal. Post.} 1.28 (873a38).
\item \textsuperscript{27} Alb., \textit{Super I Sent.}, 1.3, 17b: “haec scientia una est proportione non ad unum quod subiectum sit aliorum, sicut substantia subiectum est accidentium, sed proportione ad unum quod est finis beatificans.”
\item \textsuperscript{28} Ibid., 17b: “licet tractata in hac scientia non sint unum supposito et subiecto, sunt tamen unum in ratione proportionis dictae.”
\item \textsuperscript{29} Alb., \textit{Summa de mir. scient. Dei}, 1, 1.3.2, 13, ins. 9–15: “cum dicit Philosophus, quod ‘una scientia est, quae est unius generis’ subjecti, intelligitur unum genus in communi ad unitatem generis et unitatem proportionis sive analogiae. Unitas enim generis facit unitatem scientiae specialis, unitas autem analogiae facit unitatem scientiae communis.”
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scientific-theoretical prerequisites for both a “specific” theological science, in the sense of a doctrine of God, and for a “general” theological science are in effect met. Albert makes no such distinctions with respect to theology, however. His concern focuses on the unity of theology as a science, which is grounded on the unity of its subject.

In the same manner in which Albert established theology’s subject matter and unity from its goal in the Sentences commentary, so too does he determine the specific affective nature of this science. This results from the interaction between a complex unity of theology’s more immediate goals and its ultimate goal. According to the Apostle Paul (Titus 1:1–2) truth, equivalent to godliness (veritas secundum pietatem), is the object of theology, possessing an objective and a subjective moment. The former is everything that constitutes and promotes the worship of God; the latter is the intellectual, affective, essential union with the object worshipped, insofar as it is the goal that bestows delight. Theology is in effect an affective science, whose goal—the truth equivalent to godliness—is inseparable from the concept of the good, which is why it perfects both the intellect and the affect.30 It is wisdom to the supreme extent, because it concerns the Supreme in the most supreme way—God on the basis of the principles of faith; and it is to the supreme extent free, because it desires to recognize God for His own sake. Theology strives for knowledge of truth not just intellectually, but also affectively and essentially. Since in this science the intellect is directed towards the affect as the goal, it is not a theoretical but an affective science.31 In his discussion of whether theology is a practical or theoretical science in the Summa theologiae sive de mirabili scientia Dei, 1, Albert stresses theology’s practical nature, with regard to the nature of its subject and with reference to Holy Scripture. However, Albert does not retract his previous conception of theology’s affective nature, which he not only reiterates in this context, but also incorporates into his definition of this science (Tr. 1 q. 2).32 In the Summa theologiae sive de mirabili scientia Dei, 1, Albert specifies two further characteristics of theology. First, that theology is neither a general nor a specific science, but the science of the general and the specific that is formally given determination by analogy towards that in which one is to take delight in the

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30 Alb., Super I Sent., 1.4, 18b.
31 Ibid., 19a.
32 Alb., Summa de mir. scient. Dei, 1.1.3.3, 13; see also ibid., 1.1.5.1, 16, lns. 36–38: “Sicut ante diximus, sacra scriptura, cum sit scientia secundum pietatem et necessaria ad salutem, practica est.”
most supreme and perfect way. The second is theology’s distinctness from other sciences because of its subject, its attributes bearing witness to its subject, and its principles. In the Sentences commentary Albert adds, regarding the order of theology’s goals, that its primary goal, also called its ultimate goal, is the affective truth that is man’s eternal happiness (veritas affectiva beatificans); the more immediate goal, subordinate to the ultimate goal, is the moral perfection of man (ut boni fiamus), based on and caused by the principles of faith and merits. Theology differs from ethics on this point, not only from the perspective of its formal end, but also from its own faith-based principles and causes founded on merits. May the brief description and tribute at the beginning of this section suffice as a demonstration of how innovative and substantial Albert’s “holistic” concept of theology as an affective science truly is.

In his analysis of theology’s method in the Sentences commentary, Albert assigns to the science the same didactical-pedagogical or apologetic functions as a doctrine (doctrina) and a skill (ars), respectively. The former consists of careful instruction in orthodox doctrine, the other of defending doctrine by proving the truths of faith and convicting the errors of its adversaries. In accordance with the different functions of doctrine and skill, the theologian guided by the light of faith has at his disposal the tool of interpretation (expositio), on the one hand, and the tool of argumentative proof (probatio veritatis et manifestatio erroris) on the other. These methods and the light of faith as the guiding habitus under which they are employed distinguish theology from all other sciences. The method of interpretation that conveys true faith through careful instruction involves a text’s fourfold sense: the literal (littera), the allegorical (allegoria), the moral (tropologia), and the mystical (anagogia). Albert

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33 Ibid., 1.1.3.4, 14, Ins. 23–48; for the term frui see ibid., 1.2.7.3, 27, Ins. 80–82: “Frui autem dicit delectationem ultimam et perfectam et optimam.”
34 Ibid., 1.1.4, 15, Ins. 17–32.
35 See the introduction to this chapter.
37 Albert repeats these views in his later commentary on the letters of Pseudo-Dionysius; see Alb., Super Dion. Epist. 7, Ed. Colon. 37/2, 504, Ins. 11–26.
applies this method of interpretation of the fourfold sense of a text to Holy Scripture, thereby revealing that he does not perceive biblical exegesis as a science separate and distinct from theology. By distinguishing theology’s methods and immediate goals, he in effect formally and factually divides the one science into two branches. One branch focuses on biblical theology, assuming didactical as well as practical functions. The science’s other branch is argumentive, demonstrative “systematic” theology that is founded on authority or reason or analogy and directed at defending doctrine and refuting error. Albert designates the argumentive method as being the methodological tool “of the science of this book”, meaning the systematic conception of theology manifest in Lombard’s Sententiae, which in the course of the Middle Ages became the chief textbook and foundation for learning and teaching systematic theology. With Albert’s distinction, introduced and developed in his Sentences commentary, between “biblical” theology in the expositio mode and that form of theology employing auctoritas and ratio in the argumentatio mode, for which the terminus technicus “systematic” theology has become established since the 17th century, I would like to conclude our brief sketch of the aspects of his concept of theology. We shall forego a deeper analysis of the question of method, presented in the Summa theologiae sive de mirabili scientia Dei, as well as in parts of the commentaries to the corpus Dionysiacum, as they are not essential to this short presentation.

41 Ibid. See also Gaybba, Aspects, 91–95.
42 In the Summa de mir. scient. Dei, 1, Albert expands the views expressed on method in his Sentences commentary, going into greater and more nuanced detail regarding the discussion of the following four aspects: (1) Does theology possess the method of a science (modus scientiae) or the method of an art (modus artis)? (2) Is the method of theology more reliable than the methods of other sciences? (3) Does it posses the method of argumentation? (4) The four methods of interpreting Holy Scripture. In this context, Albert points out, among other issues, the limits of applying a scientific method or one suitable to an art to theology (Modus atem scientialis et artificialis non omnibus competit), a problem he avoided in the Sentences commentary by availing himself of the term “doctrine” (doctrina) instead of science (scientia). Especially noteworthy is his argument for the methodological legitimacy of metaphor, symbolism, and poetry in theology, as well as the science’s unparalleled certitude, and the topicality of its argumentation. See Alb., Summa de mir. scient. Dei, 1.1.5.1–3, 16–20.
B. If one applies the foregoing distinction in Albert’s concept of theology to his theological works, then we must divide these into writings on biblical and on systematic theology. Albert’s sermons, however, do not fit this system and rank separately among his theological writings. Albert’s sermons conjoin the goals and methods of biblical theology with the approaches and functions of systematic theology, but they do not serve theological science. Their purpose, rather, is careful instruction and edification in faith, for varying occasions and audiences. The latter could either be academic circles, as evidenced by his university sermons, as well as less educated members of religious orders and the ordinary lay population, as attested by sermons he evidently held in the vernacular. Albert’s sermons are therefore considered a separate category of writings that scholars refer to as parenetic. Although they are interesting and valuable to systematic theology as such, we will nevertheless exclude the sermons from this survey, since their exact number as well as their authenticity have yet to be established. We shall proceed by making some general observations on the formal structure of those texts from the body of Albert’s writings that are classified as belonging to the field of systematic theology. Regarding Albert’s biblical-theological works, the subject of another contribution to this volume, suffice it to say that they comprise an objectively, formally, and methodologically uniform complex within the literary form of the so-called postil commentary on Holy Scripture, with exception of

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45 For the critical edition, see Bernhard Geyer, Die Universitätspredigten des Albertus Magnus (Munich: 1966).


47 See Gilles Meersseman, Introductio in Opera omnia B. Alberti Magni OP (Bruges: 1931), vii, 117–126; most of the works cited by Meersseman are not authentic.

the pseudepigrapha and the works whose authenticity have yet to be fully researched (for example, *De muliere forti*).\(^{49}\)

From a chronological perspective of Albert's systematic theological works with regard to the formal structure of the individual texts, the very first text, *De natura boni*, is composed in the literary form of the treatise.\(^{50}\) Its subject—the definition of the good—is organized according to objective principles, which the author proceeds to analyze, quoting theological and secular sources first in a moralizing, and then in an excursive manner, but with the same objective.\(^{51}\) The pronounced effort towards a systematic presentation of doctrine is manifest not only in the outline at the beginning, but throughout the text as well, in the captions introducing new topics. This treatise denotes Albert's first attempt—albeit uncompleted—at a systematic presentation of the theology of the good, which was substantially guided, supported, and determined by biblical sources. This factor and the text's declared intention explain the heavy use of those methods of interpretation peculiar to biblical theology. This lends an instructional tone to the text, although it is a work neither of biblical exegesis in the stricter sense, nor is it parenetic. Rather, it is classified as a work of systematic theology.\(^{52}\)

Albert's two-part systematic theological treatise on the Mass and the Eucharist, belonging to his late works, is structurally sophisticated and in its objective very carefully elaborated.\(^{53}\) The consistency of literary form and genre between the first work and the later is especially evident in the excursive method of the systematic presentation, while closely orienting

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\(^{50}\) Alb., *De nat. boni* (prolog.), Ed. Colon. 25/1.

\(^{51}\) Albert explicitly refers to his first written work *De natura boni* as a *tractatus*, which corresponds to the literary genre and excursive method of presentation; see Alb., *De nat. boni* (prolog.), 1, ln. 16. See also Henryk Anzulewicz, *Die theologische Relevanz des Bildbegriffs und des Spiegelbildmodells in den Frühwerken des Albertus Magnus* (Münster: 1999), 5–6.

\(^{52}\) See Meersseman, *Introductio*, 110–111.

the doctrine on Holy Scripture and liturgical texts (hymns, prayers, and the canon of the Mass). Both treatises open with a quotation from the Bible, a feature not only characteristic of the systematic theological treatises, but also of Albert’s commentaries on Holy Scripture, including \textit{Principium super totam Bibliam}, and the remainder of Albert’s theological writings—the \textit{Sentences} commentary, the commentaries to the works of Pseudo-Dionysius, \textit{Summa theologiae sive de mirabili scientia Dei}—excepting the early systematic theological works composed in the form of \textit{quaestiones} and the collection of single theological questions.

The early systematic theological works, consisting of a series of five texts very close in date and similar in structure and content, but in effect independent works—\textit{De sacramentis}, \textit{De incarnatione}, \textit{De resurrectione},\textsuperscript{54} \textit{De IV coaequaevis},\textsuperscript{55} \textit{De homine},\textsuperscript{56} and \textit{De bono}\textsuperscript{57}—as well as the \textit{Quaestiones},\textsuperscript{58} primarily theological in content, and the \textit{Summa theologiae sive de mirabili scientia Dei},\textsuperscript{59} in contrast, differ with respect to literary form, genre, and method from the treatises, and also differ in part from the \textit{Sentences} commentary\textsuperscript{60} and the commentaries to the \textit{corpus Dionysiacum}. Common to the series of texts listed first are the disputative method and the literary \textit{quaestio disputata} form. All of these individual texts, each devoted to one theological problem and systematically arranged according to topic, form syntheses referred to as \textit{summae}.	extsuperscript{61} Peculiar to the \textit{quaestio}—in the High Middle Ages a widespread academic teaching technique and a literary genre for scientific discourse—is that it opens with an \textit{utrum}-question that may constitute a thesis, the truth of which would then need to be proven in the ensuing debate of the \textit{pro} and \textit{contra} arguments, formulated according to the rules of the syllogism.\textsuperscript{62}

\textsuperscript{54} All three texts are found in the same volume of the complete critical edition \textit{Alberti Magni Opera omnia}, Ed. Colon. 26.
\textsuperscript{55} Alb., \textit{De IV coaeq.}, Borgn. 34, 307–761 (Indices, 763–798).
\textsuperscript{56} Alb., \textit{De homine}, Ed. Colon. 27/2.
\textsuperscript{57} Alb., \textit{De bono}, Ed. Colon. 28.
\textsuperscript{58} Alb., \textit{Quaest.}, Ed. Colon. 25/2.
\textsuperscript{59} Alb., \textit{Summa de mir. scient. dei}, 1, 1–50A, Ed. Colon. 34/1; Borgn. 31–33.
\textsuperscript{60} Alb., \textit{Super I–IV Sent.}, Borgn. 25–30.
\textsuperscript{62} See Anzulewicz, \textit{Die theologische Relevanz}, 6–9.
All the early theological works, most of the *Sentences* commentary, and the collections of theological *quaestiones* closely related to Albert's teaching activity, as well as the not completed *Summa theologiae sive de miraculí scientia Dei*, are composed in this form. The *Sentences* commentary, however, does not derive from the literary *quaestio* form. The *quaestiones* as such, or in the form of objections (so-called *obiections* and *dubia*), are the most frequently employed discursive form in Albert's systematic treatment of theological issues. These are nevertheless preceded in turn by a designation and division of matter taken from the section of Peter Lombard's book to be commented on. Usually, these sections from the original are interpreted paraphrastically in an *expositio* instead of discursively. In his *Sentences* commentary, after an introductory characterization, designation of content, and arrangement of the section to be commented, Albert proceeds to combine two basic literary forms: specifically, the paraphrasing interpretation with the *quaestio*. In this respect the commentaries to the works of Pseudo-Dionysius are similar in structure, although in the latter the paraphrasing explications of the original are more extensive and of greater significance.

II

Albert's systematic theological work transcends the basic outline of Peter Lombard's *Sententiae*, which focuses on the Trinity, Creation, Incarnation, and the Sacraments. Its multifarious facets are manifested in his very first treatise *De natura boni* and in all other works of this category as well: the early five-part series *De sacramentis*, *De incarnatione*, *De resurrectione*, *De IV coaequaevis*, *De homine*, *De bono*; the commentaries to Peter Lombard's four books of *Sententiae* and to the works of Pseudo-Dionysius; the collection of theological treatises on various,
mainly moral-theological topics;\textsuperscript{71} the double treatise on the Mass and the Eucharist;\textsuperscript{72} and the late unfinished work \textit{Summa theologiae sive de mirabili scientia Dei}.\textsuperscript{73} Albert’s lively interest in this branch of theological science is reflected not only in the profusion of works and their magnitude, but also in the fact that he commenced and concluded his scientific oeuvre with writings on systematic theology.\textsuperscript{74} Systematic theology may therefore be seen as providing the framework for his entire work. I would like to proceed by introducing the main topics of this theology, and I shall attempt to assess its historical significance. In this sketch we shall also consider the chronology of his writings, in order to better follow and understand Albert’s theological career, including the external preconditions and the evolution of his doctrine.

1 \textit{The Theology of the Good}

A. \textit{De natura boni}. The good from the moral-theological aspect, the moral good, and the moral virtues are the subject of the treatise \textit{De natura boni}. This is the earliest work to emerge from the beginning of Albert’s teaching activities in the convents of the Dominican province of Teutonia and, like the late \textit{Summa theologiae sive de mirabili scientia Dei}, it was never completed.\textsuperscript{75} Albert’s original design was to develop a holistic concept of the good from a theological perspective. Seven aspects of the concept were to be explicated: the good of created nature (\textit{bonum naturae}), of political-civil virtue (\textit{bonum virtutis politicae}), of grace (\textit{bonum gratiae}),

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\textsuperscript{71} See note 58 above.
\textsuperscript{72} See note 53 above.
\textsuperscript{73} See note 59 above.
\textsuperscript{74} See Anzulewicz, \textit{De forma}, 6–17.
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of gifts (\textit{bonum, quod est in donis}), of happiness (\textit{bonum beatitudinis}), of the Spirit (\textit{bonum fructus spiritus}),\textsuperscript{76} and of eternal bliss (\textit{bonum felicitatis et beatitudinis}).\textsuperscript{77} The reasons for Albert abandoning the project are not known. Perhaps other responsibilities hindered him, or his dispatch to Paris to pursue doctoral studies, or a change in interests.

After the brief introduction specifying the subject and the perspective from which it is to be approached, that is, the distinctness and attributes of the created good under moral-theological considerations,\textsuperscript{78} part one follows, under the caption “On the Good of Nature”, which is devoted to the concept and the instantiation of the created good.\textsuperscript{79} Albert begins by first establishing what the good in nature is, citing Genesis and Augustine (\textit{De trin.} XVIII 3). He then proceeds to discuss in three steps how natural goodness (\textit{bonitas naturae}) manifests itself morally in man, how it may be lost, and how it may be regained. Albert substantiates the concept of the created good with biblical-theological and Trinitarian citations from Augustine and Boethius, succinctly summarizing the doctrine of divine traces in creation.\textsuperscript{80} In his explanation of the concept with respect to human morality, however, he does not limit himself to the biblical-theological sources, but supplements these with philosophical ones. Among them, apart from Cicero, are especially those portions of Aristotle’s \textit{Nicomachean Ethics} available in Latin translation,\textsuperscript{81} his \textit{Metaphysics}, various treatises on natural philosophy (\textit{De caelo, Meteorologica, De generatione animalium},...
De memoria et reminiscentia, and De anima), and on logic (Categoriae, Topica). The second part, never completed, on the goodness of political-civil virtue is not only disproportionately long compared to part one, but goes far beyond the original scope of the project, which eventually led to it being abandoned entirely. Following a brief explanation of the good of civil virtue according to the pattern applied in part one, Albert directs his gaze to numerous new issues, causing him to lose track of the central theme of the overall concept. Thus he fails to complete not only this section, but the other five originally planned as well. His discussion of the moral good—more precisely, the goodness of moral virtue—focuses on the doctrine of the circumstances surrounding moral actions, on free and unfree choice and decision, as well as on the general and specific doctrine of the cardinal virtues. It is natural for Albert to echo the Stoics’ doctrines of circumstance and virtue, while simultaneously attempting a systematic analysis of the doctrine of the cardinal virtues. In this context, the Nicomachean Ethics plays an increasingly important role, although at the time its reception was still incomplete.82 The specific doctrine of virtues that Albert addresses in De natura boni begins with the virtue of temperance (temperantia), soon moving on to the doctrine of the virginity of Mary, mother of Jesus. The predominant portion of the treatise is devoted to this topic, closing with reflections on conjugal chastity.

In this piece, which departed from the original plan never to be completed, the author’s lack of scholarly experience, independence, and resolve to realize his project are manifest. Remarkable and striking, however, are his great interest in philosophical and scientific sources, and his use of these to benefit theology. Besides Boethius, Cicero, and the numerous treatises of Aristotle already mentioned, Albert is familiar with and quotes from many other secular authors and sources.83 He reveals a preliminary familiarity with the Liber de causis, a work particularly influential for his thought together with the writings of Pseudo-Dionysius.84 One of his greatest sources of inspiration was Philip the Chancellor’s Summa de bono.85 From the systematic theological and historical perspective, the

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82 See previous note above.
83 See note 75 above.
most outstanding aspects of *De natura boni* are the holistic concept of the good and the indication of its paramount hermeneutic significance in theology and philosophy (especially metaphysics and ethics), as well as the doctrine of the Mother of God he develops, embedded within the context of the doctrine of virtue, using the prayer *Ave Maria* as its central theme and incorporating other Marian sequences and literary sources.

In conclusion we may summarize that Albert’s first systematic theological draft of a synthesis of the concept of moral good, based on Holy Scripture, Augustine, and other theological authorities, among them the writings of Pseudo-Dionysius on the one hand, and consulting numerous sources from the areas of philosophy and natural science on the other hand, fell short of its goal and remained a fragment. This, plus the circumstance that a few years later Albert returned to this topic in *De bono*, with a new systematic analysis according to scientific standards and more recent sources, are plausible explanations for why this first work remained historically entirely insignificant, even within the Dominican order. There is no mention of it in the oldest catalogues of the authors of the order. The first critical edition of this treatise, rediscovered at the beginning of the last century and today extant in only two manuscripts, was not published until 1974. Scholars today recognize the treatise as a valuable source not only illuminating an interesting period in the history of theology, but also providing insight into the intellectual development of the author, and which allows us to follow and therefore better comprehend the internal and external circumstances of this evolution.

B. *De bono*. During John of Wildeshausen’s term of office as master general (1241–52), Albert was relieved of his duties as lector in the convents of the Dominican province of Teutonia and sent to Paris to pursue a doctor’s degree. During his doctoral studies in Paris, which also involved teaching, or possibly just before departing for Paris, he wrote *De sacramentis, De*
incarnatione, De resurrectione, De IV coaequaevis, and De homine. The treatise De bono, written in Paris around 1243, followed. We will briefly digress from the chronological perspective chosen for this survey to focus our attention on the last-mentioned work, since Albert returns here to the topic of his first work—the good. This had been designed as a comprehensive discussion, which he ultimately failed to complete. In the few years that lie between the two treatises, his educational horizon and his scholarly competence had broadened considerably, evident not only in De bono, but also in the five pieces preceding it. In De bono, he modifies his previous conception of a synthesis of the concept of the good by developing an ontotheological foundation of the general concept of the good first. This aspect, also emphasized with respect to God as the transcendental cause for all good and perfect happiness but not explicated in De natura boni, is, from a systematic viewpoint, of central importance. Next, Albert defines the natural good and the moral good, then proceeds to concentrate on the good of political-civil virtue, on the definition of the general concept of moral virtue, and on the doctrine of the cardinal virtues. Years later, Albert expanded his doctrine on the virtue of justice after gaining access to Robert Grosseteste’s complete Latin translation of the Nicomachean Ethics, composed in 1246–47. When one compares the contents of De bono with the incomplete draft of a synthesis of the concept of the good in De natura boni, originally designed to comprise seven treatises, it becomes evident that in this work the conception of the good is extended to encompass the definition of the general concept of

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90 See Anzulewicz, De forma, 112–114.
91 Alb., De bono 1.1, “De bono secundum communem intentionem boni,” 1–21.
92 See Alb., De nat. boni (prolog.), 1, lns. 2–8 and 16–23.
the good and its ontotheological foundation. This, however, is confined to only two of seven treatises—*De bono naturae* and *De bono virtutis politicae*. The structural elements and contents shared by both works are primarily explicated philosophically in *De bono*, but they remain embedded in a theological framework because of the ontotheological definition of the good at the beginning of the work. Finally, in *De bono* Albert employs a different method than in *De natura boni*, the *quaestio disputata* method, obviously with university requirements and standards for teaching and research in mind.98

The demonstration of theological principles and explication of the doctrine of virtue appear right at the beginning of the work *De bono*, in the definition of the good in general, and of the natural and moral good, which are linked to the concept of the highest good. In defining truth and determining the relation of the transcendental terms of the good, the true, and being, Albert distinguishes between eternal and absolute truth and the relative truth of the created, as well as between uncreated and created being.99 Albert interprets the natural good as the traces of the uncreated Trinity manifest in creation.100 On the one hand, he sees the moral good as being the good springing from habit (*bonum consuetudinis*), which he further differentiates as the good which is the object of a moral act (*bonum in genere*), the good resulting from circumstance (*ex circumstantia*), and the good of political-civil virtue (*bonum virtutis politicae*). On the other hand, he perceives it as the good of grace (*bonum gratiae*).101 From the theologian’s perspective, all actions performed freely are morally relevant; for the moral philosopher, however, all morally irrelevant actions are conceivable as well.102 In the doctrine of the circumstances of moral actions, Albert distinguishes between the perspective of the rhetorician, of the moral philosopher, and of the theologian; for him, the latter two are of greatest significance.103 From this theological-philosophical perspective Albert develops his doctrine of natural law, establishing for man his own specific concept of nature, which is: an inherent power, the light of the agent intellect, the general principle of morality, directing human action

99 Alb., *De bono* 1.1.8–10, 15–21.
100 Alb., *De bono* 1.2.1–3, 22–28.
102 Alb., *De bono* 1.2.7, 34, lns. 26–35.
103 Ibid., 1.3.2, 41, lns. 35–42.
towards the *bonum moris*. In this context, more theological questions and issues arise, for example, in the explication of abstinence and chastity as elements of the cardinal virtue of temperance within the discussion of law (*lex*) in conjunction with the cardinal virtue of justice. Albert’s main interest in this work goes beyond theology, however. His primary concern is a systematic analysis of the traditional doctrine of the cardinal virtues on the basis of an ontotheological definition of the concept of the good: that is, its rational proof according to the standards of Aristotle’s *Nicomachean Ethics* within a comprehensive perspective transcending the limits of *ratio*.

In spite of the fact that this work was fairly well known in the Middle Ages, as evidenced by the manuscript testimony—inspiring as it did in the High Scholastic period the idea of the good as a theologically well-founded transcendental concept and the doctrine of the cardinal virtues—its influence nevertheless remained limited, as far as may be discerned from the studies published to date. This is further substantiated by the fact that it is exceedingly difficult to prove effectively the actual influence this work may have had. Also, despite the many printed editions of Albert’s works, a printed edition of this particular text was not published until 1952. The theological and philosophical significance and influence of this work manifests itself instead in the continuity and continued influence of its doctrine in Albert’s succeeding works, especially in the *Sentences* commentary, in *Super Dionysius De divinis nominibus*, and *Summa theologiae sive de mirabilis scientia Dei*, as well as in the two commentaries on Aristotle’s *Nicomachean Ethics*. Scholars in the past acknowledged

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105 See Alb., *De bon*, 3.2.4–9, 138, In. 77–p. 151, In. 47; ibid., 5.2, 281–289.


it as being a system of moral theology surpassing all previous models in coherence and depth, as the foundation of Albert’s moral theology and his theological-philosophical doctrine of natural law, as well as the key to understanding his moral philosophy. Furthermore, scholars assume that this work influenced Thomas Aquinas.

2–4 Preliminary Versions of Albert’s Doctrine of the Sacraments, Christology, and Eschatology

As we remarked earlier, Albert’s systematic theological work goes beyond the frame set by Peter Lombard. Although the first parts of his early work—De sacramentis, De incarnatione, and De resurrectione—correspond more or less in structure and content to Lombard’s Sententiae, in many aspects they differ greatly in detail from Albert’s later Sentences commentary. Unlike the combined method of interpretation employed in the Sentences commentary described briefly above, all of these three treatises are composed entirely in the quaestiones form. Completely missing here are references to the original text to be commented on and its paraphrasing interpretation that is typical of the commentary. A more suitable term for this peculiar type of work would be quaestiones in Sententias, which is confirmed by the author’s own testimony. Albert himself generally refers to this work or parts thereof as quaestiones or, when speaking of it as a whole, a summa. Although the topics are to a considerable extent predetermined by Peter Lombard’s Sententiae, Albert reserves in this work the freedom to choose which topics are to be discussed in which order, with which intensity, and from which approach. A certain innovativeness is recognizable here that is even more manifest in the subsequent works De IV coaequaevis, De homine, and De bono, previously discussed.
above, which in effect anticipate and supplement the topics discussed in the \textit{Sentences} commentary regarding the doctrine of virtue.\footnote{See Alb., \textit{Super III Sent.} 23–36, Borgn. 28, 403–675.}

If one takes a closer look at the three early works in comparison to the \textit{Sentences} commentary, they appear to be transcriptions of seminars Albert held in the \textit{quaestio} mode modeled on Peter Lombard’s \textit{Sententiae}.\footnote{On this \textit{modus docendi} see Bernardo C. Bazán, “Les questions disputées, principalement dans les facultés de théologie,” in \textit{Les questions disputées et les questions quodlibétiques dans les facultés de théologie, le droit et de médecine}, ed. Bernardo C. Bazán, John W. Wippel, Gérard Fransen, and Danielle Jacquart (Turnholt: 1985), 29–48.}

This impression may already be gained in the first, general part of the doctrine of the sacraments in the early treatise \textit{De sacramentis}. Here Albert discusses nearly the entire canon of theological issues on the sacraments contained in Book 4 of the \textit{Sententiae}. However, he concentrates on and limits himself to those he considers essential, thus achieving clarity regarding the content and scope of the questions. In Book 4 of the \textit{Sentences} commentary, in contrast, the corresponding topics are discussed in much greater detail. The issues concerning the general doctrine of the sacraments discussed in seven questions in \textit{De sacramentis} expand to 16 in the \textit{Sentences} commentary.\footnote{See Alb., \textit{De sacram.} 1.1–7, 1–16; \textit{Super IV Sent.} 1.1–16, Borgn. 29, 4–30; see also Henryk Anzulewicz, “Zum Priestertum und Ordensstand nach Albertus Magnus,” in \textit{Kirchenbild und Spiritualität}, ed. Thomas Prügl and Marianne Schlosser (Paderborn: 2007), 68 and 74–75.} The discrepancy between this work and Book 4 of the \textit{Sentences} commentary is even starker in the specific section on sacramental doctrine, for example in the doctrine of baptism and the doctrine of the Eucharist, than in the general section. The positive effect of this difference is that these two treatises are mutually explanatory and contribute to a deeper understanding of Albert’s sacramental doctrine.\footnote{This heuristic benefit is demonstrated on the example of the doctrine of baptism by Alfons Müller, \textit{Die Lehre von der Taufe bei Albert dem Grossen} (Munich: 1967).} But there are other important theological issues that are more fully developed in the last-mentioned work and in the two related early treatises than in the \textit{Sentences} commentary, or are now classified as systematic theology and therefore differently assessed. Such issues include, among others, the idea
of the church as the mystical body of Christ and eschatology's position in systematic theology, which was enhanced after being transferred from sacramental doctrine to Christology. The continuity of doctrine displayed in De sacramentis is equally manifest in the Sentences commentary as well as in his entire theological work, Super Dionysius De ecclesiastica hierarchia and the double treatise Super missam and De corpore domini in particular. Certain developments in his doctrine—as may be observed in the Eucharistic doctrine in the early De sacramentis, the Sentences commentary, and the late De corpore domini—are indicative of a progressive philosophical penetration of the problem of the independent existence of accidents and Albert's effort to make it more comprehensible.

As previously suggested above, what has been briefly outlined for the treatise De sacramentis goes mutatis mutandis for De incarnatione and De resurrectione as well. Although the project was abandoned shortly before completion, since the three treatises De beatitudine aeterna, De coronis aeternis, and De domo dei et mansionibus referred to at the end of De resurrectione are missing, Albert nevertheless opened, by virtue of his prior achievements, a new chapter in systematic theology: he combined Christology and eschatology, which he viewed as a continuation of Christology, and assigned eschatology a new position within systematic theology. With the clear position on the issue of the beatific vision expressed in De resurrectione and De IV coaequaevis, both written around the same time, and the later treatise De visione dei in patria in Super I Sententiarum, he contributed to a de-escalation of the doctrinal controversy at the University of Paris, which reached its climax with a condemnation on 13 January 1241 or 5 January 1244. The treatise De resurrectione, with its holistic

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119 See Alb., De sacram. 5.1.4, 61, ln. 41–p. 62, ln. 17; on the evolution of the doctrine in Super IV Sent. and in the later De corp. domini, see Jorissen, Der Beitrag Alberts, 7–18.

120 See Alb., De resurrec. 4 (prolog.), Ed. Colon. 26, 322, Ins. 4–5.

121 Alb., De resurrec. 4.II.1, 326, ln. 71–p. 329, ln. 59; Alb., De IV coaeq. 4.32.1, Borgen. 34. 507a–510a; see also Pierre-M. de Contenson, “La théologie de la vision de Dieu au début du XIIIe siècle,” Revue des sciences philosophiques et théologiques 46 (1962), 409–444, esp.
concept of life as the key to reconstituting the fundamental structure of Albert’s thought, exemplifies the hermeneutic significance of the early works. The systematic benefit of these three works has yet to be fully researched. Scholars are beginning to recognize and appreciate Albert’s efforts, however, and his rational explanation of theological issues, with consideration for scientific-philosophical evidence, in the context of the doctrines of the sacraments, of Christology, and of eschatology.

437–439; Ludwig Ott (†) and Erich Naab, Eschatologie: In der Scholastik (Freiburg: 1990), 219–220; Anzulewicz, Die theologische Relevanz, 161–172, for the relevant references from Super I Sent. and from Quaestio de visione dei in patria. Regarding the dates of the Paris Condemnations, see Victorin Doucet, “La date des condamnations parisiennes dites de 1241. Faut-il corriger le Cartulaire de l’Université?” in Mélanges Auguste Pelzer (Louvain: 1947), 183–193.


A Synthesis of a Theological Doctrine of Creation: De IV coaequaevis

While the three treatises De sacramentis, De incarnatione, and De resurrectione were decisively inspired by Peter Lombard’s Sententiae, although not following the model as closely as the later Sentences commentary, the subsequent work De IV coaequaevis bears only superficial resemblance to Book 2 of the Sententiae. This theological conception of the doctrine of creation is extant in two redactions, appearing in the oldest manuscripts under varying titles, among others: tractatus de quatuor coaequevis, summa de creatione, and the questiones de creatione et creatis. In most of the later manuscripts as well as in the oldest catalogues of Albert’s works, it appears under the title De IV coaequaevis. According to the incipits of several manuscripts (and to the non-critical editions) of the work De homine that follows immediately after, the treatise De IV coaequaevis was part one of a Summa de creaturis in two parts. Under the last-mentioned title, also shared by De homine, the treatise appears as part one of the Summa on creatures in four non-critical editions. Apparently, Albert did not affix a specific title to this treatise. The familiar short title, De IV coaequaevis, is a later, not entirely satisfactory invention. The four coaequaeva are the “coeval” realities of creation. For Albert, following the Glossa ordinaria on the opening verse of Genesis, these include (1) the “first matter” (materia prima/informis) as the substrate of all bodies; (2) time in its entire complexity as the measure of duration, that is, eternity in the stricter and the larger sense (aeternitas and aevum), as well as the measure of change, that is, time in the narrower sense (tempus); (3) heaven (caelum) as the all-encompassing supralunar region up to the

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126 See Fauser, Die Werke, 261–266 and 268; Henryk Anzulewicz, “Prolegomena,” in Alb., De homine, v, xii.

127 See Fauser, Die Werke, 260; Anzulewicz, De forma, 117–119.
heaven of the Trinity, factually identical to God, differing only conceptually; and (4) the angel (angelus) as spiritual substance.\textsuperscript{128} While the coaequaeva are the main focus of this treatise, they are not the sole topic. It opens with a definition of creation and a detailed explanation of the Hexaemeron, followed by an examination of the primary and elementary realities of creation, based on the theme of the four coaequaeva. There are reflections as well on what emerged from these four “elements” during the six days of creation according to the account in Genesis, and finally, what it actually means for God and man to rest on the seventh day.\textsuperscript{129}

Albert’s creation theology is inspired by various sources and patterned after several different models and examples, adopting and combining their different approaches. As in his first treatise and later in \textit{De homine} and \textit{De bono}, he owes many a stimulating impulse to Philip the Chancellor.\textsuperscript{130} Albert’s open mind towards philosophical tradition is reflected in his keen interest in natural philosophy. He develops his concept of the first three coaequaeva primarily according to the physics and cosmology of Aristotle and his Arab interpreters Avicenna and Averroes. Here, as well as in \textit{De resurrectione}, Albert allows systematic theology to benefit from the contributions of Moses Maimonides.\textsuperscript{131} Regarding the fourth coaequae­vum, the angel, he lets himself be guided by the \textit{De caelesti hierarchia} by Pseudo-Dionysius and develops in the \textit{quaestiones} mode the first version of his doctrine on angels, which he later augments in the commentary \textit{Super Dionysium De caelesti hierarchia}. In the subsequent questions on the Hexaemeron, theological authorities determine the course of Albert’s contemplation. These include, next to the Bible and Augustine, the \textit{Glossa ordinaria Bibliae} and the church fathers. These are further supported with

\textsuperscript{128} See Alb., \textit{De IV coaeq.} 1.2 (\textit{divisio textus}), 319: “Item, inter coaequaeva singula primo quaeritur de materia, dicit enim Glossa super Genesim in principio quattuor esse coaequaeva, scilicet materiam, tempus, caelum empyreum et angelicam naturam.”

\textsuperscript{129} See Alb., \textit{De IV coaeq.} 1.1, “De creatione,” 307–319; ibid., 1.2–4.70, “De creatis,” 319–724; ibid., 4.71–73.9, “De his quae de quattuor coaequaevis secundum numerum sex dierum processerunt,” 724–61; ibid., 4.73.10, “De quiete sabbati,” 761. (This outline of the contents of the treatise is based on our own reconstruction.)


philosophical arguments and authorities like Plato, Aristotle, Boethius, and the poets. In this distinctly theological perspective of his concept, Albert is attempting a rational penetration and verification of the dogma of creation as revealed in Genesis.

We will refrain here from presenting a concise recapitulation of the subject matter contained in *De IV coaequaevis* and the concept of heaven, mainly an assimilation of Aristotle’s definition developed from a strictly theological perspective, since this has been provided elsewhere. Of particular significance are the exposition of Aristotelian cosmology in the light of Neoplatonic interpretations of Judeo-Arab origin, and Albert’s proclivity to harmonize the different philosophical approaches with one another and with biblical faith. There are two classic examples of this. First, the threefold distinction of the mover of heaven into (a) an external mover, identified as God, (b) a mover who is the form linked to heaven, indivisible from the division of heaven, and (c) a mover who embodies the material form, divisible because of the division of heaven. The second example is the concept of individual movers of the heavenly spheres analogous to the human soul and the angels. In his first redaction of *De IV coaequaevis*

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133 Alb., *De IV coaeq.* 3.16.1, 438a–b: “si velimus loqui secundum philosophos, ponemus in caelo triplicem motorem, scilicet deum qui est motor extra, non proportionatus mobili: et hoc attendit Ptolemaeus qui dicit, quod nihil movet caelum nisi solus deus, et Rabbi Moses qui probat multis rationibus, quod motor caeli est extrinsecus extra ipsum…Secundus motor est forma coniuncta caelo non divisibilis divisione caeli…Tertius motor est forma materials divisibilis secundum divisionem caeli.” See also ibid., 439a: “Deus qui est motor absolute primus, movet in motore qui est primus in natura, sicut causa prima movet in causa secunda…”.

134 Alb., ibid., 3.16.2, 443a–446a, esp. 443a–b: “Nos cum sanctis confitemur caelos non habere animas, nec esse animalia, si anima secundum propriam rationem sumatur. Sed si vellemus philosophos ad idem reducere cum sanctis, dicemus quod quædam intelligentiae sunt in orbibus deservientes primo in motu orbium, et intelligentiae ille dicuntur animae orbium, et non univoce cum intelligentiis hominum, eo quod non egrediuntur in actum per abstractionem a phantasamatinus, sed ipsae revertuntur super essentiam suam, et per essentiam super aliud reditio completa…”; 445a–b: “motor qui est intelligentia, et motor qui est ex parte corporis, sunt diversi…Ista omnia diximus secundum philosophos qui non contradicunt quibusdam sanctis negantibus caelum animam habere, nisi in nomine solo, qui abhorrent nomen animae et tamen bene concedunt, quod intelligentiae quædam sive angeli movent caelum iussu dei. Sicut ponimus secundum catholicam fidem quosdam angelos miraculosa facere, et legibus naturae concurrere, ita non est contrarium fidei quosdam angelos iuvare naturam in movendo et gubernando sphæras caelorum, quos angelos moventes sive intelligentias philosophi dicunt animas. Sancti vero timentes ne forte dicere cogantur caelos esse animalis, si concedunt ipsos habere animas, negant motores caelorum esse animas. Et ita patet, quod non est contradictio inter eos: antiqui enim deos et angelos dicebant animas mundi.”
and in *De homine* Albert vehemently supports this harmonizing thesis, whereas in *Super II Sententiarum*, in the second redaction of *De IV coaequaevis*, and in later works he qualified it in more precise terms.\(^{135}\)

In *Super II Sententiarum* and in his commentary on the *Physics*, Albert reverts to the topic of creation and the concept of creation previously developed in *De IV coaequaevis*.\(^{136}\) Although Albert’s doctrine on creation has been well studied in the past, most of the research was based primarily on the two former texts, but seldom on the treatise *De IV coaequaevis*.\(^{137}\) Individual studies are available on the first two *coaequaeva*, matter and time.\(^{138}\) Albert’s doctrine on angels has been examined with regard to its evolution in subsequent works in a study on Albert’s views on universal causality based on the non-critical edition of the treatise (i.e. its second redaction).\(^{139}\) The study’s author was able to demonstrate how Albert, striving for a philosophically proficient theology, endeavors to harmonize theological doctrines with philosophical interpretations in his early systematic theological writings. Following the arguments of the past


\(^{136}\) Alb., *Super II Sent.* 1.6–9, 19b–22b; *Phys.*, 8,1,13, Ed. Colon. 4, 574, Ln. 63–P. 577, Ln. 50.


Parisian theology professors William of Auxerre and Philip the Chancellor, he concludes that philosophy is ancillary to theology.¹⁴⁰

6 Theological Anthropology in De homine

In the work *De homine*, which immediately followed *De IV coaequaevis* and was composed within the same theological framework of the doctrine of creation, Albert did not abandon the harmonizing approach of a synthesis on the subject of man as a body–soul union. His endeavor, however, to investigate natural phenomena in accordance with their own inherent laws, curbs reductionistic tendencies. The efficacy of the theological perspective is manifested in the conviction that the origin of man’s soul is in God, and that both man—understood as *imago dei* and center of the universe—and the universe are directed toward God.¹⁴¹

How may we characterize the form, content, concept, and scientific philosophy of Albert’s anthropology in *De homine*, and how do we determine its systematic scientific place? As I have demonstrated elsewhere,¹⁴² the doctrine on man that Albert develops in this early treatise is holistic in two ways. This characteristic is founded on the concept of the unity of man on the one hand, and the unity of knowledge on the other. Albert perceives man as a body–soul union from a perspective linking the divine origin, the orientation of man and the universe towards God, and the goal of man and creation that is identical to the origin. This holistic concept of man is gained from a synthesis of the philosophical, scientific, and

¹⁴⁰ See Alb., *Super II Sent.* 14.6, 266b: “Alibi etiam disputatum est de ista materia multum et prolixo: et ibi (i.e., in *De VI coaeq.* 3.16.2) secuti sumus dicta quorundam magistrorum theologiae, qui voluerunt opiniones naturalium ad theologiam reducere dicendo quod angeli deserviunt deo in motibus caelorum, et quod illi ab eis animae dicuntur: sed nihil ita secure dicitur, sicut quod sola dei voluntate moveantur et natura propria non contrariante motui”; see also Twetten, “Albert the Great’s Early Conflations,” 29–41 and 49–54; Anzulewicz, “Zwischen Faszination und Ablehnung,” 150–151.

¹⁴¹ See Alb., *De homine*, Ed. Colon. 27/2, 71, lns. 60–61: “Dicimus quod deus infundendo creat humanas animas et creando infundit eas...”; ibid., 76, lns. 18–34 and 595, lns. 4–5: “Tribus ordinibus ordinatum est universum, scilicet in se et ad hominem et ad deum creantem.”

theological knowledge *de homine*. Although Albert himself does not use the term “anthropology”, by devoting an individual investigation to the topic he develops a comprehensive doctrine of man that incorporates psychology, metaphysics, and theology, although it does not derive from these disciplines directly. He employs a model of integration in which the unity between theology, philosophy, and natural science regarding man is achieved and preserved. While Albert is able to answer many of the questions discussed on the basis of natural science and philosophy, his solutions are nevertheless in no way contradictory to his theological perception of man. On the other hand, he provides theological answers to such issues as the soul’s divine origin and immortality, demonstrating their philosophical truth by citing Aristotle, Plato, and numerous other authorities and sources of varied provenance. Although Albert lets himself be guided by Aristotle on theoretical principles and methodological issues, the overall context of the discourse is theological.\(^{143}\)

The characterization of Albert’s doctrine on man as a holistic, theological-philosophical anthropology is, in my opinion, appropriate.\(^{144}\) It reflects its subject matter, man, in his psychosomatic constitution with his vegetative, sensory, and rational capacities and functions, in his aspirations and with his ability to distinguish good and evil, in the freedom of his will and conscience, the basis of his morality, as well as in his likeness to God. It addresses issues concerning the philosopher, the psychophysiologist, and the theologian in its systematic investigation of the soul and body of man, as well as the modes of the relationship and interaction of body and mind, and furthermore the original condition of man (before the Fall of Adam and Eve), the natural abodes (Paradise and earth), as well as the completion and universal ordering of the cosmos and of all creation.

7 A Full Conspectus of Systematic Theology: Super I–IV Sententiarum

Essentially, Albert’s *Sentences* commentary conforms to the systematic pattern of Peter Lombard’s *Sententiae*, encompassing all areas of Scholastic theology in the *argumentatio* mode. Furthermore, we briefly described above how Albert categorizes the content of the four books of his model, and the method of interpretation he employs. The commentated text,

\(^{143}\) See Anzulewicz, “Der Anthropologieentwurf,” 764–765.

\(^{144}\) On the use and understanding of the terms “*de homine*” and “anthropology” in the Scholastic and modern periods, see Anzulewicz, “Der Anthropologieentwurf,” 762; Anzulewicz, “Albertus Magnus—Der Denker des Ganzen,” 149, note 4.
more precisely its division into parts according to topic, would invariably establish the starting point for his ensuing commentary, its form alternating between paraphrase and _quaestio_, and the simultaneous development of his own theological ideas and solutions. Of fundamental systematic and scientific-theoretical importance were his concept of theology, presented in the first book of his commentary, and the doctrine of theological science he developed there as well. Albert is among the vanguard of theologians to engage in scientific-theoretical and methodical study according to Aristotelian principles, with the purpose of demonstrating theology’s scientific proficiency and to define more closely its scientific character.\(^{146}\)

As we have briefly sketched above, Albert distinguishes theology’s subject matter as being either general or specific. The former encompasses the entire reality of being in its existing and symbolic form insofar as it affects man’s participation in eternal bliss. The latter, on the other hand, encompasses that which theology proves according to its own principles, peculiarities, and distinct nature, that is, that which many of Albert’s predecessors generally referred to as the content of faith (_credibile generaliter acceptum_).\(^{147}\) Albert counts among these the general prerequisites for faith (_praeambula_) and the articles of faith summarized in the creed, as well as the moral norms derived therefrom. Theology’s primary subject is God, not exclusively for His own sake, however, but insofar as theology reflects upon Him as the origin and goal of existing creation, which is by origin within Him and, like the manifestations of His work, directed towards God, including all the means reinforcing this predisposition (virtues, gifts, sacraments, and such). Theology does not consider existing reality for its own sake—this is the task assigned to natural philosophy—but insofar as it is the condition for man’s fulfillment with respect to his perfect happiness. Therefore, theology is separate from natural philosophy and the natural sciences, and Albert acknowledges the independence of the latter. If theology is perceived as the ultimate truth and a truly “free” science because of the sublimity of its subject matter and due to its principle of investigating its subject matter for its own sake, then philosophy and all other human sciences relying on the principles of reason cannot be con-

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\(^{145}\) Regarding the structure of the work’s text, see Augustin Hiedl, “Die ursprüngliche Einteilung des Sentenzenkommentars Alberts des Grossen,” in _Studia Albertina_, 189–201.


\(^{147}\) See the introduction to this chapter, and note 22.
sidered as being to the same extent wisdom and “free” sciences unbound by any external goals.148

Following the theological doctrine of science is a systematic discussion of those areas designated as being theology’s general or specific subject matter. First Albert discusses the meaning of reality and signs (res et signa) and use and enjoyment (uti et frui) with respect to their relevance for man’s participation in eternal bliss.149 In this context, the issue of the possibility of divine revelation for the created intellect and beatific vision is discussed in anticipation of the doctrine on God, a topic already treated in De resurrectione and De IV coaequaevis.150 With Distinction 2, Albert addresses the special subject of theology, the doctrine on the Trinity and the unity of God, topics that comprise the body of the commentary to the systematic theological content of the first book.151 Like in his prologue at the beginning, he opens here by categorizing the contents of all four books of the Sententiae according to his definition of “systematic” theology’s subject matter as res et signa. Accordingly, existing reality is examined in the first three books from the theologian’s perspective. More specifically, the first book examines the reality, which is to be enjoyed by man for his delight; the subject of the second book are the realities for man’s use, which he enjoys and needs; the subject of the third book are those realities directing man towards the enjoyable (in one respect enjoyed, in the other needed); and the subject of the fourth book is reality revealed in signs. Albert divides the content of the first book into two parts. Part One treats the possibility of an individual person’s natural recognition of the divine Trinity as that reality in which to find delight. Part Two is on the divine persons. This division of the two parts of the work is further structured according to systematic factors. Let us briefly examine the key points of the first part of Book 1, in which Albert explicates his introductory doctrine on Trinitarian theology.

The question of whether natural reason may know the Trinity is, according to Albert, essentially dependent on: (1) the specific principles

148 Alb., Super I Sent. 1.4, 19a.
149 Ibid., 1.6–23, 20–52b.
150 Ibid., 1.15, 34a–37b; on this aspect, see Mercedes Rubio, Los límites del conocimiento de Dios según Alberto Magno (Pamplona: 1998).
151 Other topics are explicated in this context as well, including, among others, anthropology or psychology; see Also Alb., Super I Sent. 3.33, 136b: “An anima sit composita”; ibid., 3.34, 139b: “Utrum anima sit suae potentiae”; ibid., 8.25, 256a: “De hoc quod dicit ‘Creatura quoque spiritualis, ut est anima, in comparatione quidem corporis est simplex;’” ibid., 8.26, 258a: “De hoc quod dicit ‘Et in toto tota anima est, et in qualibet parte eius tota est.’”
(suppositiones) prerequisite to the doctrine of God; (2) prior knowledge of the intention with which one aspires to knowledge of God; (3) the specific order of cognition; and (4) the actual cognitive process as such. Decisive significance is ascribed to the prerequisite principles of the doctrine of God, since they enable the cognitive process and determine its course. These include: (a) that which is engendered by the doctrine of faith (generativa doctrinae fidei), meaning the impartation of the words of divine revelation (dicere), the assent in faith (dictis assentire et credere), and the resulting insight of faith (ut per lumen fidei veniatur ad intellectum), a triple step describing the order in which one gains knowledge of the Trinity; (b) the concept of the highest good (summum bonum), meaning God as the substantial and essential good towards which everything is directed, which surpasses and limits everything, but which experiences no limitations itself; (c) clearing from reason all that hinders it on the affective and cognitive side to ascend the light of faith, enabling it to discern that God is Trinity and unity; and (d) the divine light that perfects the natural powers of cognition. The explanation of the prerequisite principles of knowledge of the divine Trinity closes with remarks regarding the possible consequences of error, on the one hand, and the fruits of Trinitarian doctrine on the other. With regard to intention, Albert stresses the distinction between essence (essentia), person (persona), and properties (notio) in the Trinity. The explication of the doctrine on the Trinity is linked to the order in which authority has a rank superior to ratio. In determining how to contrive the cognitive process, Albert states that the doctrine of the divine Trinity and unity has its origin in the canonical books of the Old and New Testaments, which he proceeds to develop with the support of appropriate rational arguments and by analogy. All essential statements, such as those concerning the inherent unity of the divine Being and of the individual persons, the distinction of the persons and the unity of their nature, are all derived from and reflected upon on the basis of Holy Scripture. In a second step, the authorities are consulted,

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152 Alb., Super I Sent. 2 (divisio textus), 54a–b.
153 Ibid., 2.1, 54b–55a.
154 Ibid., 2.2, 55b–57b.
155 Ibid., 2.3, 57b–58a.
156 Ibid., 3.4–5, 58a–60a.
157 Ibid., 2.6–7, 60a–b.
158 Ibid., 2.8–9, 61a–62b.
159 Ibid., 2.10, 63a–b.
Augustine and Hilary of Poitiers in particular, and their views on Trinitarian theological issues are explained.\textsuperscript{160}

It would go beyond the scope of this sketch to go into further detail on how Albert evolves the individual elements of his Trinitarian theology. I have described some of the most typical aspects of this doctrine elsewhere.\textsuperscript{161} Furthermore, an introduction to Albert’s Trinitarian theology has been published, as well as several monographs and numerous smaller but substantial contributions, some of them within the context of studies on the Trinitarian theology of Thomas Aquinas.\textsuperscript{162} Here I would like to emphasize instead the originality and the great historico-theological significance of Albert’s doctrine. With his doctrine on theological principles and theological science, which precedes the Trinitarian doctrine in the \textit{Sentences} commentary of the \textit{Doctor universalis}, Albert is the first to redefine the relationship between the doctrine of God and the new concept of science resulting from Aristotle’s notion of science and scientific principles that were introduced by the reception of his \textit{Analytics} and \textit{Metaphysics}. Albert is thus able to provide entirely new solutions to the question of the possibility and necessity of theology as a science, as well as the possibility and meaning of knowledge of God.\textsuperscript{163} Regarding a natural knowledge of God, he is of the opinion that, in principle, God’s existence (\textit{quia est}) and some of His attributes are recognizable by the power of natural reason, but certain knowledge of God’s nature (\textit{quid

\textsuperscript{160} Ibid., 2 (divisio textus), 64a–b.
\textsuperscript{161} Anzulewicz, \textit{Die theologische Relevanz}, 172–188.
\textsuperscript{163} See Schmidbaur, \textit{Personarum Trinitas}, 266.
est) and of the essential attributes of the persons of the Trinity remain hidden from natural reason. Albert disagrees with the views of Abelard and distinguished representatives of the school of Chartres on this matter, arguing that the actions of the divine persons are indistinguishable from the outside. The distinctness of the divine persons Albert derives from the distinction between essence and persons in the Trinity, between an essentialist (ontological) and a conceptual (logical) level. He perceives the essence as the foundation for internal divine processes. In structure and content, Albert’s doctrine on God, in particular his doctrine on the divine persons, is recognized as being the “decisive new measure, setting the course” for Thomas Aquinas and a “decisive model” for his student’s treatise on God. It has furthermore been lauded as “probably the most substantial insight into trinitarian theology since Augustine’s introduction of the concept of relation in *De Trinitate*” and as an anticipation of Karl Rahner’s declaration of the identity and convertibility of the economic and immanent Trinity.

The second book of the *Sentences* commentary is on the theology of creation. Here Albert develops his own doctrine strongly influenced by philosophy. As described in the prologue to his commentary on all four books, it opens with the topic of the emergence of all creatures from God through His work of creation (de creatura secundum exitum suum per creationem a prima causa, quae deus est) and progresses to the creatures in their creaturely nature (de creatura secundum quod est in propria natura et universitate). Before addressing the individual issues, he first explains the system Peter Lombard established for this doctrine in the prologue, using the introductory quote from the book of Isa. 6:1, and thus indirectly establishing it as being theologically determined by revelation. He derives from the biblical citation that the author’s insight was inspired by the Holy Spirit. The doctrine on creation, as presented in the *Sentences*, is

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166 See Alb., *Super I Sent.*, prolog., 2.

comprised of an introduction and three main parts. The main focus of the introduction (Dist. 1) is to define the concept of the creator and to clarify any errors regarding this question. The subject of the first main section (Dist. 2–11) is the nature of angels. The second main section (Dist. 12–15) is devoted to visible creation, the “higher and lower physical nature”, that is, heaven and the sublunar world. Topics of the third main part (Dist. 16–44) are man in his relation to God, in his original state, and the Fall.\textsuperscript{168}

In accordance with the content of his model, the third book of Albert’s commentary discusses Christology and the theological doctrine of virtue. In contrast to the first two books, his explications are not preceded by a prologue, neither his own nor the Lombard’s.\textsuperscript{169} He opens with an outline of the text, categorizing the entire contents of Book 3 using a citation from the letter to the Galatians (Gal. 4:4–5) quoted from the beginning of Peter Lombard’s first Distinction. Since Book 2 closes with an explication of the Fall of the first human couple, it thus follows that Book 3 is devoted to the restoration of fallen man to grace by means of existing reality.\textsuperscript{170} The question of the \textit{reparation hominis lapsi} leads to Christology (Dist. 1–22) on the one hand, and to the theological doctrine on virtue on the other (Dist. 23–40). The main topics of Christology focus on the problem of the union of the divine nature and the human nature in Christ (Dist. 1–5)\textsuperscript{171} and the characteristics—in the broadest sense—inherent in Christ as son of God and son of man (Dist. 6–22).\textsuperscript{172} The theological doctrine on virtue considers how man’s relation is formally restored through his actions. These include dispositions or \textit{habitus} and the gifts of the Holy Spirit, discussed in the first part of the theological doctrine on virtue (Dist. 23–36),\textsuperscript{173} as well as the commandments, treated in the second part (Dist. 37–40).\textsuperscript{174} These are regarded as real (\textit{ut res}), whereby their distinctness from the symbolism of the sacraments is emphasized. In this light one

\textsuperscript{168} Ibid., 2–3; see also Joseph Hansen, “Zur Frage der anfanglosen und zeitlichen Schöpfung bei Albert dem Grossen,” in \textit{Studia Albertina}, 167–188.

\textsuperscript{169} The Prologue printed in the edition by Borgnet (and Jammy) preceding Albert’s commentary text, and the text in Dist. 1 before the “divisio textus”, were not written by Albert, but were taken from Peter Lombard’s introduction to \textit{III Sent.}; see Alb., \textit{Super III Sent., prolog.}, Borgn. 28, 1–2.

\textsuperscript{170} Alb., \textit{Super III Sent. 1, divisio textus}, 2a–b (amended according to MS Naples, Biblioteca Nazionale VII C 19 f.8ra): “Iste liber tertius est de reparatione hominis lapsi in his reparantibus quae sunt per modum rerum, non per modum signorum.”

\textsuperscript{171} See ibid., 1, \textit{divisio textus}, 3a.

\textsuperscript{172} See ibid., 1, 6, \textit{divisio textus}, 3a, 117a–118a.

\textsuperscript{173} See ibid., 1, 23, \textit{divisio textus}, 2b, 403a.

\textsuperscript{174} See ibid., 23, 37, \textit{divisio textus}, 403a–b and 679a–b.
must interpret Albert's assertion that remedies against failings resulting from sin are not the subject matter of the doctrine on virtue.175

Albert might have considered the first part of his commentary on Book 3 of the *Sententiae*—the Christology—as being a continuation of the doctrine on God in Book 1. He did not comment on the four books in the sequential order laid down by Peter Lombard, but rather in the following sequence: Books 1, 3, 2, 4. The doctrinal coherence of Books 1 and 3 is especially manifest in the doctrine of the Incarnation and the union of Godhead and manhood in Christ, in the doctrine on the persons, and in the explication of faith as a theological virtue.176 Mariology appears here as an integral part of Christology.177 God’s Incarnation cannot be fathomed by natural reason, not even with the support of grace. As a truth of faith it is superior to the insight of reason, and the latter never challenges it, not even when it seems to contradict logic.178 Thus the question of whether or not a causal connection exists between the Incarnation of the second person and the Fall of the first man cannot be answered with certainty. Still, Albert believes that God’s Son would still have become man if the Fall had never occurred.179 This opinion is repeated in the *Quaestio de conceptione Christi* written a bit later, while Thomas Aquinas, who was aware of his teacher’s position and even shared his opinion that the question could not be solved by the human mind, preferred the opposite view.180

The section of the commentary presenting a comprehensive discussion of the theological virtues (*fides, spes, caritas*) and the commandments in a broad doctrinal context grants a greater understanding of Albert’s

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175 See ibid., 1, 23, *divísis textus*, 2a–b and 403a.
177 Alb., *Super III Sent.* 3.1–24, 43a–62a; ibid., 4.5.11–14, 83b–86a and 90a–92b; see also Haberl, *Die Inkarnationslehre*, xxvii.
178 Alb., *Super III Sent.* 6.1, 121a: “Sine praeiudicio propter errores hic se ingerentes oportet respondere ad argumentationes praeclitas caute, ut omnio teneatur veritas fidei potius quam Aristoteles príncipes philosophorum: quia non est mirum si aliquid contra artem in se habeat incarnatio, quae etiam ingenio per grátiá suffulto investigari non poterat.”
doctrinal views, which are always at some remove from the opinions of his contemporaries. It also provides historians with an extraordinary profusion of systematically adapted material, for example: the definition of theological virtues and their differentiation from the cardinal virtues,\(^{181}\) and the concept of identity, difference, and the intrinsic value of the object of faith and knowledge.\(^{182}\) The expositions on the commandments close with a reference to those on law and natural law contained in *De bono*, which Albert apparently supplemented on this occasion with an examination “On special justice”.\(^{183}\)

In Book 4 of the *Sentences* commentary, the doctrine of the sacraments and eschatology are discussed in great detail.\(^{184}\) Albert commences to approach the theological meaning and essence of the work in the prologue, using the introductory quotation from Prov. 9:1, “Sapientia aedificavit sibi domum, excidit columnas septem.” This biblical citation—“Wisdom has built herself a house, she has hewn out seven columns”—recounts the content and outline of the book in a reorientation from eschatology (Dist. 43–50) to sacramental theology (Dist. 1–42) for a specific reason.\(^{185}\) The biblical testimony commences with the intention preceding the work, but which he does not achieve until last in his explications. The seven columns in the Bible citation symbolize, according to Albert, the seven sacramental graces corresponding to the individual sacraments. The theology of the sacraments is divided into one very short general part and another exceedingly extensive special part. In the general part (Dist. 1), he discusses issues pertaining to all the sacraments of the New Covenant and their correspondence in the Old Testament. Primarily, this includes the definition and composition of the sacraments, as well as their unparalleled salvific efficacy compared to the “sacraments” of the Old Covenant. Albert precedes his explication of the general doctrine of the sacraments, according to the text by Peter Lombard to be commentated, with four introductory discourses. In these, he emphasizes the necessity of the sacraments for man’s salvation, critically examines the number of sacraments,

\(^{181}\) Alb., *Super III Sent.* 23.2, 407b; 26.1, 491a; 27.1, 509b–510a; 33.1–4, 606a–613b; 36.1–2, 665a–669b.

\(^{182}\) Ibid., 24.9, 467a–468b.

\(^{183}\) Ibid., 40.4, 753a: “Hic autem qui vult, potest inducere longam quaestionem de legibus et iure naturali, quam disputavimus in tractatu de iustitia.” Cf. Alb., *De bono* 5.1–4, 259–307, and esp. 5.4, 300: “Quaestio IV (addita) De iustitia speciali.”

\(^{184}\) This last section of the commentary fills two quarto volumes in A. Borgnet’s edition—vols. 29 and 30—with a total of 1601 pages of text (indices not included).

\(^{185}\) Alb., *Super IV Sent., prolog.*, Borgn. 29, 1–2.
clarifies the relation of the sacraments to one another, and determines the difference between sacramental grace and the grace of the virtues and the Holy Spirit.\textsuperscript{186} In the special section on the doctrine of the sacraments, which opens with an introduction to the sacraments of the New Covenant (Dist. 2) and explains, once again, the number of sacraments, discussing as well the time of their institution and the baptism of John the Baptist, Albert proceeds to discuss each sacrament individually (Dist. 3–42). He begins with baptism and ends with the sacrament of matrimony. In his depiction of the theology of the sacraments, Albert succeeds in combining traditional elements, for example the remediative concept of their salvific efficacy or Augustine’s doctrine on original sin, with newer, even original approaches, such as the personal enactment of the sacraments, the hylo-morphic structure and form as the principle of sacramental efficacy, as well as the reconciliation of Augustine’s doctrine on original sin, which focuses on lust, with Anselm of Canterbury’s approach that maintains “a lack of necessary justice” as being the essential factor in original sin. Herein, historico-theological scholars emphasize, lies the great significance and relevance of the contribution of the \textit{Doctor universalis} to this area of systematic theology.\textsuperscript{187}

Albert explicates eschatology in his \textit{Sentences} commentary in the very same systematic context found in Peter Lombard. As we saw above, in his early work \textit{De resurrectione} he had assigned it to Christology. The rearrangement of the original order was prescribed by the sequence of the text to be commentated on, whose argument Albert adopted as well. This concurred with his view, adopted from Pseudo-Dionysius and Hugh of St Victor,\textsuperscript{188} that the sacraments lead to the heavenly hierarchy. This enabled him to perceive eschatology as that part of sacramental doctrine whose subject matter is the effect designated by the sacraments and towards which they lead, but which they themselves neither cause nor contain. Eschatology, therefore, needed to consider the glory of the resurrected,
as well as the punishment of the evil and the Last Judgment. Although Albert remains in many ways faithful to the tradition of his predecessors and contemporaries in his portrayal of the doctrine, he nevertheless poses many new questions, often blazing innovative paths for inquiry. With his solutions, he contributed considerably to the further development of the discipline of eschatology.

Although the significance of Albert’s *Sentences* commentary for systematic theology as a whole, as well as for individual areas and issues, has been emphasized repeatedly, as indicated above, it has yet to receive the recognition it deserves. Certain necessary requirements must still be met for this to occur—first and foremost, a critical edition of the work.

8 *The Theological Quaestiones*

Contemporary with the *Sentences* commentary, Albert also composed a series of shorter treatises on various areas and topics of systematic theology. Most of these appear to be transcriptions of the university disputations he held. There are 24 theological treatises in all that scholars have recently been able to ascribe to Albert, with the exception of one that is anonymous. Nineteen of these are contained in Codex Vat. Lat. 781, which belonged to Thomas Aquinas. Not included in this count are the three treatises contained in the critically edited collection deemed inauthentic by the editor, namely, a second redaction of the *Quaestio de prophetia*, which was not prepared by Albert, the *Principium super totam Bibliam*, and the philosophical treatise *De quiditate et esse*. Twenty of the 24 treatises are extant in only one manuscript, and the rest exist in only two or even three codices.

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190 See Kübel, “Die Lehre von der Auferstehung,” 294–318. A brief summary of the doctrinal on beatific vision on the basis of the Lombard’s book of *Sentences*, with regard to the parallel didactic treatises among the early works (*De resurrectione*) and among the late works (*Summa de mir. scient. Dei*), as well as in comparison with the doctrine of Thomas Aquinas and Bonaventure, may be found in Hergan, *St. Albert the Great’s Theory*.


192 For a chronological conspectus, see Anzulewicz, *De forma*, 14.

193 Alb., *Quaestiones*, v.

The theological issues explicated in the *Quaestiones* may be gathered from their respective headings, which I list here according to the sequence of the texts in the critical edition: (1) *Quaestio de peccato acediae*; (2) *Q. de prophetia* (1); (3) *Q. de raptu*; (4) *Q. de visione dei in patria*; (5) *Q. de dotibus sanctorum in patria*; (6) *Q. de sensibus corporis gloriosi*; (7) *Q. de aureola*; (8) *Q. de poena parvulorum sine baptismo decedentium*; (9) *Q. de luxuria*; (10) *Q. de vitiis capitalibus*; (11) *Q. de gula*; (12) *Q. de avaritia 1*; (13) *Q. de peccato originali*; (14) *Q. de avaritia 2*; (15) *Q. de origine animae*; (16) *Q. de sensualitate et eius motibus*; (17) *Q. de inferiori et superiori portione rationis*; (18) *Q. de synderesi*; (19) *Q. de conscientia* (2); (20) *Q. de esse Christi*; (21) *Q. de conceptione Christi*; (22) *Q. de ideis divinis*; (23) *Q. de angelis*; and (24) *Q. de intellectu animae*. Next to the moral-theological and eschatological topics most frequently discussed, we find discourses on the doctrine of God and Christology, the doctrine of angels and on the intellect, as well as the doctrine on prophecy. If one also takes the *Principium super totam Bibliam* into consideration, contained in this collection, a cross section of those issues and areas of theology prevalent in the High Middle Ages appears. In these individual treatises, Albert systematically reconsiders and examines in depth theological issues previously treated within other contexts, but only touched upon there.

The *Quaestiones* offer another excellent basis for studying the evolution of the systematic theology of the *Doctor universalis* and its historico-theological context. Although they are extant in only a few manuscripts, they nevertheless seem to have inspired and stimulated the ideas and theology of his students, especially Thomas Aquinas, and many a contemporary. It is still too early to assess their actual historico-theological standing, however, since only a few of these texts have been analyzed from this aspect, for example *Quaestio de prophetia*, *Q. de synderesi*, *Q. de conscientia*, and *Q. de visione dei in patria.*

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9 The Commentary on the corpus Dionysiacum

After the early writings and the Sentences commentary, two related systematic theological corpora each in and of itself complete, a third collection of writings entirely different in nature follows. They are commentaries to the writings of Pseudo-Dionysius the Areopagite: De caelesti hierarchia, De ecclesiastica hierarchia, De mystica theologia, Epistulae (11), and De divinis nominibus. With his interpretation of the theology of the corpus Dionysiacum, which is negative and apophatical-mystical in nature and in its entirety heavily influenced by Neoplatonism, Albert opened a new chapter in the theological tradition of the Latin West. He had become familiar with this tradition early in his theological career and discovered here, as we noted with respect to the treatises De natura boni and De IV coaequaevis, one of the most influential sources of inspiration for his theological thought. In the Dionysian tradition, all essential elements explaining the fundamental structure of Albert’s thought are recognizable. This is a dynamic form of reflection, based on a circular motif, and which is perceived as a three-phased progression of existing reality: the emanation of existing reality from its divine origin; its perfection in time, space, and matter; and its return to the transcendental goal that is identical to its divine origin. The terms Albert uses to designate the three phases of this progression, or the three segments of this structure, are exitus, perfectio, and reductio. Albert prefaces his interpretation of the corpus Dionysiacum with an explanation of this structure, which we consider to be the hermeneutical key to Albert’s thought.

Whence did Albert derive his interest in the corpus Dionysiacum and his high regard for this tradition? It is not the authority of the author alone, who was identified with the disciple of Apostle Paul, but also his distinctive theology, displaying many new facets and employing

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196 On the autograph of Thomas Aquinas containing Albert’s commentaries, and on the correction of the prior dating of the commentary on De cael. hier., see Adriano Oliva, Les débuts de l’enseignement de Thomas d’Aquin et sa conception de la ‘sacra doctrina’ (Paris: 2006), 214–220.
198 See Anzulewicz, “Pseudo-Dionysius Areopagita.”
Neoplatonic philosophy. The novelty of this tradition, the negative and apophatic-mystical theology of Pseudo-Dionysius, provided Albert with the means for deepening and supplementing conventional academic theology, which was hardly in a position to attain such depths and altitudes while adhering to the path of Lombard’s *Sententiae*.\(^{201}\)

In his commentaries on the writings of Pseudo-Dionysius, Albert develops an apophatic-mystical theology with systematic and methodological recourse to the causality, supremacy, and negation of God, conveyed with Scholastic elements.\(^{202}\) This is already manifest at the beginning of the commentaries, where the introductory questions and the doctrine on theological science are explicated. Here we find the confirmation and expansion of the scientific-theoretical considerations in the *Sentences* commentary, of all the statements in the early works pertaining to the doctrine on angels, and of those in the *Sentences* commentary concerning the doctrine on God and creation or theology’s relation to philosophy. Thus, for example, in the commentaries to *De divinis nominibus* and to the *Epistulae*, Albert readdresses and elucidates his position on the guiding habitus of theology he briefly described in his methodological reflections in *Super I Sententiae*. The habitus directing this science is the faith transmitted by Holy Scripture.\(^{203}\) Whereas methodological reflections in the *Sentences* commentary were more general in nature, since they referred to theology as an integrated science with two fields—biblical and “systematic”—here the method could be specified according to the more narrowly defined subject matter of the respective work being commented. In *Super Dionysium De caelesti hierarchia* and in *Super Dionysium De divinis nominibus* Albert designates these as being the method of analysis (modus resolutorius) that deduces the cause from the caused, or rather assigns the caused to the cause. With regard to the state of angels, their power, and hierarchy (dispositio in principatu et ordine), which constitute the subject matter of the treatise on celestial hierarchy, this means

\(^{203}\) Alb., *Super Dion. De div. nom.* 1, 2, ins. 66–69; see the introduction to this chapter.}
to trace back their most sublime property—the emanation of spiritual gifts—as far as possible to their first cause, in which it exists in the simplest form, freed from the composition of a created being.\footnote{204} This method, writes Albert in Super Dionysium De divinis nominibus, is common to all works of the corpus Dionysiacum. It enables one to recognize the Creator as the cause, starting from the creatures, insofar as it creates that which is caused univocally. The method of resolving down to a cause, unknown because of its preeminence (propter eminentiam sui), according to its nominal designation is that employed by mystical theology.\footnote{205}

The commentaries to the Corpus Dionysiacum are exceedingly extensive in their theological content. Thus, the commentary to De divinis nominibus is not confined to the doctrine on God (divine attributes and divine names), but considers nearly the entire range of systematic theological topics, from the doctrine of creation to eschatology. The commentaries to the remaining works are similarly comprehensive. Due to the limitations of space, we are unable to go into greater detail with regard to the content of the individual commentaries and the Dionysian tradition in Albert’s works. This void is partially filled in the separate article on Albert’s mystical theology in this volume, and partially by the bibliographic references provided below, listing the relevant secondary literature and recent studies.\footnote{206}
The authenticity of this work was long a matter of scholarly dispute. Recent studies on its style, doctrine, and external testimony have proven Albert’s authorship, at least for the first part.207 This later work follows the structure of Peter Lombard’s Sententiae, its content influenced in part by the Summa fratris Alexandri.208 Originally, the work was to comprise four books covering the entire subject matter of theology—Albert’s conception of this we described above, in part one of this contribution and in our summary of the Sentences commentary in part two. Books 1–3 were to be on things that were to be enjoyed or used, and Book 4 would have been on symbols (signa). Only half of the project was completed, that is, only the first two books. Whether Albert himself, or perhaps his socius Godfried of Duisburg, wrote Book 2 remains uncertain. The second part is most definitely not of the same quality as the first book; however, the author clearly compiled the material from early works, among others the dossier on David of Dinant, and from the Summa fratris Alexandri. These conspicuous traits of the second book seem, as has been noted elsewhere, to speak against its authenticity in the narrower sense.209 Possibly old age, blindness, and diminishing strength prevented Albert from realizing this project. Book 1 opens with an analysis of theology as science from a principle-theoretical and methodological perspective. Then, in Book 1, Albert explicates the following topics: enjoyment and use as such (de frui et de uti), as well as things to be enjoyed and used (de fruibili et de


208 On the influence of the Summa fratris Alexandri see Siedler and Simon, “Prolegomena,” ix, ln. 62–p. xi, ln. 58.

utili); the subject of the enjoyment and use (de fruentibus et utentibus); the knowability of God, and especially the theological doctrine on images; the concept of time from the theological perspective, taking the philosophical view into account; the one, the true, and the good as attributes of God’s nature and transcendental concepts (unum, verum, bonum); the Trinity; the names of God; God’s knowledge and foreknowledge; predestination, divine salvation, and reprobation; providence, fate, and the “Book of Life”; divine omnipresence and omnipotence; and the divine will. Book 2 begins with the doctrine of the first cause (de primo principio), followed by discourses on angels, miracles and wondrous things, the Hexaemeron, and the well-ordered state of the universe. The criticism frequently voiced by scholars that the work exhibits discrepancies in relation to doctrines in Albert’s earlier works, or that it even manifests a complete reversal, away from a philosophical theology back to the “old” theology, is incorrect. A reversal in Albert’s thought can be ruled out entirely on the basis of the analyses of the corpus of his works. The existing differences in certain doctrinal details between this work and earlier treatises may just as well be interpreted as either a normal evolution of thought, or as the result of a continuation of the redaction by an assistant.

Formally, the Summa theologiae sive de mirabili scientia Dei provides the hermeneutic framework for the author’s universalist thought and his theological concept, on which his comprehensive system for explaining reality in its entirety is founded. This concept, which adopts Neoplatonic structures of reflection, explicating the emanation of the whole from its divine origin (exitus), its realization under the conditions of contingency in orientation toward the transcendental end (perfectio) and in return towards this goal (reductio), is in essence inspired by Pseudo-Dionysius, but also by the Liber de causis, as we have previously illustrated.210

In the first book of the Summa theologiae sive de mirabili scientia Dei, Albert is familiar with and makes use of the Stoicheiosis theologiké by Proclus for the first time, in the Latin translation provided by William of Moerbeke (1268). Albert nevertheless continues to attribute the Liber de causis to Aristotle and to the Peripatetic philosophical tradition, unlike Thomas Aquinas, who ascribed it to Proclus. The uncompleted work, the second part of which fails to match the scientific excellence of Book 1, was overshadowed by the exceedingly influential Summa theologicae by

210 See note 84 above.
Thomas Aquinas. It was neither widely dispersed nor widely read—although more so than the *Sentences* commentary of the *Doctor universalis*—either within or outside of the Dominican order.\textsuperscript{211}

11 *The Double Treatise* *De mysterio missae* and *De corpore domini*

The two works *De mysterio missae* and *De corpore domini*—in subject matter and structure combined into a double treatise, whose authenticity have long since been confirmed despite repeatedly raised doubts—date from the later phase of Albert’s literary activity. The theological depth and high philosophical standard testify to the author’s undiminished speculative, intellectual capacities.\textsuperscript{212} This is evident, for example, in his characteristic endeavor—making significant progress here—to arrive at a rational explanation for mysteries of faith, such as transubstantiation. In this treatise, Albert corrects his earlier views on Eucharistic accidents and proves, with reference to the philosophical doctrines of Aristotle, Avicenna, and Averroes, that the possibility of them existing without their substance is rationally conceivable.\textsuperscript{213} Although he declares the explanation of the Mass and the treatise on communion to be merely abbreviated though useful sketches, composed out of piety,\textsuperscript{214} both are in fact theological works in no way inferior in quality or scientific ambition to the earlier systematic theological works of the *Doctor universalis*. Much of the author’s doctrine transcends his previous accomplishments, some is entirely novel for his age—the doctrine on transubstantiation, for exam-

\textsuperscript{211} Up until World War II, the number of extant manuscripts for both books was equal, with 13 codices each. One manuscript containing Book 1 originating from the Dominican convent in Vienna was burned in Cologne in World War II; photographs of four pages from this codex are preserved in the Albertus-Magnus-Institute (Bonn). Other manuscripts contain one fragment of Book 1, as well as two excerpts from both books, and one compilation. See Fauser, *Die Werke*, 288–296; Fauser, “Albertus-Magnus-Handschriften. 3. Fortsetzung,” 145–46; Fauser, “Albertus-Magnus-Handschriften. 4. Fortsetzung,” 141.


\textsuperscript{213} Jorissen, *Der Beitrag Alberts*, 18.

\textsuperscript{214} Alb., *Super missam* 3.23, 165b: “Hoc igitur est quod de Missarum peractione breviter et grosse videbatur esse dicendum, alia subtilia melioribus relinquendo.” Alb., *De corp. domini* 4.4.3, 432b: “Haec de Eucharistia propter honorem Iesu Christi a nobis scripta sunt, ex quibus multa alia intelligi possunt. Et quidquid lectori in dictis displicet, parcat simplicitati, quia <et> si non subtiliter, tamen utiliter multa in eis dicta inveniet.”
ple, mentioned above—and its theological relevance undiminished, such as his ecclesiological interpretation of the Eucharist and his conception of the church as the mystical body of Christ. The innovations and intellectual acuity may also be indications that, at least in part, this work is a product of his teaching activities.

The double treatise begins with an extensive prologue, introduced by a citation from Isa. 66:12. Once again, just as in the Sentences commentary, the Bible citation serves as the key providing access to the concepts to be discussed in this work. These become accessible, according to Albert’s interpretation of the words of the prophet Isaiah, with the receipt of divine benevolence according to supernatural perfection on the one hand, and in the tasting of divine sweetness in accordance with the foretaste of glory on the other. Such a complete receipt of divine benevolence and foretaste of glory are fulfilled in the Mass. His motive for explaining the mysteries of the Mass, Albert states, are the many requests he received. From the short prologue to the second part of the double treatise one can conclude that Albert perceives De corpore domini as the sequel, as it were, to the explanation of the Mass, in which the most difficult issues previously postponed were to be readdressed with piety and acuity.

In the first part of the double treatise, Albert carefully explains in detail the canon of the Mass, with its liturgical components and rites and their theological meaning. In the second part, he devotes himself to the sacrament of the Eucharist from the perspective of the Mass as grace (gratia), gift (donum sive datum), office (munus), communion (communio),

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218 Ibid.: “In quo verbo duo promittit dominus, in quibus abundantiam suae bonitatis ostendit. Quorum primum est perceptio suae bonitatis secundum perfectionem gratiae. Secundum est gustus suae dulcedinis secundum praegustationem gloriae.”
219 Ibid., 5.
and sacrifice (sacrificium).221 One of the most difficult topics must have been the mystery of the dogma of transubstantiation, to which Albert had already devoted much deliberation in the Sentences commentary. In this treatise, he contributes a new, rational explanation to the general theological discussion.222

Albert’s double treatise on the Mass and the Eucharist was exceptionally popular in the Middle Ages, to which its wide dispersal, the numerous manuscripts extant today, the many incunabula, as well as the translations into Middle High German testify.223 Theological-historical scholarship in the 20th century has concentrated on the work’s influence, voicing exceedingly positive opinions regarding its doctrine.224 Nevertheless, a critical edition as well as in-depth studies of this significant work remain desiderata.

In Conclusion

In the first part of this sketch, we attempted to explicate how Albert differentiates the concept of theology, which connotation is to be attached to the term “systematic” theology according to his understanding of theology, which of his writings may be classed as pertaining to this discipline of theology, as well as how their aspects may be formally classified. In

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222 See Jorissen, Der Beitrag Alberts, 14–18.
the second part of this portrayal, we highlighted in chronological order (with the exception of *De bono*) those individual treatises we classified as pertaining to systematic theology. Within the limited framework of this contribution, however, we could summarize the main topics dealt with in these works and thus the main aspects of Albert’s systematic theology.

*English translation by Cornelia Oefelein*
The period of Albert's intellectual activity coincides with a transformative period for medieval theology. The medieval “queen of the sciences” received a new form due to the interplay between a vision of theology rooted in the 12th century, still bound to Augustine's tradition, and the growing reception of Aristotle's texts pertaining to the theory of knowledge. The process by which Peripatetic epistemology influenced theology has been epitomized and described in a book published in 1927 by Marie-Dominique Chenu, *Théologie comme science au XIIIe siècle*. This work inaugurated a new epoch in studying the evolution of Scholastic theology because it established a new interpretative paradigm for the historical process that took place at that time. On the basis of a careful study of authors ranging from William of Auxerre to Thomas Aquinas, Chenu formulated the following thesis: 13th-century theologians inherited from their intellectual predecessors a certain vision of theology inspired mostly by elements from Augustine's works and transmitted by Peter's Lombard

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2 Chenu's book was preceded by Engelbert Krebs's *Theologie und Wissenschaft nach Lehre der Hochscholastik an der Hand der bisher ungedruckten Defensa doctrinae D. Thomae des Hervaeus Natalis*, (Beiträge zur Geschichte der Philosophie des Mittelalters. Texte und Untersuchungen) 11/3–4 (Münster in Westfalen: 1912). Nonetheless, it was Chenu's *Théologie comme science* that received broader recognition and identified and named the process transforming theology during the 13th century. Since then, this process and its discovery have been connected with the name of the French historian of theology.

Chenu's book provoked a series of publications developing the same idea. At least two studies must be mentioned in this context, namely Martin Grabmann's *Die theologische Erkenntnis- und Einleitungslehre des Heiligen Thomas von Aquin auf Grund seiner Schrift In Boethium De Trinitate im Zusammenhang der Scholastik des 13. und beginnende 14. Jahrhunderts dargestellt*, (Thomistische Studien) 4 (Fribourg: 1948) and Ulrich Köpf's *Die Anfänge der theologischen Wissenschaftstheorie im 13. Jahrhundert*, (Beiträge zur historischen Theologie) 49 (Tübingen: 1974). While Grabmann's book concentrates on the scientific status of theology, Aquinas's solution to this problem and its later fortune, Köpf demonstrates that metatheology spread out in several questions relatively independent from the scientific status of theology. This motif is particularly valuable in analyzing Albert's standpoint. In addition, he casts doubt on the prominence given to Aquinas over other authors, which is interesting in regard to Albert's *Summa*. 
Sentences. At the beginning of the 13th century, owing to translations of works by Aristotle, theologians were confronted with an elaborated and comprehensive theory of knowledge, in which the notion of science played a central role. Reading Aristotle made theologians reflect whether (and to what extent) Aristotle’s epistemology can be applied to an analysis of the nature of theology, while seeking a balance between tradition and new ideas. The definitive answer to this challenge was offered by Aquinas, who established an equilibrium between Aristotle and Augustine, ascribing to theology the status of a science; this, in turn, opened a path to the later fruitful development of Scholastic theology. Albert played a certain role in this process.3 Therefore, any study devoted to Albert’s understanding of theology must, nolens volens, take into consideration Chenu’s paradigm. Thus, apart from the reconstruction of Albert’s views that distinguished him from his contemporaries, and while disclosing its specific elements,
I intend to reveal the place of the Dominican Master in the development of 13th-century theology.

Albert twice examines the nature of theology in a systematic way: first, in his *Commentary on the Sentences*, and second in his *Summa theologiae*. Since these works belong to different periods of his intellectual career—and also to different stages in the development of Scholastic reflection on the nature of theology—they first should be presented separately, and then their interpretation will be followed by some general synthesizing and historical remarks. I have decided to base my general remarks on a detailed reconstruction of the contents and structure of Albert’s texts in order to show what and how Albert really wrote, to demonstrate recurrent themes, *auctoritates*, ways of reasoning, and, in this way, to present Albert’s thought in the making. By contrast, in the historical analysis I want to disclose the hidden logic and motives for his conception.

### 1. The Commentary on the Sentences

Albert’s *Commentary on the Sentences*, begun in 1243 and completed in 1249, combines the exposition of Lombard’s text with a series of questions following from its contents. Hence, Albert’s analysis consists of two parts: the first interprets Peter Lombard’s crucial thesis, while the second examines a series of questions dealing with two pairs of Augustinian notions, that is, *res et signa* and *uti et frui*. The first four articles and the exposition of the text involve metatheological questions.\(^5\)

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\(^4\) In fact, there exists one more short synthesis of the nature of a part of theology, namely the beginning of Chapter 1 from the *Commentary on the Ecclesiastic Hierarchy of Pseudo-Dionysius*, where Albert asks whether the science of the ecclesiastic hierarchy is a science, what its subject is, if it is one, and what its goal is. The solutions provided in Questions 2–4 are hardly applicable to theology as a whole: the subject and goal of the science of the ecclesiastic hierarchy is limited in comparison with theology more broadly considered and its unity depends directly on the subject. Although the analysis of the scientific status of the science of the ecclesiastic hierarchy is more developed, and the reconstruction of the Aristotelian notion of science in particular is more detailed than the one presented in the *Commentary on the Sentences* (both works were written in the same period), the two versions do not differ doctrinally. See Alb., *Super Dion. de eccl. hier.* 1, Ed. Colon. 36/2, 1, ln. 14–p. 4, ln. 3. See also Burger, “Die Bedeutung der Aristoteles-Rezeption,” 287–288.

\(^5\) The division of Albert’s text introduced by Borgnet, which indeed repeats the structure introduced in the oldest printed edition (Basel, 1506), is incorrect. The section marked off as Article 1 constitutes a unity with the *Expositio textus* that precedes it, while the part consisting of questions begins with Article 2 in Borgnet’s edition. Therefore, in the text
Peter Lombard claims that Scripture and/or theology deals with things and signs (res et signa).\(^6\) Peter's statement entails some difficulties, however, especially when confronted with commonly acknowledged assumptions about the nature and process of scientific cognition. The first problem pertains to the order of matters treated in subsequent books of the Sentences. Albert says that Books 1–3 deal with things, whereas Book 4 analyzes signs. But this inverts the natural order of acquiring knowledge, since the human intellect starts from signs and then, with their help, recognizes things. Albert defends the adequacy of the structure of the Sentences, pointing out that the difficulty assumes that signs and things are interconnected, since signs signify things. Yet in fact the res and signa presented and studied by the Lombard are not related in the way assumed in the objection.\(^7\) Hence, Books 1–3 expose divine things in themselves, whereas Book 4 deals with signs, understood typically as sacraments.\(^8\)

The Augustinian definition of the subject of theology is exposed to another difficulty following from the encounter with the Aristotelian thesis that a science cannot prove its own subject.\(^9\) Albert answers that the term “science” can be understood to have two meanings: first, science is understood as connected with its subject matter, and theology, in this sense, does not consider its own subject; second, science can be understood as a set of truths ordered in such a way as to facilitate learning. Science, understood in the second sense, does investigate its own subject, especially if, as theology, it treats mysterious and eminent things.\(^10\) Albert ends this section with a recapitulation showing that his conclusions are

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\(^6\) See Peter Lombard, Sententiae I 1.1.1 (Grottaferrata: 1973), I: 55, Ins. 7–9.

\(^7\) Alb., Commentarii in I Sententiarum 1.A, Borgn. 25, 14a.

\(^8\) Ibid., 1.A, Borgn. 25, 14a–15a.

\(^9\) Albert refers directly to the general rule claiming that a science has to assume its subject. Ibid., 1.A.1. 1–2, Borgn. 25, 15a.

\(^10\) Ibid., 1.A.1.resp., Borgn. 25, 15a–b.
in agreement with Lombard’s text. Here the exposition of the Sentences ends and the questions start.

The crucial problem at the beginning of Distinction 1 is the subject of theology, determined by Peter Lombard to be res and signa. But, since this thesis is questionable, it provokes a more profound analysis of the nature of theology. Thus Albert inquires into the subject of theology, its unity, its practical or theoretical character, and the mode of proceeding characteristic of theology, which is combined with the theory of biblical interpretation.11

Article 1, studying the subject of theology, begins with a series of its popular and commonly accepted definitions. First, obviously, comes Augustine’s res et signa.12 The remaining definitions are presented as sed contra arguments:13 first come Hugh of St Victor’s works of redemption; second, the etymology of the term theology; third, the argument assuming that the noblest science must have the noblest subject (and the last two prove that God is the subject of theology); and the fourth contends that the literal and the spiritual are the subject of theology.

Albert’s solution begins by distinguishing several meanings of the term “subject of a science”. First, "subject of a science" means, generally, all that is considered in the science.14 According to this meaning, the Augustinian res et signa are the subject of theology, yet not as such but rather as they are related to the ultimate happiness of human beings. Albert contends that such a limitation was assumed by Augustine, who related res et signa to fruenda et utenda. Finally, Albert states that theology does not concern things and signs absolutely, but only as they are subordinated to the perfection and fruition of eternal happiness.15

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11 I omit this problem because it is not directly connected with the nature of theology and I have discussed it in a separate article. See Mikołaj Olszewski, “St Albert the Great’s Theory of Interpretation of the Bible,” in Albertus Magnus. Zum Gedenken nach 800 Jahren: Neue Zugänge, Aspekte und Perspektiven, ed. Walter Senner et al., Quellen und Forschungen zur Geschichte des Dominikanerordens, NS 10 (Berlin: 2001), 467–478.
12 Alb., Commentarii in I Sententiarum 1.A.2.1, Borgen. 25, 15b.
13 Ibid., 1.A.2.sc 1–4, Borgen. 25, 16a.
15 Ibid., 1.A.2.resp., Borgen. 25, 16a–b: “Theologia non speculatur res in quantum res sunt absolute, sed prout ordinantur ad perfectionem beatitudinis et fruitionis, ad quas quaedam ordinantur ut beatificantes, quaedam autem ut adjuvantes et disponentes ad beatitudinem sicut utilia.”
Second, and in a more specific sense, “subject of a science” means the subject of which passions or proprieties are predicated. Albert adds that according to this meaning some earlier authors contended that *credibile* (that is, what is worthy of faith or belief) is the subject of theology. Among these *credibilia* are some very general theological truths from which particular articles of faith can be deduced, for example, that God exists, that the Bible is inspired by the Holy Spirit, the articles of faith expounded in the creed, and some conclusions drawn from them, especially commandments and detailed moral precepts. Furthermore, among *credibilia*, there is something that is nobler than anything else, namely God, and He is also the specific subject of theology, as the etymology of the term “theology” assumes. God, however, is not the subject of theology taken absolutely, but rather as He is the principle and the end. The divine attributes are considered as principles, while other theological propositions, and above all those directing human actions, assume God as their final end.

The text’s corpus also contains answers to the arguments formulated at the beginning of the article, that is, to the five definitions of the subject of theology. By means of his distinction of the senses of the term “subject of a science”, Albert reconciles these definitions with each other. He defends the accuracy of the traditional Augustinian definition of the subject of theology and, at the same time, acknowledges modern solutions that advance *credibile* or God as the subject of theology. The answers to arguments can be easily inferred from the corpus; they recapitulate the standpoint elaborated earlier.

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16 Ibid., 1.A.2.resp., Borgn. 25, 16b: “Alio modo dicitur subjectum specialiter, circa quod negotiatur scientia probando de ipso proprietates”.
17 Burger refers to Alexander’s of Hales *Summa* I.1.1.ad 3 (3b); see “Albertus Magnus, Über Theologie als Wissenschaft,” 19.
18 Ibid., 1.A.2.resp., Borgn. 25, 16b: “Sic quidam antiqui dixerunt, quod credibile generaliter acceptum est subjectum Theologiae. Voco autem credibile generaliter acceptum, praemblem articolulo, sicut Deum esse, veracem, Deum esse, sacram Scripturam a Spiritu sancto esse factam, Scripturam non posse excidere, et hujusmodi. Et similiter articulos... Et etiam illud quod <con>sequitur ad illa duo ex parte bonorum morum, ut fornicationem esse mortale <peccatum>, et hujusmodi: de istic enim probatur <omne> quod probatur in sacra Scriptura.”
19 Ibid., 1.A.2.resp., Borgn. 25, 16b: “<Specialissime> autem dicitur subjectum, id quod est dignius inter considerata in scientia, et sic subjectum hujus scientiae Deus est,... non autem absolute tantum est subjectum, sed secundum quod ipse est Alpha et Omega, principium et finis: quia sic ea quae sunt <ab> ipso, considerantur in ista scientia, tamquam principia<ta> ab ipso, quae repraesentant indicia sui factoris.”
20 Only the fourth argument *sed contra* is fully rejected; Albert explains that it pertains rather to the way in which Scripture is explained than to its subject, see *Commentarii in I Sententiarum* 1.A.2.ad 5, Borgn. 25, 17a.
The next article deals with the problem of the unity of theology. This problem follows directly from the previously accepted Augustinian definition of the subject of theology, as the arguments opening the question show. Argument 1 demonstrates the incompatibility of *res* and *signa* as the subject of theology with the necessary conditions for the unity of theology *qua* science as established by Aristotle.\(^{21}\) The Stagirite points out that one science must consider objects that belong to one genus; but things and signs do not fulfill this condition. Argument 2 shows that theology deals with many things—such as the lives of the patriarchs, angels, the act of creation, and God—and that all are treated by philosophers in different sciences.\(^{22}\) Argument 3 is more complicated. It assumes that according to Aristotle one science considers both being and its properties. Moreover, this science is universal. But things and beings are convertible; hence, the science that considers things cannot be particular but, on the contrary, it must be universal. The unity of such a science depends on the proportionality of all its subjects to something that is one, just as metaphysics considers all the properties of being as they are related to substance. There is, however, no such proportionality among the subjects of theology. Therefore, it is not one science.\(^{23}\) Argument 3 is crucial because it provides the proper criterion that is indeed used in measuring the unity of theology. Albert works out this criterion gradually: he starts from its strictest version in Argument 1, where the unity of the genus is proposed; it is, however, appropriate for the particular sciences. Argument 2 continues this motif and shows that the variety of objects studied by theology is considered by different branches of philosophy. There is, however, one philosophical science that considers all things, namely metaphysics. Thus, Albert has to examine whether there is something in theology that can play the same

\(^{21}\) Ibid., 1.A.3.1, Borgn. 25, 17a: “Dicit Philosophus, quod scientia est una, quae est unius generis subjecti: sed res et signa non sunt unius generis subjecti: ergo non est de eis scientia una.” See also Arist., *Anal. Post.* 1.28, 87a 38.

\(^{22}\) Alb., *Commentarii in I Sententiarum* 1.A.3.2, Borgn. 25, 17a.

\(^{23}\) Ibid., 1.A.3.3, Borgn. 25, 17b: “Dicit Philosophus, quod est scientia una, quae speculatur ens in quantum ens, et quae sunt entis in quantum ens est: et haec non est una scientiarum particularium, sed est scientia universalis: igitur cum res et ens convertatur, scientia considerans res in quantum res, et <ea> quae sunt rei, non erit una scientia particularis, sed universalis. Inde sic: Scientia universalis licet non uniatur genere uno, unitur tamen proportione ad unum, sicut prima Philosophia quae considerat partes entis <omnes>, secundum quod per analogiam respiciunt substantiam: ergo videtur quod sic debat facere ista scientia: sed patet quod sic ad unum non possunt reduci quae quæruntur et tractantur in ea.”
role, namely whether there is such a point of reference common to all the things considered in it.

Albert states that the unity of theology is guaranteed by reference to something one, that is, by reference to the end common to all the subjects treated in theology. Eternal happiness constitutes this final end, because all that is studied in theology somehow relates to it.24

This solution enables Albert to answer the arguments presented at the beginning of the article. To Argument 1, Albert answers that the unity of theology relies on the unity of the reference indicated in the corpus.25 To Argument 2, Albert responds that all the things enumerated are not considered in theology as they are in themselves (the way that they are studied in philosophy), but only in one particular aspect, namely as they relate to salvation.26 Then, Albert analyzes in greater detail theology’s concern with the lives of the patriarchs. These seem too closely tied to the individual to be a subject of any science. Thus, interest in them undermines the scientific status of theology. Albert explains that events from the lives of individuals are considered in theology as examples of the general rules governing moral actions.27

The answer to Argument 3 involves a marginal theme, namely the universality of theology and, indeed, it focuses on it. Albert contends that theology is a universal science like metaphysics, but in a different way because its universality is not due to its subject but rather to its special aspect, namely to its reference to salvation.28

Article 3 answers the question whether theology is theoretical or practical. It is clear from the answer to Argument 2 of the preceding article that Albert favors the practical character of theology. Hence, the arguments opening this article defend the theoretical nature of theology. The first argument takes as its basis the highest dignity of theology: the noblest science must not be investigated because of something else, but instead it must be autotelic and free. Thus, it deserves to be called wisdom.29 The

24 Ibid., 1.A.3.resp., Borgn. 25, 17b: “Haec scientia una est proportione non ad unum quod subjectum sit aliorum, sicut substantia subjectum est accidentium: sed proportione ad unum quod est finis beatificans”.
27 Ibid., 1.A.3.ad 2, Borgn. 25, 18a: “Similiter actus Patrum accipit non ut actus particulares, quia sic non est de ipsis scientia: sed ut exempla quaedam quae habent vim principiorum in moribus, vel fide: scientiae enim quae est ut boni famus, proprius est ille modus qui est per exempla, eo quod ipsa sunt operibus magis apta quam universalia.”
29 Ibid., 1.A.4.1, Borgn. 25, 18a.
second argument assumes that the perfect and imperfect realization of the same thing must belong to one and the same genus. Therefore, since the vision of God in heaven is the perfect realization of theology, theology has to aim at contemplation of the first truth on earth. And such contemplation is accomplished by the theoretical intellect.30

The arguments sed contra defend the practical character of theology. The first one contends that most, if not the whole, of Scripture consists of commandments and precepts to be respected in actions, customs, and behaviors.31 The second argument supports the same observation with biblical authority (James 1:25).32

The text’s corpus begins with the declaration that the nature of theology should be based on its end. The end of theology is revealed by Scripture at the very beginning of Paul’s Epistle to Titus (1:1): “Paul, a servant of God, and apostle of Jesus Christ according to the faith of God’s elect, and acknowledging of the truth which is according to godliness [secundum pietatem].”33 The clause that states that cognition of the truth according to piety constitutes the end of theology is crucial for Albert. The specification secundum pietatem, emphasized by the Gloss,34 distinguishes the truth of theology from the truths studied in different branches of philosophy. Then, the Dominican Master distinguishes two kinds of truths considered by theology: the first one pertains to the proper forms of worship; the second to the intellectual, affective, and substantial unity with the object of worship, which constitutes its final end for achieving happiness. Albert infers further that theology must be an affective science and that

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30 Ibid., I.A.4.2, Borgn. 25, 18a–b.
31 Ibid., I.A.4.sc 1, Borgn. 25, 18b.
32 Ibid., I.A.4.sc 2, Borgn. 25, 18b.
33 As will be demonstrated below, in the analysis of the Summa, the quotation from the Epistle to Titus 1:1 plays a crucial role in Albert’s conception of theology. Although this biblical phrase was also quoted by other medieval theologians, for example Alexander of Hales (Summa theologica I 1.4.1.ad 2 ed. [Quaracchi: 1924], 1: 8b) and, following him, Odo Rigaldi (Quaestio de scientia theologiae, 2.1.6, in Leonardo Sileo, Teoria della scienza teologica. Quaestio de scientia theologiae di Odo Rigaldi e altri testi inediti (1230–1250), II, (Studia Antoniana) 27 [Rome: 1984], 70, note 172), it does not enjoy such a prominent place in these two works as it does in Albert’s Commentary. The importance of this biblical citation is most clearly seen in the shortest version of Albert’s exposition of the nature of theology, i.e. in the prologue to his Commentary on Isaiah (Super Isa. prol., Ed. Colon. 19, 1, Ins. 46–77), where, explaining the meaning of the name Isaiah, he says that it means salvation and, thus, reveals the subject of his prophecy, and consequently of theology. Isaiah’s prophecy does not aim at pure knowledge but leads rather to the good and to salvation. This conclusion is mostly supported by the Epistle to Titus 1:1.
34 See Peter Lombard, In Epistulas Pauli, ad Tit. 1:1 (PL 192, 384C).
the truth it considers is not separated from the good. Thus, consequently, theology perfects the intellect as well as the affective power, that is, the will. The end considered in theology cannot be found among the creatures that constitute the subject of philosophy. Hence, philosophers do not deal with such an end, but instead they have to divide it into the truth and the good, and they must analyze it in two different sciences. The article ends with a refutation of all the arguments, both *pro et contra*, formulated at its beginning. The answer to Objection 1, pointing out that theology is theoretical, gives Albert an opportunity to concentrate on the question of how theology relates to wisdom. He acknowledges that the autotelic character of a science is an indispensable condition of scientific knowledge. Finally, because it studies the highest principle, theology is wisdom, and it is free in a fuller and more perfect way than any part of philosophy because it deals with God, whom all human beings want to know for Himself and because of Himself, and not for or because of anything else. Besides, theology surpasses all the philosophical sciences because it considers its subject in the highest and noblest way, that is, immediately, while philosophical sciences examine their subjects through some determined notions.

Albert rejects Argument 2 by saying that theological cognition strives for the truth not only in the purely intellectual dimension, but also through the affections and substance.

The answers to both arguments *sed contra* explain the relation between the practical and the affective within theology. The explanation is based

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35 Alb., *Commentarii in I Sentientiarum* 1.A.4.resp., Borgn. 25, 18b: “Ista scientia ex fine determinanda est: finis autem dicitur ad Titum, 1, 1 et 2, ubi dicitur: *In* agnitionem veritatis, quae secundum piatem est, in spem vitae aeternae. Et ibi dicit Glossa, *secundum piatem*, id est, Christi religionem…Veritatis autem, quae secundum piatem est, sunt duo: unum scilicet secundum piatem cultus Dei in se et in membris, ad quod pertinet omnia promoventia cultum illum. Alterum autem est finis intentionis, et hic est conjungi intellectu et affectu et substantia cum eo, quod colitur prout est finis beatificans: et ideo ista scientia proprie est affectiva, id est, veritatis, quae non sequestratur a ratione boni, et ideo perficit et intellectum et affectum.”

36 Ibid., 1.A.4.ad 1, Borgn. 25, 19a: “Ista scientia principalissime dicitur sapientia, eo quod ipsa est de altissimis, et altissimo modo: quia de Deo *<est>* per principia fidei: aliae autem <sapientiae> quae a philosophis sunt inventae, etsi sapientiae dicantur, quia sunt de altis, non tamen sunt altissimo modo, sed potius per principia quae sub ratione sunt. Sic dico etiam, quod ipsa vel sola libera est, vel aliis liberior: dicitur enim scientia libera (sicut dicitur Philosophus) <sic>:ut homo liber, scilicet, quia gratia sui, et non propter alterum est: et hoc est propter scitum quod quaeritur in illa, quod propter se desideratum est: hoc autem praecipue Deus est, quem omnes scire scientia beatificante desiderant.”

37 Ibid., 1.A.4.ad 2, Borgn. 25, 19a.
on the end of theology. As revealed in the Bible (e.g. Titus 1:9), theology aims at piety. But a thing can have many ends, one that is ultimate and another that is subordinated. The ultimate end of theology is the truth of affection that gives eternal happiness, whereas the subordinated end is moral conduct. Seemingly, this proves the practical character of theology, or at least some kind of subalternation of theology to ethics. Theology, however, is neither reduced to ethics because moral conduct is not its ultimate end, nor is it subalternated to ethics, since theology does not accept its principles from ethics, and a necessary condition for the subalternation of one science to another is that one receives its principles from the other. Thus, Albert introduces subalternation into his metatheology. He refuses, obviously, the subalternation of theology to any philosophical science.38

As mentioned above, Article 4 analyzes biblical hermeneutics together with the use of rational demonstrations in theology. Both topics are treated as one problem, namely the exposition of Scripture. The method proper to theology, understood as the science of the Bible, is exegesis. But since theology’s goal is a discussion with opponents of the faith, argumentation, whether purely rational or including the appeal to authority, can be a tool of theology.39 This brief remark provides us with Albert’s solution to one of the most extensively analyzed questions of Scholastic theology, namely the acceptability of rational procedures in theology. Albert presents here a traditional view that apologetics justifies the use of rational methods in theology.

At the end of this presentation of Albert’s Commentary, it must be noted that this work, unlike the later Summa, met with some response. Specifically, the claim that theology is an affective science was adopted

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38 Ibid., 1.A.4.ad sc 1–2, Borgen. 25. 19a–b: “Finis autem scientiae duplex est, scilicet ultimus, et ordinatus ad illum. Qui a quibusdam <terminus> vocatur ultimus, veritas est affectiva beatificans: finis autem citra illum est, ut boni fiamus. Nec tamen sequitur, quod ipsa sit moralis philosophia vel illi subalternata: moralis non est, quia mores non sunt ultimus finis in ea, ut habitum est: subalternata non est, quia scientia subalternata accipit principia et causas subalternantis: sed ista scientia non accipit ab aliqua, sed propria habet principia fidei et proprias causas secundum intentionem meriti, et ideo non accipit ab aliiis, sed aliae famulantur ei.”

by Guy of Aumône and by Albert’s most faithful disciple—Ulrich of Strasbourg.40

2. The *Summa theologiae*

Albert’s *Summa theologiae*, dated to 1268–74, discusses metatheology in a separate introductory part (treatise 1), entitled “On theology as it is a science”. In the first question of Treatise 1, Albert analyses the scientific status of theology. The corpus is short; Albert states there only that theology is truly a science, and, moreover, that it is wisdom because it recognizes the highest causes, which, according to Aristotle, constitute the essence of wisdom.41

Of the six arguments examined by Albert, three seem essential. The first one, continuing the motif from the *Commentary on the Sentences*,42 says that theology treats the histories of individuals, which cannot be the subject of science.43 Albert answers that particulars are present in theology not as its subject, but because theology is a science regarding piety. This biblical formula (Titus 1:1), cited already in the *Commentary*, is cited again and plays a crucial role at the very beginning of the introduction to the *Summa*, as will be shown in Question 2 dealing with the definition of theology. Thus, *scientia secundum pietatem* is a key notion of Albert’s metatheology. Here, in the answer to the first argument, the Dominican Master explains that the relation of theology to piety means that theology influences faith and actions that result in merit. Thus, the final end of theology consists in the specific actions of individuals, its credibility relies on the example of virtuous men, and its persuasive value grows when it adduces examples from the lives of individuals, especially when teaching simple believers. These remarks, however, do not remove the methodological problem. Thus, Albert continues and insists that the particular is able to become the universal if one particular stands for every particular of a kind. For example, if Peter’s soul is immortal, every human soul is

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41 Alb., *Summa theologiae I* 1.1, resp., Ed. Colon. 34/1, 6, Ins. 52–55: “Theologia verissime scientia est et quod plus est sapientia, eo quod per altissimas causas est, quas difficile est homini scire. Talia enim cognoscentem PHILOSOPHUS dicit esse sapientem”.
42 See note XXX above.
immortal. This is the case for every biblical statement because what the Holy Spirit reveals in one, is true of everyone. Therefore, as Albert summarizes, the particulars proposed by Scripture are potentially universal and can therefore stand for universals in theological argumentation.⁴⁴

Arguments 2 and 6 assume a disproportionality between truths of theology and the human intellect. The former seem impossible to prove or surpass the abilities of the latter. Thus, the intellect must rely on authority. The intellect, however, cannot produce science when proceeding from authority; it is limited to mere faith. Thus ultimately theology, which is based on authority, cannot be a science.⁴⁵ Albert solves this objection by pointing out that it assumes only the natural powers of the human intellect, whereas the supernatural light is able to elevate the human cognitive power to a degree of certitude that surpasses that of science.⁴⁶

Argument 3 asserts that all human knowledge can be divided into opinion about what is probable, faith about what is credible, and science about what is intelligible. Hence, theology, which deals with what is a matter of belief, is faith but not science. The limitation of theology to faith is supported by Augustine.⁴⁷ Argument 4 provides corroboration by invoking the auctoritas of Hugh of St Victor.⁴⁸ Albert answers that matters of belief can be divided into those that can also be understood by the intellect, and those that cannot. Theology is about those that can also be understood by the intellect; thus, it can be a science.⁴⁹

Argument 5 assumes Gregory the Great’s judgment that faith is deprived of its merit when demonstrated by human reason. But every science is grounded in human reason; therefore, theology is not a science.⁵⁰

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⁴⁵ Ibid., 1.1.2, Ed. Colon. 34/1, 6, ln. 32–p. 7, ln. 6; 1.1.6, Ed. Colon. 34/1, 6, lns. 30–42.

⁴⁶ Ibid., 1.1.ad 2, Ed. Colon. 34/1, 7, lns. 35–42: “Intellectus noster diversis perficitur luminibus et elevatur; et ex lumine quidem connaturali non elevatur ad scientiam trinitatis et incarnationis et resurrectionis, ex lumine autem fluente a superiori natura ad supernundana elevatur . . . Et his lumine desuper influenta assentit et certius ea scit quam illa quae ex lumine sibi connaturali accipit”; 1.1.ad 6, Ed. Colon. 34/1, 7, lns. 76–85.

⁴⁷ Ibid., 1.1.3, Ed. Colon. 34/1, 7, lns. 7–19.

⁴⁸ Ibid., 1.1.4, Ed. Colon. 34/1, 7, lns. 20–23.

⁴⁹ Ibid., 1.1.ad 3, Ed. Colon. 34/1, 7, lns. 43–59.

⁵⁰ Ibid., 1.1.5, Ed. Colon. 34/1, 6, lns. 24–29.
In response, Albert explains that theology does not proceed merely from human reason, but that it presupposes also supernatural revelation.\footnote{Ibid., 1.1.ad 5, Ed. Colon. 34/1, 7, Ins. 70–75.}

It is surprising that Albert does not focus on the sense in which the term “science” is predicated of theology. One would expect that the author, who is one of the specialists in the study of Aristotle in the 13th century, would be interested in examining the relation of the Aristotelian notion of science to theology. Instead, Albert seems to be satisfied merely with the claim that theology is a science in a general, unspecified—that is, not specifically Aristotelian—sense of the term.\footnote{This feature also struck other medievalists writing about Albert’s metatheology; see e.g. Senner, “Zur Wissenschaftstheorie,” 325–326; Burger, “Die Bedeutung,” 288–289.} In a more detailed way, Albert declares his understanding of the term “science” as referred to theology in two sed contra arguments. There Albert states that theology is a science because it is known directly from the source of knowledge, and that this source is immutable.\footnote{Alb., Summa theologiae 1.1.sc 1–2, Ed. Colon. 34/1, 6, Ins. 43–51.} The application of the term “science” to theology in this common understanding of the term is undermined by two arguments: first by the conviction, justified also by Aristotle’s vision of science, that science must deal only with universals and, consequently, must be general; and second by the distinction—grounded in the Aristotelian language too, but present also in the Augustinian tradition—according to which science is incompatible with faith, accompanied by the claim that theology is identical with faith. Albert rejects both these arguments and demonstrates that theology is general and deals with universals (only the biblical expression of theological truths is particular and singular), and that it cannot be reduced solely to faith. In fact, arguments use the term “fides” ambiguously, using interchangeably fides understood as credulitas (credibility) or conviction based only on authority, which is less certain than science and rightly ranked under it, with faith understood as a conviction, based on God’s revelation, that offers stronger certainty than any natural science. Theology is based on faith in the second sense and it exceeds credibility in regard to certainty, and that is why it is a science. Theology’s certainty surpasses that of the remaining sciences because it was revealed through the supernatural light. The presence of the supernatural light in theology explains also why it is able to achieve an understanding of objects inaccessible to the natural sciences. Thus, Albert defends a reasonable opinion that the level of certainty in theology is surely not lower...
than that in the natural sciences, and that theology differs from a simple, unreflective faith.

Question 2 deals with the definition of theology. Albert begins with two commonly acknowledged definitions extracted from St Augustine. The first says that theology is a science about things that regard salvation, while the second says that it considers all that leads to faith, and gives birth to, nourishes, and corroborates it. These definitions seem unsatisfactory because they restrict too narrowly the range of things with which theology must deal. In fact, theology concerns things that have nothing in common with salvation (Argument 1), for example, sin (Argument 2). Besides, faith grows principally because of miracles and charity; hence, they alone should constitute its subject (Argument 3). In addition, faith grows exclusively from God’s grace influencing our virtues; therefore, God alone should be theology’s subject (Argument 4). Finally, the meaning of the term “theology” indicates that theology speaks about God, and the meaning of the term should coincide with its definition (Argument 5).

The corpus is based on the Pauline saying (Titus 1:1) that theology is a science regarding piety. Albert writes that the limitation secundum pietatem restricts the subject of theology and excludes the understanding that theology treats everything. Next, he declares that piety should be understood as service to God that is perfected in the three theological virtues—faith, hope, and charity—and in prayers and sacrifices. Moreover, since piety leads to salvation, theology is a science about salvation; and that is why it is also about things that lead to faith, and create, nourish, and corroborate it. Thus, Albert proves that the statement inferred from the biblical text is in full agreement with Augustine’s authority. Further, Albert adds that faith is an assent to the first truth. This assent, in turn, is produced by hearing of the deeds of the saints, of miracles, of the punishments of the wicked, the creation of the world, or its fall and restoration.

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54 Ibid., 1.2, Ed. Colon. 34/1, 8, Ins. 9–19: “Et dicit Augustinus in libro de trinitate xiv, quod theologiam est scientia, quae est in rebus ad salutem hominum pertinentibus. Et ibidem dicit: ‘Non quidquid sciri potest ab hominibus in rebus humanis, ubi plurimum est supervacuae vanitas aut noxiae curiositatis, huic scientiae tribuo, sed id tantummodo quo fides saluberrima, quae ad veram beatitudinem ducit, gignitur, nutritur et roboratur’. Ex quo accipitur, quod theologiam est scientia, ea quae sunt ad fidem generandam, nutriendam, roborandam, considerans.”

55 Ibid., 1.2.1–5, Ed. Colon. 34/1, 8, Ins. 21–45.

56 Ibid., 1.2.resp. Ed. Colon. 34/1, 8, Ins. 47–63: “Sicut dicitur tit. 1 (1), theologiam scientiam est ‘secundum pietatem’, hoc est quae non est de scibili simpliciter, ut scibile est, nec de omni scibili, sed secundum quo est inclinans ad pietatem. Piaus autem, ut dicit Augustinus, cultus dei est, qui perficitur fide, spe et caritate et oratione et sacrificialis.
In the answers to arguments that attack Augustine’s definitions, Albert points out that the goals of theology may be many and that they are structured hierarchically: salvation is its main goal, and the others serve as the means to accomplish this principal goal. Thus, theology can consider sins, because they incline one to faith from the fear of punishment. Theology resembles medicine, which deals with illnesses and cures, although health is its main goal.\(^{57}\) Theology naturally considers God too, however, not only demonstrating His essence, as the sense of the word “theology” suggests, but also as the principle and end of things; this, in turn, involves salvation.\(^{58}\)

The main idea of Albert’s text is clear. First, he presents the most important biblical text on which an analysis of theology’s nature can be based. Second, he tries to defend and show the relevancy of the commonly acknowledged *auctoritates* of St Augustine. Their weakness lies in that they seem to define the scope of theology too narrowly. Albert shows that Augustine’s propositions can be supported by the Bible and that a careful interpretation of Titus 1:1 discloses that different elements can be integrated in one definition by means of the hierarchy of goals realized by theology.

Question 3 examines the subject of theology and three problems subordinated to it. The question of the subject of theology clearly follows from the previous one. These are the different possible subjects of theology that undermine Augustine’s views on its nature. Moreover, Albert is aware that the solution of the problem of theology’s subject affects some of its remaining features, namely its unity, its practical or theoretical character, and its universality versus particularity.\(^{59}\) Question 3 starts by sketching the battlefield. The earlier authors proposed many solutions to the problem of the subject of theology. Albert enumerates the four most important subjects: Augustine’s *res et signa*; Hugh of St Victor’s *opera restaurationis*—that is, works of redemption, understood as the opposite

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\(^{57}\) Ibid., 1.2.ad 1–2, Ed. Colon. 34/1, 8, ln. 68–p. 9, ln. 9.

\(^{58}\) Ibid., 1.2.ad 5, Ed. Colon. 34/1, 9, Ins. 10–18.

\(^{59}\) Ibid., 1.3, Ed. Colon. 34/1, 9, Ins. 59–67.
of the *opera conditionis* (that is, works of creation) studied by other sciences; the Gloss’s Christ and the church; and, finally, God. Although Albert proposes the etymology of the term “theology” as a justification of the view that God is the subject of theology, it must be noticed that this thesis constituted one of the principal elements of Aquinas’s metatheology, which distinguished him from his contemporaries.60

First, Albert explains how Augustine’s *res et signa* can be connected to the definition of theology presented earlier. Theology is about things and signs that dispose to salvation.61 Objections may be presented to this opinion because, first, things and signs do not belong to one genus, which is a necessary condition for the unity of a science and its subject; second, signs are too varied and too multiple to be grasped in one science; third, very much the same thing can be said about things, since it seems that the things considered in theology comprise all existing things, and, consequently, the other sciences are superfluous.62 Hugh is wrong because he excludes the *opera conditionis* or works of creation that are treated in the Bible.63 In addition, the Gloss seems to define the subject of theology too narrowly, since it excludes many things about which Scripture does speak, such as creation, hell, and the devil.64 The fourth possibility entails difficulties, too. God also does not exhaust the multitude of things considered in the Bible.65

The corpus is based on a threefold understanding of the term “subject of a science”. “Subject of a science” may mean, first, what is principally considered in a science; second, that about which the properties are proved; and third, all that helps to examine the subject in the first and second sense. Albert illustrates these meanings with the example of metaphysics and its subjects: God is the subject of metaphysics in the first sense, being is the subject of metaphysics in the second, and accounts of the opinions of ancient thinkers and an understanding of the principles of demonstration constitute the third.66

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61 Alb., *Summa theologiae* I 1.3.1, Ed. Colon. 34/1, 9, In. 70–p. 10, In. 20.
62 Ibid., 1.3.1–3, Ed. Colon. 34/1, 10, Lns. 21–39.
63 Ibid., 1.3.1.4–5, Ed. Colon. 34/1, 10, Lns. 40–47.
64 Ibid., 1.3.1.6–7, Ed. Colon. 34/1, 10, Lns. 48–58.
65 Ibid., 1.3.1.8–9, Ed. Colon. 34/1, 10, Lns. 59–64.
66 Ibid., 1.3.1.resp., Ed. Colon. 34/1, 10, Lns. 66–85: “Subiectum in scientiis tripliciter assignatur, scilicet quod principaliter intenditur et in principali parte scientiae, sicut deus dicitur esse subiectum primae philosophiae…Secundo modo assignatur subiectum in scientiis, de quo et de cuius partibus probantur passiones, sicut ens subiectum dicitur esse primae philosophiae, ut unum et multa et potentia et actus et ens necesse et possibile
In accord with this distinction, God is the subject of theology in the first sense (this is the source of its denomination); Christ and the church together with all the sacraments (this is equipollent with Hugh’s *opera restaurationis* and with God understood as *fruibile*) are the subject of theology in the second; and *res et signa* are the subject of theology in the third sense.\(^{67}\)

Next, Albert solves the arguments presented at the beginning of the chapter, using extensively his threefold distinction of the subject of a science. Objections raised against Augustine’s *res et signa* are not relevant because signs are considered in theology as things, and not as signs. Besides, theology is not about everything in such a way that it eliminates all the remaining sciences.\(^{68}\) The *opera conditionis* and all the things listed in the arguments against the third position are the subject of theology in the third sense.\(^{69}\) God, in turn, is the subject of theology in the first sense.\(^{70}\)

The general tendency of Albert’s solution is irenic. He wants to reconcile all the definitions and to show that they do not involve difficulties that cannot be removed. By contrast, he shows that they complete each other, and together they adequately represent the variety of the contents of theology. From a purely historical point of view, Albert goes against the mainstream of the period. He presents the opinion characteristic of the earlier generation of theologians, as did Alexander of Hales and Bonaventure, who also tried to promote similar multipartite subjects of theology.\(^{71}\) By contrast, Aquinas argued unambiguously in his *Summa*
theologiae that God is the principal subject of theology, to which every other is subordinated.72 After Aquinas, most authors accepted God as the proper subject of theology.

Chapter 2 on the unity of theology, like the parallel question in the Commentary, begins with the same counterargument based on Aristotle's thesis that "one science must pertain to one genus." This condition is fulfilled neither by the res et signa, nor by the opera restaurationis. Moreover, even God cannot satisfy the criterion of the unity of a genus, since He belongs to no genus.73 But every theologian defends the unity of theology.74

The corpus has a polemical character: first, Albert cites two conceptions pertaining to the unity of theology, and then he formulates his own in opposition to them. The first was put forward by Thomas Aquinas, who says that theology is one because of the one formal notion through which everything is considered in it; this notion is revelabile, that is, subject to revelation.75 Albert formulates two objections against Thomas's solution. First, Scripture speaks about many things that are not revealed, but can be rationally deduced. If Aquinas were right, theology would be one science encompassing all the others because everything may be revealed. Second, the form that unites a science must be the form of the subject matter of a science, not the form of the knower. This condition is not satisfied by revelation because revelation is properly ascribed to a person to whom something is revealed, not to that which is revealed. If the state of the knower determined the form of a subject, the subject would be accidental because the subject would be the same whether revealed or not revealed, and would not be the subject of the science.76
The second opinion asserts that it is useless to search for one, strictly determined subject of theology because it is a general science that somehow considers everything. Albert raises one objection against this standpoint. He says, namely, that although mathematics is also a general science, it must have one subject; otherwise all its propositions will be proved only accidentally.

Finally, Albert presents his own solution. He contends that the unity of theology is due to the unity of the form of the subject according to the second meaning of the term explicated earlier. Albert reminds the reader that a sign reduces to what is useful, and the useful to the fruibile, just as a means reduces to the final end. Albert argues that this unity is not the unity of the genus, but the unity of the principle. This principle is properly in one thing, and exists analogically in others. Unity such as this is characteristic of theology and metaphysics. Thus, the fruibile is the subject of theology just as being is the subject of metaphysics, and both of the subjects provide their sciences with unity in the same manner.

The chapter ends with the answers to arguments against the unity of theology. Albert repeats that the unity of theology is not the unity of the genus, but an analogical unity, which is sufficient for the unity of a general science. He adds that God, indeed, does not belong to any genus or

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77 Ibid., 1.3.2.resp., Ed. Colon. 34/1, 12, Ins. 67–69. The editors of the Editio Coloniensis refer here to Krebs (Theologie und Wissenschaft, 56–57), who discusses Peter’s Olivi question on the subject of theology from his Commentary on the Sentences (edited later by E. Stadter, “Offenbarung und Heilsgeschichte nach Petrus Johannis Olivi,” Franziskanische Studien 44/1 (1962), 1–12). The problem is that Peter’s text is surely later than Albert’s Summa; we do not possess any text earlier than the Summa that contains a similar conception. Perhaps, Albert cites here a conception current among Franciscans who, in their oral tradition, had a critical attitude toward Aristotelian metatheology, which was later committed to writing by Peter.

78 Alb., Summa theologiae I 1.3.2.resp., Ed. Colon. 34/1, 12, Ins. 70–73.

79 The rest of the argument indicates that Albert in fact means subject in the second meaning, in spite of the fact that the text has “first”.

80 Albert says that nothing other than God is fruibile. See Alb., Summa theologiae I 2.2.resp., Ed. Colon. 34/1, 31, Ins. 58–64.

81 Ibid., 1.3.2.resp., Ed. Colon. 34/1, 12, Ins. 80–p. 13, ln. 8: “Theologia una scientia est ab unitate formae unum facientis subjectum, secundum quod substat et causa est passionum, quae determinantur de subiecto, quod secundum primam intentionem subjiciet dicitur. Iam enim HABITUM est quod signum reductur ad utile, utile autem refertur ad fruibile. Dicit tamen PHILOSOPHUS, quod ubi unum propter alterum, utrobiique tantum. Et est sensus, quod finis et non aliquid quam finis insipicet et quaeretur et in seipso et in eo quod est ad finem ipsum, et ita utrobique quaeritur finis; et sic in utili quaeritur fruibile et stat sub forma fruibilis. Et haec unitas non est generis nec speciei, sed principii, quod simplisticer est in uno, et in alis est secundum modum, quo respicient in ipsum per analogiam unicusque determinatum; et talis unitas est primae philosophiae et theologiae.”
species, but He is analogically present in everything because everything is related to Him. 82

Chapter 3, on the practical or theoretical character of theology, begins with three arguments in favor of the practical character of theology. The first is based on Aristotle’s statement that practical sciences aim at action and theoretical ones are concerned with causes and truth. Theology also has an action as its goal, since Scripture argues that men should not only hear the Word but also fulfill it. The second argument points out that the Bible makes use of examples, parables, commandments, and prophecies, which call upon men to act morally. The third quotes Paul’s Epistle to Titus (1:1), from which Albert infers that theology’s object is not truth as such but rather truth as something that induces piety. Hence, theology is a practical science. 83

Next comes the objection sed contra, which refers to Thomas Aquinas’s notion 84 that if God, who cannot be affected by man’s operations, is one of theology’s subjects, then theology must be a theoretical science. Albert’s response also presents his own solution to the problem. He starts with the assertion that Scripture is practical and that its goals are operations caused by the theological or cardinal virtues. Besides, when Scripture considers the truth of an object of eternal fruitio (that is, enjoyment), it relates truth to affect. For example, the affective intellect enjoys the highest truth in faith, the salutary element in hope, and goodness in charity. Moreover, the truth about God is discovered in the Bible primarily not as truth in general but as salutary truth. Next, Albert points out that such a description of the nature of theology agrees with the Aristotelian notion of practical science. 85 The ultimate goal of practical science is contemplation,

82 Ibid., 1.3.2.ad 1–3, Ed. Colon. 34/1, 13, Ins. 9–25.
83 Ibid., 1.3.3.1–3, Ed. Colon. 34/1, 13, Ins. 35–51.
84 Ibid., 1.3.3.sc, Ed. Colon. 34/1, 13, Ins. 52–57: “In contrarium huius videtur esse, quod sacra doctrina de deo et operibus eius est, in quibus opus nostrum non requiritur, sed verum, quod est in eis. In omnibus autem practicis sive liberalibus sive mechanicos opus nostrum requiritur. Videtur ergo, quod haec scientia sit theorica, non practica.” Cf. Thomas Aquinas, Summa theologiae I 1.4.resp., ed. Marietii, 4b. There exists, however, a quite similar argument in Bonaventure’s In librum I Sententiarum proem. 3.sc 3, 12b.

A paragraph that contains the justification of the theoretical character of theology reproduces a mere skeleton of the reasoning. Therefore, it is not so easy to recognize the specificity of Aquinas’s formulations. There is probably only one formal element that enables us to recognize St Thomas as the source of citation, namely Albert’s use of the term doctrina sacra, which is typical of Aquinas’s language in Question 1 of Summa and is exceptional for Albert.

85 The thesis claiming that theology is a practical science was earlier put forward by Odo Rigaldi, Quaestio de scientia theologiae 1.6.resp., 51, note 118. In contrast to Albert, Odo
and virtues and their actions are a way leading to it. Therefore, a practical science pertains either to the end or to the means leading to it. Comparing theology with ethics, Albert explains their difference: the former deals with supernatural virtues and the latter with natural ones.86

The last feature of theology that depends on its subject is its universality. The universality of theology seems to be favored by solutions to the previous questions where Albert agreed that theology is, in some respects, about everything. Besides, nothing is entirely outside the scope of theology, so it must consider something common to everything.87 Yet, there is one remarkable argument against the universality of theology. All the particular sciences draw their principles from a universal science. This is true of metaphysics, which provides all the remaining natural sciences with principles regarding being in general and with the principles of demonstration. But this cannot be true of theology because the natural sciences do not draw their principles from a supernatural one.88

Albert, aware of difficulties following both from the universality of theology as well as from its particularity, says that theology is neither universal nor particular. There is but one universal science, metaphysics, and its subject is being. By contrast, there are many particular sciences and each of them pertains to a specific genus of beings. Theology, however, is neither about being in general, nor about any part of being; it is about being that is determined analogically to the fruibile, that is, to God. Moreover, theology is about all the parts of being as they are related to the fruibile. Hence, theology is neither particular because in some sense it is about everything, nor universal because the remaining sciences do not

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basses the practical character of theology on its goal, saying that it is not limited solely to
cognition.

86 Alb., Summa theologiae I 1.3.3.resp., Ed. Colon. 34/1, 13, Ins. 58–81: “In veritate sacra
scriptura practica est et stat in opere virtutis vel theologicae vel cardinalis, quia si etiam
verum in re fruibili vel utili inquirit, hoc ipsum refert ad affectum, ut scilicet in fide vel in
eo, quod succedit fidei, fruat per affectum vel intellectum affectivum summa veritate,
per spem vel spei succedens summo beatificante, per caritatem summa bonitate. . . . Sicut
Aristoteles etiam in X Ethicorum felicitatem contemplativam determinat ut finem, ad
quem referatur actus virtutum intellectualium et moralium, et heroicarum; propter quod
et ipsa, quae tractat de felicitate contemplativa, moralis sive practica est, sicut ceterae
partes scientiae moralis. Differt autem ab aliis practicis, quas philosophi considerant; aliae
enim practicae stant ad opus perfectum perfectione virtutis acquisitae, ista autem stat ad
opus perfectum perfectione virtutis infusae per gratian.

87 Ibid., 1.3.4.ad 1–3, Ed. Colon. 34/1, 13, ln. 88–p. 14, ln. 10.

88 Ibid., 1.3.4.sc 1, Ed. Colon. 34/1, 14, Ins. 11–22.
draw their principles from it. Thus, Albert proves the independence and autonomy of the particular sciences from theology and starts a new topic in his introduction, continued in the next question, namely the topic of the relations between theology and the remaining sciences.

The main theme of Question 4 is the difference between theology and the natural sciences. The series of arguments presented at the beginning tries to convince the reader that theology can be distinguished from other sciences neither by its source, because every science comes from God, nor by its subject, since like theology metaphysics speaks about God and theology deals with many things studied in other sciences. The last objection points to the fact that unless theology is distinguished from the other sciences, it will seem superfluous because it is transmitted by them. The arguments sed contra and the corpus distinguish theology from the natural sciences. Theology differs from them because of the proprieties treated in it, and because of the way of justification. Theology treats the divine attributes, while other sciences treat proprieties of being; theology's proofs are based on faith or revelation, whereas the natural sciences use axioms. The problem of the specific way in which theology is acquired is considered in counterarguments, where Albert stresses the difference between revelation and experiment: the former characterizes theology, the latter the natural sciences. A solution elaborated in the corpus helps to answer the arguments: Albert acknowledges that every light derives from God, but theology is based on a special light that differs from that used by natural sciences. In the answer to the last objection, the Doctor universalis proves that theology is necessary. The natural light is not able to inform us about all that is necessary to salvation; hence, the natural sciences leave room for the supernatural, that is, for theology.

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89 Ibid., 1.3.4.resp., Ed. Colon. 34/1, 14, Ins. 23–48: “Theologia proprie loquendo nec est patricularis nec universalis. Proprie enim universalis est, quae est de ente, quod universale est essentialiter omnibus. Particularis autem, quae est de aliqua specie entis sive parte entis per formam substantialem, coartati sub ente communi sicut sub principio, et non sub genere. Theologia autem non de ente ut ens nec de partibus entis est, ut partes entis sunt, sed est de ente determinato per formam analogiae ad id quo fruendum est, et est de partibus entis, secundum quod specialem habent analogiam ad illud. Et ideo non simpliciter est universalis vel particularis, sed quodammodo est et universalis et particularis.”

90 Ibid., 1.4.1–5, Ed. Colon. 34/1, 14, Ins. 55–76.

91 Ibid., 1.4.6, Ed. Colon. 34/1, 14, Ins. 77–79.

92 Ibid., 1.4.1–4 and resp., Ed. Colon. 34/1, 15, Ins. 1–32.

93 Ibid., 1.3.4.ad 1–5, Ed. Colon. 34/1, 15, Ins. 33–62.

94 Ibid., 1.3.4.ad 6, Ed. Colon. 34/1, 15, Ins. 64–69: “Ex illuminatione enim connaturali nobis non sufficienter innotescunt, quae ad salutem necessaria sunt. Unde omnibus aliis
The next question examines the method proper to theology. As in the *Commentary on the Sentences*, the question combines a theory of interpretation with the problem of rational argumentation in theology. Chapter 1 of this question—concerning whether theology proceeds like a science—consists merely of the arguments and answers to them, and has no corpus. First, Albert describes the scientific method: science analyzes, synthesizes, and/or constructs syllogisms, but theology does not use these heuristic methods; instead, it expresses its truths in metaphors, which also are not as clear as the forms of scientific argumentation. Albert agrees with all the arguments and in his answers explains why theology does not proceed like the other sciences. Albert reminds us that theology is practical and that its ultimate goal is action. But action is more effectively directed by examples than by syllogisms. Furthermore, examples are comprehensible to the simple believers as well as to the educated. Thus, since theology is addressed to everyone, a non-scientific procedure takes precedence over the scientific procedure, although the latter is not excluded.

Next, the Dominican Master clarifies why the use of metaphors is justified in theology. The human intellect is disproportionate to God, just as the eyes of a bat are not properly proportioned to the sun’s light; hence, the human intellect must recognize God, who is simplest and most manifest, through complex and sensible things. Such a procedure is forbidden to the philosophical sciences because their light is proportional to the truths they study. Moreover, every metaphor is naturally mysterious, and not obvious.

The next chapter answers a question implicit in the previous one; namely, if the procedure proper to theology is not scientific, it seems that theology suffers from a defect and lacks certainty. All the arguments against certainty in theology assume that scientific certainty is the highest type possible. But, as has been acknowledged in the previous chapter, the method applied in theology is far from the scientific method. Theology uses poetic expressions, is based on faith and authority, and employs metaphors and equivocal terms.

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traditis scientiis ista tamquam omnium perfectiva necessaria est, in qua supernmundana illuminatione innotescunt ea quae ad salutem hominis pertinent.”

95 Ibid., 1.4.1.1, Ed. Colon. 34/1, 16, lns. 5–21.
96 Ibid., 1.4.1.1–3, Ed. Colon. 34/1, 16, lns. 21–35.
97 Ibid., 1.4.1.ad 1, Ed. Colon. 34/1, 16, lns. 36–65.
98 Ibid., 1.4.1.ad 2, Ed. Colon. 34/1, 16, ln. 66–p. 17, ln. 35.
99 Ibid., 1.4.1.ad 3, Ed. Colon. 34/1, 17, lns. 36–40.
100 Ibid., 1.4.2.1–5, Ed. Colon. 34/1, 17, lns. 46–72.
Albert then invokes two arguments for the thesis that theology’s certainty exceeds scientific certainty. They are almost identical with the two arguments for the scientific character of theology formulated in Question 1.101 Albert reminds us that theology is founded on the surest divine inspiration, whereas the remaining sciences rely on fallible human efforts. Furthermore, theology is grounded on the first, immutable truth, while other sciences are grounded in secondary truths that are susceptible to changes. The corpus only confirms these two arguments. Answers to the arguments formulated at the beginning of the question assume that divine inspiration provides theology with certainty that compensates for every deficiency following from its non-scientific character. Thus, the use of poetic language instead of reasoning, of unclear expressions instead of clear, of authority instead of argumentation, is dangerous only for philosophy and diminishes significantly its certainty, but it is not dangerous for theology, whose certainty exceeds philosophical certainty.102 In his answer to Argument 5, Albert denies that theology uses equivocal words. It only seems that theology does so because it uses one word for one thing, which, in turn, signifies something else. This kind of seeming equivocation does not affect, however, the certainty obtained through theology.103

The problem considered in the next chapter also refers to Chapter 1. The method proper to theology is not the scientific method that relies, in part, on syllogistic argumentation. Therefore, Albert has to examine whether this sort of argumentation can be applied in theology. There are some reasons to exclude the use of syllogistic argumentation in theology. They are listed in the arguments at the beginning of the question. First, theology, as it deals with particulars, cannot formulate syllogisms that require universals as a starting point. Second, there is no deduction in theology, which involves drawing conclusions from premises and principles of demonstration, because God—understood as the first truth—is immediately present in every theological proposition. Third, theology is grounded on a faith that surpasses any science, but syllogistic argumentation supports only science. Fourth, argumentation aids to dispel doubt, but doubt is not allowed in theology.104 The counterarguments, however, point out that the Bible uses argumentation and that metaphysics, in spite of considering the first being, argues in favor of its principles. Therefore, a relation to

101 See above, p. ##.
102 Alb., Summa theologiae I 1.4.2.ad 1–4, Ed. Colon. 34/1, 18, lns. 11–54.
103 Ibid., 1.4.2.ad 5, Ed. Colon. 34/1, 18, lns. 55–71.
104 Ibid., 1.5.1–4, Ed. Colon. 34/1, 18, lns. 77–p. 19, ln. 23.
The first truth or the first being does not exclude argumentation. The argument *sed contra* is particularly interesting. There Albert states that theology consists of three elements or parts: namely, of antecedents to the articles of faith, of these articles themselves, and of others that follow from them. For example, the thesis that Scripture is true precedes the articles of faith, the articles of faith themselves constitute the actual content of faith, and conclusions drawn from faith are their consequents. All these elements can enter the syllogism, and some can be used as premises proving the others. This section answers an important question—which often bothers modern readers of Scholastic theology even if it did not seem to trouble medieval theologians as much—namely, the question concerning the relationship between theology and Scripture. Albert shows here that theology somehow embraces Scripture from both sides because, on the one hand, it provides the principles preceding faith (in the form of reflection on its foundations and structure) and, on the other, it teaches us how to draw conclusions from faith.

In the *corpus*, the Dominican Master asserts that there are two types of argumentation: one demonstrating the truth of the object analyzed, and another deriving other truths from theses that have been proposed while combating opinions that contradict the propositions that were assumed. The first type does not apply to theology because it does not prove the truth of faith. The second type, however, is acceptable in theology, especially in discussions with heretics.

Answers to the first three arguments repeat ideas already presented, but a new notion appears in the discussion concerning theological doubt. Albert acknowledges that no biblical proposition can be doubted, but disputes concerning the motives and arguments proving the proposition may arise. Theology thus resembles metaphysics because the relationship between theology and Scripture parallels the relationship between metaphysics and its principles, as expressed in the popular saying that there is no possibility of discussion with one who rejects its principles. The Bible

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105 Ibid., 1.5.sc 1–4, Ed. Colon. 34/1, 19, lns. 24–41.
106 Ibid., 1.5.sc 5, Ed. Colon. 34/1, 19, lns. 42–51: “In theologia tria sunt, scilicet antecedens ad articuli fidel, sicut quod scriptura vera sit, et ipse articulus sive fides, secundum quod fides est, quod creditur, et consequens fidel, sicut quod fornicatio sit mortale pecatum, hoc est aeterna morte plectendum. Sed in omni scientia in qua est antecedens et medium et consequens, medium potest argui ex antecedente et consequens ex medio et antecedente; ergo videtur, quod theologia argumentativa scientia sit et syllogistica.”
107 For example, this question is central for McInerny, “Albert,” 53–55.
108 Alb., *Summa theologiae I* 1.5.resp. Ed. Colon. 34/1, 19, lns. 52–68.
is a principle whose acceptance is a necessary condition for any theological discussion, but once accepted it paves the way to subsequent rational and discursive argumentation. Albert ends this section and the chapter as a whole with a very medieval remark, but one not devoid of humor: that the enemy of truth should be thrown into the fire, because for him it makes no difference whether he is in the fire or out of it.\footnote{Ibid., 1.5.ad 4, Ed. Colon. 34/1, 19, ln. 88–p. 20, ln. 18; see also Ins. 14–18.}

The last question of Treatise 1 of the \textit{Summa} examines the goal of theology. This question begins with three arguments stating that theology has no external goal because—as wisdom, that is, the highest and most free and/or independent science—theology cannot be subordinated to any other science and cannot serve as a means to the final end. On the contrary, theology is the final end of the entire hierarchy of the sciences.\footnote{Ibid., 1.6.1–3, Ed. Colon. 34/1, 23, Ins. 5–49.}

The counterargument points out that the simpler the subject of a science is, the more uniform a science is. Thus if theology \textit{qua} wisdom has the simplest subject that guarantees its autotelic character, it must be uniform; but in fact theology is internally diversified. Hence, its subject is not the simplest and theology, consequently, loses its autotelic character.\footnote{Ibid., 1.6.sc 1, Ed. Colon. 34/1, 23, Ins. 50–61.}

The \textit{corpus} relies on the dichotomy between internal and external goals. The internal goal is rooted in science, while the external goal is rooted in the knower of the science. All arguments denying the external goal of theology take into consideration its internal goal, and they are right to insist that no other science is the goal of theology. Hence, theology is dominant over the remaining sciences and is the only free science.\footnote{Ibid., 1.6. resp., Ed. Colon. 34/1, 23, Ins. 62–72.}

The external goal, that is, the goal of a knower, justifies the internal diversity of theology. Theology must take into consideration the abilities of human cognitive powers that cannot directly access the simplicity of its subject. In addition, theology, as a practical science, must take into account its persuasiveness. Thus, finally, it must apply procedures commensurable to its different audiences and convince also the simple believers. At the end of the entire treatise, Albert sketches out the hierarchy of the external goals of theology (i.e. the goals assumed by a person studying theology): first, the theologian aims at theological knowledge; then, the theologian wants to be prepared for earthly contemplation; finally, the theologian intends the uncreated happiness consisting in the enjoyment of the first
truth. Thus, at the very end of his longest exposition of metatheology, Albert restates what seems to be essential to it—namely, the practical character of theology and its indispensable regard for salvation.

3. Historical and Doctrinal Synthesis

As I mentioned at the very beginning of the chapter, Albert’s texts are bound to be measured against Chenu’s paradigm of theology as a science. And, indeed, this paradigm is relevant and helps to identify some essential elements in Albert’s conception.

The main boundary between Aristotle and Augustine was drawn in the *Commentary on the Sentences*. On the one hand, the Dominican Master acknowledges as a foundation for his metatheology the Augustinian thesis that theology is about things and signs (Article 1). This statement is a departure point for an adequate characteristic of theology, especially as it is conceived in the *Sentences*. On the other hand, theology seems to be a science and even more, wisdom, that is, a science that deals with the highest objects. But Aristotle argues that, first, science cannot prove its own subject; second, that one science has but one subject; and, third, that sciences are divided into theoretical and practical sciences. It is worthy of notice that Albert does not pose the question directly whether theology is a science, but he tacitly assumes the scientific status of theology and rejects argumentation that could undermine it (Article 2, ad 2). Albert’s solutions for individual questions that involve discussion with Aristotle have the same structure and conclusion. The Dominican theologian first clarifies Aristotle’s statements and then demonstrates that they cannot be applied directly and strictly to theology. Theology, in contrast to other sciences, proves its subject. It is not one because of the unity of its subject. It can be listed neither among the practical nor theoretical sciences. Nonetheless, theology has a definite subject, it remains one, and it relates to both the practical and theoretical. All these statements indicate how complicated the relationship is between Aristotle’s theory of knowledge and Albert’s metatheology. On the one hand, Albert denies any direct applicability of all of the Stagirite’s epistemological theses to theology. On the other hand, the confrontation with Aristotle helps him formulate remarkable insights into the nature of theology. Thus, finally, some ambivalence

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113 Ibid., 1.6.ad sc, Ed. Colon. 34/1, 23, Ins. 77–90.
toward Aristotle can be perceived in Albert’s text. Although the Doctor universalis does not accept the Peripatetic ideal of science as a model for theology, Aristotelian categories help him to discover and explain theology’s nature. They make him aware of the differences between theology and the natural sciences and, thus, help him achieve theological self-consciousness. Aristotle provides Albert with a set of notions that constitute the conceptual frame for metatheological analyses.

Moreover, the Dominican Master does not merely repeat mechanically Augustine’s theses, defending them against “dangerous novelties” in accord with the cliché that depicts him as a follower of Augustine in theology and a follower of Aristotle in philosophy. On the contrary, Albert the theologian treats Aristotle seriously and is profoundly aware of real limitations in the Stagirite’s theory of knowledge, limitations that are brought to light when adapted to an analysis of theology’s nature. The confrontation between a philosophical theory of knowledge and theology is not an ideological conflict, but it is a real intellectual problem that merits attention and profound consideration.

Having established a general frame for Albert’s metatheology, one is able to formulate some remarks concerning its content. From the historical point of view, the metatheological introduction to Albert’s Commentary on the Sentences is typical of the genre and epoch. Almost all of its elements, individual questions as well as specific quotations and arguments, can be traced to both earlier and contemporary texts. All authors from that period agree that theology is one, that it is allowed to use a discursive method, and that its subject combines various elements. Nonetheless, in Albert’s first metatheological synthesis, there are two original elements. The first one has already been mentioned: namely, a relatively small direct interest in stating that theology is a science. The

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115 The lack of a question about the scientific status of theology distinguishes Albert’s Commentary from the tradition of metatheology growing out of the Summa of Alexander of Hales, where this question is put first and its solution affects solutions to other problems (1.1.1, 1–3).
second original element is that Albert was the first to inquire directly and in the form of a distinct question into the practical or theoretical character of theology.\textsuperscript{116} Almost every historian dealing with Albert’s Comment- tary has concentrated, moreover, on this question and has evaluated its thesis—the claim that theology is an affective science—as his main contribution to medieval reflection on the nature of theology.

How, then, is Albert’s vision of theology transformed in the Summa? First, I would like to draw the reader’s attention to the structural dependence of the Summa on the Commentary.\textsuperscript{117} It seems that the first treatise of the Summa has its own original structure, described by Albert at its very beginning,\textsuperscript{118} and conforms to the scheme an sit, quid sit. But, it must be noticed that the central question (that is, Question 3) repeats the scheme and order of the questions adopted in Distinction 1 of the Commentary. The whole of Question 3\textsuperscript{119} deals with the subject of theology, as do all the questions of the Commentary because they follow formally from Peter Lombard’s definition of the subject of theology.

Furthermore, the problem of the scientific status of theology, placed first in the Summa, has its counterpart in the Commentary, in the exposition of the text that precedes the questions. Question 5 of the Summa parallels Article 4 from the Commentary, while both of them deal with the procedures characteristic of theology, that is, with the acceptability of rational argumentation and a biblical hermeneutic. Question 5 is inserted between two questions: Question 4, on the distinction of theology from the remaining sciences, a distinction that follows from the different mode of acquiring knowledge, and Question 6, which formally considers the goal of theology and, indeed, is devoted to proving the independence of theology from the remaining sciences. Thus, Questions 4 and 6 are strictly bound

\textsuperscript{116} This particular trait of Albert’s Distinction 1 has been perceived already by Grabmann (“De quaestione,” 114). He has also rightly noticed that Albert first proposed the affective character of theology.

\textsuperscript{117} The structural similarity between Albert’s and Alexander of Hales’s Summae cannot be denied. This pertains especially to the place and internal structure of questions treating the mode proper to theology. The affinity of the two texts is intensified by their doctrinal unity. See Alexander of Hales, Summa theologiae I 1,4.1–4, t. 1, 7–13. However, there are also remarkable differences between them—e.g. the presence of a question on the definition of theology, and a different placement of the question on the distinction of theology from other sciences—that enable us to maintain the independence of the general organization of Albert’s text from Alexander’s.

\textsuperscript{118} Alb., Summa theologiae I 1, 5, lns. 6–8.

\textsuperscript{119} Even Chapter 4, dealing with the universality of theology, although not present as a separate question in Distinction 1, grows out of it, namely out of Argument 3 and the answer to it in Article 2.
to the main problem of the procedure that is proper to theology, which brings about its distinction and independence from natural sciences.

The only structurally new element is Question 2. It is also original in comparison with earlier and contemporary works dealing with the nature of theology. It must be noticed, however, that although the theme of the question is new, its content develops an idea proposed already in the Commentary. The whole question is in fact an interpretation of the Pauline formula *scientia secundum pietatem*, around which the analysis of the nature of theology crystallized in the Commentary.

Having stated the structural dependence of the *Summa* on the Commentary, one should examine the doctrinal influence of the latter on the former. It seems that they contain almost identical ideas. Such an impression is not far from the truth, but the prevailing similarities notwithstanding, there exist some remarkable differences between them. Consequently, I would like first to show what differences divide the *Summa* from the Commentary, the reason why they differ, and then to show what unites them, at the same time constituting the core of Albert’s vision of theology.

It is obvious that any presentation of the differences between the Commentary and the Summa must take into consideration sections that correspond to one another, that is, Articles 1–3 from Distinction 1 of the Commentary and Chapters 1–3 of Question 3 from the Summa.

The issue of the subject of theology is resolved similarly in the Commentary and the Summa. In both texts, Albert defends the traditional tripartite definition. There are two differences, however: first, the way that they are constructed; and, second, the order in which they are listed. The Commentary bases a distinction concerning the meanings of the term “subject of science” on a general-specific dichotomy and distinguishes the most noble from the various specific subjects defined collectively as *credibile*, while the Summa uses a distinction modeled on the analysis of the subject of metaphysics. The solution adopted in the Summa is surely more elegant from the logical point of view. The real difference between the Commentary and the Summa lies in their polemical context. The Commentary is devoid of polemical character because similar tripartite formulas were proposed by most of Albert’s contemporaries, for example Alexander of Hales and Bonaventure, whereas the Summa was written later, when a new unifying conception was becoming popular. Here, I mean first of all

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120 The problem of a relation of theology to metaphysics is continued in the question on the unity of theology, see below, p. ##.
Thomas Aquinas's thesis that God is the only principal subject of theology, while all others are the subject of theology only as related to God and owing to this relation. I suppose that Albert deliberately neglects the new proposition and defends the traditional view because he views it as more relevant and adequate to what theology really is. But it is also possible that he is simply attached to the traditional formula rooted in Augustine's thought, supported by the great modern theologians. Perhaps, an inversion in the order of the individual parts of the subject of theology should be read in this context, too. If the first part is the most important, in the *Commentary* Albert favors Augustine's *signa et res*, but in his *Summa* he gives priority to God.

It is also instructive to look at Albert's text from the perspective of later discussions coming after Aquinas that were dominated by the dispute whether God *absolute*—that is, as such or in itself—was the subject of theology (an opinion shared by Henry of Ghent and the Thomists)\(^\text{121}\) or rather as determined by an additional notion (e.g. as the Savior, as Giles of Rome asserted,\(^\text{122}\) or as the Good, as held by Richard of Middleton and William of Ware).\(^\text{123}\) Nonetheless, if we read Albert in the context of the later discussion, the thesis expressed in both of his texts—namely that God is the subject of theology as the end, not absolutely (the *Commentary*), or as *fruibile*, that is, as one that human beings enjoy or who gives them joy (the *Summa*)—is less similar to that presented by Thomas than to the one sustained by his opponents. Albert also proposes to limit the theological perception of God to one particular notion, namely, to salvation.

Albert solved the subsequent problem treated in both his texts—the unity of theology—in a similar way. The main and most easily recognized difference between them consists in the polemical character of the *Summa*. Chapter 2, which treats this topic, is highly polemical: this is the only section where Albert uses the expression “*dixerunt quidam*”, which in medieval literature commonly signifies the opinion of a contemporary author. It means that Albert wanted to underline the critical character of his text. The text against which Albert argues is surely Aquinas's *Summa*.

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122 Giles of Rome, *Quodlibeta* 2.3 (Louvain: 1646), 127–133.

theologiae. This suggests that Albert perceived Thomas as his intellectual opponent there and as an author with whom it is worthy to debate. The content of the polemic has been presented above. It must be noticed, however, that the corresponding section of the Commentary is devoid of a polemical character simply because when it was written, there was no one with whom Albert could debate this issue. This consideration puts us on the right track: most of the differences between Albert’s two texts follow from reactions to what was written between the 1250s and 1270s of the 13th century. And indeed, the most original author was Thomas Aquinas, who at many points criticized the opinio communis. Thus Albert, who displayed a positive attitude toward traditional solutions, had to react to an attempt that undermined them.

I would like to draw the reader’s attention to one more difference between Albert’s two works that complicates further the relationship between Albert and Aquinas. In the Commentary, Albert proves the unity of theology using the end as its criterion, while in his Summa he bases the unity of theology on its subject. The majority of contemporary theologians preferred the end as a criterion by which the nature of theology should be determined or measured, and so did Albert in his Commentary. But especially in his Summa theologiae Aquinas tended to raise the subject as a criterion. Albert accepted this idea and, as can easily be seen from Question 3 of the Summa, he inferred three important traits of theology from its subject, just as Thomas did. The acceptance of the subjective criterion made Albert revise another element proposed in the Commentary, namely the opposition between metaphysics and theology in terms of the type of their unities. In the Commentary, he contrasts the unity of metaphysics based on the analogical unity of the subject with the unity of theology that is based on its goal. Consequently, when in the Summa theology is evaluated by means of the same criterion as metaphysics, they have a unity of the same kind. Thus, metaphysics serves as a model for theology, as in the previous chapter, where Albert explained the meanings of the term “subject of a science” with illustrations drawn from metaphysics and applied to theology.

The substitution of the subjective criterion for the final criterion produced a different solution to the question of the practical or theoretical character of theology. Moreover, the question of the practical or theoretical nature of theology is the only one for which Albert retracts his main thesis from the Commentary. What made Albert retreat from the claim that theology is an affective science and the acknowledgement of its practical character?
This change becomes particularly interesting when placed opposite Senner’s opinion that the affective character of theology constitutes the core and *proprium* of Albert’s metatheology. Senner rightly emphasizes the difference between the affective and practical intellect that Albert sketched in the *Commentary*.\(^{124}\) He summarizes his interpretation of Albert’s conception of theology, as formulated in the *Commentary*, with three propositions: (1) theology searches for the first truth; (2) this search is not limited to mere speculation, but it also engages the human will, and therefore theology is relevant for moral conduct; and (3) theology is not possible without God’s grace. All these conditions are also fulfilled by practical theology in the *Summa*. Thus, in fact, Albert does not change his understanding of theology in his *Summa*. Instead, he changes the criterion according to which the nature of theology is to be determined and his conception of praxis. Albert owes the first element to Aquinas’s *Summa theologiae*, where the subject of theology determines that it has principally a theoretical character and where, in general, the subject plays a greater role than the end. This notion does not change Albert’s general conception of theology, however, because he defines the subject of theology differently and ties it to the natural and supernatural virtues. St Thomas also tacitly assumes that the opposition between the practical and theoretical is an appropriate instrument for the analysis of theology’s nature. However, he accepts that theology can be theoretical and practical at the same time. Thus, this distinction regards theology differently from the remaining sciences. Albert, meanwhile, begins his analysis by stating Aristotle’s thesis that theoretical and practical sciences have two different subjects: truth and action, respectively. It seems that Albert accepts this distinction and its strong disjunctive character, and that is why he defined theology as practical, not as affective. Thus Albert’s evolution is analogous to the development of Franciscan metatheology: both Alexander and Bonaventure\(^{125}\) proposed the affective character of theology and later authors, from Odo Rigald to the great synthesis of John Duns Scotus,\(^{126}\) argued its purely practical character.


Albert’s position may also be illuminated by the later discussion on the issue. One post-Thomistic author, Godfrey of Fontaines, is particularly interesting in this respect. Godfrey criticized Thomas Aquinas’s thesis that theology was simultaneously practical and theoretical and that it remained one science nonetheless. Godfrey also formulated arguments proving that the affective character of theology, disputed by Giles of Rome, was reducible to its practicality. Thus it seems as if Albert anticipated the critiques of Thomas Aquinas and Giles of Rome and realized that the unity of theology was better safeguarded when it was determined merely as practical, and that its affectivity was untenable. This remark and a comparison of Albert’s thesis concerning the practical character of theology with later conceptions show that the Summa belongs to the post-Thomistic period. The Doctor universalis should be understood in comparison to such authors as Giles of Rome, Henry of Ghent, and Godfrey of Fontaines, who delineated the mainstream of late 13th-century theology. Unfortunately, there are no manifest traces of Albert’s direct influence on them. It seems rather that his Summa remained unread by other authors.

In the context of the discussion concerning the practical or theoretical nature of theology, it must be noted that, in fact, in his Summa Albert accepts (to a greater extent than Aquinas) Aristotle’s division of the sciences into practical and theoretical as an instrument for an analysis of theology’s nature. Albert seems also more faithful to the Stagirite on the question of the unity of theology, based on its subject, and not on the mode in which it is received by its knower, as Thomas postulated. On the one hand, these two observations complicate the univocal classification of Albert either as a follower of Aristotle or Augustine, but on the other, they testify to his profound understanding of Peripatetic epistemology and the advantages and risks that follow from it for a reflection on the nature of theology. Albert is aware that the Aristotelian conception of science can hardly be applied to theology, but at the same time he fully accepts other elements of Aristotle’s theory of scientific knowledge. Thus, what in Albert’s case first seemed to be the most Aristotelian question in metatheology, turned out to be less Aristotelian than others.

Now, let us turn to the constant elements of Albert’s metatheology, which at the same time constitute the core and *proprium* of his conception. In this context, the importance of the Pauline expression a “science regarding piety” (Titus 1:1) has to be emphasized. For Albert, in both the *Commentary to the Sentences* as well as in his *Summa*, this biblical expression was a presupposition for discovering significant components of the nature of theology. Indeed, in the *Summa* it played an even greater role. Although this scriptural citation was popular enough among his contemporaries, none of them conferred upon it such crucial status. Moreover, there is no medieval theologian other than Albert that based his reflection, to the same extent, on the nature of theology on any biblical quotation. *Scientia secundum pietatem* is a key notion not only for Question 2 where it serves as a basis for the definition of theology, but it recurs in almost every question and always plays a central role, being a main premise for the solution of problems at hand. Indeed, Albert’s proposed solutions resemble those formulated by his contemporaries. Therefore, it seems that Albert’s originality relies to a lesser degree on the theses he argued than on the way they are derived and demonstrated from a single biblical quotation.

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129 For example, McInerny calls the whole discussion about the practical or theoretical nature of theology a gloss on it (“Albert,” 55).
There is a well-known legend according to which Albert the Great grew weary of the spiritual life soon after entering the Dominican order. It even appeared to him too arduous to investigate the depths of theological wisdom. During his attempt to flee from the monastery he encountered Mary the Mother of God. She offered him a great wisdom but he would have to choose between theological wisdom and secular wisdom. Albert chose the secular wisdom in which he soon became the most learned man. However, since he decided against theological wisdom, Mary took all wisdom away from him at the end of his life, so that he concluded his life in simplemindedness.

Popular piety is the source for such stories that explicate Albert's special relation to Mary. Thus it was much easier to attribute to him extensive treatises that deal with Mary, through which Albert was said to have expressed his admiration for her. The current state of scholarship indicates that Albert's work on Mary is significantly smaller than the old editions of his works suggest. In this chapter there is no room to take up again the discussion about the authenticity of those treatises that in the past were attributed to Albert. Following the studies by Albert Fries, these texts will not be considered in this presentation. Peter of Prussia, the medieval biographer, had already claimed in his list of works that Albert had also written Mary-sequences. Although there is better evidence for their authenticity I shall not discuss these texts here because of their special nature.

1 See Alb., *De laudibus beatae Mariae Virginis libri XII*, Borgn. 36, and *Mariale sive CCXXX quaestiones super Evangelium Missus est Angelus; Biblia Mariana*, Borgn. 37.
Setting aside legends and inauthentic works, on what basis can we present Albert’s Mariology? Even though we have to realize that Albert did not compose a separate systematic Mariological treatise, we find a wealth of Mariological claims embedded in larger theological contexts. In part, these are merely brief notes. However, Albert also wrote longer treatises on the central themes of Mariology: sanctification, Annunciation, virgin birth, divine motherhood, and assumption into heaven. These expositions are found most of all in discussions of Christology, ecclesiology, and eschatology. Albert did not compose “a systematic but rather a situational Mariology”, as Albert Fries has put it.5

In presenting Albert’s Mariology in this chapter I shall consider the following works: his early works De natura boni and De bono, the treatises De sacramentis, De incarnatione, De resurrectione, the Commentary on the Sentences from when he taught in Paris, as well as the theological Quaestiones composed in the same chronological context. Apart from these systematic works I shall consider Albert’s exegesis of the four Gospels and his commentaries on the Old Testament prophets.

The earliest known work, De natura boni, which was composed while Albert taught in German convents, is a text of moral theology, written primarily for instructional purposes. This work contains within the teaching on the virtues extensive Mariological passages that are expanded to a relatively integrated Mariology. In the same way, Albert primarily deals with Mary’s virginity in his work De bono, which is a more scientifically developed theory of the virtues. In the Sentences commentary—the required lecture course on dogmatic themes—Mariological statements are found especially in the third book in the context of Christology; we find parallels in the preceding work, De incarnatione. Passages from the fourth book of the Sentences commentary, within the context of eschatology, have a parallel in Albert’s De resurrectione. In his exegetical works Albert carefully interprets the relevant texts that deal with Mary. Albert’s exegesis of

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5 Albert Fries, Was Albertus Magnus von Maria sagt (Cologne: 1962), 17: “Was er über Maria schreibt, ist nicht als geschlossenes Ganzes vorgelegt. Es ist vielmehr eine marianische Theologie, wie sie jeweils an einem Punkt der Glaubenswissenschaft sich nahelegt, eine Summe von Äusserungen über Maria, die sich je aus dem Ganzen eines Traktates von selbst ergeben. Er erhebt die Herrlichkeit Marias dort, wo er von Gott kündet und von Christus Zeugnis gibt.” [“What he writes about Mary is not presented as a complete whole. Rather, it is a theology of Mary as it offers itself, given a certain issue, a sum of remarks about Mary that follow from the entirety of a treatise. Albert raises the topic of Mary’s glory when he talks about God and gives testimony of Christ.”]
the narrative of Christ’s childhood in Luke is very detailed; the inserted Mariological discussions are the reason for the extraordinary length of the commentary on Luke. Albert follows the old tradition according to which Mary herself provided Luke with these insights. According to Albert there is a simple explanation for the relatively small number of statements about Mary in Mark's Gospel: Mark did not report Jesus's conception and birth since these reports were already included in Matthew's Gospel. Albert reads the Gospels in the order in which he finds them in the Vulgate, the Latin Bible. On this account, Mark can presuppose Matthew. Albert reads Old Testament prophetical texts typologically with reference to Mary.

Albert Fries must be credited with the indisputable accomplishment of having provided a comprehensive documentation of Mariology in Albert’s entire work. In addition there are monographs by Bruno Korosak, Robert J. Buschmiller, M. Mellet, and Jakob Bergmann. In general, researchers’ interest in studying Albert’s Mariology peaked during the 1930s and 1950s; however, the earlier studies all included as the main work the Mariale, which is now considered inauthentic. I shall not attempt a synthesis here of the previous scholarship. Rather, I will follow the Mariological statements scattered across Albert’s works in order to provide a sketch of Albert’s Mariology by pursuing systematic questions through a close reading of the text. I will refer to relevant secondary literature in a selective manner.

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6 Albert Fries, Die Gedanken des heiligen Albertus Magnus über die Gottesmutter, (Thomistische Studien) 7 (Freiburg: 1958), 210.
7 Alb., Super Luc. 1:35, Borgn. 22, 101a: “Non enim ab Evangelista scriberetur, nec ab Ecclesia praedicaretur, nisi a Virgine doceretur.”
8 Alb., Super Marc. 1:1, Borgn. 21, 342b–343a: “In initiis tamen et finibus, non in materia, sed modo discrepant. Matthaeus a generatione humana incipit: Marcus autem hanc praeterit et incipit a Joannis praedicatione.”
9 See especially, Albert Fries, Die Gedanken (note 6 above). There is no room here to list the full bibliography of Fries’s works on Albert’s Mariology. Selected studies will be listed in the notes.
The Problematic

Mariology as a theological discipline has a long history that extends to the middle of the 20th century. Some aspects had found their definitive form already in the early theological debates up to the 5th century: in particular, dogmatic statements regarding Mary’s virginity and her divine motherhood. While the New Testament provided evidence for both statements, neither the New Testament nor the early church reflected on these statements in terms of a proper Mariology. Both statements describe Mary in her relation to Jesus Christ. However, early on we find testimonials that appeal to the themes of Mary’s virginity and her divine motherhood to fend off heresies: against Docetism, Christ’s true humanity must be stressed, and against Judaism, his divinity. His humanity was stressed by the statement that Mary truly was Christ’s mother, and his divinity was stressed by the statement that Christ was conceived by the Virgin Mary. In this context, both statements had a clear meaning that was already suggested in the New Testament but not yet systematically developed.

Mary’s virginity will later be linked to the great respect offered virginity as an ascetic practice, which resulted from the eschatological ideal of following Christ. From this perspective, Mary’s perpetual virginity became important. Once the anti-docetic impetus gradually had lost its force, her virginity even in childbirth could be affirmed. Mary’s motherhood became newly important during the disputes about the doctrine of Christ’s two natures. The affirmation that Mary was the Mother of God became truly meaningful only in light of the doctrine of the unconfused and yet inseparable unity of the divine nature and the human nature in Christ, together with the communicatio idiomatum, that is, the doctrine that both the properties of the divine nature and the properties of human nature can be ascribed to Christ.

Although the statements about virginity and divine motherhood were suggested in the New Testament, their dogmatic significance only became clear once these statements had been embedded in a developed Christology. At this point a first level of theoretical reflection, which found its (preliminary) conclusion in the confessions of Constantinople and Chalcedon, could provide an initial clarification of the relation between Scripture and tradition. A theological statement does not become “untrue” if its full content has not already been affirmed in the New Testament. Rather, what is suggested there is explicated and developed through reflection and interpretation of the whole of the message of Jesus Christ. Importantly, “Until
the end of the period of the Church Fathers Christology proved to be the driving force for the development of Mariology."

From the 5th century on, after the First Council of Ephesus (431), new Mariological themes arose: a question whether Mary was without sin, as well as a question about Mary’s death. In this case it was the liturgy that gave rise to such questions. In Jerusalem there was a tradition of Mary’s tomb in Gethsemane, where a basilica was said to have stood for some time, but there were no bodily relics. The first reports of Mary’s assumption into heaven stem from the 5th century. Emperor Mauritius (582–602) decreed for the entire church the Feast of the Dormition for the 15th day of August. From the 6th century the Annunciation, Mary’s Birth (and, as a consequence also Mary’s conception), and Mary’s Purification have been celebrated as well. Treatises on these new topics first appeared in the early Middle Ages. By the time that Albert took up these topics they had become a regular component of dogmatics; his task was to reflect on them theologically and to confirm them. Regarding Albert’s expositions it should be noted, however, that the dogmatic formulation of the Immaculate Conception (1854) and Mary’s Assumption into Heaven (1950) is due to a later development, and thus we cannot presuppose it in Albert’s discussions.

**Method**

What method does Albert use to explicate these Mariological themes?

At the beginning of his commentary on Peter Lombard’s *Sentences*, Albert presents his understanding of theology as a science. Following the Aristotelian model of the *Posterior Analytics*, Albert examines the scientific character of theology by applying several criteria. In conclusion he asks according to what method theology ought to proceed. Albert’s guiding principle for answering this question is a passage from Titus: “He [the overseer] must hold firmly to the faithful word as it has been taught, so that he will be able both to exhort with sound doctrine and to refute those who contradict it.” (Titus 1:9)

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Thus two tasks must be carried out: (1) to exhort in accord with sound doctrine, and (2) to refute the arguments of the opponents. Albert structures theology accordingly.

(1) Exhortation, the first methodical task, proceeds in accord with the fourfold sense of Scripture that had been the basis for exegesis since the time of the church fathers: that is, the historical, allegorical, moral, and analogical. The historical sense is what the author of the text seeks to communicate first; it signifies the historical context. The deeper meaning, inspired by the Holy Spirit, has a threefold structure. There are statements that a human being on his earthly pilgrimage can grasp only if his cognition is illuminated by faith. These are the allegorical contents. Then there is the direction towards good works; this is the moral sense. Finally, there is the direction towards eternal blessedness; this is captured by the analogical sense. This procedure in accord with the fourfold sense of Scripture belongs to biblical theology. Its goal is to grasp the biblical contents through intellect and will. This grasp is accomplished through continuous contemplation and repeated learning of God’s works and miracles. As a result, faith takes root and is strengthened. (2) There is a different method for refuting the arguments of the opponents: the truth must be demonstrated so that the error is made clear. Therefore, intellectually honest argumentation is required. This happens in systematic theology as it is carried out in commenting on the Sentences or in the late work of the Summa.

When we examine Albert’s Mariology we find that he uses both methods: he pursues exegesis as well as systematic theology, and he reflects on the biblical statements and gathers systematic arguments. Different works put the emphasis on different issues, but in general we find a consistency as regards content both in the exegetical and the systematic works. Thus, the scriptural commentaries do not lack systematic reflections, especially since Albert often treats the literal sense at length. In the Sentences commentary in turn we find that theological claims are regularly linked to the revealed texts.

In the following I shall present the central themes of Mariology on the basis of Albert’s works. The order of presentation essentially follows the biographical sequence of events in Mary’s life.

Sanctification

Theologians in the early church dealt with the question of Mary’s sanctification, but only after the doctrine of original sin had been developed did
this question assume soteriological significance. Mary is counted among all human beings who are subject to original sin and thus in need of salvation; but how can Mary, the mother of the Savior, be tainted by original sin? Theologians found a first solution by interpreting the account of the Annunciation (Luke 1:26–38): Mary’s sanctification, that is, her liberation from original sin, occurred during the Annunciation of Jesus’s birth through the angel Gabriel. Thus, Mary’s sanctification coincides with Jesus’s conception. Only further reflections led to shifting the point of Mary’s purification gradually towards the beginning of Mary’s life. It was taught that Mary was sanctified at birth and finally that she was sanctified when she was still in the womb, which led later to the dogma of the Immaculate Conception. Although this topic was also discussed during Albert’s time it was under no circumstances the fully developed doctrine of the church, since it became dogma only in the 19th century. While the dogma will claim that Mary was “preserved” free from original sin from the beginning of her existence, the discussion that Albert knows and presupposes deals with the question as to exactly when Mary was purified from original sin. The purification of the Mother is to be understood as a preparation for the Incarnation, that is, of Christ’s becoming man, and thus it must be interpreted from this perspective.

Albert teaches Mary’s sanctification in the womb as a matter of faith and confession of the church, “although it is not explicitly expressed in Holy Scripture”.16 The mystery is allegorically indicated in the Old Testament in Noah’s ark; the ark signifies the Virgin’s womb. The animals represent the movements of desire that are quieted in such a way that they never extend to what is forbidden. This sanctification brings about in Mary an even greater grace than the one that humans share through baptism. To be sure, original sin is extinguished even through baptism, but in the baptized there remains the tinder of evil desire, which is merely weakened. In Mary, however, this tinder is extinguished as well.17 This Ark of the Virgin is made from the wood of our nature, for she is the descendent of corporeal parents—of Joachim and Anna. In mentioning Mary’s parents by name Albert follows the known apocryphal traditions, which sought to provide information about Mary beyond the biblical texts, even

16 Alb., De nat. boni, Ed. Colon. 25/1, 44, Ins. 31f.: “Et de sanctificatione quidem eius in utero fides habetur et communis ecclesiae confessio, licet in scripturis non aperte sit expressum.”
though Albert generally disapproves of the apocryphal gospels.\textsuperscript{18} Mary’s body is made out of the wood of our nature, but in her case it is a material that does not rot or burn easily. Neither is Mary subject to rotting corruption through evil desire, nor does the tinder of sin burn in her. Albert interprets the angel’s greeting to Mary, \textit{Ave}, as \textit{sine vae}: in Mary there are no lamentable consequences of sin.\textsuperscript{19} In Mary this state is already reached as sanctification in utero.

If we talk about such sanctification in the womb, we have to clarify first what is meant by the phrase “in utero”. Albert distinguishes two forms of birth: first, the moment in which a soul enters the organic body so that a human being is generated; this is the birth in utero. Second, birth is the moment in which the newborn human being is separated from the mother who is giving birth; this is the birth \textit{ex utero}.\textsuperscript{20} Apart from Mary, two other biblical figures are said to have experienced a sanctification in utero: the Old Testament prophet Jeremiah (Jer. 1:5) and John the Baptist (John 1:15).\textsuperscript{21} In comparing these figures with respect to an early sanctification one has to assume that at the time of their ensoulment they were still subject to original sin, but that they were cleansed of original sin through the actual birth process. Jeremiah is the prophet who not only announced prophetically Christ’s suffering but also prefigured it in his own person; therefore he was sanctified in the womb. He preached the coming grace. John the Baptist had the task of immediate preparation, of being the precursor.\textsuperscript{22} Thus, it is true for both of them that they receive their sanctification, insofar as it is related to salvation, through Christ. Nonetheless, they are subject to those rites that are true for all human beings, according to which they normally become members of the community of the saved; this means that Jeremiah had to be circumcised. John, however, raises this issue in his question to Christ: “I need to be baptized by you, and you come to me?” (Matt. 3:14). Thus, in the doctrine of baptism Albert makes


\textsuperscript{19} Alb., \textit{De nat. boni}, Ed. Colon. 25/1, 44, lns. 46–57.

\textsuperscript{20} Alb., \textit{De incarn.}, Ed. Colon. 26, 182, lns. 19ff.


\textsuperscript{22} Alb., \textit{Super Ier. 1:5}, Ed. Colon. 19, 634f.
clear that the sanctification in the womb also has its origin in Christ. The sanctification in utero is directed towards the one who brings about this sanctification. Accordingly we have to assume that after Christ’s birth such sanctification in the womb is no longer intended for any human being. Since salvation comes through Christ, a human being is normally cleansed from original sin through baptism.23 Now, the sanctification of the Mother of the Savior is meant to be even greater than the process of sanctification of Christ’s two predecessors. Mary’s purification from original sin does not merely occur sometime between ensoulment and birth, but rather shortly after ensoulment. However, Albert assumes that for the sake of fulfilling the commandment Mary was also baptized, as was John, just as Jeremiah was circumcised.24

How can we, with Albert, imagine Mary’s sanctification more concretely? First of all, we have to ask whether Mary was freed of original sin already at the time of her conception. According to Augustine, the conception of a human being is always linked to inordinate desire; for this reason original sin is passed on during the act of conception. By contrast, the biological parents have no power to transfer to the child the grace of sanctification during conception. For this reason the semen to be inserted in the mother’s womb cannot already be free from original sin.25 The next possible period in which sanctification could have occurred lies between bodily conception and ensoulment. Upon its creation the human rational soul enters into the preformed body of the developing human being.26 Albert rejects as heretical the idea that sanctification could occur before this moment of ensoulment. The body receives grace through the soul and not without it. In like manner we ought to understand the work of the Holy Spirit. The Spirit does not have an effect on the soulless body as if it wished to preempt the soul.27 Next, sanctification could have occurred in the time after ensoulment and before birth. Albert agrees with this thesis: “It should be said that Mary was sanctified before birth from the womb. However, a human being can only know by revelation on what day and at which hour this happened, even though it is more likely that she received sanctification soon after ensoulment rather than after a long

24 Alb., Super IV Sent., d. 6, a. 9, Borgn. 29, 138b.
26 See Alb., Quaest. super de animal., l. 16, q. 13, Ed. Colon. 12, 283f.
time.” This sanctification brings it about that any inclination towards sin, be it venial or mortal, is erased from the disposition of original sin; in Jeremiah and John the inclination towards venial sin remained. Mary surpasses these two predecessors in her being without sin throughout her life. Nonetheless, it was not impossible for her to sin. Even though the inclination towards sin was erased, she still could have sinned out of her free decision. The possibility to sin can only be excluded for Christ.

Albert returns to the sanctification in the womb in his exegesis of the image of Solomon’s throne from the Book of Kings (1 Kings 10:18–20): “Moreover, the King made a great throne of ivory, and overlaid it with the finest gold.” This throne symbolizes Mary’s womb; the white ivory stands for her purity. And just like ivory reddens with age, its redness signifies Mary’s modesty (erubescentia). The throne is great because the Lord is seated on it; it is overlaid with gold in order to express the honor that is due to the Mother of God. Albert stresses here that Mary derives her honor entirely from Christ. Seven steps lead to the throne, which symbolize seven spiritual gifts that befit Mary in a special way. The first gift is the fear of God, with which Mary is filled; the second is piety, which allows her to deal with everything in kindness; the third gift is knowledge, which allowed her completely to maintain her vow of virginity in a prudent manner; the fourth gift is the spirit of fortitude, through which she crushes the head of the Serpent; the fifth is the gift of counsel, through which she understands God’s judgments; the sixth is the gift of understanding, which bestows on Mary the honor to see invisible divine secrets; the seventh gift is the spirit of wisdom, through which she receives divine kindness in such a way that she disregards all bodily consolations. Finally, Albert interprets the two armrests of Solomon’s throne as Mary’s arms. With one arm she fends off the enemies, through intercession with Christ.

28 Ibid., d. 3, a. 5, Borgn. 28, 48b: “Dicendum quod ante nativitatem ex utero sanctificata fuit, sed quo die vel qua hora nescire quemquam hominem, nisi per revelationem; nisi quod probabilius est, quod cito post animationem conferatur, quam longe exspectetur.”
29 Ibid., d. 3, a. 6, Borgn. 28, 49.
30 Ibid., d. 3, a. 8, Borgn. 28, 50f.
31 Ibid., d. 3, a. 24, Borgn. 28, 62: “Dicendum quod est posse ex habitu inclinante et est posse ex libertate arbitrii; et posse ex habitu inclinante ad peccandum vicerat Beata Virgo, sed habuit ex libertate arbitrii.”
32 Alb., De nat. boni, Ed. Colon. 25/1, 44, Ins. 58ff.
33 Departing from his exegesis of this text in the Sentences commentary, in De nat. boni Albert chooses to change the text of the Vulgate, which talks about six steps, according to his intention.
34 See Gen. 3:15.
With the other arm Mary turns towards the needy who cry out to her.\textsuperscript{35} Two lions, which stand next to the armrests, symbolize the works of fortitude, through which Satan is conquered by humiliation and the flesh by purity.\textsuperscript{36}

In addition to the sanctification in the womb there is another sanctification through Mary’s way of life. Mary earns merits in all the worldly virtues: in prudence, courage, temperance, and justice. A third sanctification occurs at the conception of Christ. These three forms of sanctification build on one another and complement each other.\textsuperscript{37} Christ himself did not have to be sanctified in the womb; rather he himself is the Holy (\textit{santum}), which rests in the mother’s womb.\textsuperscript{38} Mary is the container which is prepared in such a way that it can receive the Holy.

**The Annunciation**

Albert may have been the first author to compose a separate treatise on the Annunciation. We find this treatise in his early work \textit{De incarnatione}.\textsuperscript{39} In addition, he returns to this topic in the third book of the \textit{Sentences} commentary and in his exegesis of the Annunciation passage in the Gospel according to Luke. Just as for the fathers of the church, for Albert the report in Luke is the guideline for all statements about the Annunciation of Christ’s birth to Mary. This event is considered especially important because of its Christological content. First of all, the emphasis is not on Mary, on the Annunciation to her that she will become the Mother of God. More important is rather the idea that God became man already at the moment of Christ’s conception, which was usually understood to coincide with the Annunciation, and not merely (later) at the moment of Christ’s birth.

Albert analyzes the Annunciation text in the Gospel in different ways, depending on his exegetical or systematic goals. In his \textit{Commentary on Luke}, Albert focuses on explicating the words in relation to other biblical passages. By contrast, even though he partly follows the text in his treatise on the Annunciation in \textit{De incarnatione}, he engages the text critically.

\textsuperscript{35} Alb., \textit{De nat. boni}, Ed. Colon. 25/1, 45, Ins. 19–29.

\textsuperscript{36} Ibid., Ins. 30–35.

\textsuperscript{37} See Elisabeth Gössmann, \textit{Die Verkündigung an Maria im dogmatischen Verständnis des Mittelalters} (Munich: 1957), 158f.

\textsuperscript{38} Alb., \textit{De incarn.}, Ed. Colon. 26, 186, Ins. 1–15.

\textsuperscript{39} Ibid., Ed. Colon. 26, 172–192.
Albert shows us what kind of questions and objections a person who doubts this text might raise, and then he argues against these objections.

In the systematic works, the treatise on the Annunciation is preceded by the Christological question of whether the Incarnation was necessary. Why did God want to become man? Why did God have to become man? This question assumes that mankind came to need salvation through original sin. God’s becoming man seemed best to meet the requirement for effective satisfaction. Albert argues along the lines of Anselm of Canterbury: man has sinned and thus he himself must bring about satisfaction. But by himself man is unable to bring about satisfaction. Therefore, it is necessary that this satisfaction is provided by a being that is greater than man, who is subject to sin. This can only happen through Jesus Christ, as both God and a human being. In this argument it is assumed that fallen mankind must ultimately be saved. But does this also imply the necessity of the Incarnation?

Albert argues that there are several kinds of necessity. The kind of necessity in the case at hand is the necessity of teleology. It was necessary that God became man on the grounds of appropriateness but not, as it were, on the grounds of some natural consistency. Moreover, Albert distinguishes between a perspective from God’s point of view and a perspective from a human point of view. He argues that from the perspective of divine omnipotence there could have been other forms of justice. But from the perspective of man in need of salvation, salvation could only happen in the manner in which it occurred through Jesus Christ. In the wisdom of his providence God ordered salvation in the way in which it happened, and within this order it cannot be conceived otherwise.

Albert does not yet explicitly hold the doctrine of “absolute” predestination, which is further developed in the Franciscan tradition. In this context, the question is raised whether God would have become man even if man whom God created had not sinned, that is, even if Jesus Christ did not have to come into the world as the savior. Albert answers: “With respect to this question one can only know something based on revelation. Without trying to anticipate a further solution it seems to me that it is more likely true that God would have become man even if man had

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not sinned.” In the Sentences commentary Albert emphasizes that the solution to this question is not certain, but that the positive answer seems to agree more with a pious attitude of faith. The reason why God comes into the world is his love for human beings. Salvation is the reason that God comes into this world, as it actually is.

In the account of the Annunciation in Luke, the Annunciation to Mary is put into a historical context with other events. It is preceded by the announcement of the birth of John the Baptist. Albert takes up the relation of these two events by interpreting the temporal reference. Elizabeth is in her sixth month of pregnancy. First of all, this datum is to be interpreted historically: according to Albert’s biological understanding, in the sixth month the embryo is developed to the point that it is able to show sensory reactions. This point is reached as Mary visits her relative Elizabeth. The first thing that John senses in the womb is the coming of Christ; in this way John becomes his forerunner. In addition, Albert interprets the sixth month allegorically in three ways. First, he establishes a reference to creation. The day of the vernal equinox is considered the day that God created the world, because at the beginning light and darkness were separated, and thus they had to be equally distributed on the first day. In the course of the creation the earth produces all sorts of plants, a fact which serves to establish that the beginning of creation is spring. At the same time Albert calls this day the day of Adam’s fall, which happened in the afternoon. Thus, on the anniversary of the Fall, salvation is announced to humankind. Albert also refers to the perfection of the number six, which can be gathered from the completion of creation in six days. The annunciation of the birth of John the Baptist was the beginning, and the Annunciation to Mary six months later is the completion. And, finally, the beginning of spring symbolizes the conception by the Virgin Mary. In this allegorical interpretation Albert can explicate the Annunciation to Mary as a new beginning in the histories of creation and salvation.

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44 Alb., De homine, Ed. Colon. 27/2, 136, Ins. 4f.
45 See Ambrose of Milan, Hexameron, 1.4.13, CSEL 32/1, 11; Bede, De tempore ratione, c. 6, CCSL 123B, 290f.
46 Moreover, the church fathers considered 25 March the day of Christ’s crucifixion. Many medieval calendars indicate the double character of this feast. See Alb., Super Dion. epist. 7, Ed. Colon. 37/2, 509, Ins. 26–31.
47 Alb., Super Luc. 1:26, Borgn. 22, 44f.
The real Annunciation to Mary according to Luke begins when the archangel Gabriel enters Mary’s chamber and delivers the message that she will be a mother. Following Jerome, Albert interprets the name “Gabriel” to mean “God’s strength”: the message that he has to deliver is so great that it requires divine strength. According to the doctrine of the church fathers, Gabriel belongs to the highest angels.\textsuperscript{48} Albert follows the hierarchy of Pseudo-Dionysius, however, according to which the archangels are placed on one of the lower steps among the nine choirs of angels and thus are closer to human beings in their communication.\textsuperscript{49} For this reason, Gabriel is especially suited to deliver the message to Mary.

Albert holds that we must presuppose that Mary was a believer when she encountered the angel. She believed in God and she expected the Messiah, the Savior. And she also assumed that some woman in the future would be chosen to be the mother of the Savior. She could not assume this for herself because she was humble and did not deem herself of high rank. That she should become the Mother of God was a belief that the angel needed to awaken in her first. But was such a belief on the part of Mary required at all? For God’s Incarnation happens through divine providence, and thus it cannot depend on the assent or the will of a human being. Albert concedes that divine providence can be satisfied without the active cooperation of the human will, and yet the human being’s willing assent is required. The Annunciation to Mary aims at bringing about this assent in Mary. It is not the case that the virtue of faith is first instilled in her but rather that the Annunciation allows her to trust the words of the angel. The credibility of the messenger allows for free assent. For this reason, Albert considers it a positive aspect that Mary asks the angel questions and expresses doubts in order to test his credibility. Here Albert follows Boethius and Aristotle: “Faith is assisted opinion” (\textit{fides est opinio iuvata}); and: “Faith follows opinion, persuasion follows faith, reason follows persuasion.”\textsuperscript{50} Mary’s obedience is reasonable.\textsuperscript{51}

\textsuperscript{48} See Gregory the Great, \textit{Homilia XXXIV in Evangelia}, PL 76:3250D.
\textsuperscript{49} The nine choirs of angels in ascending order from bottom to top are \textit{Angeli, Archangeli, Principatus, Potestates, Virtutes, Throni, Dominationes, Cherubim, and Seraphim}. Alb., \textit{Super III Sent.}, d. 3, a. 15, Borgn. 28, 57b: “Sine praeiudicio dicendum quod Angelus illa fuit de ordine Archangelorum.”
\textsuperscript{50} Arist., \textit{An.} 3.3 (428a19): “Si omnem opinionem consequitur fides, fidem autem sua-sum esse, suasionem autem ratio.”
\textsuperscript{51} Alb., \textit{Super III Sent.}, d. 3, a. 13, Borgn. 28, 56a: “Dicendum quod fidei virtutem Angelus non intendit aedificare per annuntiationem in Virgine, quia illa fide plenissima fuit, sed quia illa humillima fuit, alta de se non praesumens; et cum altissimum sit esse Matrem Dei, hoc de se ex sua reputatione non debuit praesumere, nisi instructa per Angelum,
But Albert first raises the question, why was it an angel who brought this message? In his *Commentary on Luke*, Albert shows that the angels shall also be included in the joy of the Annunciation. The joy of the Annunciation must not be hidden from them since they will later begin to sing the hymn of praise at the birth of Christ. Moreover, they themselves have reason to be joyful since through the salvation of humankind the restoration of the fallen tenth choir of angels is secured. Since the angel is in a special way the servant and protector of humankind, moreover, this messenger-task pertains to the angel most of all. But if we assume that Mary is "elevated above all choirs of angels", it does not seem appropriate that an angel would communicate knowledge to her. In his reply, Albert remains firmly within the context of the Dionysius-reception. In his works Pseudo-Dionysius develops a rich symbolism of ascent and descent, of procession from God and return to him. Pseudo-Dionysius describes how the divided plurality of creation proceeds from the divine unity and unfolds as a hierarchical order. The gifts of grace that proceed from God are also distributed to human beings via the degrees of the hierarchy (themselves ordered in triads). A creature's return to God comes about when the creature is assimilated to God by receiving the gifts from above in proportion to its capacity. The hierarchical degrees are in turn related to each other, which Albert interprets as a lawful order: "For this is the law of divinity that through the first the intermediate ones are lifted up, and through the intermediate ones the last." This means that through the angel illumination is brought to human beings. Since Mary was a part of the ecclesiastical hierarchy at the moment of the Annunciation, this law governs her as well. The angels see God face to face, but Mary does not have the heavenly vision of God during the earthly life; she needs the mediation of an angel.

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52 Albert offers this view in greater detail in his exegesis of the parable of the lost drachma (Luke 15:8ff.). Man was created to replace the fallen choir of angels. But since mankind is fallen through sin, mankind must be saved by God. See Alb., *Super Luc. 15:8ff.*, Borgn. 23, 389–391. Albert’s model is Gregory the Great, *Homilia XXXIV in Evangelia*, PL 76:1249ff.


54 Alb., *Super Dion. de cael. hier.*, prol., Ed. Colon. 36/1, 2, Ins. 19f.: “Haec enim est lex divinitatis, ut per prima media et ultima per media reducantur.”

The glory of God shines in such a bright light that in order to approach it gradually one needs this hierarchical mediation. Above the ecclesiastical hierarchy this function belongs to various degrees to the angels, who therefore are called messengers. Albert’s biblical exegesis is based on this fundamental Pseudo-Dionysian thought, as can be seen from his interpretation of angelic appearances in his Commentary on Luke. The divine message manifests itself so mightily that it requires, as it were, a plurality. Albert assumes that for the Annunciation to Mary there was not only Gabriel, but also a heavenly host of angels, just as later at the proclamation of Christ’s birth. Yet the encounter with the divine—even in this “weakened” manner through an angel—instills agitation and confusion in a human being. The reaction to this encounter can turn out quite differently. Albert compares Mary’s hesitating, questioning behavior at the Annunciation to Zachary’s behavior at the annunciation of the birth of John (Luke 1:12) and to Daniel’s behavior when he has his vision (Dan. 2:1). Zachary reacts with disbelief to the message, which seems to contradict all reasonable expectation. Daniel throws himself to the ground upon his vision, but the words of the angel make him rise again, trembling. Mary asks pointed questions, however, about how to understand the message. Her positive answer can thus become the answer that decides the salvation of humankind.

But we must ask further why the Annunciation happened in this manner, namely through the sensible appearance of an angel. Following Augustine, Albert adduces three kinds of appearance: visio intellectualis, imaginaria, corporalis. Among these the intellectual vision appears to be the highest and thus appropriate for such a special event as the Annunciation of God’s Incarnation. Yet what is at stake here is not merely the intellectual reception of a piece of knowledge. The Annunciation expresses a call to motherhood, which demands a free answer, an assent grounded in free choice. A divinely produced illumination (illuminatio) of the intel-

56 Alb., Super Luc. 1:26, Borgn. 22, 47a: “Nec est credendum, quod angelus unus venerit, sed cum eo principaliuntio multitudo allorum ad libitum. . . . ita Pater summus mittens ad desponsandam sibi naturam humanam, unum quidem praecipue dignitatis Angelum misit, tamen cum illo multos creditur misisse secundae dignitatis Angelos.”
58 Augustine, De Genesi ad litteram 12.6, note 15, CSEL 28/1, 387, Ins. 1–4.
lect would overwhelm reason. But that is not the point of the Annunciation; rather, Mary has to assent freely to her motherhood. Her faith in the words of the angel is to be awakened. Through the angel's words Mary receives, on the one hand, the knowledge that she has been chosen to be the Mother of God. On the other hand, these words demand her assent. On the part of the angel, the goal (finis) of the Annunciation is reached when he has communicated the message. On the part of Mary, who receives this message, the goal is reached when she has given her assent in faith. However, Albert assumes that God preceded his messenger and through grace instilled faith in Mary, so that the angel would find it. This account is in accord with the view that faith, as a theological virtue, is instilled by God as the light of understanding and cannot be acquired by human beings on their own.

In his treatise on the Annunciation Albert presents a detailed exegesis of the Annunciation scene, especially of the angel's words. He discusses every historical detail of the scene. Among the words of the Annunciation Albert pays special attention to the overshadowing by the Holy Spirit. That Mary will be overshadowed by the Holy Spirit means, first of all, the cooling of the glow of original sin in the Virgin, which is brought about by the Holy Spirit. The shadow also implies preparing the strength of the virginal nature so that it may bear the divine light. Finally, it also means that the created intellect can only grasp the immense secret of the Incarnation as if through a shadow. In the Sentences commentary Albert interprets this point directly with respect to the Incarnation: the shadow signifies the kenosis of the Son of God. The overshadowing can thus express all aspects of the Annunciation.

Conception

In order to understand Albert's reflections on the conception of Christ, one must presuppose the ancient view of conception, which Albert mostly

60 Alb., De incarn., Ed. Colon. 26, 176, lns. 59–63: "Ita dicimus hic quod finis in ipso annuntiationis est notificare virgini, quod esset electa ad hoc, ut fieret mater dei. Finis autem in alio est, ut virgo credens verbis angeli consentiat in id quod nuntiatur."
61 Alb., Super Luc. 1:28, Borgn. 22, 64b: "Sic et nunc praevenit nuntium suum Dominus, inventus a nuntio circa sponsam: ut fidem habeat sponsa de verbis nuntii, secum in cordis thalamo iam perhibet esse Dominum."
takes from Aristotle. According to this view the man is the active principle of conception; his semen contains the power that forms the embryo. The woman is the receptive, passive part, who carries out a nutritive function after conception. Her blood is the material basis for the embryo. The vegetative capacity, which the woman offers materially, is actualized through conception. The man’s semen provides the sensitive capacity. The vegetative and the sensitive soul of the developing human being are disposed towards their completion in the rational soul. The process of the soul’s development reaches its goal in the rational soul. The sex of the child is determined by the quality of the active principle. If the formative power of the male semen is undiminished then a male child is generated. A defect in the semen's active quality is the biological reason for the conception of a female child.

Now, what does this mean for Christ’s Incarnation? The operative principle in the conception of Christ is the Holy Spirit, who possesses the formative power. Like other women Mary provides the material basis for the conception and she is the warming and nourishing place for the embryo’s development. The active power in the conception of Christ, the Holy Spirit, was maximally perfect. For this reason, Albert can emphasize in the Commentary on Luke that it is the conception of a son rather than a daughter. The child given by God is a son, as is clear from many other special births reported in the Old Testament. There are typological but also biological reasons for this fact.

Albert is well aware that the question of the mother’s cooperation during conception had already been the subject of controversial discussions in ancient natural philosophy. While the Greek physician Galen holds the

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65 Alb., Super III Sent., d. 3, a. 11, Borgn. 28, 54: “Dicendum quod totum quod est simplex operatio ad formam et ad speciem hominis et unionem, fecit Spiritus sanctus; sed quoad materiam et fomentum loci convenientis foventis caloris extrinsecus, operabatur potentia generativa Beatae Virginis, sicut et in alis feminis fit.”

view that during conception there is a cooperation of (primarily) male power and (secondarily) female power, Aristotle maintains that the formative activity belongs entirely to the man, while the woman is purely passive. According to his principles of scientific theory, Albert accepts as an authority the author that evidently appears competent regarding the issue at hand. We read in the second book of the Sentences commentary: “One should know that in matters of faith and morality one should trust Augustine more than the philosophers, if they hold a different view. But if Augustine were speaking about medicine, I would rather trust Galen or Hippocrates; and if he speaks about the natures of things I trust Aristotle more, or any other expert in natural philosophy.”

Thus one would think that Galen is the authority to trust on this medical issue. However, for the doctrine of conception Albert actually follows Aristotle’s theory. In this special context of the Annunciation account this doctrine is even more important since Aristotle assumes a heavenly origin of the human rational soul. For this reason, his view is closer to Catholic belief in the conception of Christ.

But what can it mean that Mary has been given the capacity to procreate? For Albert this indicates that the Virgin is being prepared bodily to receive God’s Word, to serve and to nourish it. Yet even though natural processes are at work in the context of pregnancy and birth, nonetheless it must be stressed that the conception of Christ is the “miracle of miracles”, which has no equivalent. God himself brought about the secret of the Incarnation. Hence, there is a significant difference in the conception of Christ compared to the natural conception of a human being. In the case of natural conception, the body is only gradually formed after

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67 Alb., Super II Sent., d. 13, a. 2, Borgn. 27, 217a: “Unde sciendum, quod Augustino in his quae sunt de fide et moribus plus quam philosophis credendum est, si dissentiunt. Sed si de medicina loqueretur, plus ego crederem Galeno vel Hippocrati; et si de naturis rerum loquatur, credo Aristotelis plus vel alii experto in rerum naturis.”


69 Alb., Super Luc. 1:31, Borgn. 22, 72b: “Utrum in conceptione Beata Virgo aliquid efficiens causae contulerit? ... Ita in conceptu virginali totam operationem et actionem damus virtuti Spiritus sancti: et corputentam substantiam, de qua operatus est Spiritus sanctus, Beatae Virginis: et ideo ipsa est vere mater Dei, quia Deus ipsa est de sua substantia factus homo. Nec tamen Spiritus sanctus est pater Christi, quia nihil de substantia Spiritus sancti est conversum in Filium. Haec est fides Catholica circa conceptum Christi, quam ‘nisi quisque fideliter firmiterque crediderit, salvus esse non poterit’.”

70 Alb., Super III Sent., d. 3, a. 12, Borgn. 28, 55.
conception, and it grows as a result of this process. During this period, which is typically assumed to take 40 days, the body is formed by the soul which still remains in potency itself. The soul in turn finds its completion successively in the rational soul. In the case of Jesus’s conception the body was formed, ensouled, and united with the divine nature in the person of Christ in one instant. However, Albert rejects as heretical the view that Christ did not grow any more after conception and the view that Mary’s pregnancy was shorter than a normal pregnancy. The bodily growth process in Christ was like that in any other embryo. But his capacities of the soul did not need any successive unfolding, and therefore the body did not have to achieve its shape first. Mary contributes to this process only the matter of blood, which is entirely purged of desire. Beginning with the first moment of conception Mary was the Mother of God. Thus, the entire activity of the Incarnation is carried out by God.

Although Mary is considered biologically passive during the conception, nonetheless her active consent through faith is a decisive contribution relevant for salvation. And for this reason the Annunciation to Mary is required in order to receive her consent. Albert carefully distinguishes the biological and the mental realms.

Virtues—Virginity

Mary’s virginity is to be considered under two aspects. On the one hand, there is a Christological perspective. In the exegesis of the biblical texts the symbolic character of virginity becomes clear. Mary is not barren, unlike Elizabeth or other women in the Old Testament. Rather, in her the greatest miracle occurs—the virginal conception—which surpasses all other miraculous forms of conception. Accordingly, the conception of Christ is unique, just as the God-Man is unique.

It is only in the further development of Christianity in late antiquity and the early Middle Ages that virginity acquires a separate status as a virtue. The first hermits and monks take up the few statements in the New Testament about the life of celibacy. Virginity becomes a radical form of the imitation of Christ. After the period of the persecution of Christians,

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71 Alb., Super III Sent., d. 2, a. 8, Borgn. 28, 31; d. 2 a. 14, Borgn. 28, 41: “Dicendum quod omnia ista simul facta sunt: unde confortando et formando, solidando et distinguendo membra, et componendo corpus et animando, sibi univit, et e converso uniendo omnia illa fecit.”
during which martyrs were considered the perfect witnesses, perfection is attributed to those human beings who renounce sensuality for the sake of Christ. In this context, Mary serves as an example: her virginity is an exemplary virtue. Over time the view takes hold that Mary had taken a vow of virginity. Albert too holds this view. Nevertheless, he stresses in accord with the Gospel that Mary was married. He argues that Jesus sought to allow the assumption that he was born from natural conception rather than to allow for the possibility that his mother might be subject to suspicions of unchastity. But this would have been the assumption if it had become known that Mary had become pregnant as an unwed woman. However, Albert adds, after their marriage Mary and Joseph had together taken a vow of abstinence. The legally binding character of their marriage thus remained intact. For Albert, it is clear that marriage comes about primarily through the consent of the marital partners, while the sexual act has lesser importance for its legal validity. The consent expressed in the vows of both partners is primarily what binds them. In accord with the traditional view of the vow of abstinence, Albert interprets the brothers of Jesus mentioned in the Gospel as his cousins, sons of his mother’s half-sister. At the same time, Albert stresses that Mary took this vow with the reservation that she wanted to preserve her virginity, unless God had other plans for her. Mary thereby followed the Jewish tradition of expecting the Messiah. Every woman had the duty to produce offspring until the arrival of the promised scion, the Messiah. Mary could not be released from this duty either. Further, she belonged to the line of David. She had to expect the possibility to be chosen as the mother of the Messiah, even though in her humility she considered this unlikely.

In the Commentary on Matthew Albert lists further reasons for Mary’s virginity in addition to this vow, for which he refers to Origen. Here, Mary as virgin and bride is seen as prefiguring the church. Moreover,
Joseph is witness to Mary’s chastity and he is able to defend her against any calumny. Since Joseph does not leave Mary (Matt. 1:19–24), she remains under his protection and is saved from being stoned, which was the penalty for adultery according to Jewish law. A further important reason for maintaining the marriage, Albert says, is that in this manner Satan was deceived since the miraculous birth could be hidden from him. Finally, Albert emphasizes with Augustine that in this way Mary acquired all the goods of marriage. But if we can attribute virginity to Mary for these various reasons, we should ask how we are to understand this virginity.

Albert already deals with virginity as a kind of temperantia in De natura boni, his early work on moral theology. The topic triggers an extensive Mariological digression. At the beginning of his exposition Albert gives the following definition: “Virginity is chastity of the mind that is preserved through the integrity of the body.” Mary’s virginity is highlighted as privileged compared to that of other human beings or of the angels—or even compared to that of diabolic beings. Her purity is an outstanding characteristic that determines her entire way of life and thus her special way of salvation. This characteristic has its origin in the sanctification in the womb; Mary combines all merits of life in her; her purity is present from the moment when she is greeted by the angel, when the Holy Spirit overcomes her and the power of the Highest overshadows her, to the Incarnation. Virginity is thus primarily a purity of heart, and loyalty in faith, as it becomes manifest especially in Mary.

In his Commentary on the Prophet Isaiah Albert takes up the topic of virginity in discussing verse 7:14: “Ecce virgo concipiet.” The sign that is promised of the birth of a child by a virgin is already referred to the birth of Jesus by Mary in the Gospel according to Matthew. Albert reads the text in accord with this tradition. He distinguishes three ways in which a human being may be generated: Adam came about from the earth, Eve was created from Adam, and all other human beings are made from the union of man and woman. Now a new, fourth way is added as a sign: the birth of a man from a virgin. Thereby all humankind is renewed after the Fall. Virginity may indicate several things: the modesty of innocence (pudor integritatis), the blossom of virtue (flos virtutis), or the purity of sanctity (puritas sanctitatis), as Albert notes initially, following Jerome.

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77 Alb., De nat. boni, Ed. Colon. 25/1, 43–124.
78 Ibid., Ed. Colon. 25/1, 43, Ins. 68f.: “Virginitas est castitas mentis integritate corporis reservata.”
But it may also indicate the honor of nature (honor naturae), the beauty of honesty (pulchritudo honestatis), and a likeness to angelic splendor (similitudo angelici ornatus), as it is said in Cyprian. Because of her virginity, Mary is in her virtue similar to the angels. She shares with the angels a virtuous decorum in all her actions; with the archangels, the prudence of counsel; with the principalities, the righteousness of the divine law; with the powers, the submission of all hostile might; with the virtues, the insurmountable strength to fulfill the divine will; with the dominions, the height of elevation; with the thrones, the worthiness of bearing the divine; and through her splendor and glow she resembles the Cherubim and Seraphim.

Albert makes clear repeatedly that virginity is not primarily a physical state but rather an inner disposition of a human being. For this reason not every kind of virginity is to be considered meritorious. There is the virginity of children, which is not to be considered a virtue but rather a natural state. There is the virginity preserved virtuously before marriage, which does not rest on a vow. In this context Albert provides the example of the daughter of Jephthah (Judg. 11:37–40), who laments her virginity since she has to die childless. In general one must take into account the possibility of virginity due to circumstances of life. Part of the genuine state of virginity however is the vow to God; virginity must be willingly preserved. And this must be assumed about Mary.

**DIVINE MOTHERHOOD**

Mary’s divine motherhood may be considered as the leitmotif for Albert’s Mariology, which serves as the explanatory basis for all statements. With this view Albert is firmly grounded in the tradition of the church fathers. Albert bases his interpretation of theotokos (“God-bearer”) especially on John Damascene’s work, *De fide orthodoxa* (Chapter 56). Here Albert
can follow a decisive defender of the Christology of the Council of Chalcedon. The title “God-bearer” can only be understood from the perspective of the mystery of the hypostatic union. Mary did not merely give birth to a human being but rather to the incarnate Word of God. She did not merely give birth to a heavenly body but also to a body of flesh, for only in this manner could the birth occur for the salvation of humankind. Albert meets possible objections by pointing out that it was not a nature that was born—neither the divine nor the human nature—but rather the person who is both divine and human in complete union. Mary is the mother of this person and thereby the Mother of God. Just as Christ is God and a human being in one person, he is only one son. According to Albert the earthly birth does not bring about a second real sonship in Christ: Jesus is Mary’s son through the one eternal sonship; there is no other real relation. But Mary’s relation to her son, her motherhood, is real. However, Albert rejects a discussion concerning fatherhood with respect to the human being Jesus Christ. He rejects in particular the view that the Holy Spirit is the father of Jesus. Nor is Christ the son of the Trinity. There is only one eternal sonship of Christ with respect to the divine Father in accord with eternal conception.

Regarding Mary’s motherhood, Albert emphasizes a painless birth. It was a special privilege of Mary as the Mother of God, through which she is placed in opposition to Eve. To Eve it was prophesied after the Fall: “I will greatly increase your pains when you become pregnant; with pain you will give birth to children” (Gen. 3:16). As regards Mary’s giving birth free of pain, Albert refers with John the Damascene to Isaiah 66:7: “Before the woman goes into labor, she gives birth; before the pains come upon her, she delivers a son.” It is remarkable that Albert assumes that Mary must later make up for this. In Mary’s suffering with Jesus under the Cross, Albert sees her labor pains for the savior. In this Albert differs from his contemporaries, who see in Mary’s suffering rather the labor pains of the rebirth of humankind, that is, a kind of aid in the act of salvation.

However, Albert underlines that Mary’s being the bodily Mother of God does not imply an obvious preeminence. This becomes clear in Albert’s

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84 Alb., *Super III Sent.*, d. 8, a. 1, Borgn. 28, 163.
85 Ibid., d. 4, a. 5, Borgn. 28, 83–86.
86 Ibid., d. 4, a. 4, Borgn. 28, 79–83.
exegesis of those Gospel passages in which Jesus is confronted with the question of his blood relatives. The spiritual relation ranks higher than the blood relation. Mary is not special because she was the bodily instrument but because she accepted this way in faith. However, Mary’s acceptance does comprise a bodily dimension as well. The fact that Mary’s motherhood is to be understood from the perspective of her faith implies in turn that in a certain way spiritual motherhood pertains to every believer. Christ is formed in the heart of the faithful.

Accordingly, Mary has a special status in that she held on to her faith during the days in which Christ rested in the tomb. For this reason, Albert says, it is appropriate to fast on Saturdays out of reverence for Mary. In this way, Mary as the Mother of God acquires a privileged status after the Resurrection of Jesus. In his Commentary on Mark Albert explains that she was the first to whom the resurrected Christ appeared. This happened for the sake of her joy. The case of Mary Magdalene is different: to her Jesus appeared so that she might serve as witness for the Resurrection. The Mother of God did not first have to come to believe in the Resurrection, and thus Jesus could appear to her first, as Ambrose had already noted.

Assumption

Albert thinks that after her death Mary was taken up into heaven with her body and soul. Even though this doctrine was widely held during the High Middle Ages, it was not defined dogmatically and thus remained subject to critical discussion. According to the Augustinian doctrine of original sin, bodily death is due to original sin. On the one hand, original sin is the lack of original rectitude, that is, the right direction towards God which pertained to human beings in the original state. This sin causes the

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90 Alb., Super Marc. 3:35, Borgn. 21, 417b: “Et mater est in cuius corde tamquam in utero formor in gratia.”
92 Alb., Super Marc. 16:9, Borgn. 21, 755a: “Inter eos in quibus probavit resurrectionem, Matri enim Mariae Virgini beatae apparuit omnium primo, non ut probaret resurrectionem, sed ut eam visu suo laetificaret, sed in Maria Magdalena resurrectionem probavit.”
separation of body and soul in death since the soul is the life principle of the body. On the other hand, original sin brings about an inclination towards evil, which gradually destroys the body. This inclination can only be erased through the decay of the entire body. Everything that hinders in a bodily way the glorification after death is destroyed. From this it is clear that such decay cannot be assumed to occur in a human being who is free from sin. As already discussed above, with respect to the topic of Mary’s sanctification, Albert assumes that Mary was entirely purified of original sin after the conception of Christ, at the latest. Thus, there was no necessity that her body be purified through decay. Indeed, her body could not and was not supposed to decay because of her purity. For this assumption one could refer to Psalm 16:10: “For you will not abandon me to the grave, nor will you let your Holy One see decay.” The model is the Resurrection of Christ.

Albert takes up a statement from the De divinis nominibus of Pseudo-Dionysius, which is subject to controversy among interpreters: “For even in the presence of our god-fearing priests, when we, as you know, and he himself and many of our saintly brethren had gathered to see the life-giving and God-assuming body...he surpassed all the others who are initiated to the holy mysteries.” This passage is often interpreted as a reference to the gathering of the apostles, when the resurrected Christ appeared to them. It could also be a reference to the Eucharist. Yet Albert interprets this text with reference to Mary. According to the apocryphal transitus-Mariae accounts, at the moment of Mary’s death the apostles were miraculously placed in her house so that they could witness her passing. In Albert’s view the passage in Pseudo-Dionysius is to be referred to this situation of Mary’s death. The inspiration for Albert’s interpretation was likely a gloss on the Pseudo-Dionysius text, in which “the God-assuming body” was interpreted with reference to the theotokos. For Albert, it is

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94 Alb., De resurrec., Ed. Colon. 26, 246, lns. 18–34.
95 Pseudo-Dionysius the Areopagite, De divinis nominibus, c. 3, trans. Sarraceni (Dionysiaca 1, 135): “Quoniam et apud ipsos deo acceptos nostros hierachas, quando et nos, ut nosti, et ipse et multi sanctorum nostrorum fratrum convenimus ad visionem corporis vitae principiis et quod deum suscepit,... omnem alios sanctos magistros post theologos, ut nosti, superabat.”
96 Alb., Super Dion. de div. nom., c. 3, Ed. Colon. 37/1, 110, lns. 50–53: “Et ideo melius est dicere, quod convenerunt in morte beatae virginis, de qua corpus Christi assumptum est, et quae deum, dei filium, in corpore suo suscipit.”
clear that Mary really died, before she was received into heaven with her body and soul.

Here a clear distinction is to be drawn between *ascensio* and *assumptio*. The ascension into heaven by divine power only pertains to Christ. By contrast, Mary is received into heaven not by her own power but through Christ’s power. The place of her assumption must be determined accordingly. Mary is not elevated to the *caelum trinitatis*; although received into heaven, Mary is not likened to God. Albert calls the place at which the blessed arrive *caelum empyreum*. Mary is elevated to this place and this is also the place of Christ’s humanity, even though in heaven there are in turn levels of participating in beatitude. Here Albert follows a doctrine commonly held since Jerome: the souls of the saints are received among the choirs of the angels. The Holy Virgin, however, takes her place above the choirs of the angels. Yet this does not mean that she is in a different place, but rather that she participates in beatitude to a higher degree. This special honor belongs to her through grace. Above this place one has to locate the place of Christ’s humanity.

How are we to understand these places? Following Pseudo-Dionysius, Albert maintains that the entire cosmos has a hierarchical structure. Dionysius coined the expression “hierarchy” as “power over holy things”. There cannot be disorder, lack of harmony or confusion in the heavenly hierarchy nor in the ecclesiastical hierarchy, but only harmony, order, and good regulation. Dionysius locates this structure both in the cosmic order, through measure, proportion, and harmony, and in the relation of rational creatures to God, which rests on analogy. To accept the hierarchical order means to carry out the divine law; to live within the measure of what is possible; to become divinized. For the origin (*principium*) of the hierarchy is God, and the end (*finis*) of all hierarchical activity is divinization, the union with God. Hierarchy is thus the ordering principle through which

98 Alb., *De IV coaeq.*, Borgn. 34, 419a: “Dicimus quod nihil est in caelo Trinitatis nisi Pater et Filius et Spiritus sanctus, quia esse in caelo Trinitatis est esse in aequalitate virtutis Dei continentis et salvantis omnia sub ipsa virtute contenta.” See Alb., *Super II Sent.*, d. 2, a. 8, Borgn. 27, 58a.
God manifests himself in creation. One must overcome the abyss between what is sensible and the divine sphere that reveals itself behind it. This is only possible through hierarchical, gradual mediation. Accordingly, the choirs of angels have their function each in the return of all things to the origin. The lowest levels, the angels, archangels, and principalities (angeli, archangeli, principatus) are those that immediately deal with the uplifting and return of human beings. Then there are the dominions, virtues, and powers (dominationes, virtutes, potestates), and then there are those highest in rank, which are closest to God: the thrones, Cherubim, and Seraphim. These highest angelic choirs shine in the light that emanates from Christ’s humanity and from Mary. Mary shines through the uncreated light that is God himself within her. In his exposition Albert follows faithfully the Pseudo-Dionysian model of triads and he avoids assuming a separate choir for Mary. She is not located in her own order; rather, a special level belongs to her.101

This becomes clear once again in Albert’s exegesis of Rev. 12:1: “And a great sign appeared in heaven: a woman clothed with the sun, with the moon under her feet, and on her head a crown of twelve stars.” This woman is the blessed Virgin and Mother. She is clothed with the sun, that is, with the dignity and the splendor of her son, who is the true sun. The moon under her feet is the Church Militant, which is time and again subject to failure. Yet the 12 stars denote the entirety of the blessed. Everything that comes from Mary comes from God; she can only become a mediator through his splendor.102 Mary is the aqueduct for the salvation of the world (Sir. 24:31–32).

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101 Alb., Super II Sent., d. 9, a. 8, Borgn. 27, 208b: “Dicendum quod Beata Virgo habet specialem gradum, sed non facit ordinem, quia ordo sonat multitudinem in gradu uno communi, sed sibi hoc est speciale propter dignitatem Filii.”

102 Alb., Super II Sent., d. 2, a. 8, Borgn. 27, 58b: “De Beata Virgine intelligitur per illud Apoc. XII, 1: Et signum magnum apparuit in caelo, mulier amicta sole, et luna sub pedibus eius, et in capite eius corona stellarum duodecim. Mulier haec Benedicta Virgo et mater est: amicta sole, id est, dignitate et fulgoire Filii sui qui sol dicitur: luna sub pedibus eius, id est, militans Ecclesia menstruis defectibus adhuc subjecta, provoluta ante pedes eius ad indulgentiam postulandam: corona duodecim stellarum est universitas omnium beatorum, quod probatur: corona circulus est, et signat circulum signorum: et ad circulum signorum reducutur omnis stella quae est in caelo per duodecim imaginum quae signa vocantur: et ideo per duodecim stellas omnes beati significatur, qui sunt in capite eius sicut corona: quia lumen ab ipsa recipiunt, et in eam omnes Sancti refundunt hoc quod habent dignitatis et gratiae sub Jesu Filio eius, et sub Deo.”
Summary

In several places in his work Albert deals with the name “Mary”. She is the bearer of light, star of the sea, bitter sea, and lady. Albert finds examples for this interpretation in Jerome’s Book of Hebrew Names and in the Etymologies of Isidore of Seville. Although Albert here remains within the context of common medieval interpretations of names, nonetheless for him these names indicate Mary’s role in the history of salvation. Let us therefore provide a summary of these names in order to offer a comprehensive look at Albert’s Mariology.

Illuminatrix

Mary does not only bring light for human beings but also for the angels. "Who is she who appears like the dawn, beautiful as the moon, bright as the sun, awe-inspiring as an army with banners?" (Cant. 6:9). Albert is not the first to read this passage from the biblical Song of Songs with reference to Mary. Moreover, he combines it with the creation of the stars in Genesis 1:16–18: “And God made the two great lights, sun and moon—the sun to rule the day, the moon to rule the night—and the stars. And God set them in the expanse of the heavens to give light on the earth, to rule over the day and over the night, and to separate the light from darkness.” In Mary there is all light, the gleam of dawn, the light from the moon and the sun; what was distinct in the creation is gathered in Mary.

The dawn is a light that shines in the darkness as a sign of the nearing sunlight which brightens the day. This means that since the beginning Mary is predestined by God for the salvation of the world. In accord with God’s counsel she emerges from the hiddenness of predestination. When the light is thus brought to human beings through the Virgin it does not appear in its frightening majesty, which human beings cannot bear, but rather in its merciful goodness. In the hour of dawn, when Mary

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104 Alb., De nat. boni, Ed. Colon. 25/1, 48–56. Here I shall provide only selected aspects of Albert’s extensive discussion of the name illuminatrix.

105 Cant. 6:9 (Vulg.): “Quae est ista quae progreditur quasi aurora consurgens pulchra ut luna electa ut sol terribilis ut acies ordinata.”
appears, the dew of divine mercy is brought to humankind. Just as the
dawn spreads, grace flows to human beings until the day of salvation.

“Beautiful as the moon…” (Cant. 6:9). The moon is a star that divides
tides and seasons. In line with his appreciation for natural philosophy,
Albert expounds on this point in great detail. All these effects can be
attributed to Mary. She shines in the night of this world’s burdens as
beautifully as the moon. She guides human beings through the tides of
life. Unlike the moon, however, she is always filled with light and she
never stops communicating it. And if the moon suffers a diminishing of
its brightness when it approaches the sun, the Virgin shines even more
brightly the closer she gets. Christ is the light, however, from which
she receives her brightness. Finally, Albert describes how through Mary
the ages are indicated, since with her the life of grace begins, just as Eve
once ended the age of innocence.

The sun in its function can be related to Mary in many ways as well:
“bright as the sun” (Cant. 6:9). The sun indicates in every respect the hours
during the course of the day. In the early morning light, Mary, who is
elevated above the choir of the angels, is reflected in the angels. As mid-
day sun she herself shines since she received this honor from her son. The
evening light, however, corresponds to the praise of the Church Militant,
whose faith is still hidden by the shade of mirror and parable. In her early
morning light Mary offers her child to the world. In the midday light she
shines when she learns from the son through his teaching and miraculous
works. In the evening, however, the light wanes, when Christ, the son of
justice, is covered at the Cross; then Mary too, the illuminatrix, is covered
by grief.

“…awe-inspiring as an army with banners” (Cant. 6:9). In this part of
the verse Mary is likened to the brightness of the stars, which in their
might appear like a banded army. They stand for the countless hosts of
angels, whose light is reflected in Mary. Albert describes this scene for all
the choirs of angels. At the same time Mary is the one who illuminates
the angels.

Stella maris

Albert further interprets the name “star of the sea” (stella maris).106 This
star is the resting pole of the firmament, which serves as the center of

motion for the other stars while it remains motionless itself. Of the two polestars, the southern and the northern one, Mary resembles the northern one, which is perceptible to us. For just as the polestar provides orientation for sailors, Mary guides to a safe haven. And Albert also describes the possibility that this star might be hidden behind clouds. Mary is called a star in three senses: the star is the nobler part of heaven; the star is given to the night to illuminate it; the stars send out rays that do not suffer any diminishing or corruption of light. Mary is elevated above all heavens, she is nobler than all other parts of heaven; she shines like a morning star to illuminate the church. She destroys the fog of sin, of sadness, and of error.

The night is the idle life of earth's inhabitants, in which the sun, which is to reveal the truth, is darkened. In this night Mary shines for she clothes the truth with our bodily nature in order to lead us from what is visible to what is invisible. Since the human eyes are too weak to recognize the divine, she surrounds the child with the kind of flesh that is ours and, further, she wraps the child in cloths and places it in a manger so that even the ox and the donkey may be led to knowledge through the senses. The ox, Albert explains, is the simple cleric, but the donkey is the layperson who does not know any theology. For the person who is not able to penetrate the subtleties of the divine grasps with his initial faith the Word of God from the articles of faith, which suffices for his salvation. To this end Mary serves as the star that guides through the night.

Just as a star sends out its ray and is not thereby diminished, so Mary has born a son without suffering any damage. The one who walks on the waves of the sea without having his body sink, who leaves his tomb without destroying the stone, and who enters the house of his disciples with the door closed, this is the one who has the power to be born by a virgin without diminishing her virginity.

The image of the star of the sea as the polestar also indicates Mary's function as the world's turning point. The southern, midday pole is Christ himself since he is full of light. The northern, nightly pole, however, is the Virgin's womb, in which Christ took on flesh. Through these poles the world is turned: the one is the reconciliation through the mother's mediation, and the other is the salvation on the Cross. Around these two immovable poles the entire firmament is turning. The northern polestar is placed in the region of cold and fog, from which the demons' hostilities arise. Mary is placed in the north in order to protect humankind. This is the place where she crushes Satan's head. In her mercy Mary does not consider it an unworthy task to send her rays to the lowest parts.
Through this image of the star of the sea Albert shows how Mary is—in her function and importance—related to Christ's work of salvation.

Amarum mare

The third name that Albert interprets is “bitter sea” (*amarum mare*).\(^{107}\) The bitterness however belongs to Mary not because of her nature but because of her life. First of all, bitterness befits her because she witnesses the crucifixion of her son, which is the fulfillment of the prophesy to Simeon, namely that a sword shall pierce her soul (Luke 2:35). Next she is filled with bitterness because of sinners, because she is not capable of withholding her mercy from them. Finally, her heart is filled with bitterness, not in the sense that she lets it become bitter, but because she softens her heart. For whenever Mary sees that human beings are bitter in their heart because of sin, and that this leads to sadness, she is filled with this bitterness, and thus it leads to a sadness willed by God.

Domina

Albert dedicates a final interpretation to the name “lady” (*domina*).\(^{108}\) Albert lists three reasons why Mary is called lady. First this occurs because of her special dignity, since she is the mother of the King and Lord Jesus Christ. Moreover, she frees human beings from slavery through the good deeds and richness of her mercy. Finally, she stops the enemy.

In the case of these two final names we also see Mary integrated into the work of salvation. Her role of mediating salvation has its origin in Christ and is ordered towards him as the goal. Mary is also a role model for human beings with respect to her way of life and her disposition of faith. For this reason Albert concludes this section with the praise of the *Ave Maria*.

\(^{107}\) Alb., *De nat. boni*, Ed. Colon. 25/1, 61.

\(^{108}\) Alb., *De nat. boni*, Ed. Colon. 25/1, 62.
ALBERT THE GREAT AND MYSTICAL EPISTEMOLOGY

Markus Führer

I am the fiery life of the divine essence, glowing in the beauty of the fields, shining in the waters, burning in the sun, the moon, and the stars.

Hildegard of Bingen

In order to come to a sound understanding of any aspect of the thought of Albert the Great insofar as it pertains to the adjective “mystical”, great care must be taken to avoid importing into Albert’s ideas any of the modern connotations of that term which may have been alien to his time and culture. And the best way to achieve this goal is to try to learn how Albert used the term. Fortunately, Albert himself is helpful here. In his Commentary on the Mystical Theology of the Pseudo-Dionysius he remarks upon what he calls “negative theology”, noting that “this doctrine ought to be called ‘mystical’ rather than anything else, because it leaves us in the dark...”\(^1\) The phrase “in the dark” (\textit{in occulto}) is crucial here.\(^2\) For Albert is using the term “mystical” not merely to describe a linguistically based method of doing theology, but also to suggest an epistemological metaphor that will help us approach his mystical writings from the right direction, which is as a theory of knowledge, and focus on the intended metaphysical point of view of those writings. And this point of view is what is usually called a “metaphysics of light”.\(^3\)

\(^1\) Alb., \textit{Super Dion. myst. theol.}, 1, Ed. Colon. 37/2, 455a: “ista [doctrina] magis debet dici mystica quam aliae, ex hoc quod in occulto nos relinquit...”.

\(^2\) The Latin term \textit{occultum} of course denotes secrecy. But the related verb \textit{occulere} indicates covering something up, hiding, or burying it. By extending the meaning, the metaphor of darkness or the absence of light is strongly suggested. Therefore, it is better to render \textit{in occulto} as “in the dark” rather than “in secret”. Albert himself suggests this by the very context of the present document of Ps.-Dionysius that he is commenting upon. For the opening chapter talks about “\textit{occulte docti silentii caliginem}”. And Albert comments that the darkness being talked about by Ps.-Dionysius can be understood as being similar to what happens to us when we look at the light of the sun, which is too bright for us, and produces a kind of darkness in our eyes. See Alb., \textit{Super Dion. myst. theol.}, 1, Ed. Colon. 37/2, 457.

\(^3\) See James McEvoy, “The Metaphysics of Light in the Middle Ages,” in \textit{Philosophical Studies} [Dublin] 26 (1979), 139: “The illumination-theory of the 13th century cannot be understood as a mere theory of knowledge, but only as the epistemological expression
The theological topics that Albert himself would call “mystical” were surprisingly few in number. Albert's confidence in his use of Scholastic analysis led him to a kind of assurance with respect to aspects of the divine being that not all theologians, let alone very many Scholastic theologians, would dare to venture. To be sure, Albert's breadth of vision was as wide as it was deep. But it was always deep. And always informed by a remarkable wisdom. Because of this wisdom there was one topic that Albert approached with great caution and deference.

The *visio mystica*, the mystical vision of God, gave Albert pause. The question was this: “How is it possible for the human soul to have the vision of God?” One might wish to add to the question, “while in this life”. But Albert was not so concerned with such an addendum. This is one reason why we must be cautious about that term “mystical”. The modern mind, influenced more by post-Renaissance mysticism rather than the mystical theology of the High Middle Ages, is anxious, perhaps a little too anxious, to achieve an experiential confirmation of the supernatural. The weakness of faith causes us to demand the certitude of experience. Never mind that Descartes and company have continuously warned us off of such certitude. These warnings are philosophical, and thus easy to dismiss. We live in a scientific age—experience is the lifeblood of our thought. Now, Albert had a scientific bent too. He was the kind of person who tended to be “tough minded” about theological as well as empirical matters. Even so, he was a man of faith and he lived in an age of faith. Consequently, he was not so concerned with proving the reality of the supernatural. It was a given for him. The mystical concerned the supernatural, whether it was manifested in this life by some kind of direct experience or not.

What interested Albert was this: what is it that is supposed to happen when the mind encounters the divine itself? That there was such an encounter after death was an article of faith for Albert. His question was, could a human being encounter God in any way that we can make sense of? The answer, if forthcoming, would apply equally to what he would call an *in via* experience (that is, the soul’s encounter with God in this life) as to an *in patria* experience (that is, the soul’s encounter with the divine in the next life). Both of these encounters would fall under the category of *visio mystica*, but the latter he would call *visio beatifica* or the beatific vision.

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of a metaphysical view of being and activity, participation and order—in short, of the metaphysics of light."
Now while Albert says precious little about *in via* visions of God, he repeatedly addresses the problem of *in patria* visions. One might wonder why he does this. The answer to this particular question is important because it will explain to us the difficulty and the danger of the ground upon which Albert was walking as he tried to give an analysis of the *visio mystica*.

Fr Simon Tugwell, in his excellent and informative introduction to his translation of Albert the Great’s *Commentary on the Mystical Theology of the Pseudo-Dionysius*, gives a kind of synopsis of the theological events that precede Albert’s attempt to explain the *visio mystica*. The problem seems to begin with those thinkers in Western Europe who were attempting to incorporate ideas into theology found in the newly translated texts of Aristotle. Particularly troublesome was the theology of the beatific vision. Here it appeared that the new thinking was attempting either to deny the beatific vision outright or to place some intermediary between the soul and God, or, as in the case of David of Dinant, to fuse the soul and God in the beatific vision. David is a good example of someone applying in theology the Aristotelian principle that the intellect becomes assimilated to its object in the act of intellection. So the soul becomes assimilated to God. The result was a form of autotheism—a doctrine that was condemned as heterodox as early as 1210. Already by this date the influence of Peter Lombard’s *Sentences* had come to serve as a measure of orthodoxy in theological matters. And Peter had claimed that the souls of those in heaven participated in the vision of God.

On 13 January 1241 William of Auvergne, as the bishop of Paris, and Odo de Castro Radulfi, as the chancellor of the University of Paris, officially condemned the theological position that the divine essence will not be seen by the blessed. As Fr Tugwell correctly observes, “The Condemnation of 1241 represented a victory for those who were disillusioned with the attempt to accommodate the Christian hope of the beatific vision to a

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5 Ibid., 51, note 88.
6 See Peter Lombard, *Sent.*, 1, d. 1, c. 3.2, ed. Quaracchi, 1, 2, 57: “sic determinamus, dicentes nos et hic et in futuro frui; sed ibi proprie, perfecte et plene, ubi per speciem videbimus quo fruemur.”
general, philosophical epistemology.” But not just any epistemology was at stake here; it was the Aristotelian theory of knowledge that was being repudiated and rejected.

The situation must have posed an intriguing problem for Albert the Great. Although his commitment to the philosophy of Aristotle was not total, he still held it in high regard. In Albert's mind it appears to be worth accommodating in some way or other. And in Albert's case the accommodation was to an ancient form of Christian Neoplatonism, found principally, but not exclusively, in the writings of St Augustine. The task of bringing the Stagirite into some kind of concordance with Augustine, especially in the area of epistemology, was no doubt a daunting task even for someone of the stature of Albert the Great. But the Condemnation of 1241 seemed to strike at the very principle that explained the operation of the agent intellect in Aristotle, thus rendering accommodation impossible. Or so it must have seemed. But the principle of the identity of subject and object in the act of intellection was crucial not only to Aristotle. It also played an important role in St Augustine's doctrine of the “inner teacher” and the whole operation of illumination—an operation that not only brings the soul back to God through Christ, but also gives it an identity with Christ; and this identity has redemptive power—at least according to some theologians. So the Condemnation not only struck at Aristotle, it also unintentionally struck at one of the pillars of orthodox medieval Christian theology—St Augustine. All of this left Albert with the question we have already enunciated, “How is it possible for the human soul to have a vision of God?” Of course the Condemnation of 1241 was only concerned with the in patria vision of God. But Albert saw the greater implications. How can the human mind know God directly at any time, that is, at any stage of its career?

It is perhaps not unreasonable to begin an investigation into how Albert answers this question by seeing what he has to say, if anything, about the text of Peter Lombard that seems to have led to the Condemnation of 1241. Indeed, Albert does have something to say. In his commentary on Lombard’s Sentences he postulates the standard Aristotelian distinction of the human intellect into the possible intellect and the agent intellect. But having made this distinction he begins almost immediately to interpret it in terms of light. The possible intellect, he tells us, is purely receptive of the light of truth while the agent intellect is the source of

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8 Tugwell, Albert and Thomas, 52.
light. And he tells us that this aspect of the intellect produces a light (or perhaps simply is a light) that causes an abstraction of the form or forms in which the truth resides. But then he almost immediately tells us that “the light of the agent intellect is not strong enough by itself but needs to be directed by the light of the uncreated intellect… and that light is the inner teacher”. So here we have, in virtually the same passage, Aristotelian terminology and the Augustinian doctrines of illumination and the inner teacher. But more importantly, we have an appeal to a metaphysics of light. And in working out this metaphysics and seeing how it grounds Albert’s epistemology we shall come to understand his position on the *visio mystica*.

Fr James McEvoy, in his article titled “The Metaphysics of Light in the Middle Ages”, points out that medieval thinkers were given to study creation in terms of light because they knew that “God makes light, because he is light in his own nature.” This is a different view from that held by Thomas Aquinas, for example. He conceived of God as *esse ipsum*, not light. But when God is conceived as light a different metaphysics ensues and creatures must be understood in terms of this metaphysics. As Fr McEvoy further points out, within this metaphysics the human soul must not be understood as passive in relation to its environment, but as active—“a source of radiation, which propagates and diffuses its activity; it is light.” The soul is light and part of a hierarchy of light.

Albert operates with a metaphysics in which God is conceived as light, along with the soul. Furthermore he explicitly expounds a doctrine of the soul’s place in this hierarchy of light. As he brings his commentary on the first chapter of Pseudo-Dionysius’s *Mystical Theology* to a close, he notes that in the order of human perception “there is a concatenation (continuatio) of intelligible lights just as there is one of sensible lights”. He places this concatenation of light linking the sensible and the intelligible within the context of a reference to the *Celestial Hierarchy* of Pseudo-Dionysius.

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10 Ibid., 60: “Lux intellectus agentis non sufficit per se, nisi per applicationem lucis intellectus increati… et illud lumen est interior magister.” See below, note 39.


12 Ibid., 138.

13 Alb., *Super Dion. myst. theol.*, 1, Ed. Colon. 37/2, 464b: “quod sicut est continuatio sensibilium luminum, ita est continuatio intelligibilium.”
and identifies both the human and the angelic intellects as light.\textsuperscript{14} This doctrine of a concatenation or hierarchy of light is consistent with Albert’s Neoplatonic understanding of creation as the emanation or flowing forth of creatures from God. In this emanation it is the presence of God understood as light that holds the creature in existence and gives it its reality. For in such a flowing, Albert tells us, that which flows and that which is the source of the flux must have the same form, just as a stream of running water must be the same form and species as its wellspring.\textsuperscript{15}

Albert explicitly identifies God with light when he comments on Peter Lombard’s \textit{Sentences}: “But in heaven…the unfathomable light of the deity, which is God himself, is united to the agent intellect and thereby essentially flows forth upon the whole soul and fills it.”\textsuperscript{16} Furthermore, he explains that this light is itself the divine essence: “In the same way that the perfections of the senses injure the senses, \textit{the perfection of light that is the divine essence} injures the intellect so that he [God] is not able to be seen by it.”\textsuperscript{17}

Here we see the reason for Albert’s claim, cited above, that the mystical “leaves us in the dark”. The light of the divine essence simply overwhelms the intellect, blinding it to the vision of God just as looking directly at the sun blinds the eyes to corporeal vision.\textsuperscript{18} But at this point in our inquiry the important thing to notice is that Albert has identified the very essence of God with light. And thus, given what he has said about creation as emanation, he has committed himself to a form of a metaphysics of light.

One problem that such a metaphysics raises for Albert is that of pantheism. If God is light and the creatures emanating from this light must also

\textsuperscript{14} Ibid., 464b: “Lumen intellectus agentis…oportet, quod ad huiusmodi cognoscenda adveniât sibi lumen intellectus angelici, quod multiplicat in animas nostras species quasdam in quibus videntur divina, quae apud ipsum sunt magis unitae, sicut in Caelesti Hierarchia ostensum est.”

\textsuperscript{15} Alb., \textit{De causis et proc. univers.} 1.4.1, Ed. Colon. 17/2, 42a: “Non enim fluit nisi id quod unius formae est in fluente et in eo a quo fit fluxus. Sicut rivus eiusdem formae est cum fonte, a quo fluit, et aqua in utroque eiusdem est speciei et formae.”

\textsuperscript{16} Alb., \textit{Super IV Sent.}, d. 49, a. 5, Borgen. 30, 670: “Sed in patria…incircumscriptum lumen deitatis quod est Deus ipse, unitur intellectui agenti, et sic effunditur substantialiter super totam animam et implet eam.”

\textsuperscript{17} Alb., \textit{Quaestio de visione Dei in patria}, Ed. Colon. 25/2, 97: “Quod sicut excellentiae sensatorum corrumpunt sensus, ita excellentia luminis, quod est divina essentia, corrumpat intellectum, ita quod ipso non possit videri.” [Italics added.]

\textsuperscript{18} See above, note 1. For a discussion of God as light in himself and as shadow for man see Henryk Anzulewicz, \textit{De Forma Resultante in Speculo, Die Theologische Relevanz des Bildbegriffs und des Spiegelbildmodells in den Frühwerken des Albertus Magnus}, part 2 (Münster: 1999), 143–144.
be light, then there is no difference between God and creature. Furthermore, if God and creatures already share the same nature, mystical union would be pointless because creatures would already be God. The doctrine of the Fall and Redemption would no longer make sense and the entire fabric of Christian theology would seem to unravel. So the question is, if Albert is serious about the identity of God and light, can he account for any substantial difference between God and creatures that will free him from pantheism? This question must be answered before we can proceed to an analysis of the epistemology of mystical vision in Albert.

The first thing to note in answering this question is that exactly the same problems concerning pantheism occur if one postulates a metaphysics of being. So there is not anything uniquely problematic about a metaphysics of light. If it is possible to differentiate being in God from being in creatures, it should be possible to do likewise for light. In the theology of Thomas Aquinas, which rests upon a metaphysics of being, being as it is found in God is "being itself" so that his act of existence is identical with his being. Creatures, according to this metaphysics, fail to have this identity. There is always a falling short of their act of existence with respect to their being. This is what it means to be a creature. Now, Albert has a similar doctrine concerning God as light.

In order to establish the metaphysical differentiation of the creature from God Albert uses an adaptation he has made of the Aristotelian distinction between potency and act. Creatures are to be understood as in potency with respect to the light that is God. Furthermore, the influence of this divine light upon creatures is understood as formative and perfecting. It is perhaps significant that Albert develops this analysis within the context of his commentary on the Liber de causis, a work that was attributed to Aristotle, but which we now know to be of Neoplatonic origin. Since he thought he was working with an Aristotelian text, Albert may have thought that he was justified in using the Aristotelian potency–act distinction. But his use of the distinction must be carefully analyzed. Jeffrey Hergan, in his study of Albert’s doctrine of the beatific vision, argues that “Albert does not define ‘potency’ as a constitutive (sic) factor in things,

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19 Alb., De causis et proc. univers. 2.2.5, Ed. Colon. 17/2, 98b: “Secundi enim ordinis intelligentia ad primi ordinis intelligentiam et ad causam primam est in potentia; ad causam quidem primam, quia creatura eius est; ad inteligentiam vero ordinis primi, quia influentia luminis illius formatur et perfectur.” See also De causis et proc. univers. 2.2.14, 107a for the extension of the distinction of potency to include “privation” with respect to the light that is God.
but rather ‘potency’ is the distance at which a creature stands in relation to its source.”\textsuperscript{20} Unfortunately Hergan does not define the key term “constitutive factor” and so it is difficult to know exactly what he means here. And while he cites texts to support his position, texts from the very commentary on the \textit{Liber de causis} we have cited above, he does not interpret the crucial passages.\textsuperscript{21} But this much is clear: he wishes to take potency, understood as mere distance from a source, as at best an accidental relation that is too weak to establish a metaphysical distinction. He states his conclusion in strong terms, “Hence, what differentiates the rays of light which constitute creatures and the light constituting the creator is only the distance creatures have emanated from their source, that is, God…. Albert’s explanation of creation at least implies a monism (of light).”\textsuperscript{22}

Recall, however, the language that Albert has used in the passage we have cited above: “influentia luminis illius formatur et perficitur”. The idea of form and perfection are clearly stated as the result of the creative act of God who is the source of the light of creatures. The context of the passage is an interesting hybrid of Neoplatonism, with its emphasis on form as the standard of real being, and Aristotelianism, with its understanding of actuality as the perfection of the potency of a being. What Albert seems to be trying to say is that the creature is potential light. Hence it is not perfect light, as is God. This is a substantial difference based on Aristotelian standards of analysis. But God as light is also the giver of form to the creature. And according to Neoplatonic standards of analysis this means that God is true light and creatures are a lesser form of light. Here no doubt is where the concept of distance comes in. Neoplatonism favors a hierarchically graduated cosmos of being. The concept of distance is perhaps being used to express this graded universe. But nonetheless, there is a real difference between God and his creation. Hergan’s confusion is easy to understand here. Albert is amalgamating two different metaphysical systems and conflating their terminology. The results are bound initially to be confusing.

Albert’s idea of the creature as potency and God as light itself in its perfect actuality is helpful in understanding his position on mystical theology in general. He defines what he means by “potency” in his \textit{Meta-}


\textsuperscript{21} Hergan cites the following locus in which “distance” is used: Alb., \textit{De causis et proc. univers.} 2.1.14, Ed. Colon. 17/2, 78b. He does not specify the text.

\textsuperscript{22} Hergan, \textit{St. Albert}, 114.
physics, where he states “The [definition of potency] is this: potency is the principle of change in another insofar as it is other.” This definition is Albert’s interpretation of a similar definition that Aristotle gives in his *Metaphysics*.\(^{23}\) What is perhaps most important to understand in this definition is the phrase “insofar as it is other” (secundum quod est aliud). Otherness is the mark of the creature. This means that there is a discrepancy between the creature as subject and the creature as object. But this disparity is not found in God. There is no subject–object distinction in the *lumen ipsum* that is God. Albert’s case is not too different from that of his famous student, Thomas Aquinas. For Aquinas, a split between its esse and its actual existence marks the creature, while God’s esse is his act of existence.\(^{24}\) Again, the subject–object distinction applies to creatures but not to God. William Hoye in his study of Albert’s mystical theology notes this absence of the subject–object distinction in Albert’s conception of God and argues that Albert translates it into his grammar of theology—in this case, negative theology.\(^{25}\) And Hoye supports this analysis by a reference to Albert’s commentary on Pseudo-Dionysius’s *Mystical Theology* that very aptly incorporates Albert’s employment of the metaphysics of light in his refutation of the claim that the *via negativa* is pure negation, and hence useless in theology:

This [the *via negativa*] does not involve pure negation because what is being denied is the natural mode of seeing and what is left is reception of supernatural light. This is made known above all by negation since we do not find anything that is known to us that we can properly predicate of God. This is

\(^{23}\) Alb., *Metaph.* 5.2.15, Ed. Colon. 16/1, 253b: “Haec autem est, quod potentia est principium permutationis in alio, secundum quod est aliud.” The italics represent direct quotation of Aristotle’s text found in *Metaph.* 5.12 (1020a4–6): “Quare propria diffinitio primae potentiae erit principium permutationis in alio, inquantum aliud.” This text is the Latin translation Albert is working with and is found on 253, 88–89, Ed. Colon. 16/1.

\(^{24}\) For Aquinas this split between being and existence grounds the aptitude for change in the creature with respect to its reception of being. See Thomas Aquinas, *In Metaph.*, V, lect. 14, *In Metaph.*, V, lect. 14 (Parma: 1866; repr. ed. Vernon J. Bourke, New York: 1948–50), vol. 20: 412a–b; and Étienne Gilson, *The Philosophy of St. Thomas Aquinas* (New York: 1979), 78. This aptitude for the reception of being is a potency in the creature for Thomas the way the reception of light is a potency in the creature for Albert. In both cases potency defines the creature and substantially differentiates it from God.

due to the preeminence of his simplicity. But true predication is grounded upon composition.  

This “reception of supernatural light” (*susceptio supernaturalis luminis*) of course implies the *potentia lumini* mentioned above. It substantially grounds the distinction between creature and God. Thus, while Albert’s metaphysics of light establishes a metaphysics that allows him ultimately to account for the *visio mystica* it does not do so by embroiling him in any kind of monism nor involve him in autotheism or pantheism.

Given Albert’s commitment to a metaphysics of light, let us now examine his solution to the question of whether a *visio mystica* is possible for the human person. We have already seen that he maintains that the human intellect, even in its highest capacity, is not capable of illumination by itself. It requires the aid of the uncreated intellect of God. So if the *visio mystica* is an illumination of the intellect, in some way this vision depends on some kind of divine intercession. It cannot be attained by the operation of the human intellect in itself.

But what does Albert understand the intellect to be? How does it differ from human reason? Reason (*ratio*) according to Albert is an illative power of the mind that moves discursively either deductively from principles to conclusion, or inductively from instances to generalization. The intellect, on the other hand, does not involve any discursion but rather attains knowledge immediately. Following Aristotle, and to a certain extent St Augustine as well, Albert sees the human intellect as divided into an agent intellect and a possible intellect. These two faculties of the intellect account roughly for the spontaneity of the mind, on the one hand, and its ability to be receptive (to illumination) on the other. So far, Albert’s position is in basic agreement with most of his medieval contemporaries.

In Albert’s time, however, the relationship of the agent intellect to the possible intellect was a highly controverted topic. Averroes (1126–98), in his commentary on Aristotle’s *De anima*, had proposed that the agent intellect was one for all human souls. He identified it with God and claimed that it informed the individual possible intellects of men, causing them to know the forms of things. So when Albert claimed that the

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26 Alb., *Super Dion. myst. theol*. 2, Ed. Colon. 37/2, 466b: “non est pura negatio, sed negatur modus naturalis visionis et relinquitur susceptio supernaturalis luminis, quod tamen magis notificatur per negationem, eo quod non invenimus aliquid notum nobis quod prorsus de Deo praedicemus, propter eminentiam simplicitatis, cum praedicationis veritas fundetur in aliqua compositione.”

27 See above, note 10.
human intellect required the aid of the uncreated intellect, it looked as if he had aligned himself with the Averroists' camp on this point.

But Albert makes it very clear that he is not an Averroist. He writes a treatise against the Averroists on exactly this point and attacks the position in several places in his other writings. For Albert, both the agent and the possible intellects are individuated in each human person. God does not operate as the agent intellect but only aids that intellect. Albert’s language is explicit here: the bare divine essence, as Albert calls it, “perfects the one seeing (perficit videntem)” and supplies a medium “helping the one seeing (coadiuvante videntem)”. But it is not identified with the one seeing. This is important, not just because the Averroist view of the agent intellect threatens human integrity, but because we see that mystical vision for Albert is not conceived as entailing any destruction of human nature.

In his Summa de creaturis Albert explains that the possible intellect is the potency of the mind to receive images from the material senses, on the one hand, and to be illuminated by the agent intellect on the other. The agent intellect, however, creates intelligible forms with which it illuminates the possible intellect and reduces it to act. The agent intellect illuminates the possible intellect with what Albert calls the “impressed species” that is brought into identity with the object of the cognitive act. The impressed species, however, is not restricted to material objects. It may transcend the senses altogether and take as its object intelligible reality itself. What Albert seems to mean here is that the soul can transcend the world of sense appearances and contemplate what Plato would have called the “Ideas”. And in a somewhat Platonic fashion Albert argues that these ideas or forms are concreated with the soul.

In his article, “Der Geist als höherer Teil der Seele nach Albert dem Grossen”, A.J. Backes argues that Albert’s distinction of the intellect into possible intellect and agent intellect is in reality an adaptation of St Augustine’s distinction of the soul into a higher and lower part—a portio superior and a portio inferior. Indeed, Albert does use this terminology

28 Alb., Summa theol., tr. 3, q. 13, c. 4, Ed. Colon. 34/ 1, 47.
29 Alb., Summa de creaturis 2, q. 55, art. 4, pars 1, sol., Borgn. 35, 470: “dicimus, quod intellectus agens est pars animae…fluens ab eo quo est, sive actu; possibilis autem pars animae est fluens ab eo quod est, sive potentia.”
30 Ibid., q. 56, art. 5, sol., Borgn. 35, 486: “Et concedimus, quod illae formae concreatae sunt animae rationali.”
31 A. Jakob Backes, “Der Geist als höherer Teil der Seele nach Albert dem Grossen,” in Studia Albertina, ed. Heinrich Ostlender (Münster: 1952), 52–53. For his part, St Augustine
to refer to the soul when it is involved in the contemplative condition we have just mentioned. In the *Summa theologiae*, he points out that the superior part of the soul is so-called because it functions as the part of the soul involved in the contemplation of God. Furthermore, Albert explicitly connects this higher part of the soul, the agent intellect, with divine illumination and his metaphysics of light: “For this function of the superior part of the mind is where the image of creation is impressed on man. It is marked by the light of the face of God through the exemplar of eternal justice, which is the light of divine wisdom.”

This light of divine wisdom (*lumen sapientiae divinae*) is crucial to Albert’s analysis of the mystical illumination of the intellect. This superior part of the mind that Albert identifies with the agent intellect is impressed by this light of divine wisdom in such a way that it takes on a kind of identity by assimilation to this wisdom. In fact, he even refers to it in this condition as a “separated light” (*lux separata*), a term used to talk about God as the first cause and as the source of light. It is also “separate” in the sense that it is not dependent upon any lower phantasms for its knowledge. It is assimilated to the divine light only. And this assimilation to the light of the first cause is Albert’s way of incorporating the Neoplatonic theme of the return of the effect to its cause. He had already spoken of cognition as a flowing forth (*fluere*) from the first cause. The agent intellect thus represents a return to God as the source of light and the possible intellect represents the results of the procession of this light from God. It seems then that the agent intellect, acting as a *lux separata*, is the active faculty of the human soul in the state of contemplation, and the seat of mystical vision. Furthermore, Albert explicitly states that the agent intellect is so assimilated to the divine light that it does not simply

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32 See Alb., *Summa de creaturis* 1, q. 69, art. 3, pars 3, Borgn. 34, 704.
33 Alb., *Summa theol.* 2, tr. 15, q. 93, m. 3, sol., Borgn. 33, 204: “Portio superior dicitur propter officium illa pars mentis superior, quae extenditur ad contemplandum Deum.”
34 Ibid., 2, tr. 15, q. 93, m. 3, sol., Borgn. 33, 204: “Hoc enim est officium superioris partis mentis in qua impressa est homini imago creationis, signata lumine vultus Dei per exemplum iustitiae aeternae, quae est lumen sapientiae divinae.”
35 Alb., *De intell. et intellig.* 1.1.6, Borgn. 9, 486: “Ex huius enim assimilatatione causae primae habet intellectum universaler agentem, qui sicut lux est separata.”
36 Ibid., 1.1.2, Borgn. 9, 479: “omnem cognitionem animalium fluere a prima causa cognitiva.”
act as an agent upon the possible intellect but is the beatitude of the contemplative person himself.37

In his Commentary on the Sentences Albert struggles with the decision concerning which function of the agent intellect he will ultimately adopt. His interest in Aristotle pulls him toward an abstraction theory of the agent intellect, according to which the agent intellect would be dependent upon phantasms in order to function. But his attraction to Augustinian Neoplatonism draws him toward an illumination theory, in which the agent intellect operates in an entirely different way. It is here that he confronts the limits of abstraction theory. Referring to the “light of the agent intellect” he notes that this faculty of the mind is not able by itself to illuminate the forms that give the mind the knowledge of truth. It requires the action of the light of the uncreated intellect, just as the stars need the light of the sun.38 As we have already seen, Albert further cements his position on the intellect to that of Augustine when he identifies the light of this uncreated intellect with Augustine’s “inner teacher”.39

Once Albert has decided to use the Augustinian model for the agent intellect he seems to move with great confidence. Towards the beginning of his De intellectu he observes that man is meant to be at one with his own intellect and that the intellect is the locus for human felicity.40 And it is here that he begins to employ a schema that is highly suggestive of the triplex via described by Pseudo-Dionysius: that is, purgation, illumination, and perfection. But Albert adapts this program of the ascetic life to a Neoplatonic vision of cosmic proportions. There is more at stake here than the return of the soul to its God; there is the return of the entire cosmos, sensible as well as intelligible, to its true source. And this return is accomplished only by the intellect.

Everything begins with the agent intellect, in its condition of assimilation to the divine light, acting upon those aspects of its cognitions that have fallen away from their source. What Albert is trying to say is that

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37 Ibid., 1.1.7, Borgn. 9, 489: “intellectu agente qui non unitur contemplativis ut agens tantum, sed ut beatitudo eorum est, quando perveniunt ad hoc quod in eis est ut forma.”
40 Alb., De intell. et intellig.1.1.1, Borgn. 9, 478: “Et proprie homo scit quid proprie ipse est, cum sit solus intellectus, ... et scit insuper principium inter ea quae faciunt in ipso felicitatem contemplativam.”
the mind is created to grasp all of reality and in so doing “reflect” this reality back to God. But in its fallen condition the mind cannot do this. It requires aid, as we have already seen Albert suggest. But once aided, once “assimilated”, once it becomes the intellectus assimilativus,41 it is ready to perform this restorative function. The assimilated intellect becomes identified with the possible intellect. In this way the divine forms, concreted with the soul, now impose themselves on the possible intellect. And the possible intellect, it will be recalled, is the recipient of the forms of material things, acting upon it through the media of the senses. But once assimilated to the lux separata, all of the created forms, sensible as well as intelligible, can be returned to the fount of light itself. The human mind thus acts as a kind of microcosm. The possible intellect sums up all that is found in the macrocosm coming to it through the senses, while the agent intellect is the instrument of the divine exemplars, the separated forms. The disparity of possible and agent intellects has been purged, which is accomplished through the illumination of the lower portion of the intellect, the possible intellect, by the higher portion, the agent intellect. This purgation and illumination leads to the soul’s beatitude, which Albert describes as the perfection of the assimilated intellect. Cosmic reditus and intellectual perfection are thus identified.

But how does the agent intellect purge the possible intellect? Albert does not exactly seem to be following the program of Pseudo-Dionysius. And indeed he is not. He prioritizes illumination. What he says is interesting. “The study of beauty orders and composes [the soul], keeping it from falling away [from God].”42 Where Dionysius took the position that the mind must be purged of sense images if it was to see God, Albert believes that the separation between the sensible and the intelligible is a disorienting influence on the soul, distracting it from its proper vision of God. By focusing on beauty, the sensible and the intelligible are brought back into alignment.

This alignment of the sensible and intelligible allows the intellect to reach its perfection and to complete its cosmic mission. “The occupation of the intellect with superior things advances proportionally to be perfected by high and divine things”, Albert tells us.43 The intellect has reached its

41 Ibid., 2.1.9, Borgn. 9, 517.
42 Ibid., 2.1.10, Borgn. 9, 518: “Studium enim pulchritudinis ordinat et componit ab avertentibus.”
43 Ibid., 2.1.10, Borgn. 9, 518.
state of perfection and Albert identifies this state as its felicity.\textsuperscript{44} Albert has thus outlined his general theory of the contemplative function of the agent intellect.

Refinements to this theory are worked out principally in his \textit{Summa theologiae}. In this work Albert shows an acute sense of the problems involved in his conflation of Aristotelian and Augustinian psychology. In the third book of his \textit{De anima} Aristotle had argued that the faculties of the mind must be proportioned to their objects in order for knowing to take place. This presented no particular problem when Albert wished to use Augustinian formulae to explain ordinary sensation. The “light of the understanding” is proportioned to the images of the senses. There is a similitude between the light of the object of sensation and the light of the mind. But when Albert wanted to explain the mind’s knowledge of God using the same model a problem arose. The divine nature is not proportioned to any faculty of the mind. Therefore, he was forced to maintain that the human intellect could not know God. Such a conclusion would put Albert’s whole analysis in conflict with the Condemnation of 1241. This was of course unacceptable to Albert. He needed to modify his theory at this point in some way. What must have occurred to Albert was that while the Condemnation did not allow him to deny the beatific vision, it did not prescribe how such vision was to take place. He was no doubt aware of the fact that David of Dinant had tried to explain mystical vision by arguing that God simply fused the human intellect to himself. In effect, the human intellect disappears and the Aristotelian principle of proportionality is preserved. But this position was condemned. William of Auxerre, however, had suggested that the weakness of the human intellect would be removed in the vision of God.\textsuperscript{45} This suggestion allowed Albert a way to save his theory. For, he argued, the human intellect cannot know God by means of its own light. Such light is simply not proportioned to the infinite and eternal light of God. But it is still possible for the human intellect to see God \textit{if it receives the aid of the divine light}. “The divine,” he concludes, “is grasped only in the light of the divine goods.”\textsuperscript{46}

\textsuperscript{44} Ibid., 2.1.1, Borgn. 9, 513: “felicitate, quae est ultima perfectio intellectus animae.”
\textsuperscript{46} Alb., \textit{Summa theol.} 1, tr. 3, q. 15, c. 3, art. 3, ad 5, Ed. Colon. 34/1, 81: “Divina autem non accipit nisi in lumine bonitatum quae sunt a primo.”
It is initially unclear what Albert is referring to with the term “divine” in the passage cited above.\textsuperscript{47} But an examination of the context of the passage shows that Albert is trying to explain the division of human knowledge into that which is natural and that which requires divine intervention. This latter kind of knowledge is obtained only by infusion, that is, an act of grace on the part of the divine light itself. Thus, after establishing that there is no natural vision of God, Albert investigates the way in which God intervenes in order to bring the mind to its final vision. If this mind is not proportioned to this vision by itself, then it must be elevated to this vision by God himself.\textsuperscript{48}

Such an elevation brings the human mind into a state of direct and immediate knowledge of God, a knowledge that Albert calls “face-to-face”. But what is this face-to-face knowledge? For Albert it means knowing God “through his essence”.\textsuperscript{49} But such a vision cannot be instigated on its own behalf by any created intellect. It requires grace. And this grace, according to Albert, takes the form of what he calls a “helping medium” supplied by the divine being: “This [medium] neither stands between nor is interposed between the one seeing and that which is seen, but rather perfects the one seeing in order to bring about the act of seeing. Thus, it is not opposed to the immediacy of the vision.”\textsuperscript{50}

Albert is careful here to make it clear to his readers that this medium he is talking about is not some thing that stands between the human mind and God as a kind of theophany or some sort of intervening creature.\textsuperscript{51} For, if such were the case, there would be no vision of God in his essence; there would only be a vision of some thing, which, while it might be like God and fulfill the Aristotelian condition of proportionality, would fall short of the desired dictum of the Condemnation of 1241. One should perhaps understand Albert’s conception of the medium being discussed here not so much as a thing, but as an action. And in the current context the action would be on the part of God. It would not be a thing standing between the


\textsuperscript{48} Alb., \textit{Summa theol.} 2, q. 14, m. 3, art. 2, pt. 5, Borgen. 32, 196.

\textsuperscript{49} Ibid., 1, tr. 3, q. 13, c. 4, Ed. Colon. 34/1, 44: “Deum cognoscere facie ad faciem...sit cognoscere per essentiam et immediate.”

\textsuperscript{50} Ibid., 1, tr. 3, q. 13, c. 4, Ed. Colon. 34/1, 47: “Hoc [medium] enim non interstat sive interponitur videnti et visio, sed perficit videntem ad videndum, et ideo non opponitur immediatae visioni.”

mind and God, as the term by itself seems to suggest. It is perhaps unfortu-
nate that Albert chose to call this helping action of the divine being a medium at all. But the fact is that the human intellect receives a certain help or aid through the action of God himself. In his *Commentary on the Mystical Theology*, as we have already seen him do in his commentary on the *Sentences*, Albert explicitly identifies this action with Augustine’s doc-
trine of the inner teacher: “Because the divine truth surpasses our reason, we are not able on our own to make it manifest unless it itself decides to pour itself (*infundere se*) into us. It is the inner teacher, without whom, as Augustine says, the external teacher labors in vain.”

How, Albert wonders, does this inner teacher instruct? Dionysius had spoken about a “darkness of instructed silence” (*docti silentii caliginem*). If taken literally the language is puzzling. In Latin, the term *caligo* has the connotation of mental darkness or dullness of the mind. Albert wonders how a dull mind can be called “instructed”. If the mind is taught, how can it be dull? If the inner teacher, who is identified with the very source and being of divine light, illuminates the mind, enabling it to know him-
self, how can the mind be said to be dark? Furthermore, Albert notes, all instruction is given by some kind of word, whether inner or outer. And when a word is uttered, silence is broken. So how can this illuminating darkness be called an “instructed silence”? Albert is not just quibbling here over Dionysius’s words. He suspects that the paradoxical language itself points towards an insight into the mystical vision. As he attempts to unravel the paradox he discovers what he believes this insight to be. “There is silence,” he says, “because one is not able to say *what* God is, but a kind of *instruction* insofar as one can say *that* he is.” The paradox is seemingly overcome by the technique of the application of a Scholas-
tic distinction. And yet it remains: the “thatness” of God is sustained by his mysterious and incomprehensible “whatness”. In this paradox God instructs us in the mystical state, whether in this life or the next. This is

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52 Alb., *Super Dion. myst. theol.*, 1, Ed. Colon. 37/2, 456a: “cum divina veritas superet nostram rationem, nos ex nobis eam manifestare non possimus, nisi ipsa se dignetur infundere; ipsa enim est magister interior, sine quo frustra laborat magister exterior, ut dicit Augustinus.”

53 Ibid., 1, Ed. Colon. 37/2, 456b: “Praeterea, omne quod docetur, per verbum aliquod docetur, sive interius, sive externus; sed quando verbum promitut, silentium non tenetur; ergo videtur contraria adiungere, cum dicit *docti silentii.*”

54 Ibid., 1, Ed. Colon. 37/2, 456b: “quod silentium est simpliciter, quia de Deo non potest dici ‘quid’, sed doctum est secundum quid, inquantum dicitur de ipso ‘quia’.”
the true wisdom of the Christians (\textit{sapientia Christianorum}).\textsuperscript{55} In language that underscores the coincidence of opposites that will later be echoed by Nicholas of Cusa, whom no doubt Albert had influenced, Albert comments on Dionysius’s reference to this wisdom as “the very summit of mystical communication”:

This summit “makes that which exceeds brightness” namely the divine light, “shine down” into the mind “in the complete darkness,” of divine loftiness, even though the excess of this radiance leaves a darkness in us so that we fall short of comprehending the divine loftiness. Nonetheless, since in some way we do attain it by leaving behind everything, the mind is deified and illuminated.\textsuperscript{56}

Albert continues using Pseudo-Dionysius in order to explore the conditions of what he calls “mystical intuitions” (\textit{intellectus mystici}). The object of these intuitions or insights is God as he is “beyond all substance and knowledge”.\textsuperscript{57} As such, he is totally beyond the categories of being. Consequently, Dionysius advises us to abandon the connatural operations of the intellect. But Albert wonders about this. If we forsake the workings of the intellect how can we know anything? But we are being told to set aside the natural operations of the intellect, “not those that are in us due to the divine light”\textsuperscript{58}

This divine light transforms the mind. By itself the human mind cannot know God using its normal operations. But Albert argues that the divine light can indeed raise the mind up to a level where it can know its divine object.\textsuperscript{59} As Fr Tugwell correctly observes with regard to this section of Albert’s commentary on Dionysius, this condition of being “capable of God” (\textit{capax Dei}) is not unnatural to the human condition since the

\textsuperscript{55} Ibid., 1, Ed. Colon. 37/2, 456, ln. 80.

\textsuperscript{56} Ibid., 1, Ed. Colon. 37/2, 457a: “\textit{verticem, dico, facientem desuper splendere} in mentem \textit{superclarissimum} quoddam, scilicet divinum lumen, in obscurissimo divinae eminentiae, quia quamvis per obscuritatem relictam in nobis ex eminentia splendoris deficiamus a comprehensione divinae eminenciae, tamen ex hoc quod attingimus aliquid perfetissimum relictis omnibus, mens deificatur et illuminatur.” The very title of one of Nicholas of Cusa’s last writings, \textit{De apice theoriae}, as well as the language of its analysis suggests the influence of not only Dionysius, but that of Albert as well.

\textsuperscript{57} Ibid., 1, Ed. Colon. 37/2, 457b: “[\textit{Deus}] qui est super omnem substantiam et cognitionem.”

\textsuperscript{58} Ibid., 1, Ed. Colon. 37/2, 458a: “[Dionysius] monet relinquere intellectuales operations connaturales nobis, et non eas quae sunt in nobis ex lumine divino.”

\textsuperscript{59} See Alb., \textit{Super Dion. de div. nom.}, 1, Ed. Colon. 37/1, 11, 28–35: “[\textit{Mens}] iuvatur per illuminationes sive theophanias descendentes a Deo.”
intellect, according to Albert, possesses an obediential potency to receive this divine illumination into itself.\(^{60}\)

The illumination that the mind receives according to its obediential potency must not be misunderstood. Albert makes his position very clear. The illumination that God sends into the intellect must not be thought to be God himself.\(^{61}\) Rather, this illumination must be understood as that medium mentioned earlier, which is the action of God in the soul, but not the object of the soul’s contemplation. And yet, Albert tells us we ought to hold fast to this infused light. In trying to clarify his position here Albert makes a substantial advance in his analysis: “We should cling to the divine lights infused into us by God, not as if they were the object, but rather as the ways in which the object is seen, and our intellect made strong. [Our] desire does not consist in them as in the highest good.”\(^{62}\)

Divine illumination does not destroy the nature of the intellect in making it capax Dei. On the contrary, it makes the intellect stronger so that it can see God. So the illuminating action of God, the medium of divinely infused light, while it indeed operates above the order of nature, also acts in coordination with the nature of the human mind.\(^{63}\)

Albert next wonders if the person undergoing this divine illumination must be in a state of rapture. He gives a qualified affirmative answer to his own question. Initially it would seem that rapture in the sense of some kind of radical separation of the intellect from the self would be a classic case of the destruction of the natural intellect. But this is what some think happens in the mystical experience. The lower powers of the soul are separated by the divine action from the higher powers and the natural unity of the human person is destroyed—at least temporarily. Albert addresses this concern by making some careful distinctions. He concedes that in the soul’s rapture there can be an abstraction from the use of its lower functions. But this does not happen in an unqualified manner in the contemplation of the divine reality because some use of these powers remains. It is rather the case, Albert argues, that in rapture there is an

\(^{60}\) See Tugwell, *Albert and Thomas*, 148, note 38. For the reference to *potentia obedientiae* by Albert, see *Super Dion. de div. nom.*, 1, Ed. Colon. 37/1, 13, 61–63.

\(^{61}\) Alb., *Super Dion. myst. theol.*, 1, Ed. Colon. 37/2, 460a: “derelinquunt etiam omnia divina lumina… idest immissiones ipsas quae sunt a Deo, quae non sunt Deus.”

\(^{62}\) Ibid., 1, Ed. Colon. 37/2, 461a: “quod divinis luminibus, idest a Deo nobis immissis, debemus inhaerere non sicut objecto, sed sicut his sub quibus videtur objectum, confortantis intellectum nostrum, quia in eis non sittit desiderium sicut in summo bono.”

\(^{63}\) Ibid., 1, Ed. Colon. 37/2, 463b: “Et ideo intellectus non corrumpitur, sed roboratur ex unitione ad lumen divinum.”
abstraction from the lower powers of the soul in the sense of an inattention—a relaxation of their intensity as it were. The soul does not attend to them and their action is weakened because another power is working with increased energy.\textsuperscript{64} Albert appeals to the authority of Aristotle to support this conclusion, but common sense and ordinary experience certainly confirms it.\textsuperscript{65} Albert, however, further explains his position. The lower powers of the soul follow the force of the higher power of the mind to the extent that as the mind tends to identify with its object, so do the lower powers. But they do not do this exclusively. It is a matter of the degree of attention.\textsuperscript{66}

The next question that Albert poses becomes crucial for his consideration of an \textit{in via} mystical vision. Since the intellect in the contemplative mode is immersed in divine light both \textit{in via} and \textit{in patria}, what is the difference between the two states of the person enjoying the illumination? Do not both see God? Albert answers this question by claiming that the knowledge is not the same in both states. The difference is due to three conditions that vary for each state. In the first place, God is seen per se by the blessed in heaven; whereas in this life he is seen through the effects of grace and light flowing into the soul. Secondly, the \textit{in patria} vision of God frees us completely from all human sufferings and misery; that simply does not happen to those on earth, Albert asserts. Finally, the blessed in heaven know God through the disposition of glory (\textit{per habitum gloriae}), while those on earth know him through the disposition of grace (\textit{per habitum gratiae}).\textsuperscript{67} So while Albert suggests here that there can indeed be \textit{in via} mystical experiences, he claims that they do not involve a vision of God per se.

But this position raises another problem for Albert. If the \textit{in via} vision of God is never per se, how is it that Sacred Scripture can claim that Moses saw God?\textsuperscript{68} On this point Albert stands his ground. Despite the fact that a \textit{facie ad faciem} experience of God seems to imply knowing him per se, Albert claims boldly that it does not. Moses only saw God in his effects,

\textsuperscript{64} Ibid., 1, Ed. Colon. 37/2, 462b–463a.
\textsuperscript{65} See Arist., \textit{Eth. Nic}. 10.5 (1175b1–10). Tugwell argues that the Aristotelian text must be from \textit{On Sense}, 7 (447a14–15).
\textsuperscript{66} See Alb., \textit{Super Dion. myst. theol}. 1, Ed. Colon. 37/2, 463a.
\textsuperscript{67} Ibid., 1, Ed. Colon. 37/2, 463a. For an analysis of this distinction in Albert see Hoye, \textit{Mystische Theologie}, 599–601.
\textsuperscript{68} See Exod. 33:11: “And the Lord spoke to Moses face-to-face, as a man is wont to speak to his friend.” Albert would have read this in the Vulgate version that reads: “Loquebatur autem Dominus ad Moysen facie ad faciem, sicut solet loqui homo ad amicum suum.”
the effects of grace and certain theophanies. Seeing the face, he tells us, can mean two different things: “It might mean seeing [the face] in itself, without any veil. This is how the face of God will be seen in heaven. But Moses did not see in this way. He saw [God’s] face in certain signs of the divine effects. . . . And they are called God’s back.”

Albert’s support for this position is not found in the Neoplatonic tradition, but in Aristotle. Albert notes that according to Aristotle prophetic visions cannot be accounted for by appealing to speculation based on first principles. The intellect receives them by being united to some higher moving power. This is much more the case for the soul that is strengthened in order to see the things of God by having the divine light come down into it. Such a light, he tells us, is called the “mirror of eternity”. By looking into it the prophets saw their visions. But it is not God.

How then do we see God? Albert attempts to answer this question in his exposition of the second chapter of Pseudo-Dionysius’s *Mystical Theology*. The problem, as he understands it, is this: how can we move from seeing “the things of God” mentioned above to being united with God in our understanding (per intellectum uniri Deo)? His reading of Dionysius leads him to conclude that we do this by way of negations. Dionysius had spoken of a “super-radiant darkness” (superlucens caligo) and Albert, employing an Aristotelian distinction concerning the order of knowability, observes that what this means is that while God is a darkness that is “obscure to us”, he in himself is a light that is “more than radiant”. What this suggests to Albert is that the mind must become adept at the suspension of all of its natural forms of knowing by “not-seeing and by not knowing”. Albert notes that “seeing” here refers to the way in which the human intellect intuits first principles, while “knowing” concerns the way in which the mind reaches the conclusions that follow from these principles.

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70 Alb., *Super Dion. myst. theol.*, 1, Ed. Colon. 37/2, 464b: “Scilicet in se sine velamine, et sic videbitur facies Dei in patria, et sic non vidit Moyses, sed vidit faciem in signis quibusdam divinorum effectuum, . . . et ibi vocantur posteriora Dei.”

71 Ibid., 1, Ed. Colon. 37/2, 464b. Albert may have had in mind Aristotle’s *On Divination in Sleep*, 2 (463b12).

72 Ibid., 1, Ed. Colon. 37/2, 464b.

73 Ibid., 2, Ed. Colon. 37/2, 465a.
“Thus,” Albert reasons, “God will be known as a principle insofar as we receive him as the light of our intellect and through the divine light we are led to the divine attributes as to a conclusion.”\textsuperscript{74} But this reception involves removing from the mind’s eye all of the obstacles that interfere with the intellect’s pure intuition or vision of God. Such an abstraction, he claims, reveals the “hidden God”—a God who is seen without any trace of his effects, but who is yet hidden in darkness. Albert understands this revelation as that of the hidden beatitude of God, a beauty that transcends all of the known forms of beauty. He explains that such an abstraction of forms is an access to the divine reality: “In all the things that are known through their forms the forms themselves are images of divine beauty. By denying them we arrive at that [divine] hiddenness that was represented in them in a veiled way.”\textsuperscript{75}

Does this mean, then, that we have a vision of God? Albert’s answer appears to be negative. What we encounter in the \textit{via negativa} is not the divine nature itself, but only something that manifests this nature.\textsuperscript{76} But it must be remembered that for Albert God is not a thing. Thus, he can never be encountered as a thing. If we approach the divine reality through forms we are better off, because strictly speaking forms are not things but only factors of things or aspects of things. But these factors, these forms, are the access to beauty. And indeed this is the case in the medieval period. Form and beauty are equivalent. In fact, one meaning of the Latin term \textit{forma} is beauty.\textsuperscript{77} It is not so much the image that is regarded as beautiful in medieval art, but rather the form of a painting or representation. This form is often regarded in mathematical terms. As Umberto Eco points out in his \textit{Art and Beauty in the Middle Ages}, the medievals are influenced by the book of Wisdom in which creation is accounted for through God forming the world in terms of number, weight, and measure.\textsuperscript{78} “Beauty,” he tells us, “exists in a thing as the splendor of its form, the form which

\textsuperscript{74} Ibid., 2, Ed. Colon. 37/2, 465a: “Deus cognoscetur ut principium, quando accipimus ipsum ut lumen nostri intellectus, et per lumen divinum ducimur in divina attributa sicut in conclusiones quasdam.”

\textsuperscript{75} Ibid., 2, Ed. Colon. 37/2, 466a: “in omnibus enim rebus quae cognoscuntur per suas formas, ipsae formae sunt imagines divinae pulchritudinis, per quaram negationem venimus in illud occultum quod velate repraesentatatur in eis.”

\textsuperscript{76} Ibid., 2, Ed. Colon. 37/2, 465b: “per remotiones rerum a Deo invenimus aliquid simile divinae naturae, quod tamen non est divina natura in se, sed manifestat eam.”

\textsuperscript{77} See Alb., \textit{Super Dion. de div. nom.}, 4, Ed. Colon. 37/1, 182, 79–183, 2; 185, 14–15; and 186, 66: “pulchritudo est quodam forma simplex.”

orders the matter according to canons of proportion, and which in shining forth reveals the ordering activity."79 Understood in this way, beauty is something that transcends the subjectivity of human perspective and understanding. It is the mark of the Creator on all of creation. Eco goes on to explain something very important for the impact of this notion of beauty on Albert:

This kind of hylomorphic doctrine also encompasses the various triads that originated in the Book of Wisdom: terms like *dimension, species* and *order,* or *number, weight* and *measure,* can now be predicated of form. For, if perfection, beauty, and goodness are grounded in form, any object possessing these attributes must possess all of the properties that pertain to form. Form is determined by its dimension or quantity (*modus*) and thus by *proportion* and *measure.* Form assigns a thing to its *species,* in accordance with its *number,* that is, its constituent elements in their concretion. Form directs a thing to its proper end, the one appropriate to its *order,* and to which it inclines by its *weight.*80

Form is involved with the proper end of a thing, which is the limit of the thing’s perfectibility. But as Albert reads Dionysius he comes to understand that God has no such limit. His beatitude must be a form that transcends all form. And Pseudo-Dionysius had expressed this transcendent divine form as the “super-radiant darkness” mentioned earlier. This terminology allows Albert the occasion to amalgamate the metaphysics of light and the doctrine of formal beauty. Just as God is light beyond light, so he is form beyond form.81 And this “beyondness” can be approached indirectly by the *via negativa.* This iconoclastic technique is the only way that the human mind can be said to have a vision of God. But it is a real vision in the sense that the mind encounters the reality of God himself, which is hiddenness.

This hiddenness of the divine reality does not mean that the reality itself is negative. It is arrived at by an operation of negation performed on the human mind, not on the divine reality, which is certainly beyond any of the operations proper to man, or any other creature, for that matter. Albert explains that the *via negativa* operates by a divine light that

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79 Ibid., 25.
is received in the soul that causes us to see by means of suspending all of our natural modes of seeing. This light is beyond the nature of any created mind and as such raises the mind beyond its natural ways of seeing. In this condition we see God. But, as Albert cautions us, this vision is confused and undetermined (confuse et non determinate). And he tells us what this means. God in his beyondness is absolutely simple. Therefore, Albert explains, in this vision “we do not find anything that is known to us that we can predicate of God properly; true predication is grounded in some sort of composition.” But we do see God and so at least theoretically the concerns of the Condemnation have been met.

This, then, is Albert the Great’s development of a mystical theory of knowledge. It is a complex understanding that involves a metaphysics of light coupled with a synthesis of Aristotelian-Augustinian epistemology. It solves a number of problems for Albert. It allows him to remain on the side of orthodoxy with respect to the position of the church regarding the vision of God. But it also permits him to retain crucial elements of Aristotle’s epistemology without falling into what he regards as the trap of Averroism.

Whether his synthesis had any direct and immediate effect on his culture would require an analysis beyond the scope of this present chapter. But it does not require an extensive analysis to discern the influence that Albert’s position had on his distant disciple, Nicholas of Cusa. As has already been noted, Cusanus’s own work, De apice theoriae, may very well have been given its title under the influence of Albert. Cusanus possessed a copy of Albert’s commentary on Pseudo-Dionysius’s Mystical Theology, and one cannot but wonder to what extent Albert’s comments on this work may have formed Cusanus’s understanding of the problems involved in developing a consistent mystical theology that was epistemologically based. The importance in Cusanus of a light metaphysics, the

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82 Alb., Super Dion. myst. theol., 2, Ed. Colon. 37/2, 466b.
83 Ibid., 2, Ed. Colon. 37/2, 466b: “non invenimus aliquid notum nobis quod propri de Deo praedicemus, propter eminentiam simplicitatis, cum praedicationis veritas fundetur in aliqua compositione.”
84 See above, note 56.
coincidence of opposites, and the effect that the radical beyondness of
the divine being has upon mystical epistemology might all be traced to
Albert in some way.87

87 See Markus Führer, “The Metaphysics of Light in the De Dato Patris Luminum of
Nicholas of Cusa,” Studi Internazionali di Filosofia 18/3 (1986), 17–32, for the doctrine of
light metaphysics in Cusanus.
PART TWO

PHILOSOPHY
INTRODUCTION TO ALBERT’S PHILOSOPHICAL WORK

David Twetten and Steven Baldner

It is difficult to attain a properly broad view of Albert’s achievement in philosophy, especially because of the nature of the works in which it is contained. Here we shall focus on the Peripatetic or Aristotelian paraphrases, which because of their range, depth, and maturity (ca. 1251–68), form the natural heart of this achievement. But several points should be borne in mind, even before we introduce the teaching of the paraphrases, properly speaking. First, there is a great deal of philosophy in Albert’s theological works, which are expressly personal, unlike the paraphrases. Especially rich sources of philosophy, of course, are the theological summae: the De quattuor coaequaevis and De homine (first redaction, ca. 1241–42, or earlier?), the Commentary on the Sentences (1246–49, but not put into its final version in the order of the books), and the Summa theologiae (from ca. 1268).¹ Because of the character of the paraphrases, and especially given the disclaimers found therein, the reader of Albert should take care to compare treatment of issues there with parallel texts in his personal works.² Even where the paraphrases report a position on which Albert personally and explicitly concurs, one must remember that they take their lead from the text that is being paraphrased (except in the frequent explicit digressions, which are sometimes modeled on or borrowed from other authors) as to: order of topics, approach, wording, and argumentation. At the same time, the instances in which Albert personally opposes a position that he maintains in the paraphrases—especially where the discrepancy cannot be explained merely as a development of


² For the approach, in addition to discussions of the disclaimers cited below, see Gallus M.M. Manser, “Alberts Stellung zur Autorität seiner Vorgänger,” Divus Thomas (Vienna) 2 (1915), 75–85, see 85; and Gilles Meersseman, Introductio in opera b. Alberti Magni (Bruges: 1931), 7–9.
his thought—can be predicted to be few and far between. Furthermore, comparison with the personal works is complicated by the fact that works written before 1250 need to be treated with care, since they may present an early stage in Albert’s thought (though not in his life); and the second book of the *Summa*, regarded by some leading Albert scholars as inauthentic, is at best partly the work of a man past his prime.

Finally, one must deal with the Dionysian question-commentaries (or “question-paraphrases”), as well as with Albert’s statement that no one is perfect in philosophy except by knowing the philosophy of Plato as well as that of Aristotle. It is significant that Albert (in the company of the young Aquinas) paraphrased the entire *corpus Dionysiacum* (ca. 1248–50, apparently in Cologne), completing the project immediately prior to beginning the Peripatetic paraphrases. It is likely that Albert considered his Dionysian project to complement the Aristotelian (just as early Aquinas regards Dionysius as an Aristotelian), and believed each project to be integral to some larger theological vision of the whole. Certainly we must label Albert’s version of Peripateticism as also Neoplatonic and Dionysian. But our historiographic labels do not correspond to Albert’s, and the interpreter does well not to begin by forcing Albert into our categories. Recall that Albert is one of the last thinkers of the Latin West to regard the *Liber de causis* as having at base a partially Aristotelian authorship and as providing, in effect, the completion of Aristotle’s metaphysics. For Albert, the “way of Dionysius” is a theological one; but he sees the *Divine Names* as also conducting an argument available to natural reason, and

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3 For one important instance, see p. 667 in this volume, esp. notes 463–64.
4 Alb., *Metaph. 1.15* [digr.], Ed. Colon. 16/1, 89, lns. 85–89, quoted below on p. 713 in this volume, and see note 623.
6 For the most thought-provoking account of Albert’s stance in philosophy and philosophical historiography, pressing the claim that Albert is Averroean and a major Latin inspiration for Averroism, see Alain de Libera, *Méetaphysique et noétique: Albert le Grand* (Paris: 2005). We shall discover a great amount of Averroes in Albert below, but he can also be quite critical: “I say that the claim of Averroes does not hold unless all of the orbs of the heaven are claimed to be of one nature, one species, and one matter…. But Averroes by no means understood the nature of the heavens, and therefore he says many wayward and preposterous things about them, which can even be refuted as false through sight”; Alb., *De caelo et mundo 1.1.3*, Ed. Colon. 5/1, 10, ln. 85–p. 11, ln. 2.
he invokes Aristotle in support of Dionysius’s argument. A few quotations from throughout the corpus can capture Albert’s spirit better than any abstract description.

[I]t should be said that although the Creator is equally distant from all created things, nevertheless all things are not equally distant from him, as Dionysius says in [his] book On the Celestial Hierarchy, and as Aristotle [says] in [his] Liber de causis.8

[W]e have said with the Areopagite Dionysius that “every nature proceeding from the first cause is simpler, nobler and ‘multiply’ more powerful the closer it is to it [the first cause] by a nearness of similitude. . . .” The wisest of the Peripatetics demonstrated this from the eighth heaven, [namely,] that the multiplicity of its stars shows how much multiplicity [of power] belongs to it.9

Every motion is from some immobile first. But we shall speak of this in the book On the Principles of the Motions of Animals. Here this suffices: an Intelligence that is separate in substance diffuses light and spreads it through the entire orb subject to it, just as the soul through its body; and this light, being everywhere present, is effected proportionately in those things that extend themselves to it. And this is what the great Dionysius says: “Light extends itself through all faces, coming to be intellectually in the intellect, animately in the soul, and naturally in the body, according to an analogy proper to each: just as also the light of the soul is differently participated in by the members [of the body] according to an analogy of each.”10

“The same thing in the same state does only one and the same. . . .” Therefore it is necessary that only one, same thing be immediately from it [the first]. Nor is this contrary to the theologian, because Dionysius says that things that are from the first receive their differentia through [their] distance from it. . . . Similarly the Peripatetic grants that the whole universe of things is produced by the first through what is first and immediate, which in some way is distant from [the first].11

As these quotations begin to highlight, then, Albert sees as complementary, even if sharply distinct or even separate projects, what we often see as opposed: philosophy and theology. Similarly what we call Aristotelianism and Dionysian Neoplatonism are in his thought reconciled, both because there is, in fact, a theology that influences his philosophical

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9 Alb., De intell. et intellig. 1.1.4, Borgn. 9, 482a.
10 Alb., De intell. et intellig. 2.11, Borgn. 9, 519a.
choices, whether explicitly or not, and because he sees Aristotle and Dionysius as harmonizable at a purely philosophical level.

2. ALBERT’S ARISTOTELIAN PARAPHRASES

At the oft repeated and often refused entreaty of his conferees, including those whom he was instructing at the Dominican studium that he founded in Cologne, Albert began his exposition of the Aristotelian Physics in 1251 or 1252.12 Protesting his unworthiness, he nevertheless set out to present the “natural philosophy” of Aristotle in its entirety—indeed, all of “real” as opposed to “moral” philosophy, including mathematics and metaphysics (though his project came to include ethics and politics, as well as logic)—so as to make the new Peripatetic sciences “intelligible to the Latins”.13 He would do so, he promised, by following the order of topics and the thought (ordinem et sententiam) of Aristotle; for every book of Aristotle (or of what we must now call pseudo-Aristotle, as well as of related treatises by Boethius, Euclid, etc.), he would write a book of the same title, and every chapter in Aristotle would find its counterpart in one or more chapters of Albert’s work. But the text would be Albert’s own, not Aristotle’s. What was missing in the corpus of Aristotle, he would supply, either by providing additional chapters (called “digressions”), or in some cases by writing entire books. Albert composes a book on the motion of animals, then after the discovery and translation of the De motu animalium, he writes a separate paraphrase of it!

It has been objected that in writing such “paraphrases”, as they are called, Albert was not giving his own opinion but was merely seeking to report the position of Aristotle.14 The import of this objection is that we

look in vain to find Albert's true philosophical position in the Aristotelian paraphrases. But this interpretative stance exaggerates the situation. In the *Physica*, Albert makes it clear that he is presenting natural philosophy, not *his* or Aristotle's natural philosophy, but simply a true account of natural philosophy, which happens to have been taken largely from Aristotle. When Albert begins to consider the opinions of ancient philosophers other than Aristotle, for example, he both explains this strategy as modeled on Aristotle and indicates that he himself will enter in and determine the matter.

Intending to give a universal and unqualified determination regarding the principles of mobile body, and wishing to follow Aristotle in what[ever] we suitably can, we must first treat the inquiries and responses that the ancients made concerning the principles, and then, summarizing, we shall make a determination concerning them according to our own opinion.

In fact, we find Albert quite willing to correct Aristotle, and he often supplies chapters of digressions to complete Aristotle's doctrine. Albert recognizes that the leading Peripatetics (Alexander, Avicenna, al-Ghazālī, Averroes) and others often disagree with each other on philosophical matters as well as on the proper reading of Aristotle; usually Albert will resolve

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16 Alb., *Phys.* 1.2.1, Ed. Colon. 4/1, 14, Ins. 18–24: "De principiis igitur corporis mobilis in universali et simpliciter determinare intestantur et volentem sequi Aristotelem, in quibus convenienter possamus, prius oportet nos tangere ea quae antiqui de principiis inquisive-runt et determinaverunt, et postea resumentem determinabimus de eis secundum nostram sententiam." By "ancients" Albert refers to the pre-Socratics, so that his method follows Aristotle's.

17 Albert, for example, thinks that Aristotle incorrectly understood the contingency involved in chance events; Alb., *Phys.* 2.2.12.

18 Of the 261 chapters in the *Physica*, 41 are called "digressions" by Albert.
It can be safely affirmed that, apart from explicit and restricted corrections or disclaimers, Albert presents the Peripatetic position in the *Physics* as a true philosophical doctrine. This is a work in philosophy, not in the history of philosophy. Albert echoes Averroes in identifying the demonstrative method as the hallmark of the *via peripatetica*, as opposed to the method of probable reasoning typical of the other two major philosophical sectae, the Stoic (which includes Plato, for Albert) and the Epicurean. Even where Plato’s conclusions are right against Aristotle himself, Plato’s argumentation falls short (although the Platonic texts remain in need of paraphrase, Albert observes). At times Albert reveals that he is critical of the *moderni Latini*, sometimes even as they follow Augustine and Plato. He complains, for example, that all follow the way of Plato on the operations of the intellect. On the nature of time, Albert admits having been earlier in agreement, even in his writings, with the *moderni*; but he has come to adopt the Peripatetic position because he holds that the understanding of the “Arabs” is true, whereas Augustine lacks a good scientific understanding of the nature of things. Similarly, many *moderni* follow Plato and the Stoic model of “induction of forms” into all things, as though a light emanating from its prior existence as ideas in the first separate

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19 In one sense Albert will allow that Avicebron’s universal hylemorphism could be true; in another sense it must be false: Alb., *Phys*. 1.3.11. Similarly, he does not always and entirely reject the doctrine of the *dator formarum*, although he does not adopt it as his own; *Phys*. 2.2.3.

20 See, for example, Alb., *Metaph*. 11.3.7. For the sources of Albert’s historiography, see Alb., *De praedic*. 5.12, Borgn. 1, 267b.

21 For at least one instance, see p. 664 in this volume, esp. note 445.

22 Alb., *Metaph*. 11.3.7 [digr.], Ed. Colon. 16/2, 542, lns. 20–25, quoted below, on p. 668 in this volume and see note 468. For the proposal to include Plato insofar as his thought is consistent with that of the Peripatetics, see Alb., *De intell. et intellig*. 1.1.1, Borgn. 9, 478a.

23 For the compound term, see Alb., *De sens. et sensato* 1.1.5, Borgn. 9, 3a; for his criticism, even abhorrence, see also Alb., *De anima* 3.2.1, Ed. Colon. 7/1, 177, lns. 49–72; 3.3.10, 220, lns. 28–51.

24 Alb., *De anima* 2.3.6, Ed. Colon. 7/1, 106, lns. 82–86. For Augustine and Boethius grouped with Plato and the *Platonici* on the question of recollection, see ibid., 1.2.14; a question that nearly all of the Latins have misunderstood; Alb., *Mem*. 1.1.1, Borgn. 9, 97b.


intellect or dator formarum explained the origin of material forms. In Albert's eyes, Peripateticism, with the doctrine of the “eduction of forms” from a prior potency in things (though missed by Avicenna, “who wants to be a Peripatetic”), provides the necessary antidote.

The issue of the disclaimers, having been mentioned, deserves attention. On some 16 occasions at least, in some seven different works spanning the entirety of his 17-year project of paraphrasing the corpus of Aristotle, Albert insists that his reader not equate what he has written there with his personal view. Apparently no such disclaimers are found in the Dionysian commentaries (although we do discover them when he presents the views of others in personal works—four times in the De unitate intellectus, as well as at least once in the Commentary on the Sentences). Still, to avoid exaggerating their importance for the Aristotelian works, keep in mind the following. The disclaimers are usually general in their scope, placed at the beginning or end of works or sections of works, though they often are occasioned by specific doctrines that are under consideration. Two topics alone, however, are disclaimed more than once, comprising together nearly half of the disclaimers: the identification of the prime mover as God or first cause, and the nature of the celestial movers (as angels or celestial souls). Each of these are topics on which Albert changes his mind and which cause him special concern for his project of harmonizing faith and reason. The concluding words to the De causis et processu universitatis a prima causa therefore also conclude Albert’s entire philosophical project, and their final disclaimer is typical:

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27 Alb., Phys. 1.3.15, Ed. Colon. 4/1, 68, In. 72–p. 69, In. 42; Metaph. 3.3.11, Ed. Colon. 16/1, 149, In. 79–p. 150, In. 25.
28 Alb., Metaph. 3.3.11, Ed. Colon. 16/1, 151, Ins. 27–58; De causis et proc. univers. 1.4.7, Ed. Colon. 17/2, 53, ln. 3. For qualifications, see below, pp. 694–722 in this volume.
29 In addition to the nine disclaimers listed in James Weisheipl, “Albert’s Disclaimers,” 3–4, 14–17, see Twetten, “Albert’s Early Conflations,” 26, and Alb., Eth. 6.2.13, Borhn. 7, 422b. The mark of a disclaimer properly speaking is the disavowal of Albert’s personal view, not merely the explicit ascription of a view to the Peripatetics (alone), for example; see also Alb., Metaph. 11.2.3, Ed. Colon. 16/2, 486, Ins. 61–70. A disclaimer may also be accompanied by the admonition not to try to discover there what is Albert’s view, by the notice that his view is different or may be found elsewhere, or by the reminder that Albert refrains from taking a position and lets others judge the truth of the matter. For practical purposes, however, we can count Albert’s denial that he takes a position, especially on an issue that he disclaims elsewhere, as equivalent to a disclaimer; see Alb., De causis et proc. univers. 1.4.7, Ed. Colon. 17/2, 55, Ins. 56–71; Alb., Metaph. 11.2.3, Ed. Colon. 16/2, 522, Ins. 83–85.
30 See below, p. 668 in this volume, Section 10, notes 466–68.
We know that certain people do not say that the celestial bodies are animated, and the contradiction of these [people] we neither approve or disapprove. But this we say for certain: their statements are consistent with neither the Epicureans nor the Stoics nor the Peripatetics. For, all of those state in one accord that the heavens are animated. We also know that certain people contend that the spirits that are popularly called angels are Intelligences. But this is certain: angels are intellectual substances that are allotted roles according to the ministries of grace. But that they are Intelligences in the way that Intelligences are affirmed by the Peripatetics, namely, that they are immobile in place and operation, is entirely absurd and inconsistent with the statements of those who have spoken of the changes, appearances and actions of angels. Therefore, let each one choose what he will. For, what has been said has been determined according to the arguments of the Peripatetics, has not been introduced under our own assertions, and has been extorted more than entreated through the incessant requests of our confreres.32

The most insistent and repeated disclaimers, then, reveal that Albert was particularly concerned about getting the central issues “right” while creating space for reporting and testing philosophical views in a non-controversial setting. The disclaimers should not be used as an excuse to dismiss his Peripatetic writings as irrelevant to his personal thought.

In what follows, instead of aiming at a complete and comprehensive discussion of Albert’s philosophy, we highlight central themes on which Albert makes a distinctive contribution, or which especially help shed light on his thought and its relation to subsequent philosophy and science.

In the first three books of the *Physics*, we find a philosophy of nature that may be fairly characterized as Aristotelian. In expounding such a philosophy, though, Albert’s presentation is distinctly his own, as is most evident in the three topics discussed here: (a) the composition of form and matter in natural substances; (b) the role of fate and providence in relation to chance; and (c) the categorization of motion.

A theme that will recur, not only in this section but in the chapter as a whole, is that of the tension between the interpretation of Aristotelian doctrines that Albert inherited from his predecessors and the new system that he would pass on to the Latins and that his student, Thomas, would take in yet another direction. As we shall see, Albert already begins to develop positions that are commonly identified with Aquinas, such as the unicity of substantial form in bodies and the rejection of arguments for the temporal beginning of the world. At the same time, he does not always successfully reconcile his novel insights and the inherited body of thought that constitutes for him the Peripatetic tradition.

A. The Composition of Form and Matter in Natural Substances

The subject of natural philosophy is mobile body, *corpus mobile.* The philosopher’s job is to determine the principles of the mobile body: that which explains its being a body and its being mobile. Of course, the Aristotelian explanation of these facts is that all mobile bodies are composed of form and matter, and motion itself is explained with three principles: form, matter, and privation. The principal goal of Book 1 of Aristotle’s and Albert’s *Physics* is to give an account of these three principles. In trying to explain these principles and the composition of natural substances, medieval philosophers were divided into two broad camps: the majority were those, like most Franciscans (but also leading Dominicans), who held that

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a plurality of substantial forms is required to explain a natural substance; a minority position was that of Albert and Thomas, who held that there is only one substantial form that informs prime matter, which is of itself purely potential. Albert’s position, however, is not completely consistent because of what he says about privation, the relation of prime matter to form, and the “form of corporeity”. We shall briefly consider each of these three, before turning to an evaluation.

1. Privation

Albert gives his own Peripatetic account of the three principles of motion in Tractate 3 of Book 1. There he signals immediately that one of the difficult principles to comprehend is privation. Change does not occur out of nothing; there must be something in which change occurs—the subject or matter—and something from which change occurs—the privation. Privation, the lack of the form that will be the terminus of motion, is not mere non-being. It is, in fact, an aptitude for form, and this aptitude for form is something formal that is already in matter. This aptitude for form is one of the contraries, and contraries belong to one genus. Like a species within a genus, the aptitude for form is an “imperfect form”, the perfect form being the species realized in an individual. The aptitude for form is not a “disposition”, because dispositions are accidental inclinations that direct something toward one form rather than toward another. An aptitude for form is rather a generic and imperfect form. A piece of paper, for example, is white, but it is privatively some other color, for it now lacks any of the other colors, though it could acquire one of them. Color is the genus of forms to which the paper has an aptitude to change; the paper might have an accidental disposition to yellow with age, but the color of the paper could be changed by a painter to any number of the other colors to which it has an aptitude. Albert’s point is that this aptitude is something formal already in the matter. This aptitude for form is also called by Albert the “beginning of form” (incohatio formae), a term that has been discussed in the scholarly literature. And Albert will use other
terms for privation: “imperfect form” (forma imperfecta),6 “confused form” (forma confusa),7 “power” (potestas),8 and so forth. Albert’s fullest, formal treatment of privation (using most of these terms) is found in Chapter 3 of Tractate 3 in Book 1, to which we now turn.

This chapter is a digression entitled, “How the Principles Must Be Contraries, and What the Contraries Are.”9 Here Albert compares privation (= contrary, aptitude for form, beginning of form, etc.) first to a genus and second to the beginning of a motion. In the first comparison, genus is related to species as matter is related to the contraries, one of which is privation.10 The genus, of course, indicates a general nature, and the specific difference indicates a species. The nature of the species is contained potentially (in potestate) in the genus, and this potential presence of the species is presence as a “confused form that is not determined to one thing or another and is not distinct as one actuality or another”.11 The question about this beginning form is whether it is or is not the same thing as the form of the species.

To this question, Albert answers that in one sense it is not the same, but in another sense it is the same. In being (esse), the potential species is not the same as the actual species, but in essence (in essentia), the two are the same, although they are not exactly the same. Albert means that an imperfect version of the species is present in the genus, and this indicates that the genus is composed, because the genus is both something in its own right (a subject) and also a collection of potential specific differences (habitus confusus, habitualis postestas). The genus “animal”, for example, is a composite of the general subject, animal, and the collection of potential specific differences, such as human (rational), equine, feline, and so on. Privation, too, is a collection of imperfect forms that are present in some inchoate way in matter.

Albert is comparing the genus to matter, and the specific differences to the potential forms in matter. The matter of a mobile body is like the

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6 Alb., Phys. 1.3.1, Ed. Colon. 4/1, 38, Inns. 7–8.
7 Alb., Phys. 1.3.3, Ed. Colon. 4/1, 42, In. 19. Here Albert is comparing privation to the form that exists in the genus as a forma confusa.
10 Alb., Phys. 1.3.3, Ed. Colon. 4/1, 41–42.
genus in containing a collective potentiality or a confused collection of forms (lns. 54–71). This collection of forms is larger in more common matter and smaller in more specific matter. The key point is that this collection of forms is a collection of forms that are essentially the same as the fully realized forms. It is not a mere potency for form; it is a collection of imperfect forms.

Albert’s second comparison is to the process of motion. The contraries and substrate are intended to explain motion, but motion, says Albert, is nothing other than a “form that flows in being but not in essence” (lns. 73–75). The idea of motion as a “flowing form” (*forma fluens*) is one to which we shall return later in this chapter, but now we should note that the moving thing, already while it is moving, is in some sense essentially the same thing as the goal toward which it is moving. When something is becoming white, to use Albert’s example, it must already be white in some sense during the process of becoming white. This notion is problematic, as we shall see, but the point of the comparison is that in motion the form to be realized is already present in some sense in the changing or moving thing. That is why Albert says that motion is a form flowing “in being” but not “in essence”, for the form during the motion is essentially the same (although imperfect, different in being) as the form that is the goal of the motion. Motion is always from one contrary (the privative) to another contrary (the form to be realized). Albert is saying that the privative is like the form that flows in motion to the completed state. Just as that flowing form has a sort of imperfect being in motion, so, too, does the privation have an imperfect form in the matter. In fact, in some very imperfect way, the privation already *is* the contrary form which the changing thing is about to acquire. If a black shirt becomes white, by bleaching or dyeing, it must contain an imperfect form of whiteness (and of all other colors) to allow such a change to take place. Its being non-black (as a privation) is in reality some imperfect, inchoate form of white. This imperfect form is the privation, aptitude for form, or beginning of form.

This means that matter contains a huge collection of potential forms, all in relation to each other. “If these forms are considered insofar as they are united in a confused collection of matter with potential forms, each one of them will have an aptitude for another but each will be deficient in actual being; and in this way a contrary necessarily indicates the existence of a privation” (lns. 19–24). Further, when a thing is actually moving,

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12 Alb., Phys. 1.3.3, Ed. Colon. 4/1, 43, lns. 8–11.
two contraries will exist simultaneously, the privation as the beginning of motion and the contrary form as the end.

Nothing prevents the contraries from existing simultaneously in motion, so long as they are not simultaneously in being. When they are in motion, one is the privation preceding the attained form, and the other is the flowing form that goes from potency to being; it is not a form that gives being absolutely. In this way, the contraries exist simultaneously in motion, and, in this way, they are principles that “cause” [or explain] motion.13

Later, in Chapters 9 and 10, Albert focuses on the reality of the principles: how are they three (and not two) and how are they real? The chief difficulty in these chapters is always about privation. Privation does not, as Albert says, “affirm” (ponit) something in reality, and yet it is not nothing, either.14 It is in matter a real aptitude for form, and this aptitude is the beginning of motion. Thanks to this privation, which is mixed in matter (quae immixta est materiae), motion and change are possible; without it the process and flow of some essence to its terminus would not be possible (Ins. 44–50). “Every change and motion is a kind of formal entity that flows to a terminus; this is the perfection of the mobile thing insofar as it is in motion to the terminus” (Ins. 50–53). Hence, matter can only be subject to motion if it is mixed with a privation that is numerically one with it, but numerically one in just the same way as an accident is numerically one with its subject (Ins. 59–64). Aristotle gives examples of this: the man who becomes musical has the accident of “non-musical” that can be changed to the accident of “musical”; the bronze has the privation of statue (non-statue) before it becomes a statue. We must, therefore, recognize that matter and privation are separable in being (in esse; Ins. 68–74).

Finally, Albert concludes that there are two ways to look at privation. In one way, it can be regarded as a simple lacking of form.15 As such, it merely indicates a kind of order, and this order can often be expressed by the preposition from (ex). From being non-musical, the man became musical; from being unformed, the bronze became a statue. On the other hand, privation can be taken to indicate an aptitude for form (Ins. 58–64). This aptitude, which we know can be called the “beginning of form”, is a formal thing that is not found apart from matter but is different in being

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13 Alb., Phys. 1.3.3, Ed. Colon. 4/1, 44, Ins. 37–44.
14 Alb., Phys. 1.3.9, Ed. Colon. 4/1, 54, Ins. 39–45.
from matter. Albert takes privation to be something formal, real, and distinct from matter.

2. The Relation of Prime Matter to Form

Privation, thus, can be understood as an incipient, proto-form or as a relation to a form yet to be attained. But there are other formalities or relations in matter. In the sublunary realm, matter always exists with privation, but matter can be considered in itself without privation. Is matter in that sense completely simple (is it “in fine simplicitatis”)? No, answers Albert, for even if such matter does not have a definable species or quantity, nevertheless it is in relation to something else, for it is related to the substance of which it is the substrate. Albert expresses himself as follows:

We say that matter, understood without form and without privation, is simple but it is not completely simple. Although it does not have essential or quantitative parts, because it is not composed of different essences or of quantity, nevertheless it is composed and able to be composed of relations. And therefore the relation, by which it is related to the form of which it is the subject, is something in it and is perhaps a potential relation to form. And thus the potency by which matter is able to be subject to form is different from the matter. [This potency] is not a thing but rather an intelligibility (ratio) by which matter is related to form. And matter by itself is subject to that potency because [prime] matter by itself is subject to the prime form or, rather, to the potency to the prime form.

This relation (habitudo) is not a fully fledged thing, but it is really distinct from matter, such that there is some composition in matter itself and that matter is not purely simple. The potency or aptitude for form in matter is something different from matter itself.

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16 For a contrasting view, consider what Thomas Aquinas says about privation: “Aristotle’s clear intention is that privation, which is given as an accidental principle of nature, is not some aptitude for form or a beginning of form or some imperfect active principle, as some say, but is just the lack of form or the contrary of form that belongs to a subject”; Thomas Aquinas, In octo libros Physicorum Aristotelis expositio, ed. P.M. Maggiolo (Turin: 1950), 1.7, lect. 13, n. 4 (113). Whereas Albert has devoted three long chapters in the Physics to the explanation of just what sort of real being privation has in matter, Thomas sweeps the whole topic away in a sentence: privation merely expresses the fact that matter in one instantiation lacks other forms.

17 Alb., Phys. 1.3.13, Ed. Colon. 4/1, 63, Ins. 78–90.
3. The “Form of Corporeity”

Matter, however, is complicated in other ways. Matter in itself has no quantity, and yet matter, prior to the acquisition of substantial form, must be divisible, but divisibility is a function of quantity. Hence, before the reception of substantial form, matter must be subject to quantity, but it does not have this quantitative formality of itself. In Tractate 2 of Book 1, Albert explains that prime matter itself is not divisible and yet it must be divided, because some parts of it exist in one part of a substance and other parts of it exist in other parts. This is possible, says Albert, because, before substantial form, prime matter is subject to a prime form, the form of corporeity (forma corporeitatis). This form of corporeity, a notion that Albert adopts under the influence of Averroes, makes prime matter quantifiable and divisible before it receives substantial form.

This form of corporeity is something that Albert gives considerable attention to in his De caelo. There, among many other things, Albert attempts to explain how it is that the heavenly bodies are not liable to corruption although terrestrial bodies are. The difference, briefly, between heavenly and terrestrial material beings is not a difference in prime matter or in substantial form; it is rather the difference between the absence of the form of corporeity in the heavenly bodies and the presence of that form in terrestrial bodies. Since the heavenly bodies lack the form of corporeity, they lack the form by which divisibility can occur. Since they are not divisible, they are not corruptible. Terrestrial bodies, by contrast, do possess the form of corporeity and do so before they...

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19 Alb., Phys. 1.2.4, Ed. Colon. 4/1, 24, Ins. 10–19.

20 Averr., De substantia orbis c. 1, in Averrois commentaria et introductiones in omnes libros Aristotelis cum eorum versione latina (Venice: 1562–74), vol. 9, fol. 3M–1; repr. Frankfurt am Main: 1962. Averroes argues that prime matter is never denuded of “indeterminate dimensions”, and Albert, in his De caelo, associates these indeterminate dimensions with the form of corporeity, Alb., De caelo et mundo 1.3.4, Ed Colon. 5/1, 62, ln. 42–p. 63, ln. 6.

21 Alb., De caelo et mundo, Ed. Colon. 5/1, 62, ln. 50–p. 63, ln. 60.
possess substantial form. By virtue of this prior form, they are divisible and hence corruptible.\textsuperscript{22}

4. \textit{Evaluation}

In three ways, thus, Albert talks about matter as a composite of formal entities or relations, and this composite nature of matter is a fact about matter \textit{before} matter is taken as composed with substantial form. Matter is composed of privations, which are aptitudes for forms, beginnings of forms, or imperfect forms; matter is composed of a relation to substantial form that is different from the matter itself; and matter is composed with a form of corporeity by which it is divisible and liable to corruption. Yet in spite of all of this, Albert still wishes to talk of the pure potentiality of matter. Albert rejects the position that he ascribes here to Anaxagoras, and does so because Albert rejects the notion that forms are somehow preexistent in the matter. If they were preexistent, then change, especially substantial change, would be illusory; what we think to be substantial change would, really, turn out to be just an emergence of a form that was already preexistent anyway, and this would be a kind of accidental change.\textsuperscript{23} The correct position, says Albert, is that forms are present in matter potentially, not actually.\textsuperscript{24}

But what does Albert mean by the potential presence of form in matter? Here is his answer:

The opinion of Aristotle and the Peripatetics is that whatever comes to be exists in potency in that from which it comes to be. \textit{This potency is something formal, because it is a habitual potency, which is an incomplete essence of the form and, as it were, the beginning of form (incohatio formae).} This potency is brought into actuality through generation.\textsuperscript{25}

Albert is willing to use the Aristotelian language of potency, but by “potency” he does not mean the pure potency of prime matter. He means a preexistent formal entity of some kind.

In Albert’s doctrine, then, there are forms or formal entities in matter prior to substantial form. Of course, if that is really the case, it appears

\textsuperscript{22} For an account of the matter of the heavenly bodies according to Albert, see Steven Baldner, “St. Thomas on Celestial Matter,” \textit{The Thomist} 68 (2004), 431–467, esp. 433–445.

\textsuperscript{23} Alb., Phys. 1.3.15, Ed. Colon. 4/1, 69, Ins. 64–69.

\textsuperscript{24} Alb., Phys. 1.3.15, Ed. Colon. 4/1, 70, Ins. 6–76. But even here Albert talks about the form as preexistent in the matter as a “confused essence”. See ibid., Ins. 9–10.

\textsuperscript{25} Alb., Phys. 1.2.12, Ed. Colon. 4/1, 34, Ins. 14–19; italics added.
that Albert will not be able to maintain consistently the doctrine of the
unicity of substantial forms, because these prior forms will be either sub-
stantial or accidental. If they are substantial, then obviously there is more
than one substantial form in the substance. If they are accidental, then we
face the absurdity of having accidents in a substance that are not depen-
dent for their existence on the substance, for they would exist metaphysi-
cally before the substance is a substance. In either case, the doctrine of
the unity of substantial form is compromised.

We have looked at this problem mostly from the side of matter, because
that is where the problem arises in Book 1 of Albert’s *Physica*. We can also
see this problem from the side of form in three areas. First, in his *De gene-
ratione et corruptione* and also in his *De caelo et mundo*, Albert discusses
the vexed problem of how it is that elements remain in compounds.26
According to him, the primary being of the elements does remain in the
compound; that is, the substantial form of the elements remains, not the
secondary being of the precise elemental qualities. This substantial form
is understood by Albert to be a kind of transient form that is substantial
but not fully actual.27 Second, when Albert discusses the relation of the
human and even the animal soul to the body, he describes the relation
dualistically.28 The soul, without the body, is composed of two metaphysi-
cal principles (*quod est* and *quo est*) that result in a complete individual
of a species; the soul is related to the body as mover is related to thing
moved; and the powers of the living animal are located, not in the com-
posite of soul and body, but in the soul alone. If the human or animal
soul is a complete substance apart from the body, then the body must be
substantial, presumably with some form, apart from the soul. Third, as
Lawrence Dewan has pointed out,29 Albert, regards the *separated* form as
form in the truest sense, metaphysically speaking. A form truly is a form,
not insofar as it makes matter to be actual, but insofar as it is separate
from matter. If one is to maintain the pure potentiality of prime matter

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26 Alb., *Gen. Corr.* 1.6 [*De mixtione*], Ed. Colon. 5/2, 169–176; *De caelo et mundo* 3.2.8, Ed.
Colon. 5/1, 240–242.
27 See Steven Baldner, “St. Albert the Great and St. Thomas Aquinas on the Presence of
28 For an account of this problem, see Steven Baldner, “St. Albert the Great and the
Union of Soul and Body,” *American Catholic Philosophical Quarterly* 70 (1996), 103–120;
Baldner, “Is St. Albert the Great a Dualist on Human Nature?” *Proceedings of the American
29 Lawrence Dewan, “St. Albert, Creation, and the Philosophers,” *Laval théologique et
and the unicity of substantial form as the key to substantial unity, these
doctrines about form are all difficulties to be overcome.

In sum, Albert says that any substance is a substance because one sub-
stantial form is united to the pure potency of matter. Yet when we look at
what Albert says about matter and privation, we find a multitude of forms
or proto-forms constituting a real composition in matter before substan-
tial form. And when we look at form, we find that there are other forms or
quasi-forms in substances in addition to the substantial form.

B. Chance, Fate, and Providence

In Book 2, Albert treats the principal topics found in the same book of
Aristotle’s Physics: nature; the difference between the mathematician’s
and the physicist’s study of nature; causality and the four causes; chance
and luck; and necessity in nature and in physical demonstrations. The
topics of chance and luck are treated in Tractate 2, Chapters 10–21. At the
end of this section, Albert adds a discussion of fate and providence (chaps.
19–20), which was inspired by Boethius’s discussion of these topics in The
Consolation of Philosophy, Book 4.

Albert, just as Aristotle, understands chance and luck to pertain to con-
tingent events. But Albert introduces a distinction, taken from Avicenna
and Averroes: “contingent” may merely mean “that which happens for the
least part”, or it may mean “that which is indeterminate”.30 Contingent
events that happen for the least part, like snow in the summer, are still
events that are determined through causes that necessitate the event.
Contingent events that are indeterminate, like either walking or not walk-
ing, are events that seem to imply some desire or choice of animal or
man. Albert claims that Aristotle insists wrongly on both of these senses
of contingent to explain chance, and he refutes this “wrong” (though
really wrongly ascribed) position of Aristotle, by establishing the correct
meaning to be merely “that which happens for the least part”. A further
confusion about the meaning of contingency comes, Albert tells us, from
Averroes, who wrongly understood this sense of contingency to character-
ize events brought about with no final cause. Albert, however, points out
that chance events, which happen for the least part, are brought about by
agents intending some end, but the peculiarity of a chance event is that

30 Albert’s terms are contingens in paucioribus and contingens ad utrumlibet. His discus-
sion of this point occurs in Physica 2.2.12.
the end actually achieved is not the one intended by the agent.\footnote{Alb., \textit{Phys.} 2.2.13–14.} This is the accidental nature of the chance event: any agent involved in a chance event \textit{does} intend some end, but the conjunction of two or more agents can bring about an outcome intended by none of them. This conjunction explains the chance event, but it is just in itself accidental. There is nothing that can account for it and it cannot be known by humans.

It can, however, be known by God, and this fact raises the Boethian problem to which Albert contributes a solution. From God’s point of view, all events are known, even the accidental conjunctions of agents that we cannot know. If God not only knows but providentially orders all things, then even chance events are not really chance from His point of view. And if there is no chance from God’s point of view, then our recognition of this is a recognition that, from our point of view, the events are subject to “fate”. Albert accepts this Boethian distinction, but he uses it in a rather different way from Boethius’s. For Boethius, the problem had been to answer the complaint that, although nature seems to be ordered, human affairs do not seem to be ordered. Essentially, Boethius introduces the distinction between providence and fate in order to explain how it is that human affairs are providentially ordered, even though we cannot always see the order. Albert, on the other hand, is not troubled about the order in human affairs, but he is concerned to establish the true autonomy of natural causes. Fate thus indicates for Albert a dependence of all things on God’s providential causality, but it also indicates a sort of descending scale of independence and distance from necessity. The heavenly bodies are the highest of natural things, and the four elements are the lowest. In between are the various grades of living and non-living substances on earth. Albert’s claim is that, near the top of the scale, fate is weaker and necessity stronger, but that, near the bottom, fate is stronger and necessity weaker. “It is clear that, to the extent that things are more diverse and mutable, to that extent they are more subject to fate; and to the extent that things are farther from diversity and mutability, to that extent they are less subject to fate.”\footnote{Alb., \textit{Phys.} 2.2.20, Ed. Colon. 4/1, 129, lns. 6–9.} God exercises his providence by causing all things, but He does so in such a way that although the heavenly bodies are subject to a strict necessity, terrestrial things are in conflict, and one thing can frustrate the end of another.\footnote{Alb., \textit{Phys.} 2.2.19, Ed. Colon. 4/1, 126, ln. 73–p. 127, ln. 5.} Hence, there is less necessity
here than there. The term “fate” thus indicates two very different ideas. On the one hand, it means that God providentially orders all things, from the highest in creation to the lowest. Fate in this sense extends equally to the whole of creation. On the other hand, it means a freedom from strict necessity: fate is greatest where chance events are greatest. In this sense, the natural substances on earth are more subject to fate than are the heavenly bodies.

The mechanism of fate is the very causal structure of the cosmos. Individual effects on earth are traceable in part to the agency of the elements, but the elements are caused by the motions of the heavenly bodies. The motions of the heavenly bodies, in turn, are dependent upon the motion of the first mobile body, and it is ultimately dependent upon the providential moving of the first mover. Thus, if fate means this entire causal structure, it must be affirmed throughout creation. If, on the other hand, fate means a freedom from necessity and being subject to chance, then fate only applies to the sublunary realm. Precisely because the mechanism of fate is the very causal structure of the cosmos, its universal extent is completely compatible with creaturely autonomy and chance. This Boethian addition, in Albert’s hands, helps to account for both God’s universal providence and genuine creaturely causality and autonomy.

C. The Categorization of Motion

One of the principal problems for the natural philosopher is the definition and understanding of motion, which Aristotle treats in *Physics* 3.1–3, and which Albert treats in Tractate 1 of Book 3. Albert begins, as does Aristotle, with a consideration of how to categorize motion: generically (Chapter 2) and specifically (Chapter 3).

The discussion of “motion”, of course, is a discussion of change, for the word “motion” was used to apply to the four basic kinds of change: substantial, quantitative, qualitative, and local. Generically, Albert says that motion is a kind of perfection, and not a kind of potency. Motion belongs to that which is in potency and not in act, insofar as it is in motion, but

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the generic classification of motion is “perfection”, “act”, or even “form”. There is a sort of perfection that is completely opposed to potency, and there is a kind of potency that is completely opposed to perfection. The perfection of motion is like neither of these. As Albert explains, the perfection of motion is a kind of perfection of things that are temporal as such: it is what necessarily precedes the final perfection in being, which is not temporal as such.\textsuperscript{37} It is a perfection, not in the sense of something complete, but in the sense of something on the way to perfection (\textit{via et exitus imperfecti ad perfectionem}; ibid.). Following Aristotle, Albert recognizes the four different kinds of motion, and he agrees that there is not one genus to which the four kinds of motion belong.\textsuperscript{38} This is partly why motion cannot be properly defined, for a proper definition requires a genus.

Specifically, Albert argues that motion can be categorized in terms of the terminus of motion. The following passage expresses the position that Albert accepts, following one group of Peripatetics, which includes Averroes:

They say that any flow [of motion] does not differ from the end in which it rests by a specific difference or through essence, but only in being. And they say that motion is found in all of the categories in which a flowing being and its terminus can be found, and these are the four categories [substances, quantity, quality, and place]… And according to them, blackening is a changing or flowing blackness, and ascending is a flowing place to that which is higher, and so forth. And blackening does not differ from blackness in essence (through a specific difference), but differs from it as being in motion [differs from] being at rest, which are different instances of being; or [they differ] as being in progress [differs from] being at the terminus, which are again different instances of being.\textsuperscript{39}

The fundamental claim is that the process and the end of the process are categorically the same: the same in essence but different in being. The motion and the end of the motion differ as two individuals differ that are members of the same species. Motion is an imperfect instance whereas the end is a perfect instance, but they are still two individuals of one species. Significantly, Albert rejects the view that motion and its end are only analogously the same.\textsuperscript{40} He argues, among other things, that if

\textsuperscript{38} Alb., \textit{Phys}. 3.1.2, Ed. Colon. 4/1, 149, Ins. 9–44.
\textsuperscript{39} Alb., \textit{Phys}. 3.1.3, Ed. Colon. 4/1, 151, Ins. 62–81. Albert rejects this position later in this same chapter, 155, Ins. 4–38. The
the motion and its end are not essentially the same, it would be possible for any motion to reach any end—an absurdity.\textsuperscript{41}

The position that Albert adopts can be described as one in which the motion is conceived to be a flowing form (\textit{forma fluens}).

Form mixed with potency and pure form are not essentially different, but they differ in being; motion is a flowing form mixed with potency; therefore, [the flowing form] does not differ essentially from the form taken in the pure sense. But the form that is mixed with potency in motion is the same form as the pure form in the terminus of motion. Therefore, these [two] do not differ essentially, and therefore they are in essentially the same category.\textsuperscript{42}

Albert's favorite image to illustrate the truth of this position is the image of a line that is drawn with a pen.\textsuperscript{43} When a pen is simply placed on the paper, it creates a point. When the pen is drawn across the paper, it takes this point and makes a line from it. When the pen stops moving, it stops, again, at a point, which is the end of the line. The point at the beginning, the points throughout the line, and the point at the end are all essentially the same (the same in species) but they are different in being—each is a different instance of the specifically same kind of thing, a point.

Here, however, we can pause to consider the difficulty of this position. Beginning with Anneliese Maier,\textsuperscript{44} Albert has been criticized for reducing motion, as Ockham later would, to a series of instants, effectively denying the reality of motion. As has frequently been shown,\textsuperscript{45} this criticism of

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\textsuperscript{41} Alb., \textit{Phys.} 3.1.3, Ed. Colon. 4/1, 152, Ins. 71–84.


Albert is not completely fair. Albert does not uniformly adopt the language of motion as a flowing form, and he does not regard motion as a series of static instants. He is fully aware of the flowing and imperfect nature of motion, as something that is a mixture of potency and act. Further, as we shall see, Albert’s actual definition of motion, given in Chapter 4, tells a rather different story. Nevertheless, there is some justice in the criticisms brought against Albert, and the claim that motion is a “flowing form” that is essentially the same as the terminus of motion is problematic. If motion and its terminus are specifically identical, then the potency of motion seems to be lost. The example of the points on the line makes this clear. The endpoint of the line, or any point found on the line, must be specifically different from the line, because the line is a continuum and the point is discrete and indivisible. The line, like motion, is a continuous reality that is divisible; it is not an imperfect version of the endpoint; it is a reality of an entirely different order. Albert’s attempt to categorize motion, found in Chapter 3, does lend support to the criticism that Albert reduces motion to a set of static instants, although such was far from Albert’s intention, as we shall see next.

In Chapter 4, when Albert defines motion, he takes Aristotle’s definition and divides it into three parts. First, motion is an actuality or a perfection (entelechia sive perfectio); second, it belongs to that which is in potency (existentis in potentia); and third, it characterizes the mobile thing just insofar as it is in potency (secundum quod est in potentia).46 We have already seen the first point, that motion is generically an actuality or a perfection. Second, motion belongs, not to the agent, but to the mobile subject. Third, motion is characteristic of the potency of the mobile just insofar as it is in potency—and not insofar as it is in act. Albert writes:

> It is necessary to consider that insofar as [mobile thing] is in potency it can only have perfection if it is moved, because form is the perfection of a thing existing in act, and when it has form, it is not in potency to it but in act. But when [something] is in motion, then it is still in potency to form. And so it is that the fulfillment of that which is in potency, insofar as it is in potency, is motion, but the fulfillment of that which is in potency, insofar as it is not in potency but in act, is form.47

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46 Alb., Phys. 3.1.4, Ed. Colon. 4/1, 156, ln. 79–p. 157, ln. 23.

47 Alb., Phys. 3.1.4, Ed. Colon. 4/1, 157, Ins. 23–32.
This is a crucial text that serves as a corrective, to some degree, of what Albert has said at length about the categorization of motion in earlier chapters. Here Albert is claiming two things: first that motion cannot be understood unless we fully recognize its potential and not actual nature, and second that form expresses actuality and not potentiality. Albert has made it abundantly clear that he does wish to regard motion as a flowing form, when he is categorizing motion, but here he makes it equally clear that motion is lost when one attempts to reduce it to a form. What may we conclude? First, notice that what Albert has said about the categorization of motion bears a close resemblance in language and meaning to what we saw earlier about privation and the compound nature of matter. In both contexts, Albert wishes to affirm that the incipient form or the form in motion is specifically identical, but different in being, from the final form to be achieved. Second, Albert’s claims about the categorization of motion are logically separable from what Albert says about the definition of motion. One may argue that he is wrong about the categorization of motion, but that need not impugn his understanding of the actual definition of motion.

Steven Baldner

II. Place, Time, and the Continuum in Albert’s Physica 4–6

Since the middle books of Aristotle’s Physics address themes that overlap with contemporary science, it is appropriate to begin this section by asking whether Albert’s natural philosophy must be seen as an outdated, historical curiosity, or whether it can be seen to be built upon perennial truths about nature, which are necessary complements to the whole project of modern mathematical physics.48 Defining the physical world

quantitatively and according to our measurements, mathematical physics must, as a science, be blind to the underlying non-quantifiable reality of that which is measured. Shorn of its factual errors and accidental inconsistencies, Aristotelian natural philosophy, as interpreted by the great medieval thinkers such as Albert and Aquinas, can arguably be understood as providing cogent non-mathematical principles of physical reality. Here we shall examine Albert’s position on two fundamental attributes of the physical world, place and time, and briefly review his refutation of errors concerning the continuum, like those of Zeno’s famous paradoxes. The thought of Albert will again be seen to be primarily and fundamentally Aristotelian, but in some details it is at a crossroads, so to speak, between the Peripatetic system that he inherited from his medieval predecessors and the well-known synthesis of his best student.

A. Place

Albert follows Aristotle very closely in his paraphrase of the middle books of the Physics and presents a theme picked up by Aquinas by describing place as an environment of bodies. Nature, as described in Physics 2, is a principle and source of activity and receptivity proper to a natural

49 A similar point can be made for contemporary evolutionary biology (consider, for example, the fittings of "place" as environment and "natural" as "equilibrium in that environment"). The difference for Albert is that mathematical physics is a distinct science from natural philosophy, although dependent on it in order to understand the real meaning of even its own conclusions. See Benedict Ashley, “St. Albert and the Nature of Natural Science,” in Albertus Magnus and the Sciences, ed. James Weisheipl, 73–102, see 94–98. Biology, on the other hand, is part of natural philosophy and a specific application of the general principles of that science. See, for example, Raymond Nogar, The Wisdom of Evolution (New York: 1963); John Deely and Raymond Nogar (eds.), Problems of Evolution (New York: 1973); Richard Connell, Substance in Modern Science (Houston, Tex.: 1988); Benedict Ashley, Theologies of the Body (Braintree, Mass.: 1985); and William Wallace, The Modeling of Nature (Washington, D.C.: 1996).


51 For a general discussion, see Edward Grant, “The Medieval Doctrine of Place: Some Fundamental Problems and Solutions,” in Studi sul XIV secolo in memoria di Anneliese Maier, ed. Alfonso Maierù and Agostino Paravicini Bagliani, Raccolta di studi e testi 151
substance. The nature of any physical body is therefore essentially relational: a nature can only be understood as a distinct material being in relation to other material bodies and forces of its environment. That environment of bodies and their interactions is the body’s “place.” A physical body’s “natural” place is that environment in which it normally and for the most part achieves equilibrium and for which its powers and potentialities suit it. In his paraphrase of Aristotle’s *Physics*, Albert presents the notion of place as an environment of bodies and rejects erroneous understandings of place or “space” as the geometric precondition of bodies (Plato’s view) or even as a geometric setting which is a completely featureless void but which nonetheless exercises physical causality (the atomists’ view). Such a conception of place as abstract dimensionality or a receptacle which receives bodies is a mathematical abstraction cut loose from its natural moorings. In the course of Albert’s analysis of place and void in *Physics* 4, he enunciates a position that is effective against a purely mathematical notion such as Newtonian space but that finds important points of agreement with Einstein’s use of the notion of “space”. Albert conceives of “place” as an accident and, as such, it requires a substance—in this case a physical substance, or “body”—for its existence. This understanding of the notion of “place” situates Albert solidly within the Peripatetic tradition. Furthermore, in his paraphrase of Aristotle’s *De caelo*, Albert introduced the principles of an important correction of Aristotle’s notion of natural place, a correction which was influential on Aquinas and which had significant repercussions much later, in the 17th century, with Galileo’s contribution to the development of the notion of inertial motion and of the understanding of the earth’s natural heliocentric motion. The understanding of “place” as “environment of bodies” follows immediately from Aristotle’s definition of place as “the innermost motionless boundary of what contains” (212a20). The definition refers specifically to the environment with which the body has immediate physical contact and interaction. But we speak more broadly of the general place or environ-
ment, in some circumstances today calling it the body’s “ecosystem”.

53 For Albert, the specification “motionless” in the definition is not absolute but relative.54 The reader at his desk is in one place relative to his immediate environment, even though the earth, which is his broader “place” is not motionless. The reader’s “place” is constituted by the boundaries at which other bodies and forces of the environment act on the body in place, and this place is “fixed” (“motionless”) relative to some standard in the broader environment.

A physical substance in place is located in its environment because it has quantitative dimensions, but if there were only one body in existence, it would not be “in any place”. Another body is required for it to be in a place. The human soul is related to the body as its substantial form, but the human soul is not properly said to be “placed” within the body because the immaterial human soul of itself lacks quantitative dimensions.55 On the other hand, the whole universe obviously has quantitative dimensions, but it is not properly in place because there are no other bodies, there is no environment, in which the universe exists. “Where is the universe?” is a meaningless question.56

It follows that “completely empty space” is impossible, if what is meant is a physically featureless medium the only attribute of which is dimensionality.57 Although our imagination fashions an empty dimensionality into which bodies are put, it must be the case that place and environment arise from the relations of bodies. “Outer space” must be a physical medium arising from bodies and energies in the universe, since it physically transmits electromagnetic energy. But it is not a body, for then two bodies, “outer space” and a body in “outer space”, would occupy the same place and would be one body. Modern physics, of course, distinguishes bodies and energy fields within an environment where Albert postulated only a plenum of bodies.

53 Alb., Phys. 4.1.10, Ed. Colon. 4/1, 220, lns. 34–56 and 4.1.9, 216, lns. 73–76. See also Ashley, Theologies of the Body, 334, n. 4.
54 Alb., Phys. 4.1.11, Ed. Colon. 4/1, 221, lns. 36–53. Natural motion is directed toward that environment which preserves the natural form: Phys. 4.1.11, 221, lns. 54–64 and 4.2.7, 248, lns. 42–46.
56 Alb., Phys. 4.1.6, Ed. Colon. 4/1, 213, lns. 70–89 and 4.1.13, 225, lns. 21–25, 47–49; De caelo et mundo 1.2.5, Ed. Colon. 5/1, 50, lns. 39–83 and 1.3.10, 75, lns. 49–63.
57 Alb., Phys. 4.2.4, Ed. Colon. 4/1, 237, lns. 46–50 and 4.2.7, 249, lns. 45–68. See Ashley, Theologies of the Body, 265–266 and 279–280.
The arguments of Albert and Aristotle against the “vacuum” are demonstrative only against the position that there is a physically featureless space between bodies whose sole property is dimensionality. Such a notion abstracts from the properly physical principles which must ultimately govern our understanding of the physical world. A “vacuum” or “void” that is simply dimensionality is a product of the imagination alone. Albert argues against Plato’s proposal that such a “receptacle” is a necessary precondition of bodily existence and against the even more “anti-physical” proposal of the atomists that the void is non-being, physically featureless, but yet is a cause of motion. Albert recognizes that his arguments in the *Physica* refute the notion of a physically featureless medium, a mathematical abstraction, which is thought of as a physically causal agent in the events of the universe. Although Albert thinks there are physical bodies everywhere (a *plenum*), there is nothing in his arguments against the void in *Physics* 4 that necessitates that conclusion. All that follows from Albert’s demonstrations is that the medium between bodies must have physical properties, a position with which contemporary physics agrees. What Albert rejects, rightly, are the physically featureless, geometric mental constructs of Plato and especially of the atomists. A mathematical analysis of the physical world must depend on the physical principles of a realist natural philosophy.

The key to Albert’s and Aristotle’s notion of place is natural place as an environment of bodies in equilibrium. When a body “seeks its natural place” it is tending toward equilibrium in its environment, and when it “rests in its natural place” it is tending to maintain that equilibrium with its environment. The “natural” place is that environment of bodies and forces which promotes the continued being and well-being of the natural

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59 Albert also rejects a position that he ascribes to Averroes, that the metaphysics of creation requires that a vacuum/void preexist into which the universe is created: Alb., *Phys.* 4.1.2, Ed. Colon. 4/1, 204, ln. 79–p. 205, ln. 26.
body. “Place” and “natural place”, like “nature”, are terms which refer to physical bodies as they are in their relationships to other bodies; they are not absolute terms applied without restriction to a body considered alone, regardless of other bodies.

Historical and philosophic accounts of the development of science oversimplify when they imply that the Aristotelian understanding of natural place, such as is espoused by Albert, simply had to be rejected in order for modern science to progress.60 Let us briefly consider two areas of convergence between Aristotelian-Albertan and later scientific thought: natural place and inertia.

1. Natural Place and Space

Newton adopted the Platonic notion of space as a physically featureless mathematical construct in which bodies exist and operate, but Einstein returned to something like the Aristotelian-Albertan notion of place as an environment.61 Newton was unable to give a physical account of gravity precisely because of his understanding of space as a void with dimensions alone. For, although Newton famously refused to “fashion hypotheses” about what kind of real force in nature gravity is, he did reject as “absurd” the possibility that it could be a “physical pull” one body exerts on another.62 Newton’s “space” is a void, a mathematical precondition

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62 “That gravity should be innate, inherent, and essential to matter, so that one body may act upon another at a distance through a vacuum without the mediation of anything else...is to me so great an absurdity that I believe no man who has in philosophical matters a competent faculty of thinking can ever fall into it”; Isaac Newton, Correspondence with R. Bentley, quoted by M. Jammer, “Gravitation,” New Catholic Encyclopedia (Washington, D.C.: 1967), vol. 6: 712a. I. Bernard Cohen says: “None of these attempted physical explanations proposed by Newton worked fully and in detail. One reason for their failure is that they are all mechanical models of action, and we know today that gravity cannot be explained mechanically. They were never better than hypotheses—suppositions or speculations—and they just would not do...it is important to observe that the law of universal gravity and its effects as delineated in the Principia are unaffected by the particular choice of explanation that Newton was adumbrating at any given time. Each mode
for the existence of bodies. As such it is physically featureless. Therefore, Newton was at a loss to explain what kind of physical force gravity could be, because his notion of space as primarily a mathematical precondition for bodies meant that there was no truly physical medium for communicating information between bodies. Newton lacked an adequate natural philosophy of place and environment to ground his mathematical descriptions of the natural motions and relations of bodies.

On the one hand, Einstein approached physics with the aim of reducing all fundamental physical concepts to the language of mathematics. On the other hand, when he verbally articulated the meanings of his mathematics of gravitational motion, he adopted language which shares significant principles with the natural philosophy of Aristotle and Albert. For example, Einstein argued that in mathematical physics gravity need not be conceived or described as a real, distinct force in nature. Thus he escaped the Newtonian conundrum of a physical force which is supposed to act instantaneously without a medium (action at a distance) but decreasing with distance (why should it decrease if there is no resistance from the medium?). For Einstein, motion that we call “gravitational” or “free fall” can be explained by the postulates that bodies and energy “curve” space and that moving bodies tend to follow the shortest path through curved space. Just as a jet from Washington, D.C. to Tokyo follows a northbound curve as its shortest distance across the spherical globe, so the shortest path through curved space is a curved path. The elliptical path of a planet in orbit around the sun is not the result of any “pull” from the sun but arises naturally from the planet’s natural tendency to follow the shortest path through space “curved” by the mass of the sun.

Our task here is not to go into a detailed comparison of Einsteinian space-time with Albertan place. It is enough to draw attention to the fact that Einstein’s “natural philosophy language”, which explains his mathematical physics, shares fundamental similarities with Albert’s natural

of explanation is but a variant sequel to phase three, as I have called it, and insofar has no effect upon phase one (the construction of mathematical systems and constructs and the elaboration of their mathematical properties and consequences) or phase two (the investigation of the degree to which such systems and constructs agree with experiment and observation, or may need modification in order to fulfill such agreement); I. Bernard Cohen, The Newtonian Revolution (Cambridge: 1980), 111–112 and 119. See also Vincent E. Smith, Science and Philosophy (Milwaukee: 1965), 42–64, esp. 60–66.


64 Mook and Vargish, Inside Relativity, 163–168.
philosophy of place. Both emphasize an intrinsic tendency of the body in motion (nature), rather than an external force, and both explain this tendency as constituting the body’s equilibrium with a physical environment of bodies and energy (place), even though Albert would reject the metaphor of “space” as a “curved actuality”. Mathematical physics must express its fundamental concepts in terms of a natural philosophy. Einstein’s discussion of free-fall shares significant points of agreement with the Aristotelian–Albertan discussion of natural motions of bodies in their environments.

2. Inertia

The notion of inertia is often presented as an anti-Aristotelian principle, but it can be reconciled more conveniently with Aristotelian natural philosophy than is sometimes realized. In Aristotelian terms, the principle of inertia can be understood as asserting that a body in continual uniform motion, without regard to “direction”, can be considered to be in equilibrium with its environment. How is this possible? Did not Aristotle assert that natural motion is straight-line motion, up or down, with respect to the center of the universe, which also happens to be the center of the earth? And how can motion that is continual be natural, since natural motion “gets somewhere” (strives for a determinate goal)? Albert made an important contribution for the reconciliation of the concepts of “natural” and “inertial” motion.

Aristotle’s discussion of natural place and motion contains inconsistent elements. Aristotle’s Physics presents a body’s “natural place” as that environment in which the body achieves equilibrium; but there is also famously the De caelo description of natural place toward or away from an abstract point, the center of the universe, the (0,0,0) locus or origin of the cosmic three-dimensional grid.65 For example, Aristotle holds both that the element earth falls because it seeks equilibrium in an environment of elements and because it seeks to go down toward the center of the universe. Aristotle did not see a conflict in these two assertions, because for him the environment towards which the element earth tends

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65 “Ergo oportet dicere, quod terra movetur ad medium, quod simpliciter est medium et non medium cuidam corpori, secundum quod est quoddam corpus; medium autem simpliciter est medium universi; ergo terrae motus et aliorum simpliciter gravium est ad medium universi, secundum quod est medium universi.” Alb., De caelo et mundo 2.4.8, Ed. Colon. 5/1, 193, Ins. 53–59; see also 1.2.3, 39, Ins. 37–p. 40, Ins. 20.
and the abstract center point of the universe toward which it falls were
the same; but as time went on the erroneous identification of “environment” with “geometric center” came increasingly under pressure.66 Albert
followed Aristotle in erroneously maintaining that these two descriptions
of natural place are equivalent. But in dealing with a particular meteorolo-
gical problem raised by Aristotle, the continual circular motion of the
sphere of fire around the lower terrestrial spheres of elements—which is
also continual circular motion around the center of the universe—Albert
concludes that there is nothing non-natural about this circular motion.
For, Albert argues, the sphere of fire does not move relative to its natu-
ral place, and its circular motion around the center of the earth neither
comes from nor is contrary to the natural tendency of fire with respect
to its natural place. The sphere of fire is in equilibrium with its environ-
ment, and so the nature of fire is neutral and indifferent to this imposed
circular motion. The nature of fire will not tend to overcome this imposed
motion because the imposed circular motion of the sphere of fire is not
contrary to the environmental equilibrium (natural place) that the fire
has attained. Since it is not contrary to fire’s nature, the imposed motion
will continue indefinitely unless changes to the environment intervene
(“unless acted upon by an outside force”). This is Albert’s position on the
perpetual motion of the sphere of fire, and it allows for a “neutral motion”
that does not dissipate so long as the body in motion is in equilibrium
with its environment. Especially, if we postulate a physically very simple
environment, there is no conflict between a body’s being in an “equi-
librium state” and its being in continual motion. Thus, there is no con-
tradiction between natural equilibrium and naturally unending inertial
motion by a sufficiently simple body within a sufficiently simple environ-
ment. Eric Reitan argues convincingly that Galileo knew Albert’s argu-
ment on this point and used it in formulating his own contribution to the

66 For example, in the 2nd century AD, Ptolemy’s use of eccentric points as centers
of celestial motions introduced the question of the possible distinction of the center of
natural motion and the abstract mathematical center of the universe. Ptolemy, in order
to account for the elliptical path of planetary motions with circles, made the center-points
of some of those planetary circular motions different from the earth’s center (thus “ecce-
tric”, “out of/off of the earth’s center”). These eccentric points were located in featureless
space to satisfy the mathematics of a geocentric astronomy; there was nothing in contem-
porary cosmology to indicate that these focal points were any sort of environment or to
suggest a physical reason for these points being centers of orbits. See Olaf Pedersen, Early
principle of inertia. It should be noted that the Newtonian understanding of inertia differs from its Albertan anticipation because the Newtonian is an essentially mathematical construct which prescinds from natural considerations, whereas the Albertan depends on the notion of physical natures and physical environments.

Albert clearly articulates an Aristotelian understanding of “place” as environment of bodies and physical forces (energies). He argues against the physical reality of “space” as a mathematical abstraction and analyzes natural motion and natural place in ways that can be reconciled with modern physical thought and indeed can help to provide a cogent physical theory to ground the equations of contemporary mathematical physics.

B. Time

For thinkers of the High Middle Ages, the locus classicus on the natural philosophy of time was not Augustine’s famous discussion of time in Confessions 11; indeed, Albert accepts Augustine’s authority in theology but rejects his views on the natural philosophy of time. The key text


on time to which medievals responded was Aristotle's *Physics* 4.10–14 (217b30–224a16) as interpreted by Averroes (t.c. 87–134). Averroes identifies four primary questions about time raised by Aristotle's *Physics*: Does time exist? What is time? Is there one time for the whole universe, or are there many? If there were no minds (souls) to perceive and number the flux of world events, would time exist? In answering these questions Albert affirms the reality of time as a flowing, successive being, like motion from which time arises. He distinguishes and establishes the philosophical priority of a study of *chronos*, time as a reality, over chronometrics, the measurement of that reality. And as with his understanding of place, Albert affirms a position on time which complements assertions about time in contemporary mathematical physics.

Albert adopts Averroes's interpretation of the mode of being and definition of time. That time exists, that there is a real temporal flow in the universe, that some events really are earlier or later than others, these facts are immediately and certainly known, just as the existence of motion is immediately and certainly known. Time's arrow, we say in modern terms, is empirically and immediately known by us. Time exists because bodies in motion exist—time is defined as an attribute of motion—and so time

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71 “[T]ime in mathematical theories is isotropic, simply a ‘dimension,’ but when applied to physical data its anisotropic (one-way) character has to be admitted, because actuality is teleologically related to potentiality, and the world becomes actual only into the future, not into the past;” Ashley, “River Forest School,” 9. See also d’Abro, *Evolution of Scientific Thought*, 201–207, and Sean M. Carroll, “The Cosmic Origins of Time’s Arrow,” *Scientific American* 298 (2008), 48–57. Although time’s arrow is inescapable to both common and scientific observation, there seems to be nothing inherent in the mathematics of physical reality that requires directional unfolding of events of the world. This disparity between universally observed reality and its mathematical representation is an indication for Albert of why mathematical physics must be grounded in a realist natural philosophy.
has the same flowing, successive mode of being that motion has. The flowing now, which is the end of the past and the beginning of the future, is all that exists of time. Averroes and Albert concur in accepting Aristotle’s definition of time as a number for events in the world (“motion”) corresponding to the progressive order of different stages exhibited by those events (“according to before and after”).

But from this word “number” in the definition of time arises the question of whether time would exist if there were no minds to number events temporally. Averroes argues that temporal number, which is a measure, such as two years or one nanosecond, cannot exist unless there is a mind to hold together the start and end of the interval of the event and to number, that is to measure, the interval’s duration according to some standard. For Averroes, temporally numerable events exist independent of minds, and so time exists materialiter in physical reality; but time’s formal principle of “temporal number that measures” events is supplied by the perceiving intellect; and so time exists in its full being, formaliter, only through the activity of mind.72 This was the opinion of Averroes, and it may have been Aristotle’s opinion, according to Albert.73

Albert agrees that temporal durations like a year or a second are the product of the measuring mind, but he asserts unequivocally that Averroes misunderstood the mind’s act of numbering, and on this point he prepared the way for a middle position such as came to be articulated by Aquinas. The mind never numbers anything, Albert maintains, unless there is a real principle of distinction in reality which is the source of the mind’s act. Number arises from otherness, from distinction: where there is division, there is by that fact multiplicity and number.74 The present flowing “now”, Albert points out, as end of the past and beginning of the future, introduces real temporal distinction into reality. Certainly

73 “Et ideo tempus ‘in potentina’ est sine anima, actualem autem accipit ‘perfectionem ab anima’ numerante. Ecce, haec videtur esse sententia Aristotelis, et est expositionio Averrois de hoc, qualiter tempus se habeat ad animam, et est imperfecta, ut mihi videtur. Cuius ratio est, quoniam anima numquam numerat aliquid, nisi sit in ipsa principio numeri, quod accipitur a rebus ipsis”; Alb., Phys. 4.3.16, Ed. Colon. 4/1, 289, Ins. 61–69, with single quotation marks where the Cologne edition identifies wording based on the Latin Averroes.
74 Arist., Cat. 6 (4b20–31), Metaph. N.1 (1087b34–1088a14) and I.6 (1057a7–8); cf. Hippocrates Apostle, Aristotle’s Philosophy of Mathematics (Chicago: 1952), 5. See also Alb., Metaph. 1.3.2 Ed. Colon. 16/1, 32, Ins. 32, and 5.1.8 and 10, 227, ln. 41–p. 229, ln. 26 and 231, ln. 61–p. 233, ln. 52; and A. George Molland, “Mathematics in the Thought of Albert the Great,” in Albertus Magnus and the Sciences, 463–478, esp. 476–477.
Averroes was correct that there could not be temporal measured *durations* without mind, but according to Albert the mind can only measure *temporal* durations because there is real distinction of temporal “earlier” and “later” in reality. This temporal distinction is made by the successive, flowing being of the present moment, the now. Temporal measure exists in our sciences because real temporal distinction exists in the changing events of the universe. Time as number is real in events of the world, apart from any mind’s perception of them, but it has outside the mind the flowing mode of being that motions have, not the stable, enduring being that an extent or measured duration has in the mind.\(^{75}\)

For Aristotle, Averroes, and Albert, there is only one time for the whole universe, because there is a continuous history of events of the universe. The one time of the universe is the one temporal history of the whole. All three thinkers agreed in the erroneous conclusion that we have direct perceptual access to the most fundamental motion of the whole universe. They thought that the fundamental “motion of the whole” was discernible in the continuous, uniform motion of the *primum mobile*, the outermost celestial sphere. The effects of that observable motion permeate the events of the whole universe. Thus, Averroes and Albert agree that there is an absolute standard, observable by any observer in the universe (limited to humans in their view, of course), by which we can make absolute temporal measurements of events. This notion of an observable absolute standard was the basis for Albert’s concluding that there is one time for

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\(^{75}\) Albert explains: “*[E]rgo ad numerare tria exiguntur, scilicet materia numerata et numerus formalis et anima efficiens et non formaliter numerans; ergo si non sit anima, adhuc numerus est secundum esse formale et secundum materiam numeratam; ergo ‘quo numeratur’ est duplex, scilicet ‘quo numeratur efficiens’ et ‘quo numeratur formaliter’. Non ergo secundum potentiam solum est numerus non existente anima, sed etiam secundum habitualem formam discretionis rerum numeratarum, et hoc modo genus est etiam tempus extra animam, et cum ad esse rei in se non exigatur nisi forma et materia, non exigitur anima ad esse temporis in seipso. Sed anima actione numerantis ponit et causat temporis deprehensionem, et quoad hunc actum non est tempus extra animam*”; Alb., *Phys.* 4.3.16, Ed. Colon. 4/1, 290, Ins. 1–16. Concerning Albert’s use of *habitualen*, which is derived from the Latin translation of Aristotle referring to time as a *motus habitus* (223a18–19), see Thomas’s gloss on *habitus as accidens motus*, *In Phys.* 4, lect. 23, n. 2 (626), and the discussion of Albert on privation and motion above, pp. 173–78 and 184–88 in this volume. On number as arising from distinction, see also Steel, “Dionysius and Albert on Time and Eternity,” 334; and see Anzulewicz, “Aeternitas—aevum—tempus” on “duration” as “something intrinsic to a being” and “a form inherent in it.”
the whole universe, although he recognized that different individuals can measure time using different standards for various reasons.\textsuperscript{76}

The insights of Einstein’s theory of special relativity show that there cannot be one temporal standard used by all measurers of all events of the universe. Yet Einstein’s theory is not meant to establish that “all is relative”. On the contrary, its foundational premise is that physical laws apply in all frames of reference. Measurers in different frames of reference will measure temporal (and spatial) intervals differently, but none can ever measure that an effect temporally precedes its cause. Because there is real causal order in the events of the universe, mathematical transformation equations can be used to reconcile measurements in different frames of reference.\textsuperscript{77} Albert the Great was factually wrong to think that there is one privileged frame of reference. But his insight that there is real temporal order in the universe is adhered to also by Einsteinian special relativity and is inherent in current “big bang” cosmologies.\textsuperscript{78} The understanding that our perception and measurement of temporal flux is based on a real temporal order in the universe is the key insight of Albert’s position on time; it was an advance over the position of Averroes and is an important principle of a realist natural philosophy applicable to contemporary science.

\section{C. The Continuum}

The continuity of local motion arises from the continuity of the magnitude over which the moving body moves and the continuity of the time in which the motion takes place.\textsuperscript{79} In \textit{Physics} 6, therefore, Aristotle takes

\begin{footnotesize}
\begin{enumerate}
\item Robert Kilwardby, a contemporary of Albert, recognized that Averroes’s position that the mind contributes the formal principle of time would result in the conclusion that the selection of any standard as ultimate was arbitrary: see Snyder, “Aquinas and the Reality of Time,” 373–375 and 381–383.
\item John M. Quinn, in “Time,” \textit{New Catholic Encyclopedia}, vol. 14, 159, says: “Plainly, the ubiquity and uniformity of time are mediated by the primary motion of the universal physical cause. Insofar as its number resident in the primary motion is secondarily exhibited in every other motion, time stretches to the farthest reaches of the cosmos… Here warranted knowledge stops; man cannot put his finger on which motion is the primary subject of time.” See also Ashley, \textit{Theologies of the Body}, 300–301.
\item Alb., \textit{Phys}. 4.2.7, Ed. Colon. 4/1, 246, Ins. 5–8 and 4.3.5, 268, Ins. 13–43. The broader problem of dimensionality and its relation to substantial form is not part of Albert’s discussion in this book. For an introduction to this problem in Albert’s day, see Silvia Donati, “Materie und räumliche Ausdehnung in einigen ungedruckten Physikkomentaren...
up physical magnitude as continuous and divisible. The primary point of
Book 6, according to Albert, is to show that no continuum, physical or
mathematical, is composed of indivisibles. That is, no line, mathematical
or physical, is made out of dimensionless points. Albert’s paraphrase of
*Physics* 6 contains three tractates plus a paraphrase by Albert of a short
work belonging to the Aristotelian tradition called *De lineis indivisi-
bus*. Albert’s Tractate 1 follows Aristotle in giving physical arguments,
from the nature of motion, velocity, and time, which conclude that these
physical realities would be impossible if distance or motion were com-
posed of indivisibles. Tractate 2 argues for the corollary, that all motions
are in theory at least potentially infinitely divisible. Tractate 3 discusses
Zeno’s paradoxes. The paraphrase of the *De lineis indivisibilibus* draws out
the contradictory conclusions that follow in physics or in mathematics
from assuming that a continuum is actually composed of indivisibles.

The refutation in Tractate 3 of the sophistical arguments of Zeno is fit-
tingly placed in Book 6 on the continuum, but in fact the middle term
for refuting Zeno has already been supplied by the denial of a physical
actual infinity in *Physics* 3. For, Zeno’s sophistical arguments, which were
originally devised in support of the Parmenidean position that motion is
impossible, assume that the infinite divisibility of the continuum involves
an actual infinity of constituent points; whereas Aristotle defends a poten-
tial infinity, that is, the fact that all actual continua are finite attainable
quantities that nonetheless can always be divided (or added to) so as to
produce another divisible, finite quantity. Zeno is ultimately refuted by
the simple, and common, recognition that any magnitude to be crossed,
whether of distance or time, is a finite magnitude, and as finite it can be
crossed, given sufficient velocity and time. Magnitude, motion, and time
are infinitely divisible only in potency.

Modern mathematicians sometimes speak as if an actual infinite is
real, as if Zeno were right that a continuum is composed of an infin-
ity of indivisibles. A complete study of the question is of course impos-

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80 (Ps.-) Arist., *On Indivisible Lines*, trans. H.H. Joachim, in *The Complete Works of Aris-
ematics in Aristotle* (Bristol, Eng.: 1998), 255.
81 See Alb., *Phys.* 7.1.2, Ed. Colon. 4/2, 520, ln. 29–p. 521, ln. 27. See also Apostle, *Aristo-
82 Zeno’s paradoxes, and Albert’s resolutions, are extended to alterations as well: Alb.,
*Phys.* 6.3.2.
sible here, but a brief digression on summing an infinite series will illustrate that at least in this case there is complementarity rather than contradiction between the position on infinity of Albert and modern mathematics.

Let us look at this problem. Suppose we have an expression, $1/k^2$, where $k$ is any integer. And further suppose we are asked to sum the series for any value of $k$, one to infinity. We can write the equation thus:

$$\sum_{1}^{\infty} \frac{1}{k^2} = \pi^2/6$$

which is often read as saying that when we sum all the values of $k$ going from one to infinity we get a value of $\pi^2/6$. An interpretation more in keeping with the Aristotelian-Albertan distinction of potential and actual infinite is had according to the definition of limit established by the 19th-century French mathematician Augustin Cauchy (d.1857):

$$\lim_{N \to \infty} \sum_{1}^{N} \frac{1}{k^2} = \pi^2/6$$

which means that for any $\varepsilon > 0$ (\(\varepsilon\) being the deviation or “degree of accuracy”) there is an $N$ so that

$$\pi^2/6 - \sum_{1}^{N} \frac{1}{k^2} < \varepsilon,$$

where $N$ is the number of terms of the series. It is the value of $\varepsilon$ that determines the finite number of $N$ terms. Since $\varepsilon$ can always be made smaller,

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84 “Even today Cauchy’s definitions of limit and continuity, and much of what he wrote on the convergence of infinite series…will be found in any carefully written book on the calculus”; E.T. Bell, Men of Mathematics, vol. 1, 314.
N can always grow larger, both without bound. The “infinity” is potential: always \( \varepsilon \) can be made more precise, always the number of terms (N) that results can grow larger. Cauchy’s explanation of limit means that summing an “infinite” series refers to a potential infinite not actual infinity.

Cauchy’s analysis is important for mathematics and for physics. For, what is impossible mathematically, is also impossible physically. If we can make the generalization that mathematical treatments of the infinite depend on conceiving the infinite as the limit of a potentially unbounded sequence of steps applied to finite entities—one could even argue that this applies to set-theoretic notions of infinity—then it follows also that there is no physical actual infinity.

In conclusion, Albert’s middle books of his *Physics* paraphrase build upon the notion of nature established in Book 2 and the definition of motion in Book 3. Place is an environment of bodies, natural place is the environment in which a body is at equilibrium, and time is the measure of the real temporal distinction that is inherent in a changing universe. The continuum is understood in terms of the distinction between potential and actual infinite in Book 3. While letting the cogency of Albert’s reasoning speak for itself, we have seen points on which Albert both accepts and corrects the received Aristotelian doctrine on place and time, and we have identified areas of agreement and complementarity between Albert’s analyses and those of contemporary mathematical physics and mathematics. Natural philosophy approaches questions about place, time, and the continuum starting with the evidence available through the experiences shared by all, and to this project Albert the Great contributed insights of perennial value.

Steven C. Snyder

### III. Eternity and the Prime Mover in Albert’s *Physica* 7–8

Physics, explains Albert, as the philosophical science of changeable body in general, treats of causes and principles, not as such, but as principles and causes of its proper subject.\(^{85}\) So, in this way, what is not a body, even though it is not strictly speaking changed physically, such as the human soul or the prime mover, can enter into physical science, namely, by being

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\(^{85}\) Alb., *Metaph.* 1.2.11, Ed. Colon. 16/1, 28, Ins. 53–60.
related to bodies, such as by being their cause.\textsuperscript{86} Physica 7 takes up the question of the relation of change to its cause, whereas Physica 8 investigates whether a perpetual motion is the cause of cyclical coming to be and ceasing to be, and how such motion is related to a mover. Here we focus on Albert's distinctive views on the familiar questions of the perpetuity or "eternity" of motion and of the prime mover.

A. Is Motion Everlasting?

In the beginning of Book 8, where Aristotle argues for the perpetuity of motion, Albert devotes considerable attention to the problem of the eternity of the world, which was of great import to thinkers in the 13th century. The main lines of Albert's position on this topic have been brought out by scholars.\textsuperscript{87} Here we shall make only four points.

First, since Albert accepts the Christian teaching that the entire created world had a temporal beginning,\textsuperscript{88} he naturally regards Aristotle's arguments for the perpetuity of motion as not demonstrative. Against Averroes, Albert argues that Aristotle's arguments show only that motion could not have a temporal beginning if the causes involved are physical causes.\textsuperscript{89} If we bring into consideration the act of creation, which is not an act that can be analyzed in terms of motion or change as these are studied in the Physics, then we can recognize that a radical temporal beginning to the world, and hence to motion, is possible.

Second, the arguments given by some to prove that the world necessarily had to have had a temporal beginning are sophistical. Only two of these arguments, both taken from Moses Maimonides and based on the idea that an actual infinity is impossible, are even attempts at demonstrations.

\textsuperscript{86} Alb., \textit{Phys}. 1.1.3, 1.2.1, 2.2.22, 3.1.5, Ed. Colon. 4/1, 6, Ins. 21–32; 16, Ins. 77–79; 131, Ins. 59–66.


One is the argument that a past eternal world would imply the existence of an actual infinity, for the number of past days would be infinite, but we know that in physical things an actual infinity is impossible.\(^90\) It would also be impossible to imagine traversing an infinite number of past days to arrive at the present day. A second argument, which is a variant of the first, is that an infinite past would imply an actual infinity of human souls, since the souls of men are immortal and since there would be an infinite number of human generations in the past.\(^91\) Albert, however, points out that these arguments are weak, because an infinite past is not an essential but only an accidental infinite, and such an infinite is not actual.\(^92\) Furthermore, whereas it might be impossible to traverse an infinite whole, the past is not a whole but is a successive reality (Ins. 36–50). The argument about human souls is the strongest of these arguments, but it is dependent on two prior and philosophically disputable claims: that the human soul survives death and that, if it does, it does so as a distinct entity (Ins. 51–62). No argument, therefore, can demonstrate the temporal beginning of the world.

Third, arguments on the other side, to prove that the world must have existed eternally in the past, are also failures. They fail, as Albert points out, because they are all based on two unproven assumptions: that nothing can begin to exist except through some physical change, and that nothing can begin to exist except in time.\(^93\) If one makes these two assumptions, then it surely follows that the world must have been eternal in the past. But Albert insists that these assumptions, however reasonably they are made in the science of physics, are nowhere proved by Aristotle, for, in fact, they cannot be proven.

Fourth, the difficult remaining question is, what can reason attain concerning the beginning of our world? The answer to this question is most properly given in metaphysics, rather than in physics,\(^94\) but nevertheless Albert gives what he considers to be his strongest argument to prove that the world is created with a temporal beginning in the *Physics*.\(^95\) This argument, however, is not a demonstration, for Albert does not think that a demonstration is possible on either side of the question.\(^96\) Briefly, the  

\(^{91}\) Alb., *Phys.* 8.1.12, Ed. Colon. 4/2, 572, Ins. 78–p. 573, Ins. 5.  
\(^{92}\) Alb., *Phys.* 8.1.12, Ed. Colon. 4/2, 574, Ins. 16–36.  
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argument goes as follows. Whatever is composed, limited, or perfected by form must have a cause of this form that is extrinsic to the thing. This claim is true even for the heavenly bodies, for, although they are not liable to generation or to corruption, still they are composed of form and matter. There is, furthermore, a great diversity in the heavenly bodies, for they move in very different patterns. This diversity, however, requires a cause, and the cause cannot be the matter itself, for diversity comes through form, and matter in itself is simple and not diverse. Precisely because the heavenly bodies are not capable of being generated through any natural process, and because some outside efficient cause is required to bring them to be, the efficient cause cannot cause out of matter and must be a cause of the heavenly bodies entirely, that is, of their form and matter. But this means that they are created out of nothing (ex nihilo). The diversity in the heavens also requires a cause that is not operating out of a mere necessity of nature, for such a cause could only produce one effect, but the heavens exhibit a diversity of effects. Hence, the cause of the heavenly bodies must be a cause that operates through intellect and will. This free, intelligent cause produces a radical beginning to all things, because the meaning of creation out of nothing is that something is newly manifest in being after the complete nonexistence of that thing.97

This argument is founded on the conviction that “out of nothing” (ex nihilo) necessarily means “after nothing” (post nihil).98 For a creature to be created out of nothing is for it to have had a temporal beginning. Since Albert regards the temporal beginning of the world as philosophically indemonstrable, he cannot regard the creation of the world as demonstrable, for it is absolutely incomprehensible to him that one could affirm the plausibility, as Thomas Aquinas later would, of an eternally existing but created world.99

Albert is the inheritor of two traditions, neither of which he accepts as given: the Peripatetic doctrine, on the one hand, which rejects the possibility of a world’s beginning in time; and the Kalam tradition, on the other, which rejects the possibility of an eternal world (and hence defends arguments for the world’s beginning in time). In rejecting the arguments

98 See, for example, Alb., Super II Sent. d. 1, a. 6, Borgn. 27, 20; Alb., Summa de mir. scient. dei 2, q. 2, Borgn. 32, 10.
99 Alb., Summa de mir. scient. dei 2, q. 4, quaest. incid. 2, Borgn. 32, 106–108. For the position of Thomas Aquinas, see, e.g. Aq., In Sent. 2, d. 1, q. 1, a. 2; Summa theol. 1.44–46.
on both sides, Albert prepares the way for the position of Aquinas and Scotus, who defend the possibility of an eternal world, reject the arguments for the newness of the world, and hand over the final resolution of the problem to sacred theology.

Steven Baldner

B. The Prime Mover in Albert’s Physics

The distinctiveness of Albert’s account of the prime mover stems from the way he weaves Aristotle’s argumentation into a universe that is, we must say, non-Aristotelian. That Aristotle’s first cause of all change is an efficient cause, not a final cause only, may seem bizarre to one schooled in contemporary historical categories, until one remembers that such was a standard reading within the Alexandrian Neoplatonic commentary tradition, traceable to Ammonius and Simplicius.\textsuperscript{100} Albert must be seen not only as an inheritor of this tradition, under the influence alike of Arabic philosophical materials and Boethius, but also as a proponent, even a prime architect, of a special 13th-century Latin variant of it, to which belong (broadly considered) also Thomas Aquinas, Robert Grosseteste, and Roger Bacon, among others.\textsuperscript{101} Albert’s Aristotle affirms one, first


God who is a knowing and willing creator, without intermediaries, of the existence of all things, taken together (even if not of prime matter), whether terrestrial, or celestial: the ten separate Intelligences, the nine nests of heavenly bodies or celestial spheres, and the souls that are the prime movers of their everlasting rotations. How, one will ask, did Albert arrive at such a reading? Not without Dionysius, the Liber de causis, Alexander’s On the Principles of the Cosmos (now extant only in Arabic), is the response. But here we shall lay out how Albert builds his answer from the ground up, as it were, on the basis of Aristotle’s text, while focusing on what is distinctively Albertan. Tracing this answer will eventually lead us (below in the chapter on metaphysics) from Aristotle’s Physics to other works of Aristotle and pseudo-Aristotle that Albert paraphrases, and to the personal works of Albert that confirm and embellish his account.

To understand Albert’s account of the prime mover, we will do better to contrast it with that of his principal influence on the issue, Averroes, than with that of Aquinas (who, although also influenced by Averroes, departs from the Commentator’s reading of the Physics 7–8, if not from his
reading of its conclusion, more radically than Albert). For Albert and Averroes, the prime mover argument can be seen to be founded on two principal steps, found in both Books 7 and 8 of Aristotle’s *Physics*:

1. Everything moved is moved by something [whether by itself or by another; that is, by an intrinsic or an extrinsic mover].
2. There cannot be an infinite series of movers each moved by a prior, but there must be a first mover.

Albert’s Averroean reading consists of Premises 3–9 (only the last two of which, with qualifications, could be followed by Aquinas). The first two are structural.

3. The prime mover argument in Aristotle, *Physics* 7 through 8.6 forms an integral whole, in which each subsequent section builds on the previous, so that the proofs of Book 7 play an essential role in establishing the foundation for what follows.
4. *Physics* 8.1 alludes to the heavens and proves that the motion of the first celestial body is everlasting.

As in Averroes, then, these structural points render even more important than otherwise a premise that Albert takes to have been established in Book 7 of Aristotle’s *Physics*, as part of the proof there of Premise 1. For,

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as a result, the following premise is presupposed in all of the subsequent reasoning:

5. Every extrinsic mover is a moved mover.109

Albert even offers an argument not found in Averroes (arising for him within *Physics* 8.5, as it reasons about the first moved body) in defense of a proposition that parallels this general Premise 5:

6. No extrinsic mover can cause a perpetual motion, unlike intrinsic movers, which are conjoined to their effects.110

Premise 6 rests on a premise that Albert takes to have been proved in *Physics* 8.1:

6.1. Extrinsic movers are not always conjoined to what they move.

Premise 6.1, in turn, rests on 6.2, which Albert draws from *Physics* 8.4:

6.2. Given that an extrinsic cause must be either (a) violent or (b) natural, violent effects (a) are obviously temporary, whereas natural effects (b) are generated, destroyed, and affected by obstacles.111

Premises 2 and 5 (or 6), then, ground the characteristic Averroean reading of *Physics* 7–8.5, which is also a chapter title in Albert’s paraphrase of *Physics* 8.5:

7. “Everything that is moved leads back to some prime mover that moves itself.”112

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109 Alb., *Phys*. 8.1.10, Ed. Colon. 4/2, 567, lns. 25–26 (quoted below, note 113); 8.1.11, 572, lns. 1–4, 35–38; 8.2.6, 602, lns. 37–38, 43–44 (quoted below, note 114); 8.2.8, 606, lns. 9–10. In the second passage, Albert ascribes this proposition to Averroes; see also David Twetten, “Albert the Great on Whether Natural Philosophy Proves God’s Existence,” *Archives d’histoire doctrinale et littéraire du moyen âge* 64 (1997), 7–58, at 17–18. Albert contrasts “extrinsic” with “intrinsic movers”, namely, with movers that are in some way “in” the thing moved, whether as a form or nature, as a soul, or in some other way. For Averroes’s discovery of Premise 5 in *Physics* 7, see David Twetten, “Averroes on the Prime Mover Proved in the *Physics*,” *Viator: Medieval and Renaissance Studies* 26 (1995), 107–134, see 116–117.

110 Alb., *Phys*. 8.2.5, Ed. Colon. 4/2, 597, lns. 36–41, 46–53. For Albert’s view that everything moved has a conjoined mover, see below, pp. 675ff. in this volume, and pp. 667, 679, and 680, notes 463, 512, and 517. A related proposition that Albert sometimes uses to the same effect is: every extrinsic mover (that moves essentially without transmuting what it moves) moves violently; see, for example, Alb., *Metaph.* 11.2.13, Ed. Colon. 16/2, 500, lns. 30–34.


112 Alb., *Phys*. 8.2.5, Ed. Colon. 4/2, 596, lns. 36–38. See also, in addition to the following note, ibid., lns. 42–46; 597, lns. 8–28 (on 257a25–30); 598, lns. 49–74 (on 258b5–9). For the ascription of something like Premise 7 to Aristotle, see esp. Jean Paulus, “La Théorie
In other words,

7.1 The first mover must be a self-moved mover.

Albert expresses the reasoning succinctly in one place:

An extrinsic mover does not move unless it is moved by another [Premise 5], and therefore, if all things were such, there must be an infinite regress, which is disproved in book 7. For this reason, [any regress] must stop at some prime mover, which moves itself and is moved by an intrinsic power.113

In fact, because of structural premises 3 and 4, Albert—though not Averroes—explicitly reads celestial self-motion into the exposition of Physics 8.4–6: Chapters 4 and 5 of Physics 8 apply Premises 1 and 2 to the heavens. Thus, Aristotle’s discussion on Physics 8.5 of what moves itself primarily (257b20–258b4) becomes an explication of the heavens’ constitution. As a result, the second half of Chapter 5 and most of Chapter 6 establish the following premise of the heavens:

8 Within this primary self-mover there must be a part that is wholly unmoved (omnino or penitus immobiles), moved neither per se nor per accidens—and this is the first unmoved mover.

One (early) passage expresses well the conclusion of Physics 8.5:

[I]t was held above that every distinct extrinsic mover is moved by another mover that is [itself] also moved…. It is therefore necessary to say that what is moved by an immobile prime mover is a self-mover, just as an animal moves itself; and that the immobile mover is not extrinsic to it—just as the intellect moves a human being, although it is nonetheless per se immobile and per accidens mobile. But the prime mover differs in this from the intellect: it is neither per se nor per accidens mobile.114

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114 Italics are added. Alb., Phys. 8.2.6, Ed. Colon. 4/2, 602, lns. 37–47, on 8.5, 257a23–25: “[S]uperius habitum est, quod omnis motor distinctus ‘extrinsecus’ ‘movetur ab alio’ motore, qui etiam movetur et est sicut instrumentaliter movens, quia si ita esset, oporteret, quod ietet ‘in infinitum’; oportet ergo dicere, quod illud quod movetur a motore primo immobile, sit se ipsum movens, sicut animal movet se ipsum, et motor immobiles non sit extrinsecus ei, sicut intellectus movet hominem, cum tamen sit per se immobiles...
Another passage shows particularly well that Albert is speaking of the heavens in paraphrasing *Physics* 8.5.

> [W]ithout doubt there will be in what moves itself a composition of two things: one *will be what is moved* and moves *others*, and this the first heaven; and the *other* will be what *causes motion* while being thoroughly *immobile*, and this is the prime mover.\(^{115}\)

Premise 8 is established in *Physics* 8.5–6 by showing the following propositions, regarded by Albert, again, as applying to all *of the heavens*:

8.1 Nothing is strictly speaking self-moving (as a whole moving a whole), contrary to Plato.
8.2 Thus, the heavens, as the primary self-moving movers, must be composed of one part that moves, and another part that is moved.
8.3 The prime mover within the first self-mover cannot be even *per accidens* moved, whether with respect to substantial or accidental change; otherwise, the universe will lack the ‘perpetuity’ and the continuity of motion proved in *Physics* 8.1.

In addition to the previous two quotations, Premises 8.2–3 can be verified by two other passages:

If we examine the primary self-mover, there will be only two components intrinsic to it: namely, the immobile mover, which is a separate, unmixed intellect; and what is only moved, which is the celestial body, whether it be the orb or star. … And the reason for this [the simplicity of the body] has already been explained: namely, this body is of itself apt to receive all motion which flows from the intelligible mover.\(^{116}\)

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\(^{116}\) Alb., *Phys.* 8.2.9, Ed. Colon. 4/2, 608, lns. 8–20, on 8.5, 258a5–8: “Si enim nos considerationem ponamus in primo movente se ipsum, non erunt sibi intrinseca componentia nisi ‘duo’, scilicet movens immobile, quod est intellectus separatum et immixtus, et id quod ‘movetur’ ‘tantum’, quod est corpus caeleste, sive illud sit orbis sive stella. … Et huius causa iam expedita est, quia scilicet hoc corpus de se aptum est recipere omnem motum, qui fluit a motore intelligibili. Et ideo motor in movendo se ipsum non indiget aliquibus medii, qui sint ex parte sui vel qui sint ex parte eius quod movetur ab ipso.” See also ibid., 8.2.11, 614, lns. 44–48 (with lemmata from 8.6, 259a28–29): “*et nos intendimus demonstrare duorum ultimo dictorum naturam utramque, quod scilicet alia sunt immobilia semper sicut motores caelestium corporum, alia autem moventur semper* sicut ipsa corpora caelestia et composita ex motore et moto, quae movent se ipsa. …”
If it is necessary that there be some continuous motion, as was stated and proved at the beginning of book 8, it is necessary that there be some prime mover [that is] immobile both per se and per accidens, and that to which that motion belongs move itself. For, given that that principle remains uniform, it is also necessary that it move in one way that whole which is continuous, that is, conjoined to the principle, and therefore that [the body] moved by it and its causing motion will always by nature remain in all time.

But how can the prime mover within a first self-moving whole not be per accidens moved along with the celestial body that it moves? If it is like the soul of a self-moving animal, it will be carried along with the celestial body and constantly changing place per accidens, so that, as in animals, the perpetual continuity of its effects would be impossible. Albert’s answer, again, is Averroean:

9 The prime mover is not “intermixed with the body” or in it as if “in a subject”; it is not divisible with the division of the body since it is not the “act of a body”, as if, like a hylomorphic soul, it were defined through

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117 Italics mark the lemma from the vetus translation, as indicated by the Cologne edition. Nevertheless, the wording of the Greek, the vetus, and the Scot translations does not strictly justify Albert’s words “move itself” (moveat ipsum se ipsum) here; Alb., Phys. 8.2.11, Ed. Colon. 4/2, 616, Ins. 32–45 (on 8.6, 259b20–28): “Et ideo siquidem necesse est aliquem esse continuum motum, sicut in principio istius libri Octavi dictum est et probatum, necesse est esse alicquid primum movens immobile, tam per se quam per accidens, quia diximus, quod oportet aliquem immortalem et impassibilem esse motum in his quae sunt per naturam, qui sit quasi vita omnibus existentibus, et oportet, quod illud cuius est ille motus, moveat ipsum se ipsum et in eodem principio, quod est movens primum; principio enim illo manente secundum unum modum necessarium est etiam, quod totum illud movet uno modo, quod continuum est, hoc est coniunctum principio, et ideo suum motum ab ipso et suum movere semper manebit in omni tempore secundum naturam.”

118 See Alb., Phys. 8.2.7, Ed. Colon. 4/2, 604, Ins. 42–53: “Si enim nos daremus, quod motor primo primus posset moveri per accidens, etiam si taliter moveri non daret ei esse motorem, tunc ipse moveretur motu sui mobilis, sicut anima movetur motu corporis, quod movet, et tunc ipse non esset perpetuus, cum aliqua renovatio et immutatio accideret circa ipsum; et hoc est impossibile, quia ex hoc sequeretur, quod ipse esset in corpore secundum partes corporis, sicut oculus habet visum... [et] oportet, quod ipse esset actus et perfectio corporis, quod non convenit substantiae, quae est intellectus purus et immixtus, sicut est motor separatus.” The force of this argument can be appreciated, as even Aristotle hints, at least in the case of subordinate nested spheres, which are carried along by outer spheres and so per accidens undergo more motions than their own proper motion.

119 Alb., Phys. 8.2.9, Ed. Colon. 4/2, 609, Ins. 25–34: “Quando autem sunt duo, tunc non sunt contacta proprie loquendo, sed continua, sicut motor immediatus convenit suo moto, quod movet, quia, sicut diximus superius, motor corpori caelesti non est immixtus, sicut miscentur vires animae corpori animato, sed potius sicut separatus intellectus, qui nullius corporis est actus, licet per modum superius dictum sit motor corporis, qui corpore utitur sicut instrumento et non est in eo sicut in subiecto, et hanc immediationem aliqui vocant contactum.”
the body or as if it possessed its being or powers through the body and its parts.\textsuperscript{120} Instead, it is “separate”, not “constituted in its being” through what it moves but is conjoined to the celestial orb only “as mover to mobile”, using it as if it were an instrument.

Thus, Albert writes:

>[A] mover that is constituted through the being of its mobile [body], as is the soul of an animal, in whose definition falls the body moved by it, is \textit{per accidens} moved when it moves its body…. [But in the contrasting case] the mover is not constituted in being through what it moves, and therefore is not essentially defined through the body that it moves—as are celestial movers….\textsuperscript{121}

Accordingly, in the \textit{Physica} Albert repeatedly calls the celestial movers not “souls”, but “intellects” or “Intelligences”; and he observes that some Peripatetics denied, based on Premise 9, that the heavens have soul, or that a heavenly body is truly an animal, since it does not have soul except in an equivocal sense.\textsuperscript{122} A passage from \textit{Physica} 1 presents a complete picture of what Albert has in mind in his reading of Book 8 (as well as indicating the influence of Arabic Neoplatonism):

[W]e wish to affirm the position of the Peripatetics, which we think to have been that of Aristotle, and to show how it differs from that of Avicenna. Therefore, I say that it was not the position of the Peripatetics that Intelligences are composed of form and matter, but that they are simple forms,

\begin{footnotes}
\item[120] Alb., \textit{Phys.} 8.2.8 [digr.], Ed. Colon. 4/2, 606, Ins. 54–84: “[Aristoteles voluit] quod primus motor est omnino immobilis, et per se et per accidens, et movet mobile primum coniunctum sibi et non movetur motu ipsius, nec per se nec per accidens. Quod autem non movetur motu ipsius mobilis, posuit duas causas, quaram una est ex parte motoris, alia autem ex parte mobilis; ex parte motoris quidem, quia cum ipse sit substantia intellectualis, quae nullius corporis est actus, ipse non est in corpore sicut actus corporis organici physici potestia vitam habentis neque etiam est in corpore non-organico sicut actus in potentia, quia sic esset anima secundum unam rationem et eandem ad animam animalis; et hoc non est verum, et ideo cum non sit sicut actus in potentia in ipso corpore caelesti, non movetur motu ipsius, neque essentiale et neque accidentaliter. Et hoc est etiam causa, quare non dixerunt priores peripatetici, quod intellectus movens corpus caeleste esset anima, sed potius esset separatum, cum anima non dicat substantiam separatam, sed coniunctam, in eo quod est anima. Et ulterius non dixerunt, quod compositum ex motore tali et moto esset animal, cum motor non habeat vere rationem animae, nisi aequivocetur anima, eo quod intellectualis substantia separata nullam habet potentiam sive vim, per quam sit actus corporis et corpore indiget, eo quod de virtutibus eius non inveniatur nisi intellectus et voluntas; et quando movet, non movet sicut anima, ita quod habeat quasdam vires affixas ipsi mobili, et alias imperantes motum et alias dirigentes motum ipsum, sicut habet anima intellectualis hominis.”
\item[121] Alb., \textit{Phys.} 8.2.11, Ed. Colon. 4/2, 616, ln. 47–p. 617, ln. 7
\item[122] Alb., \textit{Phys.} 8.2.8, Ed. Colon. 4/2, 606, Ins. 54–84, quoted above, note 120.
\end{footnotes}
although not in the highest degree of simplicity. For this reason, they are able to reflect upon themselves in the knowledge of their own essence, and in this [the Peripatetics] say that they have a mode of composition, and not an essential composition....[B]ut an Intelligence is a certain intellectual light of the first cause. And, although it is separate in such a way that it is not the act of a body, such that it does not determine for itself a part in [the body] according to whose nature it acts and knows, just as the power of sight determines for itself the eye in an organized body, nevertheless, the Intelligence itself is conjoined to its orb as mover to what it moves. But a mover receives nothing from what it moves....Thus exist the movers of the superior bodies, which receive nothing from these [bodies], but pour into them (influent eis) motion, through which [motion] they produce in natural materials (materias) the forms that they have within themselves. For, the forms of all natural things are in Intelligences in the way that the forms of artifacts are in the practical intellect, as the Peripatetics have taught. Therefore, the Intelligence that presides over an orb is in a certain way united to it by the sort of union that exists between a mover and that which is being moved by it in actuality. And, [the Intelligence] is not the act of [the orb] in the way that an act has being and operation through the composition and power of the body. And it is in one way united [to it], in another way, not....

The reader of Albert’s *Physica* is left puzzled, nonetheless, as to the precise identity of the prime mover of the Aristotelian science of physics. In his paraphrase of Aristotle’s *De caelo*, which he wrote immediately following that on the *Physics*, Albert clearly affirms (as does Aristotle) and defends the fact that each heavenly sphere is moved, not by their intrinsic corporeal nature alone, but by a celestial “soul”—as “was shown in *Physics* 8,” says Albert—which is not an imaginative soul, but moves alone through intellect (and will, as becomes clear in the *Metaphysica* and thereafter). As for Averroes, the proximate celestial mover is called “soul” in an equivocal sense, since, given premises 3–9, it must be part of a self-mover, but it cannot be united to the sphere as form to matter;

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123 Alb., *Phys* 1.3.11 [digr.], Ed. Colon. 4/1, 59, lns. 26–54.
124 Alb., *De caelo et mundo* 2.1.5, Ed. Colon. 5/1, 113, lns. 95–p. 114, ln. 18; Alb., *Metaph.* 11.1.13, Ed. Colon. 16/2, 478, lns. 73–82 (quoted below, p. 666 in this volume, note 457); cf. 11.2.10, 495, lns. 87–91, under Averroes’s name. See also Alb., *De mot. animal.* 2.1.2, Borgen. 9, 288b: “[P]ostea consenserunt in eam [sententiam] Socrates et Plato, dicentes animae motus esse coeli motus: et hanc etiam sententiam corroborant dicta Peripateticorum, tam Aristotelis quam aliorum.”
125 For a catalogue of Albert’s various arguments for each of these claims, gathered from all of the works after 1251, see David Twetten, “Albert the Great, Double Truth, and Celestial Causality,” *Documenti e Studi sulla Tradizione filosofica medievale* 12 (2001), 275–358.
126 Alb., *De caelo et mundo* 2.1.5, Ed. Colon. 5/1, 113, lns. 95–114.18, 115, ln. 96–p. 116, ln. 7; 2.3.13, 172, lns. 23–42.
in short, the celestial mover is a non-hylomorphic soul, not immanent or subsistent in its sphere.\textsuperscript{127} Here is the most central passage to this effect:

\begin{quote}
\textit{[G]ranted that the heaven has a soul, which is in it the principle of its local motion, as we have proved in Physics 8… But when we say that the heaven has soul and that a terrestrial animal has soul, “soul” will be understood equivocally, because that which is called “soul” in the heaven is a separate substance, which is not the act of any body or of a part of a body, and does not have any act of soul upon the body of the heaven except the act of local motion, which it pours into the heaven. For, that substance is not drawn out from the body, it has no dependence upon it, and it does not acquire anything from it. And, when that substance is said to be the “act and perfection of the heaven”, it is not said to be this in the way that in lower things soul is the “act and perfection of an organized body that potentially has life”, because then that substance would be linked to the body, and its action would not be free but would be limited.\textsuperscript{128}}
\end{quote}

Nonetheless, argues Albert, the proximate mover of each sphere is especially “conjoined” to what it immediately moves, as “overflowing” to it esse and power (which it also virtually overflows into subordinate spheres).\textsuperscript{129}

Subsequent treatises of Aristotle’s natural sciences, then, show that the first of what the \textit{Physica} calls a “primarily prime” mover is a celestial soul (the second and third, etc., of which are the souls of subordinate spheres), as opposed to the “secondarily prime mover”, whose referent is the entire “sphere-soul complex”.\textsuperscript{130} For Albert, the “primarily first” versus the “secondarily first” movers are outside the genus of physics. It follows that further discussion of their nature belongs to a higher science than natural philosophy, and, in fact, we find this discussion in the last part of the Aristotelian science of metaphysics, the part Albert calls the \textit{De causis}


\textsuperscript{128} Alb., \textit{De caelo et mundo} 2.1.5, Ed. Colon. 5/1, 113, ln. 95–p. 114, ln. 18 (lemmata from 2.2, 285a29–285b8).

\textsuperscript{129} Alb., \textit{De caelo et mundo} 2.3.15 [on Arist., 2.12 293a4–12], Ed. Colon. 5/1, 177, Ins. 73–80.

\textsuperscript{130} Alb., \textit{Phys.} 8.2.6, Ed. Colon. 4/2, 598, Ins. 80–82, 602, ln. 34; 8.2.7, 604, Ins. 37–42; 8.2.9, 608, Ins. 1; 8.2.11, 614, Ins. 40–42.
et processu universorum. Albert expresses precisely this point in a logical treatise (1252–57) written not long after composing his De caelo:

There is a lengthy and difficult answer regarding what the soul of the world is and how it exists. [The answer] pertains to the first philosopher in that part that explains the primary and universal causes. Nevertheless, we state briefly that [the soul of the world] is neither the first cause nor any Intelligence, but it is the mover of the primum mobile, for which it is the principle of life and local motion. Through this motion it is the cause of life and motion in all things, as is said in the book On the Causes.131

Up to this point, Albert’s conclusions are entirely consonant with Averroes’s. Albert only adds argumentation as well as language not found in the Commentator: for example, “conjunction”, “overflowing of form”, and “primarily prime”. The point on which Albert radically disagrees with Averroes is the Avicennian claim: physics does not prove the existence of God, therefore metaphysics must. Albert does not realize, however (partly because it is not clear in the text of Averroes’s Long Physics Commentary), that the historical Averroes does not take physics to arrive at, as its ultimate first, a proximate mover of the first sphere. Instead, Averroes interprets the infinite power argument in Physics 8.10 to arrive at a cause that cannot be identified with the proximate mover, with what is part of a self-moving complex.132 So, Averroes has unappreciated justification for his anti-Avicennian claim that physics proves God’s existence. Albert, while adopting Averroes’s language and his distinction between proximate and remote celestial movers—one infinitely powerful in duration, the other infinitely powerful in strength—appears to think, unlike Averroes, that Aristotle’s Physics concludes only to the former.133 Thus, for Albert, physics concludes to a first cause of motion that is outside the genus of motion

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131 Alb., De sex prin. 1.2, Ed. Colon. 1/2, 6, Ins. 8–19.
133 Averroes concludes to an infinitely powerful mover in Physics 8.10, then argues in De substantia orbis, a physical science, that this mover must be distinct from the proximate celestial mover, which moves with a finite velocity—so that motion does not occur in an instant—and which is infinite only in the duration of its power, receiving this infinity from another (considered in itself and in absence of a superior cause, it is possible that it not cause motion); see Twetten, “Averroes’ Prime Mover Argument,” 42–74. By contrast, Albert takes Physics 8.10 to conclude to a proximate mover that is infinite in the duration of time, and subsequently argues, in the De causis, a part of metaphysical science, that the proximate mover must be finite and determinate in its power, whereas there must also be a remote mover, a separate Intelligence that is thereby indeterminate in power; see below, pp. 675ff. in this volume.
but that cannot be God. Its discussion ends once the argument arrives at the immediate unmoved, incorporeal cause of the first corporeal change in classical astrophysics: a non-hylomorphic soul of the outermost self-moved heavenly sphere.

David Twetten

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134 The authors would like to express their gratitude to Francisco Romero, Bruno Tremblay, Greg Townsend, Michael Anderson, and Daniel Vecchio for their help in preparing this chapter.
ALBERT THE GREAT AND HIS BOTANY

Gilla Wöllmer

But in the experience which is gained from every universal that reposes in the soul—the experience of the One alongside the many, which although it is in everything nevertheless remains One—lies the beginning of art and of knowledge.¹

INTRODUCTION

In 1251/52, in his commentary on the Physics, Albert the Great proposed as a larger project an explanation of the contents and methods of the entire Corpus Aristotelicum.² In the framework of this project, which includes inter alia the sphere of material philosophy (whose object is based in things),³ he commented on natural philosophy, whose objects are inseparable from matter and movement both with regard to their Being and with regard to their definition.⁴ He began with the study of natural philosophy because, according to Aristotle, this deals with inanimate and animate nature, as well as with psychology.⁵ Albert’s commentary on the pseudo-Aristotelian work De plantis belongs to this category,⁶ since he regards botany as belonging to natural philosophy. This is why he integrated it into his scientific system, which found its orientation in Aristotle, and made it an essential component of the comprehensive oeuvre in which he sought to make accessible the totality of reality that can be experienced...
and grasped by thought. He undertook this enormous project when his confreres requested from him a book about natural philosophy, so that they too could understand Aristotle’s writings on this subject.7

The outcome of Albert’s endeavors was an extraordinary encyclopedic collection that contains almost all the knowledge of that period. The uniqueness and originality of the writings of Albert the Great are based on the adoption, the processing, and the mediation of the body of Greek and Arabic–Jewish knowledge that was available to him in Latin at that time.8

**Methodology**

In his commentary on the *Physics*, Albert also describes the methodology he employs when he comments on Aristotle’s writings.9 This methodology corresponds to the form of a “paraphrase”. This can mean that he first follows the meaning and the structure of the text on which he is commenting, without directly referring to it, and then in a second step introduces words or phrases when required by the explanation or by his reasoning, or else he expands his presentation by means of “digressions”10 that expound upon questions that have arisen. This procedure enables him to deal with the subject more freely, adding new chapters, inserting sentences, or giving a more detailed exposition of what he has already discussed. He also expands the original texts in order to enrich and complete them, by adding material from other authors.11

**The Manuscripts and Printed Editions of the *De vegetabilibus***

Eight manuscripts were discovered and described by Ernst H.F. Meyer and Karl Jessen in the context of their edition,12 but one of these perished in

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9 Alb., *Phys.* 1.1.1, 1, ins. 23–36.
12 Alb., *De veget.*, ed. Ernestus Meyer and Carolus Jessen (Berlin: 1867), 663–667 (*Appendices editorum*).
the flames during the war of 1870. At present, we know of 40 manuscripts which contain the *De vegetabilibus* in whole or in part. These have been edited by Melchior Weiß and identified and described by Winfried Fauser. The oldest manuscript is a copy prepared by scribes working for Thomas Aquinas; it may have been copied from the autograph manuscript of Albert. It has been studied and described by Antoine Dondaine.

*De vegetabilibus* was first printed in Venice in 1517 along with other writings by Albert, as the *Editio Veneta.* This edition was printed for a second time in the complete Lyons edition, the *Editio Jammy or Editio Lugdunensis,* edited by the Dominican Pierre Jammy in 1651. On this is based a third edition, the complete Paris edition, the *Editio Borgnet or Editio Parisiensis,* edited between 1890 and 1899 by Auguste and Émile Borgnet. A critical edition of the text, which had been begun by Ernst H.F. Meyer and was completed after his death by Karl Jessen, had already appeared in Berlin in 1867.

### The Treatise *De plantis* as Basis

Albert the Great’s botanical work *De vegetabilibus libri VII* is based on the little treatise *De plantis,* which was ascribed to Aristotle in the Middle

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13 Ibid. This is listed as Ms. A, Strasbourg, Bibliothèque municipale, without a shelf number, p. 663.


19 See Alb., *De veget.,* Borgn. 10, 1–320.

20 See Alb., *De veget.,* ed. Meyer and Jessen, v–xx (*Editionis ratio*). An unchanged reprint of *De vegetabilibus libri VII* was published by Minerva (Frankfurt am Main: 1982).

21 See Alb., *De veget.,* ed. Meyer and Jessen.
Ages, but is in fact a work of Nicholas of Damascus.22 His two compilations, Books 1 and 2 (Peri phyton), bring together scattered or lost botanical texts by Aristotle and writings by Theophrastus of Eresos (Historia plantarum, Causae plantarum); the original Greek version is lost.23 This treatise was translated from Greek into Syriac. Then Ishāq ibn Hunain translated it ca. 900 from Syriac into Arabic, and his text was revised somewhat later by Tābit ibn Qurra.24 Even before 1200, the Arabic manuscript was translated into Latin by Alfred of Sareshel, with a foreword addressed to Roger of Hereford. It is possible that there was also an older Arabic–Latin translation.25

**The Structure of De vegetabilibus**

Albert the Great’s treatise comprises seven books. Books 1–4 belong to the general theoretical area of botany; Books 1 and 4 have the treatise De plantis as their principal point of reference. With the exception of some chapters in Book 1, the books consist of commentaries. Albert calls Books 2, 3, and 5 “digressions”. In Books 6 and 7 he presents a special and applied botany. Beginning with the individual presentation of trees and herbs in Book 6, the account he gives of non-indigenous plants is indebted to the Canon medicinae of Avicenna,26 the Circa instans,27 and texts by other authors. Book 7 is devoted to agricultural botany, and Albert calls this

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final book a “digression” too; here, he draws several times on the *Opus agriculturae* of Palladius.\(^{28}\) His treatise *De vegetabilibus*, which is the most extensive Latin commentary on *De plantis*, is much longer than the latter, both in terms of its sheer size and in its elaboration of the subject matter, “but it remains indebted to this work in its title and its theme: without the *De plantis* and its position in the *Corpus Aristotelicum*, the *De vegetabilibus* could not have existed in this form.”\(^{29}\)

**Date of Composition**

We do not know when Albert the Great wrote the *De vegetabilibus libri VII*. He himself says nothing about this in his work,\(^{30}\) but the provisional chronology of his commentaries on the writings of Aristotle with their many cross-references make it possible to propose the years 1256–57, via the dating of the treatises *De anima*,\(^{31}\) which comes earlier, and *De animalibus*, which follows it.\(^{32}\) An additional factor in support of this date derives from Albert’s numerous and extensive journeys during his itinerant activity in central Europe between 1254 and 1257, when he was prior provincial of the Dominican province of Teutonia. On these journeys, which he undertook on foot in accordance with the Dominican rule, he had excellent opportunities to study a great number of natural phenomena.\(^{33}\) This probably applies likewise to the period he spent in Italy in 1256/57 at the papal court in Anagni and to his other travels in Italy, in a Mediterranean landscape that gave him excellent opportunities to get

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\(^{29}\) See Biewer, *Albertus Magnus: De vegetabilibus VI*, 2, 13.

\(^{30}\) See Alb., *De veget.*, ed. Meyer and Jessen, 676.


to know new plants of southern Europe, thus broadening his scientific knowledge. Besides this, he himself mentions in his treatise *De animalibus*, almost en passant, a garden in Cologne in which a pheasant was occasionally found resting between sage and garden rue.

**The Structure of the Seven Books**

*De vegetabilibus* comprises seven books, each of which is organized in treatises; the treatises in turn are divided into chapters. Books 1–3 and 5–7 all contain two treatises, while Book 4 has four treatises. The number of chapters varies from book to book. Each of the chapters in Book 6 contains a large number of lemmata of plants.

**On the Conception of the Book**

In the following sketch, I offer a brief, threefold approach to the botany of Albert the Great: first, by giving a short account of the contents of each of the seven books; second, by selecting some topics and treating these in greater detail; and third, by presenting literal translations of Latin texts from *De vegetabilibus*.

**De vegetabilibus libri VII**

*The First Book*

At the start of the first treatise, Albert the Great explains why one must study the science of plants after having studied the science of the soul. This is because “the soul is the chief principle of the knowledge of the bodies of living beings” (*potissimum principium cognoscendi corpora vivorum est anima*). And this is why Aristotle is correct to say that the soul is in the seed in the same way as the artist is in his work of art. Albert writes that since the bodies of all living beings are divided into two or

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34 See Scheeben, *Albert der Grosse. Zur Chronologie*, 43–47. Albert had already spent time in Italy as a young man, so that many southern plants would already have been known to him from that period; see 12–13.
35 Alb., *De animal.*, 7.1.7.172, ed. Stadler, 1: 526.
three species according to their principle—plants, sensitive beings, and rational beings—we shall begin by investigating the life of plants.

Various reflections on plant life now follow, asking questions in the form of a “digression” about plant life, plants’ sensory perceptions, their sleeping and waking, and their gender, also in relation to animals. The final reflection inquires into the character of plant life. Albert’s answer is that the life of plants is a “hidden life” (vita occulta). Whereas the character of the body displays itself in nutrition, in growth, and in propagation, the soul, on which all this depends, works unnoticed.

The second treatise gives an account of the differences that plants display both in and among themselves. Albert points out the lofty significance of the tree. He sets out a comparison between the parts of plants and parts of animals, describes the various essential parts of plants, and the division of plants into tree, bush, shrub, and herb. He explains the characteristics of cultivated plants and wild plants, as well as the distinctions that result from gender, location, and nutrition, and the variety that manifests itself in fruit, smell, taste, and propagation. For his commentary on these topics, Albert used Book 1 of the pseudepigraphical compilation De plantis by Nicholas of Damascus.

The Second Book

This is called a digression, and consists of two treatises. In the first treatise, the plant is studied in detail according to its essence (per principium vitae occultae), its materiality, and its activities. This is followed by the division of the plants into their groups: trees, bushes, shrubs (olis), herbs, and fungi. This arrangement is based partly on the articulated structure of pseudo-Aristotle or of Theophrastus; Albert adds the fungi. He himself remarks that this division is illogical, since one cannot strictly separate the plant forms from one another: for example, because of their development, some can pass over into another plant form.

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38 The concept of an analogy between plant and animal maintains that there is an analogy between parts of the plants and organs of the animals.
39 Alb., De veget., 1.1.2, ed. Meyer and Jessen, 5–6; Meyer, Geschichte der Botanik 4, 44.
41 Alb., De veget., 2.1, ed. Meyer and Jessen, 103–137.
42 Alb., De veget., 2.1.1.1–20, ed. Meyer and Jessen, 103–137.
43 Alb., De veget., 2.1.1.1–3, ed. Meyer and Jessen, 104; Meyer, Geschichte der Botanik 4, 46.
44 Ibid., 83–84; Meyer, Geschichte der Botanik 4, 47.
chapters, he distinguishes the individual parts of plants. These are ordered in three distinct areas, which we summarize here with a brief description of the individual parts of plants and their functions.\textsuperscript{45}

The classification of the plant organs:
1. \textit{partes integrales essentiales}\textsuperscript{46}
2. \textit{partes accidentales essentiales}\textsuperscript{47}
3. \textit{partes accidentales non essentiales}\textsuperscript{48}

1. The integral essential organs are:
   a. The plant sap (\textit{succus}) which contains in itself all the other parts of the plant (\textit{in potentia});
   b. The active parts of the plant (\textit{in actu}) are subdivided into:
      1. the organic members (\textit{membra officialia}), which serve to maintain the individual: these are the nodes, the roots, the paths taken by the sap, the marrow, and the bark;
      2. the similar members (\textit{membra similia}), which include the wood and, in herbal plants, the “flesh”;
2. The accidental essential elements:
   Those which serve the maintenance of the species, not of the individual: the leaves, the blossoms, the fruits, and the seeds.
3. The inessential elements:
   These are the thorns and spines.

The functions of the plant organs:

1. \textit{The Integral Essential Elements}

1a. \textit{The Sap (succus or humor)}\textsuperscript{49}

The \textit{partes integrales} are those parts that Albert calls “organs” (\textit{officiales}) and which perform the most necessary service for the maintenance of the individual. The most important organ is the interior sap, which corresponds to the blood in animals. The plant needs this as an integral and essential part for its construction, since the sap contains in itself potentially

\textsuperscript{45} See Stephan Fellner, \textit{Albertus Magnus als Botaniker} (Vienna: 1881), 41.
\textsuperscript{46} Alb., \textit{De veget.}, 2.1, ed. Meyer and Jessen, 114–137.
\textsuperscript{47} Alb., \textit{De veget.}, 2.2, ed. Meyer and Jessen, 138–162.
\textsuperscript{48} Alb., \textit{De veget.}, 4.3.3, ed. Meyer and Jessen, 264–267.
\textsuperscript{49} Alb., \textit{De veget.}, 1.2.3.138f., ed. Meyer and Jessen, 69–70; ibid., 2.1.3.30–40, ed. Meyer and Jessen, 114–116.
(in potentia) all the other organs of the body of the plant, in accord with its structure. Albert the Great understands plant sap in keeping with the teaching of Empedocles and Aristotle: all that is bodily consists of the four elementary qualities (warm, dry, cold, wet) and their admixture. Accordingly, the nutritional sap is perfected only by the quality of the dry, through the warmth of the digestion. The sap is transformed in keeping with the complexity of plants and of their parts, which it nourishes.\(^{50}\)

1b. *The Active Parts of the Plants* (in actu)

1b1. *The Organic Members* (membra officialia)

The Root (*radices*).\(^{51}\) The sap, which is initially raw and bitter, is sucked up out of the earth through the pores of the root and transported to the individual parts of the plants. Aristotle had already compared the root to the mouths of animals because of this ability. Sap also stands in place of the heart in animals, which gives its vitalizing warmth (*calor vivificus*) to

\(^{50}\) See Jerry Stannard, “The Botany of St. Albert the Great,” in *Albertus Magnus. Doctor Universalis 1280–1980*, ed. Gerbert Meyer and Albert Zimmermann, Walberger Studien, philosophische Reihe 6 (Mainz: 1980), 345–372, see 351. The four elements—earth, water, air, and fire—are the presupposition for the coming into existence of a plant, and each element performs one specific function within the physiology and chemistry of the plant.

See Paul Hossfeld, "Grundgedanken in Alberts des Grossen Schrift über Entstehen und Vergehen," *Philosophia naturalis* 16 (1976), 191–204, see 201–202. The heavenly bodies bring the elements to a mixture, but they themselves are exempt from mixture (1.6.4). The basis of all four elements is a matter that cannot, however, be separated from all the elements at once, but only from one or other element, while it constantly encompasses an opposite.

To put it briefly, the first basis of the elements is matter, which is inseparable from the elementary forms and is subject to opposites (1.6.4). The elements are bodies perceptible to the senses; they are perceived through touch. These tangible qualities are the cause of all the other sensible qualities. The first qualities of the sense of taste are the primary qualities, those of the warm, the cold, the dry, and the wet. It is through these that the elements are distinguished from one another and are responsible for the coming into being and the passing away of every single natural body (2.1.1, 198). Warmth and cold are active primary qualities; the wet and the dry are passive primary qualities. When one active quality unites to a passive quality, they determine those first beings which are called elements. This means that fire is warm and dry; the air is warm and wet; water is cold and wet; the earth is cold and dry (2.1.8, 199). A physical union of the elements comes into existence “out of antithetical elements that in terms of their power survive in the unions, so that they emerge once more when the unions are dissolved. When we say that the elements are present in the unions in terms of their power, this excludes the possibility that they are there like matter: rather, their essence is preserved, as is the power of their primary qualities” (2.2.15). See also Paul Hossfeld, "Die Ursachen der Eigentümlichkeiten der Elemente nach Albertus Magnus," *Philosophia naturalis* 14 (1973), 197–209; Erich Schönher, *Das Viererschema in der antiken Humoralpathologie*, (Sudhoffs Archiv) suppl. 4 (Wiesbaden: 1964).

\(^{51}\) Alb., *De veget.*, 2.1.3.44–48, ed. Meyer and Jessen, 119–121; ibid., 1.2.2.132, ed. Meyer and Jessen, 66.
The nutritional matter, whereby it moves to the members of the plant. Albert provides as examples plant cuttings that easily put down roots, such as the box-tree (Buxus sempervirens L.), the savin (Juniperus sabina L.), and others. Although their wood is hard, they put down roots more quickly than their scion wood dries out, so heated is their nature.

**The Vascular Bundles (venae).**52 The sap pathways transport the nutritious sap in the plant. These pathways are various: some run directly upwards from the root, some are reticular; sometimes they branch off and then reunite, or they radiate out from the center of the marrow to the bark. When they warp en route, knots (nodi) are created. The pathways correspond to the veins of animals; like the veins, they have no pores (solidae), and they lack the pulsating spirits (spiritus pulsatiles).

**The Knots (nodi).**53 The sap is stopped from flowing, and is purified, in the knots on stems and stalks in which the vascular bundles warp. The knots are regarded as the organs that serve digestion. For example, in order that wildlings may bear better fruit, a cut is made in their stem right into the marrow. The scar that this causes obstructs the sap and thus alters the yield of fruit. The cereal crops possess four knots related to the four stages of digestion, which Albert presents in detail.54 Knotweed (Polygonum aviculare L.) possesses innumerable knots; bulrush (Scirpus L.) has no knots; clematis (Clematis vitalba L.), white bryony (Bryonia alba L.), and the vine (Vitis L.) have many knots. The knots correspond to the ligaments in animals.

**The Marrow (medulla).**55 The vital spirit of the plant (spiritus plantae or vigor spiritualis) pulsates in the marrow (which corresponds to the spinal marrow of animals) more strongly than in the vascular bundles (venae). It is the carrier of the power of the root for the side branches, which have their origin in this power. The plants with transverse sap pathways possess a great quantity of marrow, while those with vertical sap pathways possess little; in old plants, the marrow disappears almost completely. In young plants, it is white and wet, but becomes yellow and dry during the process

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52 Alb., *De veget.*, 1.2.1.114, ed. Meyer and Jessen, 58; ibid., 2.1.3.49–50, ed. Meyer and Jessen, 121–122.
54 See Biewer, *Albertus Magnus: De vegetabilibus VI*, 2, 77–78.
55 Alb., *De veget.*, 1.2.1.117, ed. Meyer and Jessen, 59; ibid., 2.1.3.51–54, ed. Meyer and Jessen, 122–123.
of aging. Black elder (Sambucus nigra L.) and dwarf elder (Sambucus ebulus L.) are described as very rich in marrow. The giant reeds (Arundo donax L.) contain no marrow. Their hollow reeds contain the vital spirit which has its origin in the nutriment they receive.

The Bark (cortex). This is similar to the skin of animals. It is made of the earthy substances which the plant excretes. Over time it becomes hard and cracked, and falls off in the same way as the skin of animals with scabies. The peeling off of the bark takes place in two ways. In the oak (Quercus L.), trembling poplar (Populus tremula L.), and vine (Vitis L.), cracks appear on the stem, running vertically downwards. In the cherry tree (Cerasi L.), plum tree (Prunus domestica L.), and others, transverse cracks are formed. The bark consists of a harder, rougher external layer and a softer inner layer.

1b2. The Similar Members (membra similia). Wood, the “flesh” in herbal plants.

The Similar Parts. The ligneous and herbal parts which lie between the vascular bundles of plants find a correspondence in animals, since they too have a supplement of simple parts between “veins” and nerves (i.e. bones and veins). They are called “simple” because they always form homogenous parts when they are divided. The plants that have strong and straight vascular bundles (venae) are allowed to decay in water. Then they are dried and beaten until one is left with the network of vascular bundles in the form of long white wool. Hemp (Cannabis sativa L.), linen (Linum usitatissimum L.), and stinging nettle (Urtica dioica L.) are examples of plants with a network of this kind.

2. The Accidental Essential Elements

Treatise 2 deals with leaves, blossoms, fruits, and seeds, explaining their origin, their form, and their functions. The phyllotaxy, the size, breadth, narrowness, and fineness of various leaves are discussed. The blossom is described as the sign which presages the future fruit, and the stamens, ovaries, and colors of plants are described.

56 Alb., De veget., 2.1.3.55–57, ed. Meyer and Jessen, 123–124.
57 Alb., De veget., 2.1.4.58–61, ed. Meyer and Jessen, 125–126.
The Third Book

With its two treatises, this book forms a “digression”. It begins in Treatise 1 with the description of fruits and of the difference between them and the other parts of the plant. This is followed by a description of the characteristics of the individual fruits and seeds, and of the differences between fruits and seeds and their form. Albert then writes about the germinability, the type of germination, and the color of seeds and fruits.

Treatise 2 describes the various kinds of taste and smell in fruits, juices, and seeds. The nature of the plant can most easily be recognized by its taste, followed by its smell, shape, and color. He also writes about the smell of other parts of the plant, namely, the root, the bark, and the blossoms.

The Fourth Book

The only book with four treatises is once again a commentary (“paraphrase”) on De plantis, this time on Book 2 of Nicholas of Damascus. The first treatise deals with the link between plants and the four elements. The element of air makes it possible for plants to grow—unlike minerals, which consist of only three elements.

The second treatise describes the regions that promote fruitfulness, for example, for wine-growing, for herbs and vegetables and aromatic plants, and the regions that are unfavorable for the growth of plants, with bitter herbs without leaves and blossoms, and the occurrence of parasites.

The bases for the propagation and fruitfulness of the rooted plants are explained in the third treatise. Albert describes seed, decomposition, rottenness, the nutritional sap, water, and grafting. This treatise also contains the investigation of thorns and spines; Albert the Great was the first to distinguish correctly between these. We shall see in some excerpts how he gives form to his observation and to the knowledge he has acquired.

59 Alb., De veget., 3.1, ed. Meyer and Jessen, 165–188.
60 Alb., De veget., 3.2, ed. Meyer and Jessen, 189–211.
3. The Inessential Elements

“On the kind of diversity and the coming into existence of thorns in plants,” Albert writes that “The time has come to explain something that has long been deferred, namely, the nature and form of the thorns which one finds in plants. We say therefore that the thorns do not truly belong to the nature and the essence of the plants. One indication of this is that the nature and origin of the thorns does not correspond to the origin of those parts which are essential for a plant.”

In Book 2 he had presented the distinction between two types of parts of plants. In Book 4 he now adds the third type. In this classification, the thorns belong to the partes accidentales non essentiales, that is, the non-essential organs. In relation to the partes integrales essentiales, the essential organs of the plants—to which the thorns cannot belong, since their origin is not from the nutritious sap and the root—he says: “For all these are directed from the root straight upwards in keeping with the straight upward ascent of the nutrition. But the thorns grow from the body of the plant by emerging through the bark, as if from a center towards the periphery, although their origin does not go as far back as the marrow. In thorny plants, there is thus a looseness of transverse pores which run from the body of the plant to the bark, and this is the path through which a thorn grows.”

After his description of the thorn’s origin, Albert specifies clearly: “But two kinds of thorns are found in plants. For there are thorns that are brought forth from the depth of the plant, and these are straight and long because of the warmth of the matter. There are also some thorns whose basis does not penetrate the body of the plant, but stand on the bark, as if they clung to the plant from the outside; these thorns are short, curved at

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64 *De modo diversitatis et generationis spinarum in plantis*: Alb., *De veget.*, 4.3.3.111–17, ed. Meyer and Jessen, 264–267.


66 Alb., *De veget.*, 2.1.3.29ff., ed. Meyer and Jessen, 114ff.

67 Alb., *De veget.*, 4.3.3.111, ed. Meyer and Jessen, 264: “Hae enim omnes a radice directe ..."
the front, and very sharp. Examples are the thorns of briar rose, egglantine rose, rose hedgerow, bramble bush, and many other plants.\textsuperscript{68}

In this passage, Albert the Great is the first to describe the difference between thorns and spines, both of which he calls by the same name, \textit{spinae}.\textsuperscript{69} His findings correspond roughly to the “morphological distinction which was clearly grasped only as a result of the nineteenth-century doctrine of metamorphosis.”\textsuperscript{70} He then describes the process whereby the curved spines are formed and gives other examples of plants. “Many trees on the other hand have many thorns,\textsuperscript{71} such as a tree that is called ‘daxus’... But since a thorn emerges from the leaves, the leaf is extended and doubles over. This is why there are many curves in the leaves of this tree.” This is his description of the holly (\textit{Ilex aquifolium L.}),\textsuperscript{72} which has leaves with jagged edges bearing spines. He also mentions spines/thorns (\textit{spinae}) on the stalks, branches, and leaves of herbs and vegetables. His examples are the stinging nettle\textsuperscript{73} and borage. “But the spines/thorns are small and are like individual hairs which hang on the herbs... but they are smaller and smoother...”.

\textsuperscript{68} See Alb., \textit{De veget.}, 4.3.3.114, ed. Meyer and Jessen, 265–266: “Inveniuntur autem duo genera spinarum in plantis. Sunt enim spinae, quae ex profundo plantae educuntur; et hae quidem rectae et longae sunt propter calorem materie. Sunt etiam quaedam spinae, quorum basis non profundatur in corpus plantae sed stat super corticem, quasi extrinsecus adhaerens plantae, et sunt istae spinae breves, recurvae anterius, et peracutae, sicut sunt spinae tribulorum (ζ) et bedegar et rosariorum et ramni et aliarum multarum.” On this, see also note (ζ): “Sunt Rosa canina et R. rubiginosa et R. centifolia cum reliquis speciebus hortensibus et Rubus fruticosus Lin.” (“These are the briar rose, the eglantine rose, the cabbage rose, and the other kinds of the garden rose, as well as the bramble bush.”)


\textsuperscript{70} See Balss, \textit{Albertus Magnus als Biologe}, 107. Thorns and spines are analogous formations, but they have different origins and are constructed differently. The spines emerge from the fabric of the bark and consist principally of the epidermis; they are not jointed to the vascular tissue. They can be removed by pulling them off or excoriating them. The thorns, on the other hand, consist of deep-lying plant tissue and are directly joined \textit{ab initio} to the vascular tissue. They are thus a metamorphosis of a plant organ, e.g. of the shoot axis, the leaf, the root, etc.

\textsuperscript{71} Here used in the sense of “spines”.


\textsuperscript{73} The stinging hairs of the stinging nettle are a special form of glandular hairs. The hair cells sit on a base of parenchyma and are thus an emergence.
The fourth and last treatise describes the colors of plants, the differences between the foliate and the deciduous plants, the chyle of trees and plants, and the growth of pine needles in the winter.74

The Fifth Book

The two treatises of the fifth book present a digression. Its contents serve as a supplement to texts which are missing or incomplete. Treatise 1 begins with a presentation of the various conditions that govern the development of plants.75 It next describes the differences or similarities between plants and the factors that govern these and are required when two plants are to be united, rather than simply bound together. He also explains the transformation of one plant species into another, or the transformation of a wild plant into a cultivated plant and vice versa.

Treatise 2 speaks of the various effects of plants, which are derived causally from the four elements and from the combinations of warmth, coldness, wetness, and dryness.76 Subsequently, he pays special attention to nutritional plants, medicinal plants, and magical plants, each with its specific effects.

The Sixth Book

This book is divided into two treatises, and deals with plants in individual detail. Albert presents special and applied botany. The first treatise is devoted to trees.77 Because of their status as the most perfect plants, they are discussed before herbs. Here, the system of order is semi-alphabetical, but this is interrupted in some passages in order to combine the investigation of various plants. The structure usually takes the following form: first, the name of the plant is explained, and then the plant or the drug that is extracted from it is described. Albert often gives a detailed and independent description of the Central European or Mediterranean plants that he himself knows. This is followed by his remarks about the nature of the plant and its use, especially in medicine. The primary source is Avicenna, but he also draws on other authors.78

78 See Biewer, Albertus Magnus: De vegetabilibus VI, 2, 18–20.
Unlike the first treatise, the second, in which the herbs are described, has both an introductory and a concluding chapter. Chapter 1 has the title: “On herbs in general”, and Chapter 22 bears the title: “On the three forms under which the effects of all plants are classified”. The system of classification in the remaining 20 chapters on herbs is likewise semi-alphabetical. Each chapter describes the plants whose names begin with the letter in question. There are between one and 26 plant lemmata. Their structure is similar to that of the treatise on trees.

The Introductory Chapter to the Treatise on Trees

Here begins the sixth book on plants, which discusses the species of certain plants.

Treatise 1: On the trees.
Chapter 1: On the firs and their species.

In this sixth book on plants, we accommodate the curiosity of students rather than philosophy, since it is impossible for a philosophy of the individual thing to exist. Our intention in this sixth book is to present certain qualities that appear to belong to individual plants. As we have already declared, however, even if we were to do no more than to mention the names of the plants, the present work would necessarily exceed the measure of the volume. This is why some are mentioned, which are better known in our region, while others are not mentioned at all. Of those which we do mention, we ourselves have examined some through experience; we shall present others on the basis of an account given by persons that we know do not make careless assertions, but make only statements that are proved by experience. For it is only experience that gives certainty in such matters, since one cannot construct a syllogism to deal with such specific natures. It is however more appropriate to retain our alphabetical order and to begin with the perfect plants—namely, the trees—and continue our presentation on to the herbs, which appear to be less perfect plants.

The Rose as Exemplum

Out of Albert’s extremely numerous descriptions of plants, we select the rose from the treatise on trees, since it is an extensive and impressive

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80 Alb., *De veget.* 6.2.1.263, ed. Meyer and Jessen, 472: *De virtutibus herbarum in communi.*
81 Alb., *De veget.* 6.2.22.483, ed. Meyer and Jessen, 584.
83 Alb., *De veget.* 6.1.1.1, ed. Meyer and Jessen, 339–340. Since many scholars quote only individual aspects of this text, it has been presented here in full.
example of his presentations, and it also displays links to the preceding Books 2, 3, and 4. Besides this, the rose is regarded as one of the best-known and loved flowering plants both in the West and in the East, and is highly esteemed.

*The Description by Albert the Great*

The rose, however, is a tree or a shrub with many spines,84 like the eglantine rose,85 which its own leaves resemble closely. The spines of the rose are weaker, and its leaves are broader than the leaves of the eglantine rose. But the former, which bears white blossoms with many leaves, is certainly a tree, with a trunk as thick as the arm of a human being and without spines, but its branches have weak and very small spines. It is a tree with many branches that are thick, but small and long, like the branches of the bramble bush. But its bark is rather smooth, without roughness, although it has spines. Its blossom is called the “rose”. The blossom initially forms a green calyx that consists of five leaves; when this opens, a blossom with many petals emerges, when it is the garden rose, and above all a white rose, which often has more than 50 or 60 petals. In a wild rose, however, one finds only five petals. In the center of its blossom is a golden-yellow sprinkling that also forms a dome. When its fruit is ripe, it is like the fruit of the eglantine rose, only somewhat rounder. It contains woolly grains with a husk. These are not divided into small cells, but are contained in the interior of its pulp, which is supple when it is ripe, especially from within, from the grains, since the grains first suck from this pulp; then, in the vapor of the wetness, they attain full ripeness. Typically, this tree retains its fruits through the winter after losing its leaves, and its blossom is above the fruit, as in the pumpkin and the pomegranate. The rose blossom is first green, and finally becomes red; in this, it differs from the lily, the elderflower, and others (blossoms) that are initially green and finally become white.

Since the calyxes are made up of five leaves, one sees in them a marvelous endeavor on the part of nature, since each of the leaves is feathered with numerous feathers86 at the point where it clasps beneath itself the leaf which is joined to it; in its other part, it is smooth without feathers, where

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84 Alb., De veget., 4.3.3.114, ed. Meyer and Jessen, 265–266.
86 In the Latin text: “bearded with numerous beards”.
it is clasped under the edge of the other feathered part of the adjacent leaf. And since there are five leaves, the result is that each of them is feathered on the one edge and without feathers on the other edge. And when they hold clasped in themselves the leaves of the rose blossom, and the calyx itself is not all of one piece but (as I have said) is made up of five leaves, the center of the back of one leaf of the rose blossom lies exactly under every juncture of two calyx leaves. This arrangement can also be observed in the petals of the rose, namely, that the back of the inner petal always extends directly to the chink between two outer petals, and the back of the petal of the outer row lies opposite the chink between the inner petals. The rose blossom shares this characteristic with other blossoms whose calyces and blossoms are made up of many rows of petals, as we see in the blossom of borage\(^87\) and the herb known as buttercup,\(^88\) and in many others. Nature does this in order to prevent wetness or some other external pest from easily penetrating into the bud. For when it penetrates the first row, it encounters resistance in the second row. The calyx of the rose does not fall off with the petals, but only when the fruit is ripe—unlike the medlar, in which the calyx remains attached to the ripe fruit at the front.\(^89\)

*Curiositas enim experiendi incitamentum facit*\(^90\)

We human beings come to know the world of phenomena with the aid of our senses, which are the “entrance doors” for all perception and knowledge of the concrete forms of existence. The senses are bound to the law of contrasting effect. That which we see, hear, smell, taste, touch, and feel is related to a second reality which is the antithesis of the first reality.\(^91\) Through his attentive and concentrated study of the polarities (in the present context, in the sphere of botany in the 13th century), which Albert the Great presents in his *De vegetabilibus*, the unlimited wealth of forms in the plant world is brought home vividly to the reader. The following passage draws on his presentation of the rose in order to demonstrate his profound and distinctive procedure in the investigation of plants, his skill at seeing and observing, and the acuteness of his perception of morphological or other botanical phenomena and their causes.

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\(^88\) In the Latin, literally: “crow’s foot.” (*Ranunculus* L.)


\(^90\) “For genuine curiosity provides the impulse for (scientific) observation”: Alb., *Super Dan*. 14.15, Borgn. 18, 636b.

This is why we complement his important botanical discoveries, some of which appear with regularity in the plant world, with aspects of botany that were described by contemporaries.

**The Rose in Albert the Great**

Albert’s description begins as follows: “The rose, however, is a tree or shrub … like …”. He immediately contrasts a second rose, *bedegar*, with the first. When he adds a third rose, the *rosa alba*, he is able to note further differences or points in common between the parts of the plant that he is describing. The bramble bush, a plant which belongs to the rose family, serves him as an object of comparison. A first section describes parts of the plant that even today belong to the morphology of the rose: the rose as tree or bush, the branches, the leaves, the blossoms, and the spines. It is obvious, however, that some of these parts of the plant can also be looked at in keeping with the classification of the plant world that Albert the Great defines, namely, the rose as a tree with roots, a stem, branches, and twigs; or the rose as a bush out of whose roots several lignified stalks emerge; and a further distinction can be drawn in terms of fruit-bearing trees whose branches are armed with spines or thorns (*spinae*).

His subsequent presentation permits an additional deduction. Albert presents both in Book 2 and in Book 4 his classification of the three types of parts of plants. According to this classification, the rose as a tree or shrub with its twigs and the bark, the *partes integrales essentiales*, should be included among the effective parts of the plants (*actu*), and more specifically among the organic members (*membra officialia*) which serve the preservation of the individual. The leaves, the blossoms, the fruits, and the seeds belong to the *partes accidentales essentiales*, the essential organs, since they are responsible for the preservation of the species, while the spines (*spinae*) belong to the inessential organs, the *partes accidentales non essentiales*.

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93 Alb., *De veget.*, 6.1.32.212, ed. Meyer and Jessen, 445 (*R. rubiginosa L.*). See also Alb., *De veget.*, 6.2.9.42, ed. Meyer and Jessen, 358 (*Rosa rubiginosa L.*).
95 Alb., *De veget.*, 6.1.32.210, ed. Meyer and Jessen, 443–444 (*Rubus fruticosus … L. etc.*).
In his empirical investigation of the rose, Albert employs several roses and numerous other plants at the same time. His object is the rose in the totality of its visible and invisible parts. He isolates these step by step as individual objects, looking at them separately and examining them specifically. He often employs here a comparison with a second, and sometimes a third part of the plant that he is discussing, or of a different group of plants.

This methodology of “comparative observation” employs perception and includes both the immediate discernment of the object and its subsequent description, thereby allowing contrasts in form and in color, formal characteristics, proportions, materiality, structures, and textures to emerge; these are typical of the objects, making it possible to distinguish between them and to give an objective and concrete description of them. One example is the bark, which Albert describes as “rather smooth, without roughness, although it has spines”. A line (or a rose twig) is recognized to be long or short depending on whether it is seen in relation to a shorter or a longer line. The first sentence of his text—“The rose is a tree with many spines”—conveys not only the two factors “tree” and “spines”, but also, indirectly, “large and small” as contrasting proportions. The spine of the rose is small only when a larger object is placed alongside it. The observation: the clause “are weaker than” or “are broader than” points to a counterpart which is different, while “many spines, like” or “small and long, like” points to something that is the same. By means of his description of the various forms of the spines, Albert shows that they help to ensure a reliable description of the rose in question, and are therefore important. He describes their quantity, size, composition, and location.

His text goes on to look at the individual elements of the partes accidentales essentiales. He offers only a brief description of the various leaves of the different roses, saying that they are “similar” in character or “larger” in proportion to each other, but he pays closer attention to the blossom, which also gives the rose its name. The process of growth, which is described objectively and precisely, and the development of the rose

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99 Here: the parts of the plants found in the rosehip.
100 See Alistair C. Crombie, Von Augustinus bis Galilei (Munich: 1977), 114: “his comparative study of the plants...”.
102 Today, the roses (rosa) are named after the species of the rosaceae family.
blossom\textsuperscript{103} take place in three phases: the formation of a green calyx\textsuperscript{104} consisting of five leaves,\textsuperscript{105} the opening of the calyx, and the emergence of the petals.\textsuperscript{106} In particular, the roses “Hortensis”,\textsuperscript{107} “Rosa alba”,\textsuperscript{108} and “Campestri rosa”\textsuperscript{109} can be recognized by the number of their petals.\textsuperscript{110} When he describes the filaments\textsuperscript{111} and anthers\textsuperscript{112} as a golden-yellow “sprinkling”, Albert employs pictorial language to designate the specific coloring and characteristic structure of lines and points of these plant organs,\textsuperscript{113} which are clearly distinct, as a color contrast, from the monochrome color field of the petals in the center of the calyx. The rose blossom develops into the ripe “fruit”, the rosehip.\textsuperscript{114} The jug-shape of its blossom differs through its size from that of its relative, the \textit{bedegar}. It is possible to follow from the outside and to describe the process whereby the bud takes on the shape of the blossom, but the rosehip must be opened before it can be investigated. The investigation begins by means of individual steps in an ordered sequence. The material quality of the grains: woolly\textsuperscript{115} with a shell.\textsuperscript{116} Its

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\textsuperscript{103} Peter Leins and Claudia Erbar, \textit{Blüte und Frucht} (Stuttgart: 2008), 42, see also “Das Perianth.”
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\textsuperscript{104} Ibid., “Das Perianth,” see also “Sepalen,” 42. Sprague, “Botanical terms in Albertus Magnus,” 440–445, see 446, \textit{folium} (4).
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\textsuperscript{105} Leins and Erbar, “Das Perianth,” see also “Calyx,” 42. Sprague, “Plant morphology in Albertus Magnus,” 431–440, see 436.
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\textsuperscript{106} Leins and Erbar, “Das Perianth,” see also “Petalen (als Einzelblätter),” 42.
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\textsuperscript{107} \textit{Rosa centifolia et Rosa gallica L. = Rosae hortenses}, Alb., \textit{De veget.}, 6.1.32.213, ed. Meyer and Jessen, 445–446. See also Alb., \textit{De veget.}, 6.1.9.42, ed. Meyer and Jessen, 358; ibid., 4.3.3.114 (c), 266.
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\textsuperscript{108} \textit{Rosa alba L.}, Alb., \textit{De veget.}, 6.1.32.213, ed. Meyer and Jessen, 445–446.
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\textsuperscript{109} \textit{Rosa campestris v. Rosa arvensis L.}, Alb., \textit{De veget.}, 6.1.32.213, ed. Meyer and Jessen, 445–446.
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\textsuperscript{110} Leins and Erbar, “Das Perianth,” see also “Corolla,” 42.
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\textsuperscript{111} Ibid., “Das Androeceum,” see also “Filament (fadenförmiger Träger),” 54.
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\textsuperscript{112} Ibid., “Das Androeceum,” see also “Anthere (verdickter Endabschnitt),” 54.
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\textsuperscript{113} See Sprague, “Botanical terms in Albertus Magnus,” 445: “culmus,—(4) stylar column of \textit{Rosa arvensis}.” Meyer, \textit{Geschichte der Botanik} 4, 54: “what Albert said about the stamina was not recognized with such precision by anyone else.”
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\textsuperscript{114} The rosehip is classified as a nut-bearing fruit, and has a jug-shaped receptacle. Sprague, “Plant morphology in Albertus Magnus,” 431–440, see 438. Albert calls the fruit pulp \textit{caro pomi}.
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\textsuperscript{115} “Woolly grains”: see Ottilie Zeller, \textit{Blütenknospen} (Stuttgart: 1983), 109: “A fur of long bristled hairs is formed between the carpels, which is ejected by the inner wall of the hypanthium and the ovary.” See also “Querschnitt durch das Hypanthium,” illustration 68, see 115, and illustration 69, see 116. Fellner, \textit{Albertus Magnus als Botaniker}, 24: “Albert includes those seeds which are provided with ‘wool’ … among the special seeds.” “Wool” (\textit{lanuginosa}) = texture.
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\textsuperscript{116} “Grains with a shell” = carpels enclosed in the pericarpium. Zeller, \textit{Blütenknospen}, speaks of small fruits (small nuts) which have a lignified pericarpium outside and small
position in the substance: not in cells, but in the fruit pulp. Its condition, also locally: smooth, ripe, on the side facing the grains. As a source of nutrition: the fruit pulp. The character of the place where it ripens: in the vapor of the wetness. One striking characteristic of the rose is the fact that it retains its “fruit” in winter after the leaves fall off. It has the location of its blossom, above the “fruit”, in common with the pumpkin and pomegranate. Now Albert the Great includes still more plants in his investigation. The change of color in the rose blossom from green to red differs from the blossoms of the lily, the elderflower, and “some other (blossoms)”, which are first green, then turn white. He then gives a very detailed and subtle description of the five green sepals of the closed rosebud. And it is not surprising that Albert expresses his amazement at this morphological principle of order in the words *mirabile videtur in eis naturae studium*, on the basis of his analysis of their elements, their form, and their organization. With the same precision and vividness, seeds inside them (116, illustration 70). Albert calls the grains *grana*. Here, grains with a shell are *grana testea*.  

117 “Inside the fruit pulp”: the nuts are surrounded by a jug-shaped succulent receptacle.

118 “The grains suck . . . from this pulp”: see Alb., *De veget.*, 6.1.11.59, ed. Meyer and Jessen, 366. In the chapter on the Mediterranean cypress (*Cupressus sempervivens L.*), Albert gives a very careful description of the rosehip and the situation of its grains/nuts in the fruit, as opposed to the kernels of the pomegranate and the cypress, the kernels of which lie in chambers. Here, Albert offers an even more differentiated observation of the material quality of the grains (carpels), their location and their activity: “Some of the grains of the rose (*granos rosae*) also suck from the husk through a medium, i.e. through a succulent twig (= carpel stalk), and these are the grains that are in the center and that tend in their situation towards the end of the fruit (= towards the mouth of the jug).” Leins and Erbar, *Blüte und Frucht*, 249–255. The rosehip is a choricarpous indehiscent fruit (or nut fruit). Its fruit wall constitutes a receptacle, and the carpels are inserted into its inner surface. A carpel (nut) possesses a dry fruit wall (pericarpium) with which it encloses the ovule or the grain. See also ibid., 82–87, 101–102. The ovule which develops into the grain is nourished by a fascicle in the funiculus, which is inserted into the carpel.

119 A process which takes place on the basis of the doctrine of qualities.

120 *Cucurbita pepo L.*, see Alb., *De veget.*, 6.2.4.312–13, ed. Meyer and Jessen, 499–500.


124 This is a common phrase in Albert, and is to be understood as a reference to those qualities which are shared with numerous other plants.


126 “A marvelous endeavor on the part of nature is seen in them.”

127 See Meyer, *Geschichte der Botanik* 4, 74: “the first study known to me of the aestivation of a calyx.” Leins and Erbar, *Blüte und Frucht*, 46: “We understand ‘aestivation’
his next step presents the alternating position of calyx leaves and petals, and their location with and in relation to each other inside the bud.\(^{128}\) He also sees points in common with other plants, mentioning borage\(^{129}\) and buttercup as his examples.\(^{130}\) Albert identifies the reason why nature produces this particular “formation of a shape”: it is to protect the bud against wetness and pests.\(^{131}\) The calyx (calyx leaves) of the rose survive the petals (= praefloration) to refer to the way in which the edges of the organs shelter the blossom inside a whorl in the vernation (illustration 36). If the edges of neighboring perianth leaves overlap, a corresponding sequence of structures is often reflected. This occurs especially in the so-called quincuncial covering of the leaves. This is usually the result of a spiral sequence according to \(2/5\), so that one can also speak of a \(2/5\) covering.” Albert the Great was the first to describe the five green calyx leaves. This is the observation of a botanical phenomenon that he presents as a marvelous endeavor on the part of nature, “which became our common property in the Latin and vernacular cultural sphere in the abstract form of a rhyming riddle”. Anzulewicz, “Die Fünfbrüder von Gilla Wöllmer und Albertus Magnus,” in *Fünfbrüder* (2006), 12–13. William T. Stearn, “The five brethren of the rose: an old botanical riddle,” *Huntia* 2 (1965), 180–184, see 182. Quinque sunt fratres. Duo sunt barbati, duo sine barba nati. Unus e quinque non habet barbam utrinque. Wilhelm Troll, *Praktische Einführung in die Pflanzenmorphologie* (Jena: 1957), part 2, 12–15, see 12. Troll’s investigation reaches the following conclusion: “In the bud state (illustration 7 II) … only the sepals 1 and 2 are completely free. Sepal 3 is mostly uncovered, while the sepals 4 and 5 largely disappear since they are covered by the sides of the other three sepals.” Karl Goebel, *Organographie der Pflanzen*, 3rd rev. ed. (Jena: 1933), 1872–1874. Albert’s description is not identical to that of the rhyming riddle, which describes the five calyx leaves in an opened state, nor to the presentation by W. Troll, who describes it as a closed bud. Karl Goebel relates the following observation of calyx leaves: there are “relationships of configuration” in several kinds of roses which provided the inspiration for the riddling verses which were often quoted in the past. There are, however, also roses in which all five calyx leaves simply display articulated small leaves. In other kinds of roses there is a clear reduction of the “calyx leaf attachment” at the side. Indeed, in some kinds of rose a calyx leaf can be formed asymmetrically. This means that the formation of the calyx leaves within one and the same species varies.

\(^{128}\) See Meyer, *Geschichte der Botanik* 4, 74. According to Albert, “Petals … alternating with the calyx leaves. This position is repeated in all the flowers which have a calyx and a crown.” Focko Weberling, *Morphologie der Blüten und Blütenstände* (Stuttgart: 1981), 23–24: “Above all, the bud covering of the petals in its various forms is often characteristic of large numbers of related plants.” If the edges of the organs of the leaf overlap, this is called an imbricate bud covering (“Rose, quincuncial”).

\(^{129}\) *Borago officinalis* L., Alb., *De veget.*, 6.2.3.291, ed. Meyer and Jessen, 485.

\(^{130}\) See Alb., *De veget.*, ed. Meyer and Jessen, 733 (*Index rerum*). *Pes cornicis* VI 215 and *Pes corvi* VI 418 = *Ranunculus acris* L. et spec. confines.

\(^{131}\) See Troll, *Praktische Einführung in die Pflanzenmorphologie*. Zweiter Teil. Die blühende Pflanze (repr. Königstein/Ts.: 1975), 14–15: “From a functional point of view, the calyx leaves are enveloping organs. As such, they are particularly appropriate … thanks to their imbricate form … (The enveloping function tends here to be ensured by a calyx-like external section of the perianth.) Under its protection, the stamina and the carpels develop, as well as the petals, all of which are uncovered only when the blossom unfolds.” Leins and Erbar, *Blüte und Frucht*, 40: “The edges of the calyx leaves move over or under each other (calyx aestivation), and all these processes help to improve the protection of the bud.”
and fall off only when the fruit is ripe, whereas the medlar retains its calyx at the ripe fruit.

*Experientia enim optima est in talibus magistra*

Albert employs 12 plants for his presentation. Six belong to the family of the *rosaceae*, each of the other six belongs to a family of its own. Each plant serves him as a model that helps him to consolidate his object, namely, the rose (*rosa*) clearly, definitely, and as comprehensively as possible as *Bauplan*. This means that if the reader follows the principal rose plant that Albert describes in the course of the text, a dense “network” of data develops thanks to his significant description; but if one reads it in strict sequence, all that appears is a “complete” rose plant. It is a shrub or tree with bark and spines, branches, leaves, blossom, and “fruit”. In particular, he emphasizes the blossom and the rosehip. The blossom displays all the parts of a plant that are essential for a hermaphroditic angiosperm. Albert also gives a thorough description of the rosehip as a choricarpous indehiscent fruit. He briefly classifies under this “rose” (*rosa*) loose data, some of them only minimal, which allow the plants *Rosa rubiginosa*, *Hortensis*, *Rosa alba*, or *Rosa arvensis* to “develop”. With this innovative and effective technique, he is able to establish a wider field and

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132 See “Persistierende Kelche,” in Weberling, *Morphologie der Blüten und Blütenstände*, 64: “Especially in blossoms with a subjacent ovary… the calyx survives after the blossoming ceases.”


135 *Rubus fruticosus* L., see Alb., *De veget.*, 6.1.32.210, ed. Meyer and Jessen, 443–444. Without giving a detailed explanation, Albert correctly assigns the bramble bush to the family of the *rosaceae*. He writes: “The bramble is a bush that has many spines (*spinae*), which are white and curved back at the tip; and its leaves are broader than the leaves of the thorny plant known as *bedegar*.” He emphasizes the number and color of the spines, as well as their shape. The greater breadth of its leaves is contrasted with the leaves of the eglantine rose or *bedegar*. We can now draw on the text about the rose, which mentions the feature shared with the branches of the eglantine rose: “thick, but small and long, like the branches of the bramble bush”. Rudolf von Fischer-Benzon, *Altdeutsche Gartenflora* (Kiel: 1894; repr. Wiesbaden: 1972), 34–37, see 35–36.

136 For a definition of *Bauplan*, see Gerhard Wagenitz, *Wörterbuch der Botanik*, 2nd ed. (Hamburg: 2008), 36: “Bauplan, … in botany the term used for the fundamental pattern of a… plant group, from which, through relatively small changes, its diversity may be derived.”

137 See Leins and Erbar, *Blüte und Frucht*, 10. Weberling, *Morphologie der Blüten und der Blütenstände*, 5: “that the morphology of blossoms is the most interesting section of plant morphology. At the same time, its findings are fundamentally important for the classification of the flowering plants.”

classification—in this case for roses—without being obliged to describe every rose separately. Albert’s descriptions of morphological findings are precise, accurate, and ascertained with certainty. This makes them valuable, and the exceptional and impressive acuteness of his observation\(^\text{139}\) allows us to compare his discoveries with aspects of morphology that were described by contemporaries of today, although a consensus about an obligatory technical terminology and a developed classification of flora existed only in part in his period, and Albert himself drew up such a classification only to a rudimentary extent.

The pure colors of the plants mentioned here are white, green, red, and golden-yellow. The change of color of the rose blossom from green to red that Albert describes, as well as the change from green to white in the lily and elderflower, describe as a process the externally observable change in the development of the plant in the course of the seasons. The same is true of the developmental phase of the green rosebud, which is initially closed, into the blossom with its calyx leaves. He mentions concrete numbers only in the case of the calyx leaves and the petals; otherwise, he employs indefinite numbers such as “many”, “some”, or “more”. A “spatiality” of the rose blossom is communicated through the vividly described observation of the formation of its calyx, the formation of the blossom and of its stamens, the interior of the rosebud and the rose petals that are contained in the green calyx with their function of protecting the bud. Although Albert mentions only one season, namely, the winter that is represented by the rosehips that remain on the tree, the green rosebud indirectly represents the spring, the blooming rose the summer, and the “loss of the leaves” the fall.

**Hypothesis**

Although Albert says nothing about a “practical” procedure with regard to the plants he describes here, his accurate descriptions of the tiniest parts and their materiality make it clear and highly plausible that these findings are not only the result of “looking at” the plants, but equally of palpation and touching. In the case of the opened rosebud, for example, the carpels surrounded by extremely fine and tiny hairs must be carefully detached. Then the hairs must be removed in order to examine their shell and the carpel stalks. One must also feel the consistency of the fruit pulp: one knows it is ripe, because it is smooth. Haptic experience lies behind the

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\(^{139}\) See Stannard, “The Botany of St. Albert the Great,” 360: “some of them concern minute details of the sort that one expects only from a scientifically-trained naturalist”. 
description of various spines as weak, very sharp, and so on. The same is true of the distinction (which Albert was the first to draw) between spines that can be stripped off and thorns that sit fast on the plant. And in order to perceive the very delicate tiny pinnas on the green calyx leaves, one must twist the bud around and “lift up” the pinnas a little, in order to observe the “overlapping” of the edges of the calyx leaves. This led T.H. Sprague to write: “Albertus Magnus was an acute observer who recorded what he saw: to this is due his high position in the history of mediaeval botany.”

Apud nos and satis nota

Let us mention two further examples of sources concerning the rose, from Books 6 and 3. In his treatise on trees, Albert devotes a chapter to the eglantine rose:

**Bedegar** too belongs to the genus of trees. Among us it is very well known, since it belongs to the genus of thorn-bearing plants. But it has white spines when it is old, and its entire stem is covered in short uncinate spines. In the leaves, however, it resembles the rose hedgerow, and it is similar in the blossom and the fruit too, except that its blossom is not so broad. But the leaves diffuse (around themselves), as it were, the fragrance of wine, especially in the spring when the leaves are young.

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140 Sprague, “Plant morphology in Albertus Magnus,” 440.
141 Further sources about the rose: Alb., De veget., Index rerum, 740.
142 Bedegar . . . est de genere arborum. Albert clearly classifies the eglantine rose here among the trees: Stannard, “The Botany of St. Albert the Great,” 363.
143 Quae satis nota est apud nos. When Albert has personal experience of a plant and of its habitat, he writes apud nos in his monograph, as here in the case of the eglantine rose. See also Alb., De veget., 6.2.19.468, ed. Meyer and Jessen, 574 (Urtica dioica L., Urtica urens L.); see also Alb., De veget., 6.2.18.438, ed. Meyer and Jessen, 565 (Scolopendrium officinarum L.). Stannard, “The Botany of St. Albert the Great,” 359.
144 Quae satis nota . . . Similarly, the formulations satis nota, est . . . nota, or similar terms are not empty clichés in Albert, but indicate and signify his vast experience of and with the plants in their native habitats. See also Alb., De veget., 6.2.8.396, ed. Meyer and Jessen, 543 (Agrostemma githago L.). Stannard, “The Botany of St. Albert the Great,” 360.
145 “Est enim de genere spinarum.” In his investigation of spinae, which leads to the definite distinction between thorns and spines, Albert mentions bedegar explicitly and accurately describes it as possessing spines. Alb., De veget., 4.3.3.114, ed. Meyer and Jessen, 265–266.
146 He emphasizes the white color of a part of a plant, which is due to its age.
147 Albert compares bedegar here to the rose hedge, which is also mentioned after bedegar in the chapter in Book 4 devoted to thorns/spines: Alb., De veget., 4.3.3.114, ed. Meyer and Jessen, 266.
148 Rosa rubiginosa L., see Alb., De veget., 6.1.9.42, ed. Meyer and Jessen, 358; and De veget. 6.1.32.112, ed. Meyer and Jessen, 445.
Albert points here explicitly to the meaning of the spines, which even today can serve to define the rose species, just as the fragrance of these leaves is a distinguishing characteristic of the eglantine rose.

He also notes the following discovery in Book 3, in the chapter “On the fragrance of plants, and how the fragrance shows the kind and the nature of the plants”: “In some, however, the blossom has a very strong smell, and the fruit has almost no smell, as in the case of the rose and the vine stock.”

*Et hoc facit natura…*

Although Albert writes in the introductory chapter of the treatise on trees that “it is impossible for a philosophy of the individual thing to exist”, he proposes “to present certain qualities that appear to belong to the individual plants”, as in the example of the rose, where he observes, records, and describes many concrete, empirical, detailed phenomena, that is, facts relating to individual roses and to other plants, the species-specific and individual (and hence characteristic) attributes, as these occur in nature. This includes their morphological parts, the change that these parts undergo in the course of their growth, their qualities, and their effects. Similarly, he writes in the treatise on herbs that in order to display the nature of specific herbs, “we investigate both the form and the size of the plants, as well as their quality and species. We display the form and the size in order that one may learn from them the nature of their [i.e. the plants’] species.” He continues:

thus, in the science of plants too, one does not in the least learn their nature unless one knows both their parts and their qualities and effects. We shall therefore describe these things, which we have investigated in specific plants, so that the nature of plants may be discovered in a similar manner in other plants.

This means that in principle the various plants are to be investigated in the individual plant, and that sense perception is of eminent importance in this task, for Albert affirms: “The proof from sense experience [i.e. the induction, *inductio ad universale accipiendum*] gives the greatest certainty…"

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149 See Alb., *De veget.*, 3.2.6.103, ed. Meyer and Jessen, 206: “In quibusdam autem multum redolet flos, et quasi nihil redolet fructus, sicut est in rosa et vite.”
150 Alb., *De veget.*, 6.1.1.1, ed. Meyer and Jessen, 339.
151 Ibid., 6.1.1.1, ed. Meyer and Jessen, 339.
in natural philosophy and thus occupies a higher scientific rank than theory without observation." He draws the following conclusion: "It is only experience that gives certainty in such matters, since one cannot construct a syllogism to deal with such specific natures." In an important passage in his commentary on the *Metaphysics*, Albert points out that, knowledge in natural science must be based on experience, and hence on the knowledge of the individual. Experience apprehends which that is individual and thereby communicates, in the course of the formation of concepts, that which is universal (conceptually general).

This in turn is the formal principle of scientific knowledge in the strict sense. Like Aristotle, therefore, Albert here defines "experience" (*experimentum, experientia*) as the knowledge (*cognitio*) of individual things or individual facts. This knowledge is formed on the basis of repeated impressions upon the memory, through which one perceives the essential similarity between individual things that unites them.

In another passage, he emphasizes, as the presupposition for knowledge based on experience, that "it is not sufficient to carry out the observation once and to limit it to one species. It must be carried out under all conditions, so that it may rightly and certainly be the basis of the work..." Albert thus clearly accentuates the methodological features and criteria for experience. He explains: "Everything that occurs in the realm of sensibles must be seen in its relationship to other things and processes as well as in the entire context."
This is precisely what he does, only on a much diminished scale, in his presentation of the rose. While the first half of the text comprises a systematically elaborated quantity of numerous precise and particular data, with the help of various plants, the second half is dominated by the description and investigation of one special botanical phenomenon. With his pointed commentary—“one sees in them a marvelous endeavor on the part of nature”—on the formation of the calyx leaves and their underlying morphological system of order, which is repeated in the petals of the rose and in the blossoms of other plants, Albert explicitly refers to “nature”, and emphasizes this clearly. After a very detailed recording of the facts that are to be regarded as the outcome of experiential knowledge and rational knowledge, he sums up what he has to say in the following conclusion: “Nature does this in order to prevent the wetness or some other external pest from easily penetrating into the bud.” He thus presents a causal-analytical finding. Although Albert does not discuss this directly, the significance of this system of order and this law lies ultimately in preventing harm and ensuring an undisturbed growth. This is indicated by his formulation: “...from easily penetrating into the bud,” since Albert sees the bud as the presage of the fruit.

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161 Examples of passages speaking of nature: Alb., *De veget.*, 1.1.3.16, ed. Meyer and Jessen, 11: “Natura enim non deficit in necessariis.” Ibid., 1.2.5.152, p. 75: “Et quia natura non subito transit de extremo ad extremum...” and ibid., 2.2.1.91, 139: “natura purgatione indigat a superfluitate humidi aquosi”.

162 See Weberling, *Morphologie der Blüten und der Blütenstände*, 53: “As soon as the calyx leaves exercise a protective function, this concerns primarily the blossom in the prefloral state...”. Alb., *De veget.*, 2.2.4.124, ed. Meyer and Jessen, 151: “In folliculis autem et siliquis flores formantur propter teneritudinem ipsorum, aliter enim frequenter laederentur frigore.”

163 See Köhler, “Annäherung an das Individuelle,” 175 and note 80. Alb., *De veget.*, 2.2.1.89, ed. Meyer and Jessen, 139: “Philosophari enim est, effectus iam cogniti certam et manifestam et veram causam investigare, et ostendere, quomodo illius causa est, et quod impossibile est aliter se habere.”

164 See Karl F.W. Jessen, *Botanik der Gegenwart und Vorzeit* (Leipzig: 1864), 143–157, see 157: “The arrangement of the calyx leaves in relation to the bud, the alternation of petals with the calyx leaves, is presented as a universal law in the rose.”

The Seventh Book

This consists of two treatises. Although it is designated a digression, it contains references to Palladius’s *Opus agriculturae*. Treatise 1 describes four methods for changing wild plants into cultivated plants: dunging, treating the soil, sowing, and grafting. We encounter the rose once again in this treatise. In his instructions about how to plant and form a “green pleasure garden” (*viridantia sive viridaria*), the rose is included among “all kinds of flowers, such as the violets, the columbine, the lily, the rose, the gladiolus and similar flowers”, which he recommends for cultivation there.

The second treatise deals with the plants to be cultivated in a field that is tilled only every second year, and in a kitchen garden. It also treats of the cultivation of fruit trees and the grafting of vines in the vineyards.

Reception

The reception of Albert’s *De vegetabilibus* can be demonstrated in the following authors and their works; the situation is uncertain only in the case of Bartholomeus Anglicus. Ernst H.F. Meyer refers to many quotations from Albert in Book 17 of Bartholomeus’s treatise *De proprietatibus rerum*, but this is contradicted by Albert’s statement that he depends on Bartholomeus; it is also possible that there is a confusion here with Alfredus Anglicus.

Petrus Hispanus (Pope John XXI) repeatedly quotes from Albert’s *De vegetabilibus* in his medical treatise *Thesaurus pauperum*. Petrus de Alvernia (Peter of Cros), who was appointed rector of the University of Paris in 1275, draws heavily on Albert’s *De vegetabilibus* in his treatise *Sententia super libro “De vegetabilibus et Plantis.”* He takes over passages that seem virtually identical, while others are modified; in other places again, Albert is the source of inspiration. Albert’s name

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166 Alb., *De veget.*, 7.1, ed. Meyer and Jessen, 589–638.
169 See Biewer, *Albertus Magnus: De vegetabilibus VI, 2, 23.*
appears six times in Petrus’s work. E.L.J. Poortman describes Petrus’s treatise as a commentary destined primarily for the students of the Faculty of Arts in Paris, which draws especially on Albert’s work as well as on that of other scholars. Numerous borrowings from Albert’s botany can be identified in Petrus de Crescentiis and his treatise *Opus ruralium commodorum*. For example, he copies out almost the whole description of the *viridantia sive viridaria*. The physician William of Brescia quotes from the *De vegetabilibus* in his treatise *Consilia*. And the name *Albertus* occurs twice in the botanical books in the *Book of the Things of Nature* by Conrad of Megenberg, in the chapter on the birch (IV.A.28) and in the chapter on the mulberry tree (IV.A.27). The citations of Albert’s name correspond to the passages about these two trees in *De vegetabilibus*. He is also regarded in Conrad’s *Economica* as “the authority for the areas of agriculture and the cultivation of plants”. The *De vegetabilibus* is frequently quoted in the *Lexicon plantarum*, where the name *Albertus* is mentioned once.

**Summary**

*In naturae enim operibus visu proprio didici…*  

In the realm of the operations of nature, I have learned with my own eyes…

Albert the Great’s “study” of the rose is an excellent model of the transformation which began already in the course of the 12th century, bringing a new way of looking at “nature” and of attributing significance to it. The
rose, formerly one of the most significant plants in the context of secular and religious symbolism, now becomes the object for the investigation of natural phenomena and processes and of the laws which underlie these. The starting point of the investigation of the plants is their perceptible and concrete manifestation, with the primary goal of attaining a theoretical knowledge, since Albert understands natural science, which refers exclusively to concrete physical phenomena, as an independent and autonomous discipline with its own object, methodology, and goal.\textsuperscript{179} The reception of Aristotle’s writings on natural philosophy and natural science, and of writings which were thought to be by Aristotle, was highly relevant to him in this context. They influenced and developed his interest in nature and improved the scientific methodology on which his work was based. Likewise, he followed Aristotle and “believed that ‘naturalia’ were capable of being understood to the extent that they could be explained causally.”\textsuperscript{180}

Albert contends that the presupposition and the guarantee of a theoretical knowledge of nature consist of three factors: observation, experience, and knowledge, summed up as “experiment”.\textsuperscript{181} Petrus de Prussia points to a relevant passage in Albert: “iuxta Alberti sententiam in terto scripto distinctione XXIV experimentum est cognitio in singularibus accepta”.\textsuperscript{182} This text, which Petrus quotes literally, continues: “et tamen arguit iuvando ad cognitionem principiorum: et quod in sensu cognoscitur, quia hoc in intellectu percipitur propter quid, quia principium est notum propter seipsum”.\textsuperscript{183} The “biological principle of description”\textsuperscript{184} which he applies

\begin{footnotes}
\item[181] \textit{Experiment} not in the modern sense of a methodological and planned production of reproducible facts, but in the sense of observing natural processes that are subject to the least possible amount of disturbance.
\item[182] Petrus de Prussia, \textit{Vita B. Alberti} (Antwerp: 1621), 126: “According to what Albert states in the third book about the \textit{Sentences} of Peter Lombard, Distinction XXIV, ‘experiment’ is the knowledge which is acquired from individual facts.”
\item[183] Alb., \textit{Super III Sent.} 3.2, Borgen. 28, 447b: “And yet it convinces by helping us to know the principles. And what is known by the senses is grasped causally by the understanding, because the principle is self-evident.” I am grateful to H. Anzulewicz for drawing my attention to this text.
\item[184] See Christoph Gerhardt and Bernhard Schnell, \textit{In verbis in herbis et in lapidibus est deus. Zum Naturverständnis in den deutschsprachigen illustrierten Kräuterbüchern des Mittelalters} (Trier: 2002), 26. Albert’s innovation is first the description of the plants, and then the medical presentation.
\end{footnotes}
in order to achieve this goal begins with the purposeful investigation of the external appearance of the plants (here represented by the rose) in search of morphological relationships through a comparison with other plants. This helps him to discover “connections in the construction plan”. The next step is a description of the vegetative development up to the reproductive stage of blossom and fruit, including the factors of color and smell, the pharmacological and medical qualities, as well as chemical and horticultural processes. And this is only one small, but striking facet in the great wealth of descriptions of plants which he presents.

It is not surprising that botanists, physicians, pharmacologists, scholars of the Middle Ages, theologians, and many others who have studied Albert’s botanical work, written commentaries on it, and paid tribute to it, both in the past and in the present, have esteemed it very highly, since it clearly and convincingly demonstrates the unique and fundamental methodology which he employs—united to a great overarching intention—in organizing this enormously wide-ranging spectrum of data that he himself has elaborated, collected, and selected, in the splendid complete system which lies before us in the *De vegetabilibus libri VII*.

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187 Alb., *De veget.*, 6.1.32.216, ed. Meyer and Jessen, 447–448. For reasons of space, this and the following passage cannot be quoted here.
188 Alb., *De veget.*, 2.2.7.145, ed. Meyer and Jessen, 161.
190 Alb., *De veget.*, ed. Meyer and Jessen, 684–693 (*Appendices, Cap. V., Plantae Albertinae*).
191 See Biewer, *Albertus Magnus: De vegetabilibus VI*, 2, 26–27. Botanical observations can also be found in Albert’s works on philosophy, natural science, and theology.
192 I am deeply grateful to Professor Irven Resnick, whose great openness and helpfulness made it possible for me to collaborate in this project on Albert the Great, and to Dr Anzulewicz, since this essay would not have seen the light of day without his central inspiration and his persistent encouragement to work on Albert the Great’s botany from a “theoretical” perspective too. He gave careful, expert, and patient answers to all my questions, translated most of the Latin texts into German, and read the proofs of my German text. I am also grateful to Professor Leins for his kindness in spontaneously agreeing to look at the botanical aspects in my text and for doing so with such enthusiasm. [English translation of this essay: Brian McNeil.]
It is not at all surprising that Mary Shelley had her hero Dr Frankenstein read “Paracelsus and Albert the Great”. Indeed, posterity invested Albert’s legend with a reputation for being an astrologer, alchemist, and magician. But Albert’s popular image was also adorned with the trappings of a physician: On the Secrets of Women proclaimed in several languages and dozens of editions its misogynist picture of female physiology under the supposed authorship of the Universal Doctor. Although Albert was not a physician—there is no historical trace that he either studied or practiced medicine—medicina did not escape his omnivorous intellectual appetite. Actually, Albert figured prominently (although not always as a hero) in that most robust tradition of German medical historiography which took flight at the beginning of the 19th century. As Heinrich Schipperges has shown, Kurt Sprengel, Heinrich Haeser, Theodor Puschmann, Max Neuburger, and Paul Diepgen included a more or less extensive treatment of Albert the Great in the section of their treatises and handbooks devoted to medieval medicine. Schipperges’s own paper on Albert’s medical thought is a brief survey organized according to the triad of physiology, pathology, and therapeutics. Nancy Siraisi’s paper first published more than a quarter of a century ago in the groundbreaking volume edited by James Weisheipl on Albertus Magnus and the Sciences, is still the unavoidable point of departure for anyone interested in the question of Albert’s medical learning.

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3 Schipperges, “Albertus Magnus.”
No more is needed than browsing through a recent bibliography on Albert, like Resnick and Kitchell’s, to see that, unlike the quite circumscribed theme of his medical concerns, the studies on his activity as a natural philosopher are multitudinous and the interpretations rich and conflictive. Albert has become a symbol of medieval “science”. Around the middle of the 19th century two works were published in France which extolled Albert as a precursor of modern “science”. In his Histoire des sciences de l’organisation (the result of courses at the Sorbonne dictated between 1839–41), M.H. de Blainville praised Albert highly. A few years later, in 1847, Félix A. Pouchet (better known for his protracted controversy with Pasteur on the issue of the possibility of abiogenesis) wrote a history of medieval natural science whose subtitle was telling enough of the slant of the book: Albert le Grand et son époque considérés comme point de départ de l’école expérimentale. Against the readings of Pouchet and de Blainville, which made of Albert a 19th-century experimentalist, the noted German zoologist and historian of science Victor Carus, in his Geschichte der Zoologie, pointedly claimed that what constituted Albert’s merit was not so much his “personal observations” but the reintroduction of Aristotle as a teacher of how the study of nature should be carried out.

The intellectual interchanges and conflicts between medicine and natural philosophy that flourished during the 13th century were known to their protagonists as the “controversy between physicians and philosophers”. Albert was involved in that scholarly wrangling throughout his active life as one of its major actors. In fact, as he grew older he became

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in Nancy Siraisi, Medicine and the Italian Universities, 1250–1600 (Leiden: 2001), 11–36. I will cite from the most recent edition.


6 M.H. de Blainville, Histoire des sciences de l’organisation et de leurs progrès, comme base de la philosophie, 3 vols (Paris: 1847). This book was the result of additions and heavy editing by F.L.M. Maupied, a disciple of Blainville’s, who reworked the lecture materials with a view toward a Catholic apologia.


8 “Pouchet, Blainville, Sighart have praised [Albert] enthusiastically, but his merit is not always what they think it is. Albert has undeniably been a great historical figure. But his principal contribution consists less in his first trembling attempts at personal observations, than in having reintroduced Aristotle as a philosopher of nature and a teacher of zoology, and thus having shown how nature should be considered” [my translation], Victor Carus, Geschichte der Zoologie bis auf Joh. Müller und Charles Darwin (Munich: 1872), 237.
increasingly interested in medicine and it could be said that his treat-
ment of the controversia inter medicos et philosophos became more self-
conscious and sophisticated. The question guiding this contribution
concerns the different rhetorical ways in which Albert sought to negotiate
the clash between medical knowledge and natural philosophy. I think it is
possible to distinguish three different textual techniques that Albert used
to absorb medical material within an Aristotelian conceptual framework
and to arbitrate between conflicting medical and natural-philosophical
sources. Renouncing from the start any precise methodological cartogra-
phy, I will assume that these three strategies can be located respectively in
Albert’s Parva naturalia, Quaestiones de animalibus, and the commentary
De animalibus. As to his stance in the controversy, we will see that while
in a work such as the treatise De homine (the second part of his Summa
Parisiensis, an early theological work) Albert tended to favor the Peripa-
tetic point of view, in his Quaestiones de animalibus and in On Animals
(De animalibus) he deployed much of his Scholastic power and rhetorical
talent to reach a point of reconciliation between Galen and Aristotle.

Albert’s earlier and most straightforward device was to include portions
of texts in his commentary, mainly in separate chapters entitled digres-
siones, which can be found abundantly in the Parva naturalia, but also in
some books of his later commentary On Animals (perhaps the most sig-
nificant is his inclusion of large portions of Avicenna’s anatomy from the
Canon in the first book of the treatise). In these cases the fragment taken
from a medical authority remains as such and Albert goes on to com-
ment on it or to elaborate on the contradictory claims brought forward
by physicians and philosophers. In order to illustrate this procedure, we
will begin by looking at some characteristic medical doctrines included
in the Parva naturalia and examine how the notions of the physicians
were subjected to a more or less profound conceptual elaboration. In the
second place, I will discuss how Albert in his Quaestiones de animalibus
(a reportatio of his teaching while he was preparing his larger commentary
On Animals) used the characteristic Scholastic quaestio to resolve con-
flicting claims. The solutions were mostly—but not always—ultimately
taken from Avicenna, and he might have used as an immediate source the
commentary on De animalibus by Peter of Spain, a 13th-century physician.

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9 It has been shown that Albert’s knowledge of medicine increased with time. See
10 For a variant approach see Siraisi, “Medical Learning,” 26.
11 Ibid., 28–31.
Finally, we will address Albert’s use of a particular technique of gloss in *De animalibus*. In this monumental commentary Albert not only made frequent use of digressions, but he also attempted to reconcile contradictory views through the use of a peculiar style of commentary which consisted of adding or interpolating words or short clauses to the Aristotelian text. A few cases will illustrate how Albert changed the original meaning of the text using the technique of “textual grafting”, which resulted in a unified discourse made out of natural-philosophical and medical elements. This analysis of Albert’s techniques for dealing with the *controversia* is preceded by a short introduction and followed by some conclusions.

**Natural Philosophy and Medicine**

Albert set himself the task of commenting on the whole Aristotelian corpus, a significant portion of which consisted of natural philosophy. *Physica* or natural philosophy, whose object is the natural, real, moving, sensible, material body, was the subject treated by Aristotle in his *libri naturales*. Albert orders the Aristotelian books on natural philosophy under the guiding notion of the mixture (*commixtio*) of the elements. He affirms that natural science (*scientia naturalis*) comprehends three parts, which correspond to three steps in a ladder of progressive complexity: the simple mobile body, this simple body as it proceeds into mixture, and the mixed body (minerals, plants, and animals). The first part corresponds to the Aristotelian books *Physics*, *On Heavens*, and *On Generation and Corruption*. The second part is found in the *Meteorology*; and the third part embraces the book on inanimate beings, *On Minerals*, as well as those on living beings, beginning with *On the Soul*, which is followed by the group of short treatises dealing with the vital functions of living creatures called *Parva naturalia*, *On Plants*, and several books on animals. Immediately afterwards Albert introduces the notion of natural philosophy (*philosophia naturalis*), a program of enquiry more restricted than “natural science”, for the former opens with *On Generation and Corruption*, while its second and third parts are the same as those of the latter.

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13 Alb., *Meteorologica* 1.1.1, Borgn. 4, 478.
14 See Miguel de Asúa, “Mineral, Plants and Animals from A to Z. The Inventory of the Natural World in Albert the Great’s *philosophia naturalis*,” in *Albertus Magnus. Zum
It is known that there is no extant Aristotelian treatise on medicine. For medieval Islamic authors and for those of the Latin Middle Ages—at least for those who built the Peripatetic tradition—Aristotle was a natural philosopher and the embodiment of a *scientia* whose purpose was theoretical in itself and which aimed at fulfilling the “desire to know” famously assigned to all human beings in the opening statement of the *Metaphysics*.\(^{15}\) Medicine was a different thing. In all the classifications of knowledge it entered as a practical activity, for its end was not contemplation but the achievement of health and the avoidance of illness.\(^{16}\) As Avicenna said at the beginning of his *Canon*, the aim of medicine was to know the dispositions of the body in order to maintain a state of health or, in case it was lost, to regain it.\(^{17}\)

By the 13th century, medicine could boast of an intellectual tradition as rich and diverse as that of natural philosophy. Albert and his contemporaries saw in Galen, the Greek physician of the 1st century AD who acted in Rome, the summit of medical learning.\(^{18}\) In a sense, Galen’s achievement resulted from a complex but effective elaboration of the medical and natural-philosophical traditions—particularly Aristotelian. The title of Owsei Temkin’s celebrated book, *Galenism; Rise and Decline of a Medical Philosophy*,\(^{19}\) captures the dual aspect of a system of medicine that dominated Western thought and practice for almost 17 centuries. The title of one short work of Galen’s, *The Best Doctor is also a Philosopher*, is quite telling of the spirit presiding over his enterprise, as is his *On the Doctrines of Hippocrates and Plato*.\(^{20}\) On the other hand, it is well known

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\(^{15}\) James Weisheipl’s *The Development of the Physical Theory in the Middle Ages* (New York: 1960) is still a valuable introduction to Albert’s natural philosophy. See also Benedict Ashley, “St. Albert and the Nature of Natural Science,” in *Albertus Magnus and the Sciences*, 73–102.

\(^{16}\) Siraisi, “Medical Learning,” 14–15.

\(^{17}\) “Dico quod medicina est scientia qua humani corporis disposiciones noscuntur ex parte qua sanatur vel ab ea removentur ut habita sanitas conservetur et amissa recupetur.” Avic., *Canon* 1.1.1.1 (Venice: 1507; repr. Hildesheim: 1964), fol. 1ra.


\(^{19}\) Owsei Temkin, *Galenism; Rise and Decline of a Medical Philosophy* (Ithaca: 1973).

that research on living beings was not an incidental, but a major part of Aristotle’s intellectual pursuits. And, as Birkenmajer argued long ago, those who played a key role in the medieval reception of Aristotle were physicians. The parallel reception of new Galenic writings and Aristotelian natural philosophy translated from the Arabic during the second half of the 12th century and the first half of the 13th century quickened the conceptual exchanges between medicine and philosophy that characterized the teaching of the medical school of Salerno. The condition for the development of what in the Middle Ages came to be known as the controversy between philosophers and physicians was that there was as much common ground as there were divergences between Aristotle and Galen, the embodiments of natural philosophy and medicine.

The first, influential synthesis of these two traditions was carried out by the Islamic writers and came to a climax with Avicenna, the 11th-century Persian philosopher and physician who authored commentaries on Aristotle’s De animalibus and De anima and the already mentioned Canon, a work which actually set canonical standards in medical learning in the West and, by the 14th century, became the core of university medical teaching. The first Latin author who significantly addressed the issues of the controversy between physicians and philosophers in a systematic form and along the lines laid down by Avicenna was Peter of Spain, a physician who, during his teaching activity in Siena around 1240, wrote the first commentary on De animalibus (the medieval name given to the whole


21 See the brief but rewarding book of Marjorie Green, A Portrait of Aristotle (Chicago: 1963), where the role of biology in the overall Aristotelian system is underscored.


of Aristotle’s books on animals) and also commented on the *articella*, a collection of medical texts used for teaching with a tradition of commentary that dates back to the 12th-century Salernitan masters. Peter was the first to loosely circumscribe a set of problems arising from the conflict between Galen and Aristotle, which he named “the controversy between physicians and philosophers”. His commentaries were written in the form of *quaestiones*, some of which are specifically addressed to the *controversia*, which he resolved by reworking the solutions set forth by Avicenna.

The key issues of the controversy included the question of generation. It was discussed whether there was or was not a female sperm (and, in case it existed, what kind of role it played in generation), and also whether the male sperm participated materially in the embryo. The differences between Aristotle’s conception of the heart as the seat of the soul and the origin of veins, arteries, and nerves and the Galenic system which postulated three principal organs (liver, heart, and brain, which were in turn seen as the origin of veins, arteries, and nerves), gave rise to a number of conflictive points. There were also anatomical conundrums, such as the structure of the heart and many other themes of minor import. By the middle of the 13th century the controversy was formally established not only in the medical, but also in the philosophical literature. The great builders of Scholastic medicine like Taddeo Alderotti and his colleagues

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25 Recent research has shown that the logical, natural-philosophical and medical works attributed to Peter of Spain, supposedly Petrus Juliani (Pope John XXI), were in fact written by different authors. I assume that the author now called “Peter of Spain (medius)” was the one who commented at Siena on *De animalibus* and the *articella*. See J.F. Meirinhos, “Petrus Hispanus Portugalensis? Elementos para uma diferenciação de autores,” *Revista Española de Filosofía Medieval* 3 (1996), 51–76; and Angel d’Ors, “Petrus Hispanus O.P. Auctor Summularum,” *Vivarium* 35 (1997), 21–71.

in Bologna, continued to develop this kind of discussion, which probably reached its high tide with Peter of Abano's *Conciliator Differentiarum, quae inter Philosophos et Medicos Versantur*, a work which was finished in Padua by 1310 and epitomized the development that the *controversia* had undergone during the second half of the 13th century.²⁷

In what follows, we shall examine the textual strategies used by Albert to deal with the issues of the controversy.

**Sermo. The Expounding of Medical Doctrines**

Albert's *Parva naturalia* are a group of short treatises concerned as a whole with physiological questions. They follow the commentary *On the Soul* and treat the things that correspond to the soul and the body at the same time. Some of them were original while others were paraphrases of Aristotle's works. In his *Parva naturalia* Albert deals with the functions of living beings, concentrating on animals but also touching on plants for purposes of comparison. The human being, the *perfectissimum animal*, might be considered as the main subject of the works. The *Parva naturalia* constitute thus a fertile ground for the exploration of how Albert handled and introduced medical theories in his works. We will consider *On sense and the sensible* (*De sensu et sensato*), *On memory and reminiscence* (*De memoria et reminiscencia*), *On sleep and waking* (*De somno et vigilia*), *On spirit and respiration* (*De spiritu et respiratione*), *On nourishment and what can be nourished* (*De nutrimento et nutribile*), and *On death and life* (*De morte et vita*).

To begin with, in *De sensu et sensato* Albert discusses the relations between natural philosophy and medicine.²⁸ He begins by distinguishing four oppositions: waking and sleep, youth and old age, “inspiratio et respiratio”, and life and death. He further indicates a fifth opposition, health and sickness, and reminds his readers that the natural philosopher (*physicus*) considers *sanitas et infirmitas* only from the point of view of

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²⁸ For a complete English translation of the passage see Siraisi, “Medical Learning,” 14.
their principles and causes. The reason for this is that health and sickness are accidents which affect only living things. Thus, when contemplating the principles of life, the natural philosopher considers by implication the principles of health, just as when he deals with the principles of death he is brought to treat the principles and causes of sickness. The result of this is that natural philosophers and those physicians (medici) who use philosophical arguments meet at the same point. For natural philosophers proceed from first things to last things and from universals to particulars, while philosophical physicians ascend from particular diseases, toward the common signs, causes, and accidents of those diseases—given that it is not possible to cure a disease without taking away its cause and introducing a cause of health. The inclusion of the rationale of the precise relationships between physici and medici at the beginning of the Parva naturalia amounts to an implicit declaration of his intention of using the two bodies of knowledge in the same plane, for, as Albert claims, both of them “terminantur ad invicem”.

Spiritus

Galen considered spirit (pneuma) as a material, extremely rarefied and subtle substance fundamentally derived from breath. He distinguished between vital spirits, which originate in the heart and are distributed through the arteries, and animal spirits, which are conveyed by the nerves and are produced in the brain from the distillation of the vital spirits. A third kind of spirits, natural spirits, thought to be born in the liver and carried by the veins, were admitted in Graeco-Roman times and soon formed part of a triadic system which Galen expounded in On the Doctrines of Hippocrates and Plato. Adopting the Platonic notion of a tripartite soul, Galen had singled out three principal organs in the body: liver, heart, and brain (although in some texts he added the testes as a fourth principal organ). The expanded Galenic doctrine of spiritus naturalis, vitalis, and animalis can be seen in a medical text such as Johannitius’s Isagoge (a part of the articella, which Albert did not quote) and was also transmitted

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29 “Sed de sanitate et infirmitate non est physici considerare sed tantum prima principia et causas”. Alb., De sens. et sensato 1.1, Borgn. 9, 2b.
30 Ibid., 2b.
by Costa ben Luca’s *De differentia spiritus et animae*, translated by John of Seville at Toledo during the first half of the 12th century.  

At the beginning of *De somno et vigilia* Albert announces his commitment to draw upon the Arabic authors. He says that he will follow Aristotle’s treatise on the subject and will make digressions wherever necessary. Leaving aside the moderns, he will follow the opinions of the Aristotelians and of Avicenna, Averroes, Alfarabi, and Algazel, insofar as they are in agreement; he adds that he will touch occasionally on Galen. Albert’s first approach to the issue of *spiritus* in this treatise is Aristotelian: spirit is a subtle body, an instrument of the soul directed toward the operations thereof, an evaporation of the humidity of the food caused by natural heat, whose main source (of the heat) is the heart. On the other hand, Albert goes on, Galen says that natural spirit (*spiritus naturalis*) originates in the liver and is altered in the brain. “But that this opinion is absolutely false is shown in the book on animals”, Albert contends. He reminds us that in his *De anima* he has already shown that the heart is the origin of all movement. What vehiculizes the operations of the powers (*virtutes*) in any organ derives from the source of the flux of those powers, that is, from the soul, which is in the heart. Since such a carrier is *spiritus*, then if we consider it from the point of view of its origin and seat, we are compelled to say that spirit comes from the heart and to the heart it returns. Despite these clearly Aristotelian statements, in the same chapter Albert seems to open a potential dialogue with the Galenic doctrines of the three spirits and the three (or four) principal organs. He affirms that the powers of the soul and spirit, insofar as they are oriented toward one or another of the members of the body, are determined and contracted (“determinantur vel contrahuntur”) in each of them into special powers and operations.

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33 “Nos autem omissis operibus quorundam modernorum, sequemur tantum Peripateticorum sententias et praecipue Avicennae et Averrois et Alfarabi et Algazelis, quorum libros de hac material vidimus concordantes: tangemus etiam quandoque opinionem Galeni, etc.” Alb., *Somn. Vig.* 1.1.1, Borgen. 9, 123a.
34 “Est igitur instrumentum animae directum ad omnes operaciones ejus.” Ibid., 131a.
35 “Sed quod hoc omnino falsum sit ostendetur in libro de Animalibus.” Ibid., 132a.
36 Borgnet remits to *De anima* 2.2.11, Ed. Colon. 7/1, 79–90, where Albert defends the uniqueness of the soul against Plato without ever mentioning the heart.
37 “Oportet ergo quod illud vehit operaciones virtutum in quolibet organum, derivetur a quo est fluxus virtutis: hoc autem est ab anima quae est in corde. Dum igitur tale vehiculum sit spiritus, spiritus secundum principium sui et sedem ex corde est, et ad cor referetur.” Alb., *Somn. Vig.* 1.1.7, Borgen. 9, 132a.
They then return to the heart so that they can be subsequently distributed through the whole body.38

In De spiritu et respiratione Albert rehearses the Peripatetic doctrine and affirms once again that spirit is the instrument of the soul, and secondly of the soul’s virtues that are its powers (vires).39 He compares the instrumental role of spirit to that of a hammer or a pickaxe wielded by an architect: in like manner, as the artisan makes an artificial form through the use of an instrument, the soul enlivens the body through spiritus.40

Bono has argued that Albert’s insistence on the instrumental notion of spirit was a move toward denying the Platonic and Neoplatonic view of spiritus as a medium of union between body and soul, expounded in Alfred of Sareshel’s De motu cordis.41

In a subsequent chapter of De somno et vigilia, Albert comments on what he calls the Platonic doctrine of three regions of the body, each of which would give origin to a certain spirit (spiritus naturalis from the liver, spiritus vitalis from the heart, and spiritus animalis from the brain). Although he argues against this notion of the tripartite soul and affirms the Aristotelian teaching that the soul is unique and has its main seat in the heart as the principle of sense and motion, he afterwards suggests a via media between those opposite views along the lines of the Avicennan solution. Albert says that even though the substance of the natural spirit comes from the heart, it receives the form to carry out its natural functions from the liver. And the same should be said of the animal spirits in the brain, for the sensory and motor powers come from the brain.42

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38 “Sic igitur in corde est virtus cujus vehiculum est spiritus: quae tamen virtus et spiritus per directionem ad unum vel aliud membrum determinantur vel contradantur in speciales virtutes et operationes: nullum enim omnino inconveniens est si dicetur quid operari per virtutem sibi attributam a corde, et postea illud operatum referri ad cor ut compleatur, et postea de illo completo iterum fieri distributionem in nutrimentum qua nutratur hepar et cor et singula alia membra in corpore animalis.” Ibid., 132b–133a.

39 “Spiritus autem sit vitae vehiculum, oportet quod spiritus secundum se sit instrumentum animae primo, et per consequens virtutum suarum quae sunt vires animae.” Alb., De spiritu et respir. 1.1.8, Borgn. 9, 225b.

40 Ibid., 225b.


42 “Quoniam licet spiritus naturalis formam naturalia periciendi forte accipiat ab hepate, sicut dicunt medici, tamen substantia spiritus fluit a corde: et ideo dico de spiritu animali in cerebro, eo quod in vegetabilibus experimentis probatur virtutem sensitivam et motivam fluere a cerebro: sed haec virtus, ut dicit Avicenna, a corde est cerebro redita: et substantia ejus et sui spiritus est a corde: determinatio autem ejus ad aliter agere est a forma quam dat cerebro, eo modo quo virtus sensus primi determinatur in organis sensuum propiorum.” Alb., Somn. Vig. 1.2.3, Borgn. 9, 142a–b.
of his *Quaestiones de animalibus* Albert will later distinguish between an origin of *spiritus* in the heart, which amounts to a “totally new change”, and an origin in the members, which can be conceived as a “generation by some kind of recreation”.

Albert does not admit that the veins originate in the liver, a statement which Galen had affirmed once and again based on the alleged fact that their openings are larger near the liver than near the heart. Following Aristotle, Albert insists that the substance of the veins is derived from the heart. He explains the claim about the relative size of their openings by adducing that these vessels dilate near the liver in order to absorb more fully the nourishment, and from the liver they ramify towards the whole body. An interesting point is that Albert affirms that this can be demonstrated by opening and anatomizing the body; in other words, he calls upon the evidence of anatomy—a characteristic Galenic criterion of evidence—to support his Aristotelian view (although, of course, the issue could not be decided by anatomical evidence).

The second treatise of *De spiritu et respirazione* (a work which explains Costa ben Luca’s *De differentia spiritus et animae*) discusses “whether the natural, vital and animal spirit is one or several”. As a whole, Albert’s treatment of the question remains mostly Aristotelian. He rehearses the Platonic opinion against which he pitches Aristotle, the crowd of Peripatetics, Avicenna, and Averroes. He repeats again the Galenic argument that veins originate from the liver and nerves from the brain, and twice again calls upon the authority of anatomy to arbitrate the controversy.

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43 “Ad istud dicendum, quod duplex est spiritus generatio: quaedam est eius totaliter nova immutatio, et talis est in corde principaliter, quia sicut a corde fluit calor, quo operatur vegetativa, sic a corde fluit spiritus, quo operatur sensitiva. Alia potest esse generatio per quandam recreationem per modum cuiusdam fomenti et confortationis vel refocillationis, et sic potest generari spiritus in singulis membris.” Alb., *Quaest. de animal.* 16.9, Ed. Colon. 12, 280a–b, lns. 31–39.

44 “Licet enim Galenus dicat, quod venarum principium est hepar, eo quod majora orificia venarum sunt ex parte hepatis, tamen hoc non est verum, sed potius substantia venarum a corde venit ad hepar, et ibi dilatantur ora earum, ut inde sugant cibi collumentum: et a corde ad hepar venientes inde ramificantur per totum corpus. Hoc autem quod dictum est, palam est ex recisionibus et divisionibus corporum, quae Graece *anatomiae* vocantur.” Alb., *Somn. Vig.* 1.2.6, Borgn. 9, 147a.


46 “Contra autem ista dicta fuit Aristoteles cum toto Peripateticorum coetu, quem sequentur Avicenna et Averroes, multis rationibus adstitulantem sententiae Aristotelis, et Platonis dogma improbantes.” Alb., *De spiritu et respir.* 2.1, Borgn. 9, 232a.
(a topic, he says, that will be discussed more fully in De animalibus).\textsuperscript{47} Albert extends his arguments to the nerves when he says that their substance comes from the heart and is conducted to the head, where it is divided in sensitive and motor nerves from the membrane that covers the brain.\textsuperscript{48}

Briefly, in these treatises Albert does not accept the Galenic idea of the origin of the veins in the liver and of the nerves in the brain on the grounds of its Platonic resonances. Besides, he affirms that the whole of spirit originates in the heart (“oritur toto a corde”).\textsuperscript{49} But he ponders upon a quite Aristotelic interpretation of the Avicennan solution, which amounts to saying that spiritus originates in the heart but receives specific powers in each of the three organs.

\textbf{Digestiones}

The Aristotelian notion of digestion involved successive stages of “concoction” (pepsis) of the nutritive materials, in each of which a residue or superfluity was separated and excreted. Aristotle described three stages of pepsis: in the stomach, in the liver, and in the heart.\textsuperscript{50} The Galenic notion of digestion was not far from the Aristotelian account.\textsuperscript{51} As systematized by Avicenna, this process consisted of four steps. The first digestion occurs in the mouth. In the second digestion, which takes place in the stomach, the food is transformed into chyle, which passes into the intestine where the residue is eliminated as feces. The chyle is absorbed by the mesenteric vein, which takes it to the liver where it is concocted into blood (third digestion). “Blood” is the mixture of the four humors (blood, black bile, yellow bile, and phlegm); the fluid residue is the urine, which goes to the kidneys. There is a fourth digestion in the veins by means of

\textsuperscript{47} “Ista disputatio non potest determinari sine sententia divisionum vel recisionum quam Graeci \textit{anatomiam} vocant.” Ibid., 232a; “Sed contrarietas illa ex multis anatomiis consideranda est in libro \textit{De animalibus}.” Ibid., 233b.
\textsuperscript{48} “Similiter autem dicimus, quod substantia nervorum venit ex corde, et ducta ad caput, ibi dividitur ex tela cerebro in nervos sensibles et motivos.” Ibid., 233b.
\textsuperscript{49} “Similiter autem est de substantia spiritus: quoniam spiritus oritur totus a corde.” Ibid., 233b–234a.
\textsuperscript{51} Michael Bolyan, “The Digestive and ‘Circulatory’ Systems,” 101–102.
which the blood is further purified of superfluities. It should be noticed that there is a difference between the natural-philosophical and the medical accounts. Avicenna postulated that the first digestion occurs in the mouth. Albert devoted one of his Quaestiones de animalibus to the discussion of this topic and he concluded that the digestion in the mouth is not properly a digestion.

Albert's treatment of digestion has been studied by Cadden and, more recently, by Reynolds. In his commentary on De anima Albert expounds the medical, Avicennan view of the four digestions. In the first treatise of De nutrimento et nutribile he provides a narrative of only three digestions, but at the same time draws upon Avicenna's Canon. Albert says that in perfect animals the first alteration of the concocted food occurs through a separation of a pure juice (succositas) from impure feces. The purer juice is attracted to the liver and since it is very watery and water humidifies more than it nurtures and promotes growth, there is a second depuration in the liver from a watery superfluity. In some animals this watery superfluity is attracted by the kidneys into the bladder; in others, it goes to the stomach and fluidifies the dry superfluity of the stomach. The third alteration is in the veins, where there is also a separation of a superfluity that in some animals ends as a sediment (hypostases) in urine; in those animals without a bladder it is united to the feces and eliminated with them. Albert notes that these three stages of nutrition transform nutriment into something similar not to this or that member, but to the whole body.

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52 Avic., Canon 1.1.4.2, fols. 6ra–6vb.
53 "In ore non est proprie digestio." Alb., Quaest. de animal. 12.7, Ed. Colon. 12, 229a, Ins. 22–23.
55 Alb., De anima 2.2.8, Ed. Colon. 7/i, 93b–94a. Albert rehearses Avic., Canon 1.1.4.2, fols. 6ra–6vb.
56 "Hoc autem patet in animalibus perfectis: quoniam in illis prima alteratio cibi cocti est per separationem succositatis magis purae a faece impure, et purior succositas trahitur ad hepar: et quia aquosa est valde...ideo secunda fit depuratio in hepace ab aquositate superflua, quae fit separatione aquei humoris ab eo qui magis aereus est terminatus subtili terreo. Et in quibusdam animalibus aquae superfluitas attrahitur per renes ad vesicam, in quibusdam redit ad stomachum, et fluidam facit superfluitatem siccam, et exit cum ipso. Tertia autem est in venis a qua etiam separatur superfluitas, quae redit ad humidam et aquosam superfluitatem per vias nutrimenti, et hypostases facit in urinis. In aliis autem animalibus conjungitur stercori, et emittitur cum ipso, sicut fit in his quae vesicam non habent. Et istae tres sunt generales digestiones et praeparationes nutrimenti, quae faciunt nutrimentum simile non huic vel illi membro, sed toti corpori." Alb., De nutrim. et nutr. 1.3, Borgen. 9, 329b.
In more general terms, Albert introduces this narrative, which is a blend of natural-philosophical and medical accounts, against an Aristotelian background that sees nutrition as a kind of motion from potency to actuality.\textsuperscript{57} The nutritive soul bestows the form of the members upon the nutriment, so that the nutriment is assimilated to that part of the living body that acts as an instrument of the soul.\textsuperscript{58} The members inform the nutriment with their own form. As has already been remarked, the notion of instrumental cause allows Albert to include in his Aristotelian account the Avicennan description of the four digestions.\textsuperscript{59} Cadden shows how in his account of nutrition in \textit{De animalibus} Albert moves toward a more unified synthesis of the natural-philosophical and medical accounts.\textsuperscript{60}

In \textit{De animalibus} Albert defines “humor” as the substance from which nutriment is transformed in the digestion in the liver (these humors are blood, yellow bile, black bile, and phlegm). But following Avicenna, he further distinguishes four kinds of “secondary humors”, “secondary moistures”, or “nutrimental moisture” (\textit{humidum nutrimentale}). The first three are the result of transformations of the fluid that exudes out of the small openings of the veins into the members. In the fourth stage of transformation of these “secondary moistures”, the product is entirely assimilated by the member’s power: it is no longer nutrimental moisture, but has been transformed into radical moisture (\textit{humidum radicale}).\textsuperscript{61} We now turn to examine this conceptual development more closely.

**Humidum Radicale**

Albert’s use of the medieval medical doctrine of the radical moisture (\textit{humidum radicale}) and the innate heat (\textit{calidus innatum}) has been discussed by Hall and McVaugh.\textsuperscript{62} As we have seen in the previous section, in \textit{De animalibus} Albert used the Avicennan doctrine of the transformation

\textsuperscript{57} Despite the fact that Albert considers three instead of four digestions, this passage can be said to have a medical character because of its neat systematization.


\textsuperscript{59} Cadden, “Albert the Great’s Universal Physiology,” 340; Reynolds, \textit{Food and the Body}, 242.


of the four secondary moistures, the result of which is the spermatic or radical moisture (*humidum radicale*), which also constitutes a part of the male sperm.⁶³

The doctrine of the four secondary moistures was closely associated with the “lamp metaphor”, which was systematized by Galen out of ancient Greek roots and was eventually rounded up by Avicenna. The idea was that the innate heat of the body was fed by the radical moisture in order to perform its vital functions, just as in a lamp the flame is fed by the oil imbibed in the wick. The radical moisture was thought of as analogous to the oil perfusing the wick, being consumed by the flame and replenished by the oil of the lamp’s deposit. As time goes by, the innate heat consumes the radical moisture and the “wick” dries up: in other words, parched members cannot continue to attract the second and third moistures.⁶⁴ In this view, aging would consist in the process through which the radical moisture is consumed by the innate heat. Albert’s knowledge of this doctrine came from Avicenna.⁶⁵ He rehearses it in *De generatione et corruptione*, when he explains how the matter of the members like the head, the eyes, and the hands, comes originally from the radical or spermatic moisture. He explains that these formal members (*membra formalia*) are crafted by the formative power in the seed, which remains in the members and acts upon the nutrimental moisture. With the passing of time, the spermatic moisture is dried up by the heat and restored by the food.⁶⁶

In the second treatise of *De morte et vita*, which depends on two of the Aristotelian *Parva naturalia*, Albert says that every living being has more heat and moisture than coldness and dryness. The *calidum originale*, which is in the seed, is conveyed to the members. A different heat is that conveyed from the heart—and, by consequence, from the liver and from the testes—to all the body, when this has been already formed and has reached a certain degree of consistency.⁶⁷ This *calidum* is fueled by

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⁶³ Avic., *Canon*, 1.1.4.1, fol. 4v. See also Hall, “Radical Moisture,” 4–5 and McVaugh, “The ‘humidum radicale’,” 265–266. The relationship between a kind of moisture that would form the final product of the process of refinement and assimilation into each member and that which forms part of the sperm is not spelled out by Avicenna.

⁶⁴ Hall, “Radical Moisture,” 5.


⁶⁶ Alb., *Gen. Corr.* 1.3.8, Ed. Colon. 5/2, 147a–b. See also Cadden, “Albert the Great’s Universal Physiology,” 335–336.

⁶⁷ “Unde quoddam est calidum originale, quod est in ipso semine: et cum membra fiunt ex semine, est per omnia membra transfunditur a corde principaliter, et per consequens ab hepate, et tertio a testiculis in totum corpus.” Alb., *De morte et vita* 2.6, Borgn. 9, 359b.
two kinds of humor. There is first the spermatic moisture (constituted from the three humors: male sperm, female sperm, and menstrual blood), from which the radical members (*membra radicalia*) are formed and in which the soul is infused.\(^68\) Second, we have the *humidum nutrimentale*, which restores and compensates for the consumption of the *humidum radicale*. The nutrimental moisture moderates the action of heat on the radical moisture and it also restores to the body materials consumed by heat.\(^69\) While the radical moisture carries the formative power of the soul (and thus it is also called spermatic moisture), the nutrimental moisture consists of the last stage of nourishment during which the members convert it to their own likeness. Albert then repeats the Avicennan metaphor of a lamp full of oil. This lamp has three moistures. One of them contains the flame with the wick, in the manner of the matter of fire; the other moisture is that which is imbibed in the wick and is prepared for the flame but is still not attracted into the matter of fire; the third is that which fills the deposit of the lamp. Albert finally spells out the meaning of the analogy. The first moisture is similar to the *humidum radicale* in which dwells the *calor naturalis*, dispersed in the radical members and ultimately proceeding from the *calor seminalis*. The second is similar to the *humidum nutrimentale*, attracted to the food and assimilated into the members. The third is similar to that *humidum* which, while still not totally assimilated, is being transferred from the veins to the members carrying the nutriment.\(^70\) Chapters 6 through 10 of Albert’s second treatise of *De morte et vita*, which discusses the causes of a longer or shorter life, depend strongly on the theory of the *humidum* and the *calor innatus*, the basis of which has been presented at the beginning of the work.\(^71\)

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\(^68\) Ibid., 359b–360a.

\(^69\) “Calor continue humidum in quo est, depascit: et ideo secundum humidum datum est in succursum primi humidi.” Ibid., 360b.

\(^70\) “Primum autem istorum humidorum est simile illi radicali humido in quo sicut in subjecto propio haeret calor naturalis, qui dispersus est in membris radicalibus, ex calore seminali procreatus. Secundum autem simile est illi parti nutrimentalis humidi, quod jam assimilatum est in membris ad cibum imbibitum et attractum. Tertium est simile illi quod nondum plene assimilatum est, sed est adhuc transfusum membris in vasis nutrimento deservientibus, quod tamen per calorem digestivum in continuo tempore assimilatur.” Ibid., 360a–b.

\(^71\) Alb., *De morte et vita* 2.1–6, Borgn. 9, 359a–368a.
The Quaestiones de animalibus are the reportatio by Friar Conrad of Austria of Albert’s teaching in Cologne in 1258. As is well known, the quaestio genre had been created to examine controversial issues and to resolve conflictive claims. I have argued elsewhere that when discussing his quaestiones Albert could have drawn upon Peter of Spain’s commentary on De animalibus taught at Siena between 1245 and 1250. This commentary has been kept in one manuscript (Madrid, Biblioteca Nacional MS 1877) and consists of 822 questions, stopping at Book 17 of De animalibus. It is the first extant Latin Scholastic commentary on Aristotle’s works on animals. Albert’s Quaestiones de animalibus is witness to the extent and depth of its author’s interest in the controversy between physicians and philosophers. I hope that a comparison of Albert’s Quaestiones with a commentary on De animalibus by a physician such as Peter of Spain will show how both works partook of a common approach to the controversy. In what follows, we will go through those questions in Albert’s Quaestiones related to the controversia against the background of the corresponding questions in Peter’s commentary.

There are only four questions in Albert’s Quaestiones de animalibus which mention explicitly the controversia inter medicos et philosophos, but the total number of those which discuss the relevant issues are ten. A group of questions deal with those points that expressed the confrontation between Aristotle’s idea of a unique soul seated in the heart and Galen’s tripartite system, with three (or four) principal organs and the account of three spirits. They ask about the origin of the veins, the origin of the nerves, the primacy of the heart among the members of the body, and whether spiritus originates in the heart. There is another set of questions that treats issues related to nourishment and digestion: the origin of the blood, its function as the ultimate nutriment of the body, and the existence of a first digestion in the mouth. Finally, a third group can be distinguished, which addresses the much discussed themes of generation: the existence of a female sperm, the material participation of the male.

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74 Ibid., 13.7; 12.10; and 12.7, Ed. Colon. 12, 241a–242b; 230a–231b; and 229a–b.
sperm in the embryo, and the question of the first organ to be generated.\textsuperscript{75} All in all, Albert touched on all the core issues of the controversy.

It is evident that Albert was more interested in finding conciliatory solutions than on defending the Aristotelian side of the problem. He answered eight of these questions through the use of a \textit{distinctio}. Only in two of them did he follow Aristotle’s opinion straightforwardly.\textsuperscript{76} On the other hand, it is well to consider that none of his answers favors the opinion of the physicians \textit{simpliciter}. In four of those eight questions answered through a \textit{distinctio} Albert distinguished between the point of view of the physicians, who rely on the evidence of the senses, and the point of view of the philosophers, who go beyond what is manifest to the senses.\textsuperscript{77} In order to better assess the import of this strategy, we now turn to Peter’s commentary on \textit{De animalibus}.

Out of a total of 822 questions in the commentary, I was able to find 24 \textit{quaestiones} that deal with the themes of the controversy: ten of them have the typically Scholastic format of the \textit{quaestio} and 14 are of the type of \textit{quaestiones et responsiones}, that is, questions with direct answers.\textsuperscript{78}

Almost all the ten questions that deal with the controversy in Albert’s \textit{Quaestiones} have a parallel question in Peter’s commentary and almost all of them receive the same solution in both authors (the exception is the question about the blood being the ultimate nutriment of the body).\textsuperscript{79} Conceptual parallelisms between Albert’s and Peter’s \textit{quaestiones} are more evident in those questions about the origin of the veins and the origin of the nerves. For example, in the question that asks where the veins originate, three of the four arguments adduced by Albert in favor of the liver and two of the four arguments in favor of the heart are close paraphrases of Peter’s arguments. The determination is the same: Albert distinguishes

\begin{footnotes}
75 Ibid., 15.19; 15.20; and 16.15, Ed. Colon. 12, 271a–272a; 272a–273b; and 285a–286b.
76 These two questions are “Utrum prima digestio sit in ore” and “Utrum cor primo generetur”. Alb., \textit{Quaest. super de animal.} 12.7 and 16.5, Ed. Colon. 12, 229a–b and 285a–286a. Albert affirms that the digestion in the mouth postulated by Avicenna is not properly a digestion. To the second question he answers that, as Aristotle said, the heart is the first organ in the development of the embryo.
77 “Quod est illud primum ad quod omnia membra animalis reducuntur,” “Utrum venae oriuntur a corde vel ab hepate,” “Utrum nervi habeant ortum a cerebro vel a corde,” “Utrum sanguis primo generetur in corde vel in hepate.” Alb., \textit{Quaest. super de animal.} 1.55; 3.3; 3.7; and 13.7, Ed. Colon. 12, 107b–108b; 124b–125b; 128a; and 241a–242b.
78 These \textit{quaestiones} are transcribed in Miguel de Asúa, “El comentario de Pedro Hispano sobre el \textit{De animalibus}” (see above, note 26).
\end{footnotes}
between an origin “virtualis et radicalis” (the heart) and another “corporalis” (the liver). In his turn, Peter affirms that “secundum virtutem et radicaliter” the heart is the origin of the veins, while “immediate secundum rem”, its origin is the liver.

In the questions about the origin of the nerves, the two arguments in favor of the heart and those two in favor of the brain discussed by Albert are rehearsals of Peter's arguments. The determination is also the same in both texts: Albert again distinguishes between an origin of the nerves “virtualis et radicalis” (the heart) and another “corporalis et immediatus” (the brain), while Peter says that “radicaliter et secundum virtutem” the origin of the nerves is the heart, but “secundum rem et materialiter” it is the brain. The question that attempts to decide whether the blood originates in the liver or in the heart is also resolved by Albert and by Peter through the use of this distinction.

In the question about the principal members of the body, Albert says that physicians are “artisans” (“sensibiles opifices”) who consider things sensorially (“respiciunt ad sensum”). They judge about something “according to what they perceive through the senses and not according to what things are in se” (“sensibiliter, ut eis apparat, et non secundum rem”). This characterization of the physician’s way of knowledge as depending on the evidence of the senses can be traced back to Avicenna. The Canon claims that the discourse of the doctors is more evident (“magis manifestus”), but the philosopher’s is truer (“veracior”). The solution, then, rests upon a criterion associated with an epistemological characterization of

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81 Madrid, Biblioteca Nacional, MS 1877, fol. 261ra.
82 Alb., Quaest. super de animal. 3.7, Ed. Colon. 12, 128a.
83 Madrid, BN 1877, fol. 261rb.
87 Avic., Canon 1.1.5.1, fol. 7va. Besides, Avicenna claims that it does not correspond to the physicians to argue demonstratively or to decide which of two contradictory enunciates is true. Ibid., fol. 7rab.
philosophers and doctors. Peter's question on this matter has a similar formulation and solution.  

The differences between Albert and Peter are reduced to the issue of generation. Aristotle had postulated that the male sperm did not form part of the embryo, while Galen claimed that it did. Albert answers the question that asks whether the male sperm is a part of the *conceptus* by distinguishing two parts in the sperm: (a) a moisture derivating from the digestion of the ultimate nutriment, and (b) the power of the father's soul, located in a certain foamy spirit. The first can become a part of the *conceptus* (a bow to Galen), but not the second, as Aristotle had said. 

Peter's answer is different. His solution is that in some species (for example, fishes) the male seed does not form part of the *conceptus*, while in another species (goat, human being) it does. In the question about the female sperm, Albert concludes that, “proprie loquendo femina non spermatizat”, but that “aliquo modo” there is a female sperm—although it does not participate in generation “secundum propriam rationem spermatis”. Peter answers straightforwardly claiming that “mulieres non spermatizant”. 

This comparison suggests that in the case of the questions dealing with the controversy Albert could have drawn fragmentarily upon Peter's commentary just as he probably did for the whole of his *Quaestiones*. Of course, it could plausibly be argued that Albert's familiarity with Avicenna could have led him to formulate similar solutions, quite independently of Peter's commentary. My own opinion is that in the group of questions on the *controversia*, as well as in the rest of the questions, Albert

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88 Madrid, BN 1877, fol. 280rb.
90 Madrid, BN 1877, fol. 285vab.

92 Madrid, BN 1877, fol. 285rab.
was inspired, at least in a general sense, by Peter’s previous commentary. In any case, it is interesting to notice that Albert differs from Peter on the crucial issue of the participation of the male sperm in the conceptus and, in a qualified sense, also with regard to the existence of the female seed, where he adopted the Galenic position, while Peter remained staunchly Aristotelian.

**Glossa. The Unification of Discourse**

In the third and last part of this essay I will discuss how Albert used a particular technique of commentary, that is, the gloss, to mediate between philosophers and physicians. In *De animalibus* he added interpolations to Michael Scot’s Latin translation of the Arabic version of the Aristotelian treatises on animals, with the result that Albert’s text itself is a veritable quilt of words. The editor of the standard Latin edition, Hermann Stadler, used typographical signs to distinguish the original text and Albert’s additions, so that it is possible to examine how Albert included small fragments of text in order to resignify Aristotle’s original meaning (Albert’s additions are contained between double and single bars). We will examine the case of the anatomy of the heart and that of the levels of organization of living beings.

**The Heart**

Aristotle distinguished two blood vessels in the thorax: a major or great blood vessel (called by Albert *vena maior*) and a minor one (called by Albert *orthy*).\(^{93}\) Aristotle also described three chambers in the heart: right, left, and middle.\(^{94}\) According to Aristotle’s account, the wall of the *orthy* has a sinewy texture; this vessel originates in the middle ventricle. The great blood vessel has a membranous texture and it originates in the right ventricle.\(^{95}\)

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94 This has caused much discussion. For a review see James Rochester Shaw, “Models for Cardiac Structure and Function in Aristotle,” *Journal of the History of Biology* 5 (1972), 355–388. Shaw argues that the greatblood vessel (inferior vena cava) is attached to the larger chamber (right ventricle); Aristotle’s “middle cavity” (where the aorta is born) is the left ventricle; and the left atrium would be the smallest “left cavity.”

The first book of Albert’s *De animalibus* gives a different account (this is Albert’s anatomy, which drew heavily upon the Galenic material of the *Canon*). Galen, and Albert after him, distinguished between *arteriae pulsantes* (arteries) and *arteriae quietae* (veins). Besides, Galen described only two ventricles or chambers in the human heart—right and left. The *arteriae pulsantes* (arteries) carry spirit and subtle blood from the left ventricle of the heart, and the *arteriae quietae* (veins) transport nutriment from the liver to the right ventricle.

In the first treatise of Book 3 of *De animalibus* Albert tried to conciliate the Aristotelian and Galenic accounts of the anatomy of the heart, reading the Aristotelian text in terms of Galenic notions. As we have seen, Aristotle talks of two blood vessels in the thorax: a major or great blood vessel (*vena maior*) and a minor one (*orthy*). Albert begins his commentary on this Aristotelian passage by establishing that the vessels called by Aristotle *vena maior* and *orthy* are *venae pulsantes* (this is Galenic nomenclature). The original sentence in Scot (as reconstructed from Stadler’s notation) was: “The place of origin [of the Aristotelian great blood vessel and *orthy*] is the heart (Harum [great blood vessel and *orthy*] autem est cor principium)”. Albert inserts a group of words (here written in italics) so that the definitive sentence, which refers to the Aristotelian great blood vessel and *orthy*, reads: “The place of origin of these two pulsating veins is, without doubt, according to all natural philosophers, the heart.”

The characterization of the Aristotelian great blood vessel as a Galenic *vena pulsans* on the basis of anatomical evidence (“visus enim hoc testificatur”) is inconsistent, for according to what Albert had said in the

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96 Alb., *De animal.* 1.2.20, ed. Stadler, 1: 135–141.
98 Alb., *De animal.* 1.2.20.382, ed. Stadler, 1: 136.
99 Of the two *arteriae pulsantes* originated in the left chamber there is one that goes to the lungs. This was called by Galen *arteria venalis* (venous artery), because it is the only artery with one tunic. The other is the *orthy* (*aortha*), which originates in the left ventricle. Ibid., 1.2.20.385, ed. Stadler, 1: 137.
100 Ibid., 3.1.2, 277–308.
first book of *De animalibus* when paraphrasing the Galenic doctrine, the *venae pulsantes* have their origin in the left side of the heart and, according to Aristotle, the great blood vessel originates in the right chamber.\(^{103}\) Besides, if the great blood vessel or *vena maior* is a *vena pulsans*, then according to Galen it has to have two tunics and a thick wall. But Aristotle had described the great blood vessel (*vena maior*) as membranous and skin-like.\(^{104}\) As can be seen, in this particular case Albert’s effort to conciliate both accounts was not entirely successful. But that only shows the limits imposed by the textual materials. It does not detract from the consistency of his intention.

**Complexion**

In the first chapter of the first treatise of Book 12 of *De animalibus*, Albert comments on the passage of *Parts of Animals* where Aristotle had distinguished three kinds of composition of parts in living beings: the composition or synthesis out of the elements (earth, air, water, and fire), the composition of the uniform substances, like bone and flesh—which constitute the uniform parts—and the composition of the non-uniform parts (organs), for example, the hand, or the stomach.\(^{105}\) Albert assumes this scheme of elements, uniform parts, and non-uniform parts, but at the same time introduces an interesting variation. Following Aristotle, he defines the first level as the composition of the elements (“compositionis originalis sive mixtio”) and the third level as the composition of the non-uniform parts.\(^{106}\) But when he talks about the second level, which...
for Aristotle was the composition of the uniform parts, Albert introduces
the notion of complexio or mixture of the humors, out of which these
uniform parts would be built.\textsuperscript{107} In this way, Albert assimilated the idea of
humoral complexion to the second Aristotelian level, thus finding a way
to introduce the Galenic theory of humors into the Aristotelian three-tier
scheme. In fact, at the beginning of the commentary Albert had already
proposed a neat formula of his view on the levels of organization, distin-
guishing between the mixture of the elements (commixtio elementorum),
the complexion of the humors (complexio humorum), and the composi-
tion of the members (compositio membrorum).\textsuperscript{108} Moreover, Albert had
expounded this scheme in *De homine*—which once more demonstrates
his early acquaintance with Avicenna’s *Canon*. Commenting on the first
book of Aristotle’s *De generatione et corruptione*, he distinguishes between
the parts of the body that lack a definite form but are defined according
to their matter (materialia) and those parts that are defined in terms of
their form (formalia), like the hand or the head. Then he mentions the
humors, which are generated through commixtio from the elements. The
“partes mediae”, generated from the humors, are also called “similar parts”
(similia), like flesh, nervous tissue, and so on.\textsuperscript{109}

Albert took his material about complexion theory from Avicenna who,
in the first book of the *Canon* and after speaking of the mixture of the
elements (commixtio elementorum) as the first level of organization,\textsuperscript{110}
introduces the notion of complexion as the second level: “Complexion
is a quality which arises from the reciprocal action and passion of the

\textsuperscript{107} Ibid.

\textsuperscript{108} *De animal*. 1.1.1, ed. Stadler, 1: 1. That Albert considered this as an important develop-
ment is evident from the fact that he referred to it on three occasions: in the opening
chapter of *De animalibus*, in the first chapter of the first treatise of Book 12, and as a sum-
mary, in Chapter 4 of that same treatise. *De animal.*, 1.1.1; 12.1.1; and 12.1.4, ed. Stadler, 1:
1–4; 798–804; and 817–823. Moreover, the scheme of commixtio elementorum, complexio
humorum, and compositio membrorum was absent from the first redaction of Chapter 1
of *De animalibus*, where these ideas were expounded in a tentative form. See F. Pelster,
“Die ersten beiden Kapitel der Erklärung Alberts des Grossen zu De animalibus in ihrer
ursprünglichen Fassung,” *Scholastik* 10 (1935), 229–240.

\textsuperscript{109} “Sunt partes in corpore animato, quae sunt secundum speciem, et partes quae sunt
secundum materiam. Sunt enim in corpore membra anomiomera, ut manus, et partes,
quae sunt secundum speciem et formam . . . Et sunt humores qui sunt vicinissima iuxta
materiam elementorum, ex quibus generantur per commixtionem. Et sunt quaedam partes
mediae, ex quibus componuntur anomiomera, et quae secundum diversas compositiones
generantur ex humoribus: et illa sunt membra quae dicuntur similia, ut caro, nervus, os,
et hujusmodi; et illa sunt media inter materialia et formalia.” Alb., *De homine*, q. 11, art. 4,
Borgen, 35, 124b. See also Alb., *Gen. Corr.* 1.3.8, Ed. Colon. 5/2, 145b–146a.

\textsuperscript{110} Avic., *Canon* 1.1.2, fol. 1vb.
contrary qualities in the elements.”¹¹¹ But it is significant that, while Avicenna defines *complexio* in the sense of the Aristotelian *krasis*—as a blend of elemental qualities—Albert, after rehearsing Avicenna’s definition, uses *complexio* in the sense of “composition of the humors” (*compositio humorum*).¹¹²

In the fourth chapter of the first treatise of Book 12 in *De animalibus*, Albert introduces a dynamic perspective on this theory, showing in what way the elements change themselves through their composition until the humors are produced; and how the humors, through a “complexional transmutation”, constitute the uniform parts (*membra consimilia*), and how these are organized into the organs (*membra officialia*).¹¹³ Albert’s articulation of the humoral and complexional theory with the Aristotelian doctrine of the levels of organization legitimized his use of humoral explanations within the Aristotelian framework of his commentary. It is true that there is no blatant contradiction between both schemes and that Albert’s ideas in this respect have been derived in substance from Avicenna and the medical theory currently accepted in the 12th century. What is significant for our inquiry is that Albert’s doctrine of the *commixtio elementorum*, *complexio humorum*, and *compositio membrorum* reveals his determination to provide a homogeneous discourse on the living being, able to absorb Aristotelian and Galenic explanations.

¹¹¹ “Complexio est qualitas quae ex actione ad invicem et passione contrariarum qualitatum in elementis inventarum.” Avic., *Canon* 1.1.3, fol. 2ra. In fact, Albert’s definition of *complexio* in *De animal. 12.1.1* was taken verbatim from Avicenna’s *De animalibus* and not from the *Canon*. Alb., *De animal. 12.1.1*, ed. Stadler, 1: 798 and Avic., *Abbreviatio de animalibus* 12 (Venice: 1508; repr. Frankfurt am Main: 1961), fols. 44vb–45ra.

¹¹² Besides, Avicenna in the *Canon* does not talk about the third level—the composition of the non-uniform parts or organs, but about the *complexio membrorum*, thus differing from Albert’s account. Avic., *Canon* 1.1.4, fol. 3rb. While *complexio* was a word associated with the blending of the qualities of the elements (and in this sense it was used by Constantine the African and Avicenna), the word usually associated with humors was *temperamentum*. But both words were interchangeable. See D. Jacquart, “De crasis a complexio: Note sur le vocabulaire du tempérament en latin médiéval,” in *Mémoires V. Textes médicaux latins antiques*, ed. G. Sabbah (Saint-Etienne: 1984), 71–76. As we have seen, in his introduction of the humors in the Aristotelian three-tier scheme, Albert, quoting from Avicenna, defines *complexion* in the Aristotelian sense as the blending of the qualities; but he immediately uses this notion to denote the blending of the humors (as an equivalent of *temperamentum*).

¹¹³ Alb., *De animal. 12.1.4.50*, ed. Stadler, 1: 817.
The controversy between philosophers and physicians was the expression of the encounter of two bodies of learning which partially overlapped their subject matter while pronouncing contrary claims about many particular issues. On the side of the physicians, the *controversia* became a hallmark of Scholastic medicine. Peter of Spain, Taddeo Alderotti, and Peter of Abano were the *medici* whom we readily associate with this climate of thought. There was, at least, one natural philosopher who stands as an equal among the physicians, and that was Albert. Albert was the natural philosopher whom we can single out as a protagonist in this dialogue. As our survey has shown, he did not take the Aristotelian side of the controversy as could be expected of a natural philosopher, but mostly intended to mediate between both sides and, in the case of the female seed, he followed the opinion of Galen against Aristotle and Avicenna.

It has already been argued that Albert became increasingly interested in matters medical, as can be shown by the increasing frequency of his quotations of Galen. I think that I have provided enough evidence to show that Albert’s handling of the controversy went through several stages, each of them associated with the use of different textual techniques.

In the *Parva naturalia* Albert included shorter or longer fragments of medical sources. In the case of the doctrine of *spiritus*, which compromised the tenet of the unicity of the soul, Albert remained within the boundaries of his Aristotelianism. But he readily incorporated the medical doctrines of the *calidum innatum*, the four digestions, and the secondary moistures.

It could have been Albert’s acquaintance with Peter of Spain’s commentary which prompted his decision to devote a series of *quaestiones* to *De animalibus*. But even if Peter’s commentary did not play any significant role in the development, Albert’s use of the technique of the *quaestio* signaled an important step ahead on the way of his evolving commitment to the controversy. Certainly, the *quaestio* was a dialectical tool designed to deal with controversial claims and to explain through the use of distinctions the contradictions among authors with equivalent claims as auctori-tates. In the *Quaestiones de animalibus* Albert follows Avicenna’s solution in the question of the principal members of the body and the origin of the arteries, veins, and nerves, which reveals his willingness to adopt a
more nuanced point of view than the one he had sustained in the *Parva naturalia*. At the same time, he adopted a distinction based on an epistemological difference between the physicians who followed appearances, and the philosophers who aspired to reach the ultimate truth of things. This was congruent with his previous discussion in *De sensu et sensato* of the methodological difference between physicians and philosophers: while the former proceed from particulars to universals, the latter reason in the opposite direction.

Finally, Albert's idiosyncratic *glossa* in *De animalibus* was a device which, notwithstanding occasional shortcomings (such as the discussion on the anatomy of the heart), he handled dexterously with an aim of unifying the natural-philosophical and medical discourse. The version of the Avicennan solution to the question of the levels of organization in living beings explained in *De animalibus* was more fully elaborated than the earlier one in the *Parva naturalia*.

Albert's intention of reconciling *auctoritates* might be credited to his discerning view of the weight each of them should be given, when considerations of expertise in a certain *scientia* were at stake. His famous dictum "If the discussion concerns medicine, I would rather believe Galen or Hippocrates, and if it concerns things of nature, Aristotle or anyone else experienced in natural things," may be taken as an epitome of his rationale for the attempt at reconciling physicians and philosophers. Albert showed a keen sense for discursive techniques. After all, his inclusion of whole genres of writings (a herbal, a *lapidarium*, and an encyclopedia on animals) within his Aristotelian commentary was a textual tour de force. It is true that in the *Parva naturalia* Albert more than once calls upon anatomy as a criterion for deciding between contradictory claims, because since Galen anatomical evidence had been a medical epistemological criterion. But Albert's declared submission to the judgment of anatomy was always accompanied by a mention of his commentary on

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117 Miguel de Asúa, "Minerals, Plants and Animals" (see above, note 14).

De animalibus. Thus, we are not compelled to accept that when Albert referred to anatomy, he was thinking about actually dissecting human bodies. It seems far more plausible to accept that he was thinking about reading (anatomical) texts—as the whole anatomical tradition did, even after Vesalius. Moreover, his inclusion of Avicenna’s anatomy is another fine illustration of his unrelenting efforts to absorb different genres of writing within his commentaries: in this case he managed to include a whole treatise on human anatomy within the Aristotelian De animalibus without doing textual violence to either of them.

Much of the scholarship devoted to Albert during the 20th century followed Pouchet’s approach. As a result, around the middle of the 19th century Albert became a symbol of the medieval “scientist”, when the prevalent strands of philosophy of science in France and Germany were one or other variant of positivism. The creation of a positivistic Albert, whose glory would result from “personal observations”, the discernment between “facts” and “legends”, and even the performing of “experiments”, perhaps made sense in an era whose culture of science valued and eulogized those attitudes. I have tried to bring forward evidence in favor of the alternative view that, as important as Albert’s “empirical” attitude toward nature might have been, his concern for textual strategies aimed at the conciliation of conflictive discourse was no less significant. It is this dimension of his work as a master of the textual strategies of discourse, revealed by his protagonical role in the controversy between philosophers and physicians, which tells us about the stature of his figure perhaps more than the popular conception of him as a 19th-century scientist avant-la-lettre ever could do.

ANTHROPOLOGY:
ALBERT THE GREAT ON THE COGITATIVE POWER

Benedict M. Ashley, OP

1. Albert's Psychology

The concept of a *vis cogitativa* or “particular reason” in the human brain as the immediate instrument used by the human spiritual intelligence to process the information coming to it from the external senses, and which uses it to guide bodily action, is central to the so-called “mind–body” problem much debated in psychology today. To understand Albert’s views on this topic, it is important first to note that the term “psychology” only became common in the 18th century and conceals an essential distinction that can lead to serious confusions.¹

For Aristotelians, there are only three theoretical disciplines: natural science, mathematics, and metaphysics, and the latter two presuppose natural science as epistemologically first.² The study of the human being, anthropology, is the culminating part of natural science, but this study culminates in proving that the soul that animates the human body cannot be material because human thinking can transcend material existents by proving that they have immaterial causes. The positive metaphysical exploration of these causes requires the use of analogies from material effects to these transcendent causes, but lies beyond the scope of natural science.

Thus the term “psychology” (study of the soul) refers to a borderline set of questions that begins in natural science but can be finished only

¹ The term first occurs in 1590 in works of the German Protestant philosopher Rudolph Göeckel (Goclenius) but became popular only after 1719 from the Cartesian-Leibnitzian Christian von Wolff’s (1759–1854) textbook *Rational Ideas on the Power of Human Understanding* used throughout German universities. This work introduced the distinction between “science” (i.e. natural science) and "philosophy".

² On this division of disciplines see my *The Way Toward Wisdom: An Interdisciplinary and Intercultural Introduction to Metaphysics* (Naples, Fla.: 2006). Natural science comes first as directly based on sense knowledge. Logic does not deal with mind-independent reality but with mental relations used in constructing natural science. Mathematics abstracts from real quantity that natural science proves to be the first property of sensible substances. Metaphysics is based on natural science’s demonstration from effect to cause that immaterial as well as physical substances exist.
in metaphysics. Albert the Great studied in great detail the metaphysical problems raised by the Greek, Jewish, Christian, and Muslim Aristotelian commentators concerning the immateriality of the human soul and its powers, the active and potential intellects, and the free will. In this, he anticipated the still more precise work of his pupil Thomas Aquinas. As Étienne Gilson rightly judged, the positions of Albert and Thomas on these questions essentially agree.3

Albert and Thomas, with Aristotle, were convinced that anthropology must avoid Platonic dualism, yet natural science must remain open to the possibility of a non-material principle in the human person. Hence, it must study how the knowledge of reality received through the external or primary senses is mediated by the internal senses to make possible the abstraction of immaterial universal intellectual concepts, as is evidently the case in scientific reflection concerning laws of nature or of mathematics.

This essay will principally deal with Albert’s views on what he calls the *vis aestimativa* or instinct in animals, and its elevation in the human person to the status of what Averroes and Aquinas call the *vis cogitativa* in man as a power that mediates between the bodily senses and the spiritual intellect and is thus central to any non-dualistic, yet non-reductionist anthropology.

The psychology (granted the foregoing) of Albert the Great received its first extensive modern discussion by Arthur C. Schneider, *Die Psychologie Alberts des Grossen nach den Quellen*.4 Among later treatments were the 1934 Catholic University of America dissertation of George C. Reilly, OP, which received little recognition, *The Psychology of Saint Albert the Great Compared with that of St. Thomas Aquinas*,5 and the more often quoted

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3 *History of Christian Philosophy in the Middle Ages* (New York: 1955), 277–294. Gilson shows that Albert was not so much concerned to find new solutions, nor, although he outlived Thomas, much affected by Thomas’s work, as to refute errors incompatible with Christian faith.

4 2 vols (Münster: 1903–06). Other works on this subject but not much concerned with the internal senses have been Étienne Gilson, “L’âme rationelle selon Albert le Grand,” *Archives d’histoire doctrinale et littéraire du moyen âge* 14 (1943–45), 5–72; A.C. Pegis, *St. Thomas and the Problem of the Soul in the XIII Century* (Toronto: 1934); Albert-Marie Ethier, “Le double definition de l’âme chez Albert le Grand,” in *Philosophie, Études et recherches publiées par le Collège Dominicain d’Ottawa 1, Philosophie 1* (Ottawa: 1936), 79–110.

5 (Washington, D.C.: 1934). The chapters of this work are: (1) The Writings of St. Albert; (2) The Soul-Union of Body and Soul; (3) The Lower Cognitive Powers; (4) Intellect and Rational Life; (5) Theory of Knowledge; (6) the Lower Appetitive Powers; (7) The Will and Freedom, Conclusion: Bibliography.
and wide-ranging article of H.A. Wolfson, “The Internal Senses in Latin, Arabic, and Hebrew Philosophical Texts.” Yet it has since been the subject of much research that has more accurately placed Albert’s view in historical perspective, as I will first summarize.

Already at the time of the so-called “scientific revolution”, the great Thomist Jean Poinsot (John of St Thomas, 1589–1644), in discussing the classification of the “internal senses” (or, so as to escape ambiguity about the somatosensory system, the secondary or processing senses), lists five opinions whose proponents were known to him: (1) the Persian Muslim Avicenna (Ibn-Sina, ca. 980–1037), followed by Albert the Great (d. 1280), who distinguished five processing senses: sensus communis (I prefer the term synthetic sense), imagination, estimative, phantasia, and memory; (2) Albert’s student, St Thomas Aquinas (1225–74), who distinguished four such senses, combining the imagination and the phantasia or fancy; (3) the Greek physician Galen (AD 129–200), St Gregory of Nyssa (ca. 335–after 394), St John of Damascus (ca. 676–749), Nemesius (fl. AD 300), and, among the baroque scholastics, the Portuguese Jesuit Conimbricenses (1596–1601) and the Dominican Bañez recognized three: sensus communis, imagination, and memory, while (4) the Jesuit Fonseca (1528–99) and also some sections of the Conimbricenses commentary recognized only the sensus communis; (5) finally, the Dominican Thomas de Vio (Cardinal Cajetan, 1469–1534), and the Jesuit Francisco Suarez (1548–1617), who both read Aristotle as saying that all these are merely distinct acts of a single internal sense power. These different views resulted from the fact that Aristotle’s De anima is a very incomplete work because, among other reasons, he supposed that the heart, not the brain, was the directive organ of the animal body.

Of these studies the most satisfactory, in my opinion, has been by Pierre Michaud-Quantin, La Psychologie de l’Activité chez Albert Le Grand (not translated into English). He shows that Albert was a major promoter of a genuinely Aristotelian anthropology, especially by his emphasis on the

6 Harvard Theological Review 28 (1935), 69–133.
8 See “Basic Somatosensory Pathway” [http://thalamus.wustl.edu].
9 Ioannis a Sancto Thoma, OP, Cursus Philosophicus Thomisticus, 4, q. 8, a. 1, ed. Beatus Reiser OSB, 3 vols (Turin: 1930–37), vol. 3: 241–244. The entirety of Question 8, 241–271 is probably the Thomistic statement on this whole question, which is still unsurpassed for its thoroughness and accuracy.
10 (Bibliothèque Thomiste) 36 (Paris, 1966).
material, natural science aspects of human activity in the physical organs of movement. This required him to reconcile Aristotle’s biology with the medical knowledge of Galen and, among the Arabs, especially with that of Avicenna. Thus for Albert, while the central, dynamic organ of the body is the heart, as Aristotle thought, the brain, by reason of its watery coolness is the site of the diverse, internal data-processing sense organs, which are, however, activated by the hot heart. Yet he also recognized the role of the central nervous system and put stress on the specifying human brain as the instrument of the highly varied technologies evident in different cultures.11

As a Christian theologian, Albert also attempted to assimilate this empirical Aristotelian psychology with the Platonic themes of St Augustine and the patristic tradition. Both as theologian and philosopher, as Thérèse Bonin has recently shown in an excellent article, “The Emanative Psychology of Albert the Great,”12 Albert, without deserting Aristotle, made great use of the Neoplatonic notion of “emanation” or the “flow” of lesser realities from greater, more concentrated principles to unify all creation, including the complexity of human nature.

Albert deals with the individuality of each organism resulting from its complexion or mixture of the elements of the cold, dry, wet, and hot resulting in diverse temperaments and attempts to relate these to the geographical and climactic environment that could explain an animal’s affectivity and movement.13 These apply also to human behavior and limit but do not remove its freedom in decision making. In particular, Albert was interested in the chemistry of gender14 and aging.15 While other medieval writers also showed considerable interest in such matters, most theologians neglected them.

Albert concerned himself with the vegetative level of human life with its functions of nutrition, growth, and reproduction as fundamental and then went on to the movements proper to animal life, even to appar-

12 Topoi 19/1 (2000), 45–58; see also Adriana Caparello, Senso e interioritá in Alberto Magno (Rome: 1993).
13 See, for example, Quaest. super de animal. 8.5–9, Ed. Colon. 12, 190–191, on the differences of sheep and goats.
14 Quaest. super de animal. 15.1–11, Ed. Colon. 12, 259–266. In q. 9 he explains the notorious statement of Aristotle that the female is a defective male to mean that while considering the universality of human nature male and female are equally necessary to preserve the species, but that less heat or other conditions of the matter result in a female rather than a male in order to provide for this reproductive difference.
15 Quaest. super de animal. 15.8, Ed. Colon. 12, 263–264.
ently motionless creatures, such as sponges that nevertheless dilate and contract. He pondered all types of progressive motions, whether natural, such as those due to weight, magnetism, and muscular contraction, or violent.\textsuperscript{16} He explained these causally both by the appetitive drives of the animal but also in terms of energy derived from the sun and other celestial bodies.\textsuperscript{17} Thus, Albert brought such information as he could acquire by his extensive reading, supplemented by his own observations during his many travels, to bear on theological questions to a degree that even his great pupil Aquinas failed to match.

Yet Michaud-Quantin emphasizes that Albert’s Aristotelianism and his acute interest in bees, ants, and whales did not lead him to neglect other theological themes less related to the Philosopher’s work, such as sensuality, the inferior and superior reason, free will, conscience, and the image of God in the human soul. In fact, Albert was clearer than most of his predecessors had been on the distinction, so central to Aquinas’s theology, between nature and grace, and therefore made a fundamental contribution to the development of Catholic doctrine and to a systematically unified theology.

2. The Sources of Albert’s Psychology

Since 1966, when Michaud-Quantin wrote, much further research has been done on the sources of Albert’s thought, besides Plato and Aristotle, which I will treat only briefly to contextualize the question of his view of the human internal senses with which this essay is concerned. I am not an Arabist and must in this matter rely chiefly on secondary sources. The most detailed recent study on this question is that of Dag Nikolaus Hasse\textsuperscript{18} on both the Arabic and Latin versions of Avicenna’s \textit{De anima}, which has shown that this Persian Muslim’s thought had a greater and

\textsuperscript{16} Especially in his \textit{De princ. mot. proc.}, Ed. Colon. 12.
\textsuperscript{17} \textit{Quaest. super de animal. 16.5–8}, Ed. Colon. 12, 276–280.
earlier influence on the history of medieval and Renaissance thought than did that of the Spanish Muslim Averroes (Ibn Rushd, 1126–98), later honored by medieval writers as the Commentator.\(^{19}\) Because Avicenna\(^{20}\) was a learned medical doctor he brought to this question the understanding of the nervous system developed by the ancient Greek Alexandrian anatomists. It was this information that was used by Albert the Great in his commentary on Aristotle’s *De anima*, especially as regards the *vis aestimativa* in animals, which Albert and Thomas Aquinas argue in human persons becomes the *vis cogitativa* that directly serves the spiritual intelligence as the instrument of both its theoretical and practical operations.

For the whole Aristotelian tradition and for modern Thomism this has corrected the two basic errors in Aristotle’s thought that historically discredited it in the face of the “Scientific Revolution”. These two errors were:\(^{21}\)

1. Aristotle’s hypothesis\(^{22}\) of the eternity of the universe and hence its cyclical dynamics that led him to adopt without proof a geocentric astronomy of celestial spheres composed of a kind of matter essentially different from that of our sublunar terrestrial region;
2. Aristotle’s hypothesis, based on his defective chemistry and anatomy, that the principal organ or prime mover of higher animals, including the human animal, is the heart and not the brain.\(^{23}\)

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\(^{22}\) Both Albert and Aquinas in their commentaries on Aristotle’s *De Caelo* I, in which he argued for the eternity of the world, concluded that his arguments are merely hypothetical. I would argue that if Aristotle considered his arguments merely dialectical (as, Aquinas notes, he seems to say in *Topics* 1, c. 9) he then should have also developed the consequences of the alternative hypothesis like the present big bang theory, that the world had a beginning.

\(^{23}\) For a discussion of Aristotle’s views on heart and brain followed by Aquinas, and revived by some modern Catholic theologians in the ethics of abortion debate as “delayed
Yet neither of these errors is a logical consequence of Aristotle’s analysis of the basic principles of natural science, which remain sound, although often ignored, even today. Nor are these errors due to any failure on Aristotle’s part to employ a sound empirical methodology in his natural science, but instead were the result of the faulty empirical data available to him, because he lacked modern instruments and techniques of observation, such as the telescope and microscope.

Although histories of science often neglect to point this out, the correction of this error of geocentrism had already been proposed by one of Aristotle’s disciples working in the Alexandrian Museum founded in imitation of his Athenian Lyceum by another of Aristotle’s disciples, Demetrius of Phaleron (350–280 BC). This was Aristoxenus of Tarentum (or Samos) who argued for heliocentrism, a hypothesis that some 1800 years later Copernicus took up again. Yet this hypothesis was not proved until 1838, when Friedrich W. Bessel was able with a much improved telescope to observe the stellar parallax that establishes the earth’s orbital movement. Similarly, Erasistratus of Chios (ca. 330–250 BC) and Herophilus of Chalcedon (335–280 BC), both working in Alexandria, were the first vivisectionists, who, long before Galen in the 2nd century AD, discovered the nervous system and the primacy of the brain, thus correcting Aristotle’s second great error that the heart and not the brain is the primary organ of the body. Albert and Aquinas can be faulted for trying to reconcile Aristotle’s view with that of Galen, which they knew, but their mistake was due to the faulty chemistry with which they still had to work.

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24 For a recent defense of these by a noted physicist, see Anthony Rizzi, *The Science Before Science: A Guide to Thinking in the Twenty-First Century* (Baton Rouge, La.: 2004).


Deborah Black has shown in an essay, “Imagination and Estimation: Arabic Paradigms and Western Transformations,” that Albert's treatment of the estimative sense was also influenced by the Arab Muslims Algazel (Al-Ghazali, AD 1058–1111), Avicenna, and Averroes. Avicenna, who was the major influence on Albert’s psychology, used three epistemological principles to differentiate the internal senses:

1. Internal sense powers are distinguished by their objects, and these are either the images (forms) of the proper and common sensibles or nonsensible intentions added to them.
2. They are also distinguished as active if they manipulate their objects and passive if they merely receive them.
3. Yet a faculty cannot be both actively receptive and passively retentive; since an actively receptive organ must be easily changeable, a retentive organ must be stable.

Avicenna, however, is not very clear about what a non-sensed “intention” is, except that it is not an image derived from any of the material objects of the five external senses. Yet it includes what we today call an animal’s “instincts”, such as a perception of danger or a mate or offspring needing care that are added to the images retained by the retentive imagination and estimative faculties of both animals and humans. Consequently, for Avicenna this estimative faculty is the highest, ruling animal faculty in the animal and it “judges” the results of the other faculties by adding to them intentions relating to other sensible objects not actually present to the external senses. For example, a sheep recognizes a wolf as an enemy. Avicenna further notes that this estimation, although it often judges falsely and causes the animal to act inappropriately, can also support an action that the human intelligence correctly judges to be good.

Therefore, Avicenna held for a fivefold division of the internal senses:

1. The common sense that receives sensible forms or images from the external senses;

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27 Topoi 19/1 (2000), 59–75.
28 Hasse, Avicenna’s ‘De anima’ in the Latin West, 127–153, discusses in great detail Avicenna’s understanding of “intention”, which he argues would better be called “connotational attributes” because of the great extension they have for Avicenna. They can really belong to the extramental object of the senses and not merely to the animal’s perception of it. I do not understand how, if this is the case, they can be said to be “insensate”, that is, not sensed.
2. The formative or retentive imagination (Latin *imaginatio*) that retains these images;
3. The estimative faculty that receives these images with their added intentions;
4. The memory retains these images with their added “intentions”;
5. The compositive imagination (Latin *phantasia*) composes and divides both forms and “intentions” with one another in a spontaneous manner, even in sleep.

Albert was also influenced by the Spanish Muslim Averroes, though he had fundamental disagreements with his psychological views, especially in two respects:

1. Imagination is sufficient to explain what animal estimation is supposed to do for animals, while in humans he replaced this with the *vis cogitativa*.
2. The human person has only four internal senses: the common sense; imagination (including the retentive and compositive functions Avicenna assigned to *phantasia*); the cogitative faculty; and memory.

Thus, Averroes really eliminated not just one, but two internal sense powers, namely, compositive imagination (*phantasia*) and estimation, since he assigns their various functions in humans to either imagination or rational cogitation, thus seeming to leave non-human animals with only two internal sense faculties: that is, the common sense and imagination. He also understands “intention” as primarily an awareness of individuals as such, since for him the cogitative faculty abstracts the individual from the proper and common sensibles and the intentions of the ten categories. Thus, a memory-image is an image of some thing sensed in the past, plus an intention added by the memory that this was a remembered individual thing. Hence, for Averroes memory is essential to the analysis of the sense data because: (a) the external senses transmit their data to the common sense; (b) the imagination next forms an image of the sensible object; (c) the cogitative then separates the intention of that object as individual

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from the images; and finally (d) the memory receives this intention so as to perceive the individual as such. Thus, it is only by memory that we perceive individuals, and since perception of individuality is the sensible soul’s upper limit of abstraction analogous to the abstraction of a universal by the intellectual soul, memory is the most spiritual power of the animal soul.

3. Albert’s Support of a Fivefold Division of the Secondary Senses

What, then, led Albert to accept Avicenna’s fivefold rather than Averroes’s fourfold division of the secondary senses? Albert’s principal treatment of the secondary senses is first found in the *De homine*, which forms the second part of his *Summa de creaturis*. He wrote this as a bachelor of the *Sentences* at the University of Paris around 1242–43. In its final state it is found in his commentary on Aristotle’s *De anima* written between 1254–57 during the time that he was serving as the Dominican provincial of Teutonia. This is part of his gigantic set of Aristotelian commentaries (really paraphrases with additions and “digressions”) that he had already begun as head of the Dominican studium in Cologne after 1248 at the request of his Dominican brothers there and in Paris. There is also important material in his *De natura et origine animae* (1254–57) and *Quaestiones super de animalibus* (1258), which make up volume 12 of the Cologne critical edition, and in the minor commentaries *De sensu et sensato, De memoria et reminiscencia, De intellectu et intelligibili, De somno et vigilia, De motibus animalium, and De animalibus*.

Albert, unlike Aquinas, warns us that his commentaries on Aristotle do not necessarily signify his own agreement with “the Philosopher” or state his own final opinion. He wavered over the classification of the
internal senses, since in his *Quaestiones super de animalibus*, 1.8, he says without qualification,

> There are four interior senses, namely the common sense, imagination, estimative sense, and memory, and the estimative is receptive of intentions, which the sense does not receive, by which animals have a better estimation as to how they are to guard and provide for themselves.\(^{37}\)

Yet Albert, in a digression in his later *De anima* commentary 2, tr. 4, chap. 7, argues for five internal senses that form a unified system, and Nicolas Hans Steneck\(^ {38} \) has shown that a careful examination of Albert’s terms and the contexts in which he seems to favor only four such senses, as in the passage just quoted, shows that in fact Albert always favored five, as he emphasizes in this mature formulation:

> Chapter 7. *A digression declaring that there are five internal sense powers of the soul.* In order, as we next intend, to inquire about the internal sense powers of the soul, for the sake of easier understanding we will first list them and then take them up one by one. We say, therefore that in any nature that is common to many real things, there must be one source from which that community of real things arises. Sense cognition, however, is common to the five [external] senses and therefore there must be one source from which all sensation arises and to which all the motions of sensible things are referred as to their ultimate end. And this source is called the “common sense” which is characterized both by the fact that it is a sense power and by the fact that it is a source of the other many sense powers. In so far as it is itself a sense power it receives the species of things without the matter these inform yet in their material presence, as is proper to all the [external] senses. But in so far as it is common it has two aspects without which sensible cognition is not perfect, of which one is a judgment of sensible operation, as when we apprehend that we are seeing, and the same for the other senses. For if animals did not have such judgment it would not be very useful for them to see or hear or apprehend by the other senses. The other aspect of the common sense is to compare the sensed objects of the different senses within one common sensation, in so far as it finds

them joined or divided, since none of the proper senses are able to do this, since comparison is between many items and it is necessary for the comparing power to consider them together. And therefore the common sense compares sensed objects by showing, for example, an orange to be sweet or that one orange is sweeter than another in so much as these objects of all the proper senses are referred to it. We perceive, however, in ourselves a cognition of sensible forms even when [the thing of which it is a] form is not present and this cognition is of a higher abstraction than [external] sense cognition, as shown above.39

This last phrase refers to the previous chapter, Chapter 4, “A digression concerning the degree and matter of abstraction”, in which Albert distinguished four degrees of apprehension: (1) abstraction of a form from the matter, but not from the presence of the object nor from any appendices, and this is the case with the external senses and the common sense; (2) abstraction of the form from the matter and presence of the object but not from its appendices or other material conditions, and this is the case with imagination; (3) abstraction of the form from matter and presence but not from its appendices or other material conditions, but with collation of intentions, and this is estimation; (4) abstraction of the essential form from matter, presence, and appendices to form a universal concept, and this is intellection, which also has degrees of further abstraction.

In the De anima commentary, Chapter 7, Albert writes:

We know, however, that the power by which a form is retained is distinct from the power by which it is well received, because retention is best provided by matter that is cold and dry; while reception is best provided by what is wet, and since sensation receives well but ceases to retain when the object is no longer present, we know that generally a sensible power does not retain images after the object is no longer present. We experience sensible forms in ourselves in three kinds of cognition. One of these concerns forms received by a sense in the very manner in which it is sensed; another concerns intentions that were never sensed but nevertheless are not separated from the conditions of what is sensible, as, for example, to be or not to be a son of another, or to be a mother or not a mother. For as a female sheep knows its lamb and does not let another sheep’s lamb milk her and as a sheep flees from a wolf, or as a dog follows its keeper, so both of these kinds of cognition concern real things no longer present to the knower. Third, there is cognition that concerns both what is sensed and such un-sensed intentions, comparing and differentiating them, which is, as it were, [the act of] a common power to which are referred the sensed forms as well as the [un-sensed] intentions elicited as if they were sensed in respect to the

39 Alb., De anima 2.4.7, Ed. Colon. 7/1, 156, l. 80–p. 157, l. 22.
common sense. Hence we sum up two principles by which these powers are distinguished, saying that what is active and formal is not perfected in the same way as is the passive power that is receptive and retentive. Therefore since there is a power that retains and receives forms previously sensed, it will be passive and in a cold and dry organ whose act it is. Since, however, we also experience in ourselves that there is cognition of intentions elicted from sensible forms, there must be something which elicits and activates these intentions and that must be, as it were, an active power producing and activating these intentions from the sense objects whose perfecting of the composition of its organ will be a very strong and a “spiritual” heat. The Peripatetics, therefore, called the power that retains the sensed forms imagination, though some preferred to call it “the formal power” because it preserves in us the forms; while they called the power that is active and elicits the intentions [that may be added to these forms] the estimative power. Further we experience that we compare and divide both the forms and the intentions; for we think of a man with two heads and other objects composed of many sensed forms and also we then compose these with some intentions [values] which they can have for us and thus there must be something common to which both the forms and intentions are referred as common to both. This power is called fancy (phantasia) which exists between memory in which are the intentions and imagination in which are the forms received by the external senses and that composes and divides both [images and intentions]. This fantasizing works in dreams just as it does when we are awake. The term phantasia, however, is taken from apparitio [preparation] for it is the greatest type of cognition that the sensible attains and is its ultimate power, and this is commonly called the cogitative power, although more properly it is the reason that “cogitates”. This fantasizing contributes much to recalling what we have forgotten, because it moves intentions to forms and forms to intentions, since, as we have shown in our book on Memory and Reminiscence, one form or intention leads to another that was known before and also returns it back to forgetfulness. And this is what assimilates intellectual concepts to bodily images. Intellectual divisions of one into many are like the division of a tree into many branches, as, for example, we do in the Tree of Porphyry in the division of the categories, and as the resolution the intelligence makes as it assimilates posterior specific concepts to prior more generic concepts, as in what is called the Golden Ladder of Pythagoras.40

Albert’s elevation of the phantasia over the other internal senses was probably also influenced by Algazel as well as by Avicenna. Michaud-Quantin thinks that Albert, though he always continued to rank phantasia over the estimative sense, ultimately, like other Christian authors, eventually became cautious about giving the phantasia too much credit lest

40 Alb., De anima 2.4.7, Ed. Colon. 7/1, 157, ln. 22–p. 158, ln. 3.
this detract from the superiority of human intelligence over animal sense cognition. Albert emphasized this caution by insisting that the intentions composed by *phantasia*, as well as by the estimative, can be false, while the intuitions of the intellect produced by the *vis cogitativa* are always true, a point later developed more fully by Aquinas in his concept of the distinction between the animal *vis aestimativa* and the parallel human *vis cogitativa* as an instrument of the intelligence.

The principle on which Albert ultimately based his arguments for this fivefold classification of the internal senses he best states in a digression in the *De anima* (2, tr. 4, chap. 17). He argues that sense powers ought to be distinguished by their formal objects as these are received in some sensitive power in a non-material (quasi-spiritual) way. The sense object does not actualize the sense power in the way that animal soul animates its body in a form–matter composite, but as a “species” or form that qualifies the form of a particular sensitive power, thus enabling it to perform its proper act in a specific way.

Strongly differing from Averroes, Albert in his *De homine* calls the compositive imagination the *phantasia* and holds that the estimative power and the *phantasia* parallel the speculative and practical intellects. Hence, estimation is a cognitive power as well as a motive power. Yet the end of its cognition of an object is not cognition as such but the effect of a physical motion of the body through the sense appetite. For Albert, the human theoretical intellect acts on its own, but the practical intellect acts in dependence on the theoretical intellect. Hence, analogically in the animal the action of *phantasia* comes first, because *phantasia* must first compose and divide images to elicit their true or false intentions before an animal can use these intentions to direct bodily motion. Thus Albert reverses Avicenna’s position because, for Albert, *phantasia* (compositive imagination) is second in the order of the secondary senses, since it deals with intentions under the control of estimation, which is first because in the animal soul as in the human soul theoretical intellect rules and judges.

In his commentary on Aristotle’s *De anima* Albert also argues that it is the retentive imagination (also called the *vis formalis*), not the compositive imagination or *phantasia*, which is designated as the animal analogue to the speculative intellect.\(^4\) Hence, the estimative power has the dual role of extracting intentions from these retained images and determining

\(^4\) *De anima* 3.1.3, Ed. Colon. 7/1, 168, ln. 1.
motion with respect to them. Yet *phantasia*, and not imagination or estimation, ranks as the highest form of cognition the sensible (“material”) soul possesses and thus is also the highest power of directing bodily motion, as is evident from the fact that only the higher animals exhibit its behavioral effects. Hence, Albert ranks these powers according to their degree of activity and passivity in operation:

1. *Phantasia* is purely active and is the ruling power (whereas for Avicenna this is estimation);
2. Estimation is active in abstracting intentions, but is also passive because it acts through the intention it abstracts;
3. Retentive imagination is purely passive.

Albert, like Avicenna, understands “intentions” as not sensed but signified by a sensation, accompanying properties of the sense objects (the standard ones related to appetition, such as friendliness, affability, and their opposites) but in addition to these Albert includes examples of incidental perception, such as awareness that an individual is of a certain kind, which necessarily involve the concomitant grasp of substantial forms apprehended through the mediation of the senses, and for this reason the addition of these intentions never occurs without estimation and collation. Perception of affective qualities and incidental perception are both perception of intentions united by the ability to grasp an object as an individual since “no wolf would ever have pity over its offspring unless it had knowledge both of this individual and of the fact that this individual is its offspring”.42

Nevertheless, Albert does not mean by an “intention” only the representation of an individual as such. It is not a part of the thing like its form, as Hasse shows Avicenna thought,43 but rather it is the species of the whole knowledge of the thing. Thus, because the intention is abstracted from the whole and is the signification of the whole, it can be predicated of the thing; for the intention of the colored thing, which is in the eye, makes known the whole thing, just as the intention which is in the imagination makes known the particular which is not present.

Thus, the estimative faculty is imbued with the power to recognize any sensible species as a representation of a complete individual, a power that

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43 Hasse, *Avicenna’s ‘De anima’ in the Latin West*, 131f.
it has in virtue of its ability to perceive the sensible species as possessing intentional or cognitive, rather than real, being. And once it has apprehended that individual as an integral whole, it is able in turn to judge whether it is an enemy or a friend, and to adopt the appropriate stance towards it.

In his later works, Albert, as Michaud-Quantin shows in the article already cited, became especially interested not only in how cognition and appetite affect action but in a third factor, namely, animal proheresis or choice which parallels the free human deliberation and decision that are so important for ethical reasoning. This led him to a special concern for understanding the internal or processing senses in the brain as they result from what he believed was the central guidance of the heart. As Michaud-Quantin says (my translation):44

> In a simple case, such as is the only one found among inferior animals, the estimative is directly released in action and, so to speak, directs it. In a complex case where many intentions and ultimately images intervene, there is a need to relate, compare, and collate these diverse elements. The phantasia then composes, decomposes, elaborates these various materials and it is the result of the work it accomplishes that one can follow the direction it gives to these [actions].

Thus, the phantasia encompasses the work of the common sense, imagination, and estimation, and its results are treasured in the fifth internal sense, the memory, or result in action.

4. **Aquinas and Albert on the Cogitative Power**

In light of the foregoing we can sum up Albert’s view on the internal sense that directly serves the intellect, and we have seen that Albert bases his fivefold division of the secondary senses with the phantasia as superior to the others and therefore transformed by its direct relation to the intelligence in man, that is, as the vis cogitativa. Although he ranks these five powers in terms of the degree with which they abstract from the data of the external senses and thus approach intellection, he puts an emphasis on their material cause, that is, the distinction and position of their organs. This position he defends on: (a) the principle that a power that receives and retains differs from one that acts, and (b) the organ that receives must

44 Black, “Imagination,” 70.
be wet, and the organ that retains must be dry. Therefore, imagination, which receives but does not retain, has a wet organ at the front of the skull, while phantasia, which acts by composing and dividing—that is, abstracting—images must be in some other organ that is closer to being dry and is behind the active estimative organ at the top of brain, yet before the driest organ of memory at the dry back portion of the brain.

Aquinas treats the internal senses in two main places: (1) Question 13 of the *Quaestiones disputatae de anima* and *Summa theologiae* 1, q. 78 a. 4, and (2) in his commentary on Aristotle’s *De anima*. Though much influenced by Averroes, Aquinas generally follows Avicenna, but does not rely directly on the Arab’s epistemological principles, and instead argues mainly teleologically, that is, that animals must have those sensible powers necessary to live animal life.⁴⁵

Although Aquinas very frequently mentions the internal senses of animals, he never gave them as much attention as did Albert. In his works he very often follows Aristotle’s use in the *De anima* of the term phantasie in a broad sense without distinguishing imagination, estimation, and phantasia as do Avicenna and Albert. He also agrees with Albert that the chemical character of the organs of internal sensation is important in understanding their distinction and functions. Nevertheless, Aquinas says nothing very specific on this subject of the material cause of the internal senses except for a few interesting observations seemingly based on his own experiences, such as in the *Summa theologiae* 1, q. 84 a. 8 ad 2 (my translation) where he notes that when in the human body much vapor rises to the brain,

[T]here can be a greater or less inhibition of the [external] sense powers and when this is extreme not only the external senses but even the imagination becomes so inhibited that there is no dreaming, as can happen after consumption of much food and drink. Then if the motion of these vapors is somewhat diminished, dreams appear, but are distorted and disordered, as happens in persons with fever…And if this motion quiets, more ordered dreams appear, as most often happens near the end of sleep and in persons who are sober and have strong imaginations. If, however, this motion of vapors is greatly diminished, not only does the imagination remain free, but even the common sense is somewhat released, so that even while sleeping

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⁴⁵ A.M. Festugiere, OP, “La place du *De anima* dans le système Aristotélicien d’après S. Thomas,” *Archives d’histoire doctrinale et littéraire du moyen âge* 31 (1932), 25–47, showed that Aquinas and Albert had different views of the order of Aristotle’s biological works, partly based on available translations. While Aristotle follows the *via inventionis* or order of investigation, Aquinas follows the *via doctrinæ* or order of demonstration.
the sleeper judges those images to be dreams, as if distinguishing between realities and their images. But since [as long as he is still asleep] the common sense remains somewhat inhibited, although he discerns images from realities, he nevertheless is always in some respects deceived.

Unlike Avicenna, Aquinas is clear that the *vis cogitativa* in humans is the same as the estimative faculty in animals except in the elevation of its action by its relation to the human spiritual intelligence that is a power of the human soul, not external to the human body. He also rejects Avicenna’s and Albert’s distinction of *phantasia* from compositive imagination; but like Averroes he retains the cogitative faculty as fulfilling in humans the same function that estimation fulfills in animals. Thus, Aquinas and Averroes, in commenting on Aristotle’s *De anima*, use the term *phantasia* to say that perfect animals and humans have only four internal senses: common sense, imagination, estimation or cogitation, and memory. Thus, Aquinas seems to hold that as the intelligence elevates animal estimation to be cogitative, in both animals and humans the estimative/cogitative sense elevates the imagination to perform what Averroes and Albert attribute to the *phantasia*.

Current psychology presents three types of theories about imagination, none of which has universal acceptance: pictorial or quasi-pictorial theories, descriptive or propositional theories, and perceptual activity theories. All agree on the semantic notion that our imagining involves *intentionality* and *consciousness*, that is, something in our brain stands for, “intends”, (is a sign of) objects in the extramental world and thus makes us conscious of them. I imagine my dog running about in the yard and then go to look for him. The *pictorial* theory supposes that this is to be explained by assuming that in my brain I have a picture or a quasi-picture or representation of my dog running about in the yard.

The *descriptive* or *propositional* theory denies this and claims that what is in the brain is a language (mentalese), such as in a computer, which has little relation to the thing signified. Some analytical philosophers have adopted this view in order to explain how we can often communicate to someone who does not know our spoken language. This theory, however, overlooks the fact that in such situations we can simply point to objects.

A third view that attempts to mediate between these is that of *perceptual activity* theories according to which perception is a process in which we categorize information step by step (that is, group similar items

together and distinguish them from other such groups) in view of some purpose, but without ever producing a final picture or description. This third theory accounts for the fact that when we recall something we have seen we are usually unable to answer questions about all its details, but only certain salient features. For example, I remember how at a football game, a certain player in a red uniform passed the goal line, but cannot recall whether he had the ball under his right or left arm. This, however, does not contradict the Thomistic notion of an image since this can have various degrees of precision. Moreover, current psychology distinguishes short-term memory from the long-term memory I have been here discussing. This seems rather to be related to “attention”, which especially involves the prefrontal lobe.

What today is believed to be the part of the brain that imagines? There is evidence that the right side of the brain seems more active than the left in fantasizing, but the left excels in language ability. Injuries to the prefrontal cortex and other evidence make it clear that the prefrontal area in front of the motor centers must be involved in imagination, creativity, attention, and planning. The prefrontal brain has elaborate connections with the other sensory centers that supply it with information. This localization is in accordance with evolutionary theory, since this part of the human brain is comparatively the most developed. The misguided practice of surgical prefrontal lobotomy, which was common in the middle of the 20th century, resulted in patients who acted like robots.

What is the physical site of the evaluative sense? Without using the term “evaluative sense”, neuropsychologists emphasize that the prefrontal lobes, besides their cognitive functions, are intimately linked with the emotional functions of the limbic system. Since evaluation results from the association of an image with an affective drive, persons with trauma of these areas often exhibit defective practical judgment and behavior. Also important are the linkages of the evaluative sense to memory centers that explain the operant conditioning of behavior.

Therefore, it seems to me that Aquinas rightly rejects the argument of Albert for the supremacy of the *phantasia* as a fifth internal sense because for him the best criterion is the function or finality of any power. On this principle, he holds that these internal powers are in an order in which only the external senses are simply passive. The common sense receives passively, but it actively synthesizes the data of the external senses to

form a notion of the concrete individual as a collection of properties. The individual image is received by the evaluative or estimative sense (or in humans the vis cogitativa) with or without its chronological order, and then actively adds intentions to it so as to evaluate it positively or negatively. Then this image along with or without its chronological order is received and stored in memory, and in the human case is subject to reminiscence by the intelligence as well as becoming the phantasm made intelligible by the agent intellect and received by the possible intellect as an abstract universal of one sort or another.

For example, you hold up three fingers and I see them in the power of vision. The common sense then enables me to know that this is a vision not a sound by comparing it to data from the other senses and this visual image is received in the imagination (phantasia) which sees it is similar to other three things, for example, three trees in the distance, and thus has a vague image of “three things”, and I recall from memory many other examples of three things—three people, three chairs, three dogs, or three stars. My estimative sense then adds to this the impulse of intellectual curiosity that desires an intellectual understanding, and my agent intellect makes this vague image intelligible by freeing it from all particularity, and finally my possible intellect thinks the abstract, mathematical three. Thus, Aquinas concluded that Albert was mistaken in separating imagination as passive from phantasia as active because: (a) imagination is not only passive in receiving images but in composing and dividing them, otherwise it would have no reason to be separated from common sense, and have nothing to contribute to the estimative sense, and because (b) phantasia also receives from the estimative, yet adds nothing to it. There remains a certain puzzle about memory, since it seems to bypass the estimative and receive directly from the imagination. Perhaps the solution is to say that the chronological order is an intention added by the receptive power?

Aquinas, however, perhaps influenced by Averroes’s reduction of the internal senses to four or even to three, holds that imagination not only retains images but composes and divides them and thus rejects the distinction between phantasia and imagination. Moreover, it is not clear why memory should, with Albert, be ranked highest in abstraction, since what distinguishes a remembered image from a pure image is its chronological order—“this happened first and that happened later”—and thus it seems less abstract than imagination. Moreover, while Albert makes memory the most abstract, he considers phantasia in some senses the highest power, while for Aquinas the highest power is estimation and this makes clearer
what is meant in this discussion by “intentions” and the modern equivalent “instinct”.

Anthony J. Lisska, in an essay relating Aquinas’s thought to modern analytic philosophy, “Thomas Aquinas on Phantasia: Rooted in but Transcending Aristotle’s De anima,”48 shows that Aquinas holds that it is by the vis cogitativa that we are able immediately to perceive an individual as an individual. Thus when A becomes directly aware of the presence of B, A is not remembering what A saw earlier as the same set of sensations nor making such a judgment. A is simply and directly aware that this “concrete whole” B is this individual of a natural kind.

That such an individual fact is not as such sensed is, furthermore, consistent with Aquinas’s position on individuation. Aquinas resolves the ontological problem of individuation in metaphysics through the assertion that materia prima signata quantitate is the principle of individuation. Accordingly, there is no need to postulate an individualizing form similar to the haecceitas of Duns Scotus. It follows from what I take to be Aquinas’s “axioms of intentionality” that only a form can be knowable directly. Since materia signata quantitate, which is the direct opposite of a form, is the individuating principle, there is nothing as such in the external world which could be the object of the mental act of direct sensation regarding an individual as an individual. Therefore, Aquinas makes use of the vis cogitativa as the faculty of the internal senses, which accomplishes our awareness of individuals, and not just of concrete wholes.

5. The Estimative/Cogitative Sense and the Affective Powers

How then, for Albert, does the estimative sense that is at the level of matter and a function of the brain serve the intelligence (which with Aristotle he grants is immaterial because it attains universal knowledge) when freed of concrete sensible particularity? It should be emphasized that according to Aristotle’s division of the sciences, this question, like that of the First Uncaused Cause in Physics 8, lies at the borderline between natural science whose proper subject is changeable, becoming, and hence material being, and metaphysics, which considers the many, analogical senses of being, both material and immaterial.

48 Jacques Maritain Center: [www.nd.edu/Departments/Maritain/tioo/lisska.htm](http://www.nd.edu/Departments/Maritain/tioo/lisska.htm)
Aristotle's *De anima* is a part of natural science, and hence, like his *Physics* proves the existence of immaterial first causes, but exceeds its proper scope if it attempts more than a negative treatment of the essences of these causes. Historically, his commentators were much confused by the fact that the human soul in its intellectual spirituality is not treated in his *Metaphysics* as one might suppose it would be. Consequently, they were left with Aristotle's natural science proof in *De anima* 3 that human thought and intellect transcends the material, and thus these commentators had to develop properly metaphysical theories as to the human soul's nature and exact relation to the material body. Further research, like that in which Albert so long ago pioneered, to explore just how the evaluative sense can be conditioned to provide images that support reasonable, moral, and truly free behavior would be very fruitful.

Unlike Averroes, Aquinas retains the estimative faculty, rejects Avicenna's and Albert's distinction of *phantasia* from compositive imagination and also, unlike Avicenna, identifies estimation as a faculty found only in lower animals; but like Averroes and unlike Albert, Aquinas retains the cogitative faculty as fulfilling in humans the same function that estimation fulfills in animals. Thus Aquinas and Averroes in commenting on Aristotle's *De anima* use the term *phantasia* (in Aristotle's Greek) and agree that perfect animals and humans have only four internal senses: common sense, retentive imagination, estimation or cogitation, and memory. Unfortunately—and it is not clear just why—Aquinas summarily passes over Albert's arguments for *phantasia* as a fifth and highest sense. Thus St Thomas simply says in the principal text in the *Summa theologiae* 1, q. 78, a. 4 (my translation):

The proper and common sense is ordered to the reception of the forms coming from the external senses... But the phantasia (or *imagination*, which are the same), is ordered to the retention and conservation of these forms, being, as it were, the treasury of forms accepted through the external senses. And the estimate sense is ordered to apprehending those intentions that are not received through the external senses. To conserve these is ordered the memory that is the treasury of such intentions.

Without naming Albert, Aquinas then answers the Avicennian view that Albert adopted:

Avicenna held for a fifth power, intermediate between the estimative and the imaginative, that composes and divides the imagined forms, as evident when from the imagined form of gold and the imagined form of a mountain we compose one image, a gold mountain, that we have never seen. But this operation is not evident in other animals than the human in which the
imaginative power is sufficient to do this. Thus it is not necessary to propose more than four powers interior to the sensitive part of the soul, namely, the common sense, the imagination, the estimative, and the memorative.

Thus Aquinas seems to hold that the estimative sense, which in the human person is elevated to be the *vis cognitiva*, elevates the imagination to perform what Averroes and Albert attribute to the *phantasia*.

Aquinas agrees with Albert that estimation is purely practical and only a power for an animal to sense what things in its environment are natural enemies or allies, appropriate shelter, food, and so on. Unlike Averroes, Aquinas argues that an animal's immediate reaction to the sensation of an object as pleasant or painful is quite different from its instinctive reaction of flight or attraction to its natural enemies and allies. Aquinas concedes that "if an animal were moved by pleasing or disagreeable things only as affecting the sense, there would be no need to suppose that an animal has a power besides the apprehension of those forms which the senses perceive, and in which the animal takes pleasure, or from which it shrinks with horror."49 Sheep flee from wolves not because they are ugly, but rather because they are a natural enemy. This distinguishes estimation from imagination and makes it the highest of the secondary senses in animals.

Like Averroes, Aquinas holds that in humans this estimative power becomes the *vis cogitativa*. This transformation is evident from the fact that, while animals estimate only by natural intentions (instincts) or by modifications of these instincts through experience or training, humans by their *vis cogitativa* also discover intentions "by means of a certain comparison" (*per collationem quandam*), and "by inquiry and deliberation". Hence the human *vis cogitativa* is often called the *ratio particularis*, since, in the service of the human intelligence (reason) it compares individual intentions in a way analogous to the way intellect compares universal concepts.

Yet, also like Averroes, Aquinas thinks that the reaction of animals to their environment does not evidence that they have more than an inchoate perception of individual things as such. In the article by Anthony J. Lisska cited above, in which he places special emphasis on the importance of this perception of things as individual, he quotes Aquinas's *Commentary on the Metaphysics* 1, lect. 1, 15:

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49 *Summa theologiae* 1.78.4, cited by Black, “Imagination,” 67.
In human beings, the next thing above memory is experience, which some animals have only to a small degree. For an experience arises from the association of many singular [intentions] received in memory. And this kind of association is proper to human beings and pertains to the *vis cogitativa* [also called the particular reason], which associates particular intentions just as universal reason associates universal ones.

Thus this ability of the human *vis cogitativa* actively to perceive individuals or primary substances, each of which is of a natural kind, enables it to transcend the limits of the external senses, as well as the limits of the internal common sense, since that sense goes no further than to perceive substances as a bundle of properties. A failure to recognize this factor in human thought is the error of nominalism with its denial of truly universal concepts. Yet the *vis cogitativa*’s perception of individuals remains distinct from the reflex knowledge of individuals attained by the intelligence.

Deborah Black, in the article already cited, also makes clear that Aquinas, like Averroes and Albert, uses the cogitative faculty to supplement Aristotle’s account of human *incidental* perception, and thus holds that the estimative faculty of animals does permit them to have a limited type of incidental (*per accidens*) perception, that is, perception of a property that accompanies a per se sensible yet differs from it. The knower must consciously apprehend the incidental percept at the same time it apprehends the per se sensible which it accompanies. Hence, in every act of incidental perception there must always be a second cognitive faculty for which the incidental percept is a per se object. Furthermore, if there are any objects of incidental perception that are either intelligibles or other per se sensibles, there must be another faculty, the intellect whose proper and essential objects these are. Thus, although Aristotle is not explicit on this point, what he says in his *De anima* about such incidental perception implies that we have an internal sense faculty (the *vis cogitativa*) that apprehends natures, not as universals, but as present in singulars. Thus, agreeing with Averroes, Aquinas identifies incidental perception that requires cogitation and estimation as involving the perception of a sensible as a “this” (*hic homo/hoc animal*), rather than as an instance of the nature itself that it is perceived as being (man, animal).

Aquinas, like Albert, identifies animal perceptions of utility and harm as instances of incidental perception so that irrational animals are able to perceive the *intentio individualis* only “through natural estimation, according to which the sheep, through hearing or sight, sees her offspring, or
something of this sort”.50 He does not want to admit that animals are conscious of individuals as such, but insists that the cogitative power only apprehends the individual “as existing under the common nature, which happens to it inasmuch as it is conjoined to the intellective power in the same subject; hence it knows this human being inasmuch as it is this human being, and this stick inasmuch as it is this stick”, while the estimative faculty is unable to apprehend the individual as an instance of a nature, but only “inasmuch as it is the term or principle of some action or passion”. That is, the sheep apprehends this lamb, “not inasmuch as it is this lamb, but inasmuch as it is to be nursed by her; and she perceives this plant inasmuch as it is her food”.51 Aquinas agrees with Albert that animal estimation reduces to practical operations and functions analogously to the practical intellect.

In her article Black concludes that for Avicenna the estimative power makes animals “cognitive in the fullest sense of the word…they are both conscious and open to augmentation by learning and experience” in contrast to the tendency of Averroes and Aquinas to limit animal cognition. Averroes seems “to deny to animals any capacity for recognizing individual intentions”, while “Aquinas reduces the grasp of intentions to the level of a purely instinctive reaction”.52 Albert, however, remained closer to Avicenna’s position, except that he reduced estimation to a purely practical power. Aquinas completed Albert’s position by arguing that animals recognize individuals only as a principle or goal of action.53 I would emphasize, however, that this leaves to the human cogitative power in its service of intelligence a wider scope.

**Conclusion**

Thomas Aquinas basically agreed with Albert the Great’s views on the *vis cogitativa*, but he saw no necessity to distinguish the *phantasia* from the imagination. He probably took this position because he saw that Albert’s position rested on two hypotheses that lacked certitude: (a) Albert’s acceptance of the then current but in fact erroneous view of the organs of the

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50 Black, “Imagination,” 68.
51 Ibid., 68.
52 Ibid., 69.
53 Ibid., 69.
internal senses, and (b) Albert’s assertion that the imagination was purely receptive and hence could not perform the active functions he attributed to the *phantasia*. For Albert these two opinions were necessarily related because an organ suited for reception would probably not be chemically suited for the actions of the cogitative power. Aquinas, on the contrary, distinguished the faculties by their acts and saw no certitude that an organ might not have receptive functions in one respect and active functions in another. Indeed, Albert himself seems to rank the secondary senses in such a way that the more abstract and superior receive all their data from the lower and then act abstractively, positively adding intentions or composing and dividing. Modern science has not yet definitively located the organ or organs serving the estimative or cogitative powers, but is making progress on this question important both for psychotherapy and for ethical decision making.
ANTHROPOLOGY: THE CONCEPT OF MAN IN ALBERT THE GREAT

Henryk Anzulewicz

INTRODUCTION

In contrast to today’s philosophical anthropology that regards man primarily from a biological–behaviorist or action-oriented perspective, Albert the Great is a proponent of a holistic concept of man as a union of body and soul. Nevertheless, the perspectives and approaches characteristic of today's anthropological discourse are not entirely alien to him, nor to his main anthropological sources, that is, the writings on theories of the soul, psychophysiology, and zoology by Aristotle and leading Arab and Jewish philosophers. One example is Albert's treatise *De animalibus*, in which man is classified as belonging to the genus of sensitive beings and characterized as *animal nobilissimum*. Albert's concept of man is not limited to this classification or designation, however, since in his opinion it does not specify what truly defines man as man. What man is, according to Albert, and what defines him as such shall be the topic of this contribution.

I have organized this discussion into four parts. (1) In the first more general part, we shall briefly consider the systematic position of Albert’s anthropological reflections and name the main topics. (2) In the second part, we shall examine those Albertan treatises in which we encounter his first definitions of man as man and which illustrate the course of the further development of his concept of man. (3) In the third, I will briefly outline the concept of man developed in the early treatise *De homine*. (4) In the fourth, we will discuss Albert's anthropological formula *homo inquantum homo est solus intellectus*, its philosophical origins, and its interpretation in a diachronic excursion through those works of the *Doctor universalis* of greatest relevance to this topic. The sketch concludes with a few closing observations.

1. THE SYSTEMATIC PLACE AND MAIN TOPICS OF ALBERT'S ANTHROPOLOGICAL REFLECTIONS

The primary subject of Albert’s anthropological reflections, addressed in several of his theological and philosophical works, is the human soul. This
he perceives as a self-sufficient substance on the one hand, and as the formal, efficient, and final cause of the animated body on the other; more specifically, it is the cause of man’s being and life.¹ The soul is for Albert the essence of man, which does not contradict, however, his belief in the substantial union of man as body and soul. On the contrary, with his holistic concept of man Albert overcomes the prevailing doctrine of the plurality of forms in man and reconciles the dualism of two substances, that is, of soul and body.² In his opinion, the human soul, with its rational, sensitive, and vegetative faculties, constitutes one single substance. At the same time, it unites itself with the body immediately (immediate) just like the union of form–matter, action–power, and mover–moveable.³ The unity of the soul and the nature of its conjunction with the body constitute a comprehensive unity that will ultimately overcome the dualism of substances in man’s one nature.

Albert’s holistic concept of man corresponds, with regard to scientific method, to the interdisciplinary approach of his perspective. He will examine the whole man as a union of body and soul: his origin, the natural processes of his life, his fulfillment as a human being under contingent conditions, and his ultimate perfection, from the perspective of both the “divine” and the “human” sciences. Albert regards the “divine” sciences as being wisdom in a double sense: first, as theology in the strict sense, which draws its principles from biblical-Christian revelation; second, as metaphysics, the “divine science” (scientia divina) that owes its principles solely to natural reason.⁴ The “human” sciences that provide the systematic frame for Albert the Great’s anthropological reflections are, above all, natural philosophy and the natural sciences, primarily psychology and physiology, as well as ethics, which deals with man’s virtue-

¹ Alb., De homine, Ed. Colon. 27/2, 571, Ins. 44–45: “animam est considerare tribus modis, scilicet prout est forma et efficiens et finis viventis corporis.”
³ Alb., De homine, 571, Ins. 34–38: “Secundum nostram sententiam anima hominis una est substantia in vegetabili, sensibili et rationali. Et propter hoc dicimus, si de anima secundum se loquamur, quod ipsa immediate unitur corpori sicut forma materiae et sicut motor mobili.” Ibid., 572, Ins. 58–60: “ex corpore et anima rationali fit unus homo ea compositione qua componitur potentia cum actu.”
⁴ See Alb., Super I Sent. 1.4, Borgen. 25, 19a; Summa de mir. scient. dei i.4, Ed. Colon. 34/1, 15, Ins. 1–2 and 36–40; Super Ethica, prol., Ed. Colon. 14/1, 3, Ins. 54–61; ibid., 17, 34, Ins. 42–44; Phys. 1.1.1, Ed. Colon. 4/1, 1, Ins. 49–55; Metaph. 1.1.1, Ed. Colon. 16/1, 2, ln. 92–p. 3, ln. 4.

based moral perfection and happiness. Because of his physical and mental composition, man becomes the focus of the interlocking perspectives of the “human” and “divine” sciences. In its scientific method, this is evident in the simultaneously open and interlocked perspective in the mutually complementary natural-philosophical and metaphysical approaches, in the theologically recast anthropological synthesis *De homine*, as well as in the natural-philosophical treatises *De anima*, *De animalibus*, *De natura et origine animae*, and *De intellectu et intelligibili*. In Albert’s two *Ethics* commentaries the ethical and metaphysical discourses overlap, especially when determining the moral good, the ethical and dianoetic virtues, and within the context of a doctrine on mental bliss. This holistic concept of man and the systematically scientific, interdisciplinary perspective of his treatment not only emphasize the originality of Albert’s doctrine but also an intellectual claim unparalleled in High Scholasticism.

What are the central topics of this doctrine? First of all, it should be noted that Albert’s oeuvre contains a remarkable abundance of anthropologically relevant texts and material, enabling us to reconstruct his comprehensive and complex response to the question *What is man?* Here, we must necessarily limit ourselves and have therefore selected three issues that may be considered exemplary for Albert’s anthropological views.

1. The soul–body union of man. In the anthropological synthesis *De homine*, in his main systematic theological works *Super II Sententiarum* and *Super Dionysium De divinis nominibus*, as well as in the most important treatises on theories of the soul and the intellect—*De anima*, *De unitate intellectus*, *De natura et origine animae*, and *De intellectu et intelligibili*—Albert clearly states that man as man is a union of body and soul. The human soul does not preexist the body; instead, it joins the body like form joins matter and action joins power, which we will illustrate further below in the discussion of the question of the origin of the human soul. Although with the body’s decomposition the soul does not perish, since it has its own substance, without the body it is not a complete human being. Conversely, the human body without the soul is also not a human being, unless in an equivocal sense. Therefore the union of man remains, even after death—that is, after the soul’s separation from the body—the ultimate goal of human existence, to be achieved at the

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body’s resurrection. We shall return to these questions in the second part of this chapter.

2. The origin, the nature, and the unity of the human soul. After establishing the human soul as a substance existing independently from the body and as the form that is the body’s fulfillment and perfection, Albert proceeds to discuss its nature. By the soul’s nature, Albert primarily means the three parts of the soul (*partes animae*), that is, the vegetative, the sensitive, and the rational. They are the faculties and powers (*potentiae et vires*) of the one, specifically and numerically unique human soul, and they compose one unified substance.

The origin of the *anima humana*, Albert states, is with God. He attacks opinions that appeared to equate the soul with God (Pythagoreans and David of Dinant) and which taught the preexistence and transmigration of souls (Pythagoreans and Platonists). In *De homine*, he asserts that the human soul is created and infused into the embryo directly by God, citing Genesis as well as philosophical arguments for support. With regard to the philosophical evidence, he considers the relevant doctrines of Aristotle and the Peripatetics to be the most authoritative and consistent with Christian faith.\(^6\) In *De natura et origine animae*, Albert explicates from a philosophical standpoint the soul’s transcendental origin, the nature of the *anima humana* in the body, and its perfection after its separation from the body by death. There he unfolds his original theory on the initial ground of forms (*inchoatio formarum*), teaching that in man, as in all sensitive beings, the initial ground of the vegetative resides in matter and the initial ground of the sensitive resides in the vegetative. He assumes, moreover, that the initial ground of the rational exists in the sensitive from the moment of conception. This theory enables him to explain in philosophical terms, and with relative consistency, the origin and the substantial unity of the human soul.\(^7\) This theory illustrates the doctrinal development of Albert’s psychology: from the early works *De IV coaequaevis* and *De homine*, which exhibit the first suggestions of this doctrine; via the *Sentences* commentary and *Super Dionysium De divinis nominibus*, which discuss it within a general creational-theological context, more specifically in the question of the origin of the forms of natural things; and up to the treatise *De natura et origine animae*, in which it is applied to the question of the origin of

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\(^6\) Alb., *De homine*, 61, lns. 25–p. 77, ln. 12.

\(^7\) Alb., *De nat. et orig. an.* 1.5, 13, lns. 43–92; see also ibid., 1.2–3, 5, lns. 1ff.; 6, lns. 9ff. German trans.: Albert der Grosse, *Liber de natura et origine animae/Über die Natur und den Ursprung der Seele*, 87 and 89; see also 47–69.
the soul. The theory of the soul that Albert unfolds in the last-mentioned work, which postulates the genesis of the soul’s first form in matter and its next higher form in the respective previous lower form, not only explains the genesis and unity of the anima humana but ensures its continuity, thus refuting the doctrine of the plurality of forms of souls in humans and all sensitive beings commonly advocated in Albert’s time.8

The conception of the initial ground of forms complied with scientific standards in that it explained the biological process of the soul’s genesis and its immediate and further causes. From the perspective of the theological doctrine of creation, the concept was innovative and bold in that it posited—for the very first time—the formation of the human soul in matter, without, however, denying the transcendental cause for initiating this process and directing its further course. The genesis occurs in matter, and the vegetative and sensitive forms of the soul are engendered from matter through the formative power contained in the man’s sperm and in the procreative material of the woman, however only insofar as the virtus formativa is formed and moved by the intellect of the First Cause. Both the genesis and the formative power in the procreative material derive from the power of the intellect of the First Cause or, more precisely, from its light. The rational soul, in contrast, does not originate in matter, but is infused by the intellect of the First Cause directly from his light into the body:

It has also been shown by the aforesaid, that this substance that is the soul of the human being originates in part from the inside and enters in part from the outside. Although the vegetative and sensitive in man is educed from matter by the formative powers within the drops of the mother and the father, this formative [power] would nevertheless not have led them out in the same manner as the faculties of the rational and intellectual form and substance, unless insofar as this formative power is formed and moved during the process of procreation by the universally moving intellect. For that reason, the pure and unmixed intellect of the First Cause infuses the final completion, which is the intellectual form, [and, to be precise] neither with an instrument nor from matter, but by his light.9

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9 Ibid., 1.5, 14, lns. 14–27: “Ostensum est etiam per antedicta, quod substantia illa quae est anima hominis, partim est ab intrinseco et partim ab extrinseco ingrediens, quia licet vegetativum et sensitivum in homine de materia educantur virtute formativa, quae est in gutta matris et patris, tamen haec formativa non educeret eas hoc modo, prout sunt potentiae rationalis et intellectualis formae et substantiae, nisi secundum quod ipsa formativa movetur informata ab intellectu universaliter movente in opere generationis. Et
3. The intellect and man’s perfection as man. The intellect is the final object of man’s psychic development. The intellect makes man what he is: man. Albert condenses this thought into the succinct phrase: “man as man is the intellect alone” (*homo inquantum homo solus est intellectus*). The earlier forms of the soul—the vegetative and the sensitive—become the faculties of the intellectual soul and form one substance with it. The intellectual soul, which is infused directly by the light of the “pure and unmixed intellect of the First Cause” into the animated and sentient human body, is the “final completion” (*complementum ultimum*) of the psychogenesis. In essence, Albert’s philosophical interpretation concurs, he notes, with the theological view of the creation of the human soul:

This is why one also says that God creates the rational soul from something nonexistent; thus, the intellect enters the embryo extrinsically, however not from an external agent, because the intellect, who is the author of nature, is not extrinsic to it, unless in the manner in which extrinsic is understood with respect to things, that is, as that which exists separately from them and is not commixed with them.¹⁰

The ultimate perfection characteristic of man is, for Albert, an intellectual perfection (*perfectio animae secundum intellectum*), which presupposes and includes moral perfection (*perfectio secundum virtutem*). Both moral and intellectual fulfillment lead man as man to total perfection and to supreme bliss and to his ultimate end, which is identical to man’s transcendental origin.

2. Albert’s Treatises on the Concept of Man

From his very first treatise *De natura boni*, the early systematic theological works and the *Sentences* commentary to the biblical-exegetical and philosophical treatises and to the last unfinished *Summa theologiae*, Albert

¹⁰ Ibid., 14, lns. 28–35: “Propter quod etiam ex non praeiacenti aliquo creare rationalem deus dicitur animam; et hoc modo intellectus ingreditur in embryonem ab extrinseco materiae, non tamen ab extrinseco agente, quia intellectus, qui est auctor naturae, non est extrinsecus naturae, nisi hoc modo quo extrinsecum rebus dicitur, quod est separatum ab eis per esse et non commixtum cum eis”; see also ibid., 13, lns. 25–42. German trans.: Albert der Grosse, *Liber de natura et origine animae*/*Über die Natur und den Ursprung der Seele*, 91; see also ibid., 87.
the Great devotes himself to topics variously relevant to the fundamental anthropological question, *What is man?* In *De natura boni*, an unfinished work planned as a moral-theological synthesis, his original intention is to explicate man’s moral self-fulfillment as man in time, space, and matter in his orientation to his transcendental goal, the absolute good, which is God.\footnote{Alb., *De nat. boni*, Ed. Colon. 25/1.} Man is generally perceived to be a creature of God existing in an order willed by the Creator, and which is ontologically and morally designated the naturally good (*bonum naturae*). This distinction qualifies man by virtue of the natural order into which he is placed, which constitutes an orientation to God as its final goal and which is in itself the naturally good. On the other hand, this distinction is intrinsic to man’s nature, impressed upon him and upon all of creation by the Creator so that He, the absolute good (*per se et substantialiter bonum*), may be reflected in it through traces of the Trinity and its unity.\footnote{See ibid., 1, lns. 2–p. 7, 28ff., 57ff.} Albert’s first treatise centers around man as a subject of moral actions and the manner in which he realizes himself in this regard or, in other words, how he realizes his “natural goodness”, that is, the natural order that “orients and directs him to God”, internally and externally through his actions, relations, and affects.\footnote{Ibid., 1, lns. 58–59: “haec bonitas ordinat et manuducit ad deum”; 2, lns. 14–17.} Albert considers man from a similar standpoint in the treatise *De bono*. First, he examines the concept of the good, laying the foundation for the ensuing detailed discussion of the cardinal virtues, with emphasis on the subjective prerequisites for the morally good. It may be said that in both treatises—*De natura boni* and *De bono*—man is primarily conceived of as being by nature a subject of morally relevant actions. Here, Albert implicitly presupposes what he explicitly articulates within a creation-theological context in *De IV coaequaevis*, composed shortly before *De bono*: that is, man’s moral self-determination (*dominium et regimen suorum actuum*).\footnote{For this and the following see: Alb., *De IV coaeq. 4.61.4*, Borgn. 34, 655b–656a. See also Alb., *De bono* 3.11, Ed. Colon. 28, 117, lns. 89–p. 118, 20; *De homine*, 563, lns. 45–54 with note 48 (source apparatus); *Super Dion. De caele. hier. 15*, Ed. Colon. 36/1, 231, lns. 81ff., 85–88 (Ps.-Dion.-Text).} This is, states Albert in accordance with Pseudo-Dionysius (*De caelestì hierarchìa* 15), one of the constitutive elements of human nature, owing to its soul–body constitution. It must be noted, however, that in the compound of body and soul the human soul is more than just the principle giving the body its life and form. Albert perceives it to be the principle of intellectuality and, in addition to corporeality and the connection of body
and soul, as the principle constituting human nature. The body is constitutive for human nature with regard to its somatic, morphologic, and psychological characteristics. At this early level, Albert appears to draw more than a purely qualitative dividing line between animals and humans when he beholds in man’s physique, figure, and posture, in the location of his internal and external sense organs, and in his countenance, the first of three constitutive moments of human nature. Albert underscores the different somatic forms developed by humans and animals, echoing Pseudo-Dionysius and citing Ovid (Metamorphoses 1, 85–86) and Aristotelian zoology, and designates them as being constitutive of their nature (ipsius naturae constitutivum). These three constitutive principles—body, soul, and the body–soul union—manifest an ontogenetic and ontological order and constitute, as Albert states in De IV coaequaevi, one united threefold constitutive principle of human nature (constitutivum triplex).

Man’s supremacy over all sensitive creatures that are not endowed with reason, however, Albert deems to be a secondary characteristic deriving from the essence of human nature, and not constitutive of it. He ascribes this to a threefold reason: first, to the “simple intellect” (intellectus simplex), which is superior to all sensitive faculties and enables man to acquire knowledge of the subjects of all sciences—logic, ethics, natural philosophy, mathematics, and metaphysics; second, to the “compositive intellect” (intellectus compositivus) that enables the acquisition of knowledge through a process of inference; third, to the faculty of free choice (liberum arbitrium) as the intrinsic principle of free will.15

While the texts briefly discussed thus far conveyed certain precise details of Albert’s conception of the constitutive principles and the primary and secondary characteristics of human nature, these still did not contain a distinct concept of man as man. Aside from an incidental definition of man as “a composite of organic body and rational soul” and from a statement on what defines man,16 the first attempt of the Doctor universalis at defining man as man is found in the moral-philosophical section

15 Alb., De IV coaeq., l. c.
16 Both cases state prerequisites for establishing a correct definition of a thing or of man; see Alb., De sacram. 3.1.1, Ed. Colon. 26, 24, Ins. 26–31: “si aliquid describitur vel diffinitur, debet poni materia immediata et forma immediata. Non enim bene describeretur homo sic: homo est compositum ex corpore et sensu, sed oportet, quod dicatur, quod homo est compositum ex corpore organico et anima rationali.” Alb., De IV coaeq. 4.38.1, 552a: “denominatio et diffinitio est penes ultimum, ut patet in homine, in quo licet sit unum sensibile et rationale, tamen denominatur et diffinitur ab ultimo tantum quod est rationale.”
of *De IV coaequaevis*. He defines man there as “only a rational being”: *homo enim in eo quod est homo, tantum est rationalis naturae*. From this definition Albert deduces that, in contrast to his rational nature, all the stirrings of the passions and sensual pleasure (*sensualis motus, delectatio in sensualitate*) are external in man. Evidently, Albert was inspired by Augustine (*De trin.* 12) to adopt this definition of man as “only a rational being” and the sharp boundaries he draws to sensuality and the animal kingdom. In the further course of his discussion, he bases his argument on the Augustinian conception of *ratio* as the essential characteristic distinguishing man from animals. Albert’s concept of man, however, appears increasingly influenced by Aristotle, citing within this context Aristotle’s treatise *On the Soul* and the *Nicomachean Ethics*—still only available in an incomplete Latin translation. They seem to direct Albert’s attention to the intellect, its separateness from the body, and its immortality. If one also takes the Arab sources into consideration (Avicenna and Averroes) that broaden and sharpen Albert’s views on man within this systematic theological frame, then a new, pioneering, philosophical, more precisely Peripatetic perspective of anthropology becomes discernable in the early works in addition to the Augustinian current. This Peripatetic influence is even stronger in the treatise *De homine*, and it peaks in *De intellectu et intelligibili*. Before we proceed to examine Albert’s concept of man from this perspective, let us glance at his biblical-theological conception of man as image of God (*imago Dei*) that Albert also asserts in his philosophical works, albeit expressed, however, in philosophical terms.

Essential and theologically fundamental for Albert’s anthropology was without doubt the doctrine of man as the image of God, based in the book of Genesis and especially its exegesis, as well as Augustine’s psychological doctrine on the Trinity. The *Doctor universalis* adheres to it in all his systematic theological and biblical-exegetical works, from the earliest to the last. He also addresses it in his philosophical works, even recasting
it, as we said, in philosophical terms.²¹ It will suffice for the moment to take a brief glance at this doctrine on the basis of two early systematic theological treatises. In De sacramentis, which follows his earliest work De natura boni, Albert argues that being the image and likeness of God is part of man’s nature:²² homo quantum ad naturam est factus ad imaginem et similitudinem dei. In De IV coaequaevis he goes into greater detail as to what is meant by man’s being the image and likeness of God and he highlights two aspects: first, the image and likeness to God is impressed upon the human soul and, second, it is a twofold image. On the one hand, it is man’s greatest possible similarity to the three divine persons in their unity. Albert calls this the “image of likeness” (imago similitudinis), adding that Augustine applies it to the three psychological faculties: memory, intelligence, and will. Image and likeness to God also resides in reason (ratio, mens rationalis), in which man was created and which represents the subjective basis for man’s supernatural restoration to a representation of divine likeness. Albert calls this image and likeness an “image of creation” (imago creationis).²³ Like Augustine, he perceives reason as having a superior form that is directed toward things eternal (ratio superior) and an inferior form (ratio inferior) that is focused on temporal things. Albert is able to lend several new accents to this theological doctrine of man’s likeness to God, which he bases on the exegesis of Genesis and develops with the aid of Augustine’s Trinitarian psychology, while reflecting upon it in the mode of Aristotelian philosophy. One example is his use of the term “intellect” from Aristotle’s Posterior Analytics, meaning the “understanding of principles” (apprehensio principiorum), for the Augustinian term “superior reason” (ratio superior) and its metaphor, vir.²⁴ Regarding the

²² Alb., De sacram. 3.1.1, 25, lns. 37–38.
²³ Alb., De IV coaeq. 4.69.3-3, 705a: “imago Dei dupliciter est in anima. Et quaedam est imago similitudinis per convenientiam maximam, quae potest esse in creatura ad tres personas in una essentia, et haec determinatur ab Augustino in tribus potentiis, scilicet memoria, intelligentia, et voluntate. Et est imago creationis, quae ab Augustino dicitur ratio in qua creati sumus, sive mens rationalis in qua reformamur per gratiam ad imaginem imitationis divinae similitudinis: et illa est in superiori parte rationis et in inferiori, quae sunt subjectum gratiae reformantis: et de hac imagine intelligit Augustinus quando dicit, quod vir est imago Dei. Convenit enim haec imago, sive ratio imitationis, quod idem est, per prius viro qui subhaeret aeternis, et per posterius mulieri quae disponit temporalia.”
Augustinian conception of man’s image and likeness to God residing in reason, let it suffice to note that according to Albert, the two forms of reason—ratio superior and ratio inferior—as a whole constitute the subject of renewing grace, and that they constitute an intrinsically united faculty, merely differentiated in function and terminology. Man’s unity, thus underscored, is for Albert always an issue of utmost importance, as shown in the first part of this contribution and as shall be demonstrated in the following.

3. Albert’s Concept of Man in the Treatise De homine

When considering the content of Albert’s treatise De homine, which follows De IV coaequaevis, two things are notable. One, he contemplates man first and foremost from the perspective of his soul and its faculties, then with regard to his body, and lastly with regard to the conjunction of soul and body. The discussions of the last two topics mentioned are relatively short—even extremely short. Two, the Doctor universalis opens his anthropological synthesis with theological definitions of the human soul and closes with the theological conception of man as the image of God. He resumes the explication of creation theology begun in De IV coaequaevis, combining the theological perspective of man with the corresponding natural-philosophical and metaphysical views, established in essence by Aristotle and the Arab Peripatetics, which focus on psychology, sensory physiology, and on the doctrine of the intellect. The philosophical sources, in particular the writings of Aristotle and his concept of science, not only open new horizons of knowledge for Albert: they also establish new methodological standards, enabling Albert to vastly expand and intensify his striving for deeper insight into man. Occasionally, Albert refers to man from the natural-philosophical perspective using the generic term “sensitive being” (animal) and, following Aristotle, describes him as the most perfect sensitive being (animal perfectissimum). This does not mean, however, that Albert is by any means eliminating the specific difference that makes man distinct from other sensitive beings by virtue of his endowment with reason, and as the nexus between God and the world, as stated in De animalibus, in De intellectu et intelligibili, in the second

25 Alb., ibid., 705a–706a.
26 See Alb., De homine, 296, lns. 39–41 (with source citations): “homo enim perfectissimum est omnium animalium, ut habetur in XII De animalibus.” Ibid., 205, lns. 44–45.
Ethics commentary, and in the *Metaphysics* commentary with reference to Hermes Trismegistus. We read in *De homine* that the endowment of reason constitutes man as man, even though man as a union of body and soul is necessarily bound to the vegetative and sensitive powers, the faculties of the *anima rationalis*. In this perspective, man is understood as a subject of natural philosophy, while his nature per se is regarded as a subject belonging to the field of metaphysics. Like all of his Scholastic predecessors and contemporaries, excepting Abelard, Albert is unfamiliar with and therefore does not use the term anthropology. For Albert and Aristotle alike, the natural-philosophical disciplines pertaining to man are firstly the “science of the soul” (*scientia de anima*) and secondly and subordinate to it the “science of the body” (*scientia corporis*). The former achieves scientific standards, while the latter conveys only partial certitude (*certitudo secundum quid*). Albert transcends the boundaries of natural philosophy

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27 Alb., *De animal*. 22.1.5-9, ed. Stadler, 2: 1353, lns. 16–20: “De proprietatibus autem hominis praecipua est quam dicit Hermes ad Escelepium scribens quod solus homo nexus est Dei et mundi: eo quod intellectum divinum in se habet et per hunc aliquando ita supra mundum elevatur ut etiam mundi materia sequatur conceptiones eius.” Alb., *De intell. et intellig*. 2.9, 517b: “dicit Hermes Trismegistus in libro De natura Dei deorum, quod ‘homo nexus est Dei et mundi: quia per hujusmodi intellectum conjungitur Deo.” Alb., *Ethica* 10.2.3, 627b: “Homo enim duo homines est, secundum intellectum scilicet, secundum quem Deo connexus est (ut dicit Hermes Trismegistus), nihil brutale habens in seipso: et secundum rationem inquisitam, secundum quam temporique et continuo conjunctus est, secundum quam quidem etiam homo est excellens bestias. Secundum autem eadem nihil nisi humanum habet.” Alb., *Metaph.* 1.1.1, 2, lns. 4–15: “Sicut subtiliter enim dicit Hermes Trismegistus in libro quem de deo deorum ad Escelepium collegam composuit, homo nexus est deo et munde super mundum per duplicem indagationem existens, physicam et doctrinalem, quarum utraque virtute rationis humanae perficitur, et hoc modo munde gubernator congrue vocatur. Subnexus autem est deo, pulchritudines eius non immersa munde, hoc est continuo et temporique, accipiens per similitudinem divinam, quae in eo est per lumen simplicis intellectus, quod a deo deorum participatur.”

28 Alb., *De homine*, 77, ln. 24: “rationale (constituit) speciem hominis.” Ibid., 54, lns. 51–57: “anima in suis partibus est ut totum potestativum…Totum autem potestativum bene est in primitatis partibus sine sequentibus, in sequentibus autem non sine primitis, secundum quod etiam dicit Philosophus quod vegetatum bene separabile est a sensitivo et rationali, sed non e converso.” Ibid., 570, lns. 36–38: “sensible numquam invenitur in corpore sine vegetatibus, et rationale numquam sine vegetatibus et sensibilibus.” Ibid., 75, lns. 50–51; 85, lns. 69–71; 86, lns. 68–74. See ibid., 10, lns. 63–67: “secundum quod (anima rationalis) habet esse in natura, et sic est in consideratione naturalis philosophi; et secundum quod est substantia non comparata ad corpus generabile et corruptibile, et sic considerat de ipsa primus philosophus.”


30 See Alb., *De homine*, 4, lns. 38–44; ibid., 17, ln. 65; 27, 26: “scientia de anima”; Alb., *De anima* 1.1.1, Ed. Colon. 7/1, 1, lns. 7–p. 3, ln. 20.
in his synthesis by his advancement into the metaphysics of the soul and by the theological perspective of his discourse.

Both the theological and the philosophical view of man make him capable of being apprehended superficially from the soul as principle.\(^{32}\) The theoretical reason for this thesis is derived in essence from Aristotle. In this case, however, Albert does not grant any precedence to Aristotle's principle that all knowledge begins with sense-experience.\(^{33}\) With reference to the twofold nature of the soul, regarding its natural–objective, metaphysical, and noetic properties and its outstanding dignity, he asserts that priority must be placed on obtaining knowledge of man by way of the soul or, more precisely, through knowledge of the soul's substance and nature. Only in a subsequent step should its properties and causes be examined, since in this way the faculties and functions of the soul may be recognized. Within this context, Albert emphasizes that the soul is more than just the primary principle of the body's life and perception, but rather that it constitutes the natural being of the animated body and the essence governing it.\(^{34}\) He derives the definition of the human soul as “rational” (\textit{rationalis}) from the term reason (\textit{ratio}) designating the human faculty, and not from the specific distinction denoting the genus “sensitive beings”.\(^{35}\) Here we find the first indications of a view later discussed in greater detail: that the human soul is the subject of investigation by the logician, the natural philosopher, and the metaphysician. Although these approaches are mutually complementary, Albert nevertheless considers the logical-conceptual approach ill-suited for deducing the soul in itself and in the natural manner of its being.\(^{36}\) Man is man because he possesses reason and not because of a specific distinction in genus or species, since these are exclusively principles of knowledge and not of the existing reality to which they are applied. The human soul is therefore properly designated as “the substantial form” that “constitutes the existing form according to its being and specific essence.”\(^{37}\) Let us omit the detailed

\(^{32}\) For this and the following see: Alb., \textit{De homine}, 1, ln. 17–p. 5, ln. 30.

\(^{33}\) See ibid., 1, Ins. 21–22; 2, Ins. 3–20 with notes 4–5 (source apparatus); \textit{De anima} 1.1.1, 2, Ins. 36–40 and 52–p. 3, Ins. 3–20; \textit{Metaph.} 1.1.6–7, 8, ln. 34–p. 11, ln. 64.

\(^{34}\) See Alb., \textit{De homine}, 4, Ins. 39–41: “anima est causa dans esse specificum corpori et rationem diffinitivam, inquantum est animatum corpus et naturale.”

\(^{35}\) Ibid., 15, Ins. 3–5: “anima dicitur ‘rationalis’ non a differentia, quae dividit animal…sed a virtute et potentia sua, quae dicitur ratio.”

\(^{36}\) Ibid., 10, Ins. 59ff.

\(^{37}\) Ibid., 11, Ins. 70–73: “Loquendo tamen proprie de anima dicimus ipsam esse substanti-alem formam, quae constituit id cuius est forma secundum esse et rationem specificam.”
natural-philosophical definition of the soul, based mostly on Aristotle and in part on Avicenna and Averroes, and instead recall the aforementioned metaphysical concept of the soul as incorporeal self-subsistent substance. This corresponds to the interpretation of the soul as the ultimate perfection of the body (\textit{perfectio}), the “intrinsic image and likeness of the First Cause and likeness of the light of the celestial intellects”, which is of fundamental significance to Albert’s doctrine of the soul and concept of man.\footnote{Ibid., 31, lns. 45–68; 32, lns. 1–18 and 33–62; 49, lns. 7–10; 73, lns. 4–6; see also note 29 above. Alb., \textit{De anima} 1.1.1, 2, lns. 5–33; ibid., 3.2.18, 265, lns. 26–52; ibid., 3.3.13–14, 225, ln. 15–p. 227, ln. 80. Alb., \textit{De nat. et orig. an}. 1.6, 14, lns. 44–p. 15, 86; ibid., 1.8, 16, ln. 83–p. 17, ln. 74; ibid., 2.6, 25, lns. 80–82, 27, lns. 44–51; German trans.: Albert der Grosse, \textit{Liber de natura et origine animae} /Über die Natur und den Ursprung der Seele, 93–99, 103–109, 147, and 155. See also note 63 below.}  

For Albert, the very essence of man is the rational soul as an incorporeal and immortal, intellectual substance, yet one that is by nature dependent on the body, which is directed toward eternal happiness and, as one learns at the end of the anthropological synthesis, which is the foundation for the likeness to God.\footnote{For this and the following see: Alb., \textit{De homine}, 18, lns. 10–14; 26, lns. 58–p. 28, ln. 10; 31, ln. 42; 49, lns. 7–10 and 13–15; 541, lns. 1–8; 545, lns. 56ff.; 554, lns. 44–45.} In this context, it soon becomes evident that it is not the endowment of reason, but the intellect—separate from the body, immortal, directed towards everlasting and eternal happiness—that is the ultimate property establishing man as man. It is Albert’s conviction that man is more likely to attain temporal happiness (\textit{felicitas, beatitudo viae}) through the intellect than with logical reason.\footnote{Ibid., 27, lns. 57–59: “(anima) in corpore magis attingit felicitatem per intellectum quam per rationem, quia intellectus simplicior est quam ratio.”} Regarding man’s orientation to eternal happiness, the body proves to be more a hindrance than a benefit.\footnote{Ibid., 28, lns. 6–9. See also Alb., \textit{Super Ethica} 10.1, 708, lns. 30–35.} Even so, the conjunction of body and soul is constitutive of human nature, is the foundation for man’s intermediate position between God and the world, and is of salvation-historical significance having cosmic dimensions, as Albert later writes in the \textit{Sentences} commentary and in \textit{De intellectu et intelligibili}.\footnote{Alb., \textit{Super II Sent.} 1.14, Borgn. 27, 41b: “mediante homine natura corporalis a Deo posset participare quae per se non poterat: quia aliter non tota universitas in Deum referretur. Quia sicut homo in anima vegetabile, sensibile, et rationale habet, quae sunt omnes gradus vitae: ita secundum corpus habet elementa, et mixtiones, et complexiones, et compositiones, quae sunt omnes gradus materie corporalis: et ideo mediante homine omnia in Deum referuntur.” Alb., \textit{De intell. et intellig.} 2.12, Borgn. 9, 520b.} Characteristic of the human soul is not only its ability to unite with the body but its dependence on
the body. Consequently, faith in the soul’s reunification with the body at
the Resurrection, which Albert proceeds to discuss within this context,
appears logical. He reiterates this opinion in later treatises as well, where
a plausible basis for faith in the soul’s reunification with the body derives
from the fact that the soul achieves its moral and dianoetic perfection in
the body upon which it is by nature dependent. The soul must therefore
necessarily be reunited with the body to share in the reward it earned
within the body. This idea of postmortem justice is yet another illustration
of Albert’s holistic concept of man as an enduring union of body and soul
that ultimately even triumphs over death. He rejects the prevailing view
deriving from this approach, transmitted via the biblical glosses on the
Apocalypse (Rev. 6:10), that the souls of the saints were distracted from
their contemplation of God because they yearned for their bodies.43

Although man’s unity is founded on the soul as a principle, and the
primacy of this principle is central to all the elements of Albert’s anthro-
pological synthesis (in which he discussed the individual faculties of souls
with their traits, functions, and organic forms, the body of the first man,
Adam, before the Fall, and the nature of the soul’s conjunction with the
body), yet towards the end he comes to focus more explicitly on the
whole man. As in De IV coaequaevis, Albert once again presents his view of man
as the image of God in relation to Augustine’s psychological doctrine
on the Trinity, this time regarding man more precisely as imago creat
triplex: the “image of creation” (imago creationis), “image of recreation”
(imago recreationis), and “image of likeness” (imago similitudinis). The
Doctor universalis emphasizes an all-encompassing likeness to God in
all of man’s internal and external relations. He concludes this didactic,
sound Trinitarian-psychological treatise on theological anthropology with
the assertion that likeness to God is rooted in the rational soul and that it
shapes its faculties variously by degrees, but first of all and most distinctly
the intellect.44

Albert reverts to the theological doctrine of man as the image of God
that he developed in De homine in his later works, restating it in the
Sentences commentary, in his commentaries on the works of Pseudo-
Dionysius, and in the Summa theologiae. The great extent to which the
theological perspective dominates the anthropological issues in these

43 Alb., De homine, 410, lns. 39–41; Super III Sent. 26.8, Borgn. 28, 505a and 505b; ibid.,
31.10, 589b and 590b; ibid., 31.12, 593a and 594b; Super IV Sent. 49.12, Borgn. 30, 685b; Super
Dion. De div. nom. 6, Ed. Colon. 37/1, 334, lns. 27–35.
44 Alb., De homine, 539–555, see 546, lns. 22–48 and 554, lns. 44ff.
works is also evident in his doctrines on the intellect and knowledge. Here Albert combines the Augustinian and Pseudo-Dionysian illumination theory with the Peripatetic concept of the “active intellect” (*intellectus agens*) and a Neoplatonic emanation doctrine, and then reinterprets it on this basis.\footnote{On this and the following, see Alb., *Super I Sent.* 2.5, 59a–60a; Alb., *Super Matth.* 5.35, 152, Ins. 17–34. See also Henryk Anzulewicz, “Entwicklung und Stellung der Intellekttheorie im System des Albertus Magnus,” *Archives d’histoire doctrinale et littéraire du moyen âge* 70 (2003), 168–171.} Henceforth, he conceives of illumination as the human intellect being enveloped by the light of the uncreated intellect or, more precisely, as the rebonding of the active human intellect with the light of the uncreated intellect and the mediated return of the human intellect to the uncreated, first light.

\section*{4. Albert’s Anthropological Formula}

\textit{Homo inquantum homo est solus intellectus}

Although in his early works Albert did define man as man on the basis of his intellect, the main focus of his concern was nevertheless man’s moral perfection. In his commentary on the *Sentences* of Peter Lombard (Books 3 and 4) he devotes his attention to the comprehensive, moral, and intellectual perfection of the *anima humana*, which within this context consistently serves to denote the essence of man.\footnote{See Alb., *Super III Sent.* 34.2, 620a–624b; *Super IV Sent.* 49.6, 672a–677a.} It is quite evident that our author comes to emphasize contemplative happiness (*beatitudo*) and man’s intellectual virtue more forcefully after having read all ten books of the *Nicomachean Ethics* (which occurred while writing his commentary on the fourth book of the *Sentences*), asserting its precedence over moral perfection and the happiness resulting from it (*felicitas moralis*).\footnote{See Alb., *Ethica* 6.1.2, 393b; ibid., 10.2.3, 627a–630a.} From this point on, he develops an intellectualist conception of man and casts it into the formula “man as man is the intellect alone” (*homo inquantum homo solus est intellectus*). This formula, which apparently has Aristotelian roots, as Albert often indicates,\footnote{Arist., *Eth. Nic.* 9.8 (1168b32–1169a2); ibid., 10.7 (1177b26–1178a8); ibid., 10.9 (1179a22–32). See Alb., *Super Ethica* 9.9, 688, Ln. 47–689, 6; ibid., 10.13, 758, Ins. 59–63 and 66–p. 763, Ln. 32; ibid., 10.16, 777, Ins. 23–39; *Ethica* 9.3.1, 585a; ibid., 10.2.3 and 6, 628a–b and 633a–b.} becomes an axiom for Albert. It reappears frequently in his philosophical treatises, probably for the last
time in *De XV problematibus*. Let us take a closer look at the beginnings and development of this concept of man as intellect, first introduced and explored theologically in his early treatise *De IV coaequaevis*.

The intellect alone is that which makes man, man. With this statement, appearing in his commentary to *De caelesti hierarchia* by Pseudo-Dionysius, Albert expresses, with reference to Aristotle, his intellectualist view of man that will become his very definition of man. With his refinement, he is able to avoid the pitfall of one-sidedness that excludes the senses by clearly asserting that the subject of the human intellect, the intelligible, naturally derives from the sensory impressions. The active intellect (*intellectus agens*) realizes a distinct knowledge of the intelligible, insofar as the possible intellect (*intellectus possibilis*) conveys it through the senses. Albert also takes account of the fundamental philosophical premise that a thing is defined from its goal or its exemplar.

The next reference to this formula, its context and brief explanation, is revealing with respect to Albert’s concept of man in two ways. First of all, he answers the question that is always relevant for our exposition, namely whether the term “soul” refers to man. Also, he elucidates once again his conception of the intellectualist formula for man. The use of the term “soul” for man is a synecdochic figure of speech in which a broader term is replaced by a more precise one, or a whole by its part. The soul is also considered to be the essence of man because man is intellect alone. This viewpoint leads Albert back to Aristotle’s *Nicomachean Ethics*, Book 10, stating more precisely that the quality within man that makes him man originates in the intellect alone. Only the man who fulfills his life through intellectual activity lives a truly human life. In concrete terms, this means that the term soul may be used to designate a human being, provided that his life is devoted to reason.

In the first *Ethics* commentary, Albert cites the formula *homo inquantum homo est solus intellectus* at least three times, stressing that the human

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50 Alb., *Super Dion. De cael. hier.* 1, 12, lns. 55–59 and 66–73.


intellect is the sole ontological constituting principle of being human.\textsuperscript{53} In Eustratius’s opinion, the Byzantine commentator of the \textit{Nicomachean Ethics}, Aristotle meant, when focusing on the intellect, the essential human faculty that distinguishes him from all other sensitive beings. Hence, the Stagirite repeatedly referred to man both as soul and as something associated with it. By the latter, he meant the sensitive and vegetative faculties of the soul, which Albert designates as its inferior part (\textit{pars inferior}) that forms, as it were, a more remote faculty. The intellect, in contrast, is the superior part (\textit{pars superior}), act and mover, which is why man is able to act of his own accord and to act using his various powers in consensus with himself, provided that the inferior part of the soul heeds the superior part. Self-causality in action is, according to Albert, also characteristic of animals, whereas consensus with one’s own self, which he calls a kind of friendship with oneself (\textit{amicitia ad seipsum}), is only possible for man by virtue of the aforementioned distinction and the relation of the parts of the soul to one another.\textsuperscript{54}

With his intellectualist formula of man, Albert focuses on the substantial unity of the human soul. He supports the conception of the identity of a form of the whole and a form of the parts (\textit{forma totius et forma partis}), acknowledging merely a distinction in terminology between the two. This is overcome at man’s final perfection, which ontologically constitutes man as man or, in other words, which establishes man’s being as one identical whole. Since the perfection of man is the intellect, it is the form of the whole and denominates man as a whole.\textsuperscript{55}

Albert explicates the topic of man’s perfection and constitution as man by the rational soul, that is, by the intellect, more extensively in his commentary on Aristotle’s \textit{De anima} than in the first \textit{Ethics} commentary.\textsuperscript{56} In the introductory chapter he declares that the rational soul, present in the human body without being conjoined with any of its parts, designates man’s perfection as man. It distinguishes man from other living creatures with whom he shares the genus nature and, as a result, sensitive perception, by his ability to recognize universal concepts and by the freedom of the will. “To be man as man means to be intellect alone”, Albert asserts,
citing Book 10 of the *Nicomachean Ethics* in support.\(^{57}\) The rational soul is the formal cause and the perfection of the physical body, and therefore the principle of its being and knowledge as well, which makes it the primary subject of contemplation for the natural philosopher. The fact that all human knowledge is conveyed by the senses is no obstacle. This is because man is endowed by God with reason and intellect (*ratio et intellectus*), so that by recalling sensitive experience he may apprehend and explore, besides the sensitive objects, all that is concealed beneath them and exalted above them, such as the First Cause, the separate intelligences, and hence the soul itself.\(^{58}\)

His intellectual formula of man and an awareness of its Aristotelian roots facilitate Albert’s philosophical rejection of the Arab philosophers’ premise that there is one active intellect common to all men. In particular, he attacks Avicenna’s and Algazel’s opinion that the intellectual soul does not reside within the human body, but infuses its brilliance into the body from without.\(^{59}\) Albert counters the doctrines of the Arab philosophers in *De somno et vigilia* with his formula *homo inquantum homo solus est intellectus*, and employs it as well in *De natura et origine animae* to refute Averroes’s doctrine of one intellect common to all men. He thus confirms the doctrine of the soul as the *forma corporis* and the unity of man as body and soul, of the substantial unity of the soul with its vegetative and sensitive faculties, its immortality, as well as the natural desire for knowledge inherent in all men.\(^{60}\)

We mentioned previously that in his commentary on Pseudo-Dionysius’s *De caelesti hierarchia*, Albert associates his intellectualist formula of man with living a life in accordance with the intellect. This relationship is made even more explicit in *De morte et vita*. In the latter, in a manner analogous to regarding perception as the reason for being (*esse*) in sensitive creatures, he equates intellectual cognition (*intelligere*) with the reason for being (*esse*) in cognitive man. This reason for being of man as man, Albert

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\(^{57}\) Ibid., 2, lns. 32–3: “esse tamen hominem, inquantum homo est, solum intellectum.” See also ibid., 12, Ins. 44–52.

\(^{58}\) Ibid., 2, lns. 36–43; 5; ibid., 11.6, 12, Ins. 35–44 and 52–63.

\(^{59}\) Alb., *Somn. Vig.* 3.16, Borgn. 9, 184b and 186a.

\(^{60}\) Alb., *De nat. et orig. an.* 1.5–6, 12, Ln. 70–p. 15, Ln. 27; ibid., 2.4, 23, Ln. 64–p. 24, Ln. 75; ibid., 2.6, 25, Lns. 69–p. 29, Ln. 77, esp. ibid., 1.5, 14, Lns. 3–14; ibid., 1.6, 14, Ln. 91–p. 15, Ln. 27; ibid., 2.4, 24, Lns. 63–64; ibid., 2.6, 29, Lns. 4–59. German trans.: Albert der Grosse, *Liber de natura et origine animae/Über die Natur und den Ursprung der Seele*, 85–96, 137–141, and 147–165, esp. 91, 95, 141, 163, and 165. See Alb., *Ethica* 6.2.17, 431a–b.
declares, is constituted by the intellect alone, which is why Aristotle was right in designating the intellect alone (solus intellectus) as being man.⁶¹

Albert's conviction that only the intellect is truly man does not exhaust itself in the repetition of the intellectualist formula and the numerous variations of interpretation that depend on the context in his theological and philosophical works. This conviction led him to examine the human intellect and its subject, the intelligible, in an individual philosophical treatise. Not only does he wish to close a gap in Aristotle's scientific corpus, who had not written a treatise on the intellect. To study the nature of the intellect and its subject, its identity and difference from its subject, is well worth the effort because on the basis of this knowledge, man—who, according to Aristotle, is intellect alone—may perceive what he truly is. At the same time, the cause of man's contemplative happiness may be perceived, which allows man to flourish as man. More precisely, it allows the intellect to discover itself according to its own nature, because man as man is the intellect alone.⁶² The human intellect is, of course, as Albert explains within the same context in his treatise De intellectu et intelligibili, "the first image of the light of the First Cause, which is linked to space and time".⁶³ With the designation of man as intellect alone that is perceived as prima imago lucis primae causae, Albert philosophically picks up on the concept constituting the keystone of his theological anthropology: namely, the concept of man as imago Dei. When Albert repeatedly reverts to his intellectualist formula for man, with occasional explications, in the philosophical treatises following De intellectu et intelligibili—he does so in several places in De natura et origine animae, in the second Ethics commentary, in the Metaphysics commentary, and in the treatises De unitate intellectus and De XV problematibus—he reflects upon the doctrine he developed previously.⁶⁴
Conclusion

On the one hand, the *Doctor universalis* answers theologically the anthropological question, *What is man?* by the concept of man as image of God; on the other hand, he answers it philosophically with the formula *homo inquantum homo solus est intellectus*. His intellectualist conception of man is the philosophical development of his theological doctrine of man as *imago Dei*. The designation of man as intellect alone, which becomes an axiom in Albert's works, constitutes the true formula of his philosophical anthropology and the very culmination of his entire philosophical thought. The formula *homo est animal nobilissimum*, which the *Doctor universalis* also employed in his treatises, should, in my judgment, be revised in light of his concept of man as intellect alone. The formula used at the very beginning of the early anthropological treatises, namely, *homo est animal perfectissimum*, appears inadequate when compared to the concept of man that Albert conveys with the formula *homo solus intellectus*. Man's preeminence over all sensitive beings is not, as we saw in Albert's early treatise *De IV coaequaevis*, constitutive of his essence. To designate this special status as the distinctive feature of Albert's anthropology would be equivalent to a behaviorist reduction of his concept of man. Such a reduction is entirely incompatible with Albert's standpoint, including his observations concerning psychology and zoology, in which man is primarily described according to his genus-specific properties and not defined according to his essential nature. The designation of man...
as *animal nobilissimum* merely denotes his superior rank within the genus of sensitive beings, without defining his essence. Noteworthy as well is Albert’s anthropocentric interpretation of Aristotle’s zoology. In the further development of his intellectualistic concept of man, already outlined in the early works, anthropology becomes the core discipline of his oeuvre and the occasion for him to restate his philosophy regarding man’s perfection as man.67

*English translation by Cornelia Oefelein*
THE MORAL THOUGHT OF ALBERT THE GREAT

Martin J. Tracey

Dissatisfied with the learned moral discourse of his day, Albert the Great sought new sources for understanding moral matters and new structures for expressing moral teachings. The effort occupied a considerable amount of his intellectual energy, particularly in the first two decades of his long academic career.

Albert’s first work, De natura boni, is a moral one. His revisionist ambition comes to expression in the first paragraph of that work when he states that he will examine its subject, goodness, “morally” rather than “substantially”—less metaphysically, as it were, and more practically than his predecessors had. A similar ambition governs De bono, a work that critiques central moral doctrines of his influential predecessor in the Faculty of Theology and its leading authority in morals, Philip the Chancellor. We see it again and most decisively in Albert’s revolutionary work, Super Ethica—the first commentary by a Latin author on the whole of Aristotle’s Nicomachean Ethics. When, in defiance of customs and regulations governing curricula within Dominican houses of religious formation (studia), Albert chose to make Aristotle’s text the subject of a lecture course at the studium in Cologne, he did so convinced that the close study of that text would enrich Christian moral thinking. Indeed, so convinced was Albert of its promise, and so dedicated was he to this purpose, that he wrote a second long commentary on Aristotle’s text, the Ethica, paraphrasing its arguments and placing them within his idiosyncratic history of philosophy.

My aim in this essay is to exhibit the leading questions, sources, and themes of Albert’s moral thinking by surveying the contents of his main

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1 Alb., De nat. boni proemium, Ed. Colon. 25/1, 1.
moral works. There is as yet no inventory of this kind, and its absence has impeded the formulation of a comprehensive account of Albert’s moral thought. Albert wrote many long and difficult works, and addressed moral questions in many of them. The works that address moral subjects most explicitly and at greatest length are De natura boni (ca. 1236–40), De bono (1241–43), Sentences (ca. 1246–49), Super Ethica (1250–52), Ethica (ca. 1262), various theological Quaestiones (ca. 1241–50), his biblical commentaries (after 1257), and Summa theologiae sive de mirabili scientia Dei (after 1268).⁴

As this list suggests, Albert expresses his moral thought within works of two kinds: commentaries on authoritative texts (e.g. Lombard’s Sentences, Aristotle’s Nicomachean Ethics, and the Gospels) and original treatises. His original treatises are, for the most part, collections of “disputed questions” (quaestiones disputatae) grouped by themes. Albert produced commentaries and questions-collections mainly within two institutional contexts, each academic and religious: courses for theology students at the University of Paris, and courses for novices in houses of religious formation within the Order of Preachers (most importantly, the Dominican studium generale in Cologne).⁵

In his commentaries, Albert expresses views about what the textus commentus says as well as about the truth, adequacy, and sufficiency of its statements. Along the way, he also expresses his own independent philosophical and theological opinions. It is sometimes unclear whether a given comment represents his interpretation of what the text says, his assessment of what it says (e.g. whether it is true, adequate, or sufficient), or indeed his own independent doctrine.⁶ This ambiguity of course complicates the tasks of reconstructing Albert’s own positions and inferring normative principles from them applicable to contemporary moral problems.

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⁴ On the dating of these texts, see Henryk Anzulewicz, De forma resultante in speculo. Die theologische Relevanz des Bildbegriffs und des Spiegelmodells in den Frühwerken des Albertus Magnus, (BGPTM, NF) 53/1 (Münster: 1999), 6–18.


A highly stylized tool for the discovery, investigation, and definition of doctrines, the Scholastic *quaestio* brings challenges all its own. Scholastic questions typically contain an author’s response to a question raised by himself or his students in the context of classroom instruction, together with objections to that response, and replies to those objections. Many questions become set pieces to which masters and students devote attention across academic generations, often with detailed knowledge of the arguments and analyses of their predecessors. The close relationship between this form and the classroom explains why ideas and principles that figure significantly in one part of a treatise are sometimes omitted later in the treatise; from one session to the next, when faced with the exigencies of the new speculative question that is the immediate focus, some fine points were evidently forgotten. The institutional context within which Albert produced his questions-collections also explains the relative dearth of prolegomenal or synthetic remarks announcing or collecting key determinations within the treatise; collective work in the classroom focused on the resolution of perceived conflicts among authorities and not on general discussion of the principles and distinctions introduced to resolve them. While the *quaestio*-form is a highly efficient instrument for bringing out differences of opinion among traditional authorities on the question at issue and for outlining ways to reconcile them, it seems less well suited for the systematic presentation and defense of the teacher’s own complex theory.\(^7\)

Whatever interpretative impediments attend the *quaestio*-form itself, other quite significant impediments attend Albert’s particular uses of it. To begin with, Albert’s responses (*solutiones*) in his *quaestiones* are often incomplete or frustratingly brief. Indeed, in many questions, Albert only replies to the objections and ventures no *solutio*; in such questions, the “objections” dispute a response that may be implied but is nowhere stated. Albert also frequently does not reply to each of the objections he lists; in such cases, he sometimes suggests that the reply is “apparent” from his response or from a reply to another objection. Finally, many of the questions that Albert formulates are formulated in the same way by his predecessors, and many of the objections he considers are considered by them too. While Albert often crafts his treatment of a question to critique those of his predecessors, his critiques can be quite subtle. With so few of

\(^7\) For detailed discussion of methods of teaching and research in medieval universities, see Olga Weijers, *La disputatio dans les Facultés des arts au Moyen Âge* (Turnholt: 2003).
the works of Albert’s academic predecessors available in print, it is easy to overlook these subtleties and so, presumably, to miss much of what Albert wishes to emphasize.

Notwithstanding the challenges to the interpretation of Albert’s moral thought, there is a growing body of scholarly work on it, albeit one that largely omits his late moral work. Various doctrines in these early works have been compared with those of Albert’s colleagues at the University of Paris. Among predecessors so compared are Philip the Chancellor and William of Auxerre in the Faculty of Theology and several commentators on the *Nicomachean Ethics* in the Faculty of Arts (including the young Robert Kilwardby); among successors are Thomas Aquinas, Boethius of Dacia, and several late 13th- and early 14th-century Arts commentators on the *Nicomachean Ethics* (including Peter of Auvergne). Scholars have been especially concerned to appraise two questions: how accurately Albert reads Aristotle and how successfully he relates Aristotelian and Christian moral thought. Appraisals of these kinds motivate and structure much of the scholarly literature, and Albert’s work figures favorably in respect of each. On the first score, he has generally been found to read Aristotle more accurately than his predecessors and in a way that profoundly influences his successors. Scholarly opinion on the second score is more difficult to summarize; it will help to say more about the way this set of questions has been framed.

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10 These are the structuring concerns, for example, of Georg Wieland’s highly influential work *Ethica—scientia practica. Die Anfänge der philosophischen Ethik im 13. Jahrhundert*, (BGPTM, NF) 21 (Münster: 1981).

A central question in the literature is whether Albert recognized conflicts between Aristotelian and Christian moral thought and, if he did, whether he discussed them in a way that remained faithful to core Christian convictions (e.g. about revelation, grace, and the afterlife). Leading authorities affirm that Albert recognized such conflicts better than others and succeeded in discussing them in a way that did remain faithful. R.-A. Gauthier has provided a highly influential assessment of this kind. He presents Albert as having advanced beyond both the misinformed concordism of certain predecessors and the unfaithful secularism of certain successors to develop a Christian Aristotelian moral theory, which was similar to if less clearly conceived than that of his illustrious student, Thomas Aquinas. The moral teaching of Gauthier’s Albert avoids the extremes of an anti-philosophical Augustinianism and an excessively philosophical Averroism. More recently, Albert has been praised for having articulated a “robust vision of the human being’s natural moral capacity, of our ability to attain to levels of moral perfection distinct from—but not in opposition to—man’s supernatural destiny.”

Most scholarship on Albert’s moral thought has been premised on a small number of loci. This doubtless owes in part to the unavailability of Albert’s own moral works in critical editions—an obstacle that to this day, for example, hinders the study of the moral parts of his Sentences commentary and Cologne summa. That being said, as the study of Albert’s thought has progressed, the availability of tools for understanding it has increased. We now have tools at our disposal of which some relatively recent interpreters of Albert’s thought only dreamed. These include critical editions of most of Albert’s moral works, the Latin translations of the Ethics and commentaries upon it that Albert knew, commentaries by several of the other 13th-century commentators on the Ethics as well as related works by their authors, and the Latin translation of Greek and Arabic commentators on the Ethics. In addition, several documents pertinent to the early Latin interpretation of the Nicomachean Ethics and the

conception of ethics as a discipline within the Faculty of Arts at Paris have been edited, such as the Barcelona Examination Compendium, various science-theoretical overviews of philosophical disciplines (*divisiones scientiarum*), and the *De summo bono* of Boethius of Dacia.\(^\text{14}\)

Albert the Great acquired a reputation in his own time for being a brilliant expositor of the history of philosophy.\(^\text{15}\) If earlier scholars regarded ethics as a subject of secondary interest for Albert and one to which his own contribution was modest, some recent ones, most notably Alain de Libera, have presented ethics as a primary interest and one to which his contribution was immense and in which his influence was great. These scholars have shown Albert’s moral thinking to be a source of ideas, information, and inspiration for thinkers as diverse as Thomas Aquinas, Ulrich of Strasbourg, and Siger of Brabant, and hence for movements as diverse as Christian Aristotelianism, Christian Neoplatonism, and Latin Averroism.\(^\text{16}\)

Albert has been read as a proponent of intellectualist eudaemonism in moral philosophy—a theory that posits a particular form of happiness as the overarching moral goal of human life on earth, and appraises the morality of actions and institutions relative to their tendency to inhibit or promote it. This happiness is imagined to be an activity rather than a state or disposition; it is moreover an activity that is best practiced within a life devoted to philosophical speculation that is preeminently metaphysical. Albert urges citizens to act in ways that develop their capacity for such a life, and urges statesmen to craft laws that foster it.\(^\text{17}\)

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\(^\text{14}\) For detailed information about these new sources, see Martin J. Tracey, The Character of Aristotle’s Nicomachean Teaching in Albert the Great’s Super Ethica Commentum et Quaestiones (1250–1252), PhD dissertation (Notre Dame: 1999), 2–8. See also Cunningham, Reclaiming Moral Agency, x.

\(^\text{15}\) On Albert’s medieval reputation, see Irven Resnick, “Introduction,” in *Albert the Great*, ix–x.


These remarks must suffice for an introductory summary of trajectories within the literature. Proceeding in chronological order, we now outline some of the leading themes in Albert’s moral works.

**De natura boni**

Although incomplete, relatively short, and written early in his career, Albert’s first work addresses some foundational moral-theoretical questions in a systematic way.

Albert’s stated subject in *De natura boni* are the traits (*differentiae*) of created goods.\(^{18}\) His analysis is premised on a traditional distinction between created and uncreated goods. The latter set of goods has only one member: God is the sole uncreated good. God is good in Himself and by His very substance, whereas every other existing thing is good derivatively; indeed, it is the fact that God made them that makes other things good. Albert underscores the distinction between what is good essentially and what is good derivatively with the verse from Luke’s Gospel in which Jesus reprimands those who call him good and asserts that God alone is good.\(^{19}\)

*De natura boni* examines three interrelated subjects: how uncreated goodness is manifested in human creatures, how it becomes diminished in them, and how, once diminished, it can be recovered. It is manifested, diminished, and recovered, Albert argues, through the actions and reactions/passions of human beings.\(^{20}\) Created goodness is exhibited variously in human beings through nature, virtue, grace, the Gifts of the Holy Spirit, the Fruits of the Holy Spirit, earthly happiness, and heavenly happiness. Albert regards these goods as interconnected forms of a moral perfection.\(^{21}\) Although he seems to have planned to examine these seven kinds of created goodness in the *De natura boni*, the form of the work that has survived to our day only contains one complete discussion, of natural goodness (*bonum naturae*), before it breaks off in the middle of its discussion of virtue.

Albert begins his discussion of natural goodness by invoking Genesis to assert that everything created by God is good. God creates things for

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\(^{18}\) Alb., *De nat. boni* proemium, 1.

\(^{19}\) Alb., *De nat. boni* 1.1, 1.

\(^{20}\) Alb., *De nat. boni* 1.2 proemium, 2.

\(^{21}\) Alb., *De nat. boni* proemium, 1.
a purpose, and endows what he creates with a nature, which is to say, a specific form of being that orders it to that purpose.  

The purpose is the manifestation of God’s glory, and created things manifest it when they attain the perfections proper to their natures. Albert emphasizes that any created thing’s attainment of perfection requires respect for the limits of its nature. Following Boethius, Albert connects the natural goodness of human beings with a certain configuration of the physical elements, and speaks of it as a shadow or vestige of God lying deep within a person’s constitution. He uses biblical examples to illumine further what natural goodness is. The Scripture refers to this goodness, he tells us, when it describes Job as having already possessed mercy (miseratio) in his mother’s womb (Job 31:18) and when it accounts for the absence of concupiscence in Raguel’s daughter Sarah (Tob. 3:16–17). John Chrysostom has it in mind when he explains what made John the beloved disciple. Natural goodness is a kind of innate readiness or habilitude to act in ways consonant with one’s nature.  

Albert explains that agents exhibit natural goodness in action through respect for due measure. To act in this way is for Albert to act in accord with the rule of reason. Invoking 1 Corinthians, Albert asserts that the manner of life (conversatio) of the naturally virtuous is guided by respect for integrity (honestas) and discretion. The naturally good seek to act in ways that all human beings agree are permissible, useful, and worthwhile. Whatever they do they do for the sake of God’s glory—this intention orders and informs all their good actions.  

As this analysis makes clear, Albert affords intention a central place within the moral evaluation of acts. Certain acts, he maintains, have ends built into them such that it is not possible to perform them without intending these ends; these ends belong to the nature of such acts as surely as does the tendency of physical bodies to move in particular ways (e.g. the tendency of a thrown stone to fall to the earth). Convinced of the moral importance of intention, Albert offers three rules by which agents may evaluate their intentions and so assess whether they are acting  

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23 Alb., De nat. boni 1.2.1.1, 2.  

24 Alb., De nat. boni 1.2.1.2, 2.
rightly. Good intentions are, first, simple—the agent with the right intention is free of any “twist of double-mindedness” (*plica duplicitatis*), and seeks one thing alone, God’s glory. Second, they are not vain; one who acts with a vain intention acts in order to be praised by other people; in so doing, he seeks his own glory rather than God’s. Finally, they are not conjoined to actions that are intrinsically evil; indeed, no good intention can ever be so conjoined.25

Albert’s discussion of how natural virtue is lost includes some metaphysical analysis of the sort he had indicated his treatise on the nature of goodness would include, albeit to a lesser degree than his properly moral or action-oriented analysis. Appealing to the biblical story of the Good Samaritan, and in particular to its account of a traveler left half dead (*semivivus*) on the road from Jerusalem to Jericho, Albert defends the notion that the more evil acts a person performs, the less capable he becomes of performing good ones. Although evil action weakens the person in this way, Albert affirms that, so long as a person lives, he has the capacity to return to goodness through penance; the capacity for acting rightly never disappears altogether in this life, no matter how gravely and how often a person has sinned. Right action, however, becomes painful to those who have performed serious sins, and wrong action pleasant; they become like the sinners in Job 30, who are so corrupted as to find pleasure living “under the briers” (*sub sentibus*).26

The wrongness of wrong action lies principally in its immoderation; those who have diminished natural goodness are deficient in their desire to do what is right and excessive in their desire to do what is wrong. They are uncivil, shameless, and vain. The recovery of natural goodness, not surprisingly, involves a return to moderation marked by a flight from the cause and occasion of corruption and a new desire and affection for heavenly things. Through zeal to avoid superfluity on the one hand and laziness (*pigritia*) on the other, natural goodness is restored. It is a fundamental reordering of the disordered soul, achieved through attention to one’s own worth, solicitude for one’s duty, and attention to the ultimate purpose of earthly life. Albert underscores this last point as follows: “If we do not attend to the end on account of which we exist and for the sake of which we must act, reason is useless to us. We are created with

25 Alb., *De nat. boni* 1.2.1.2, 3.
26 Alb., *De nat. boni* 1.2.2.1, 4.
reason for this very purpose: that we might know that toward which we should tend in our actions and deeds.”

While natural goodness inheres within human beings by nature, Albert's second kind of created goodness, the good of moral or political virtue, does not; it is acquired. He offers some remarks about human action in general before discussing moral virtue as such. Human actions include things we do and things we say. They derive from human beings—they come “from us” (*a nobis*) in a way that things created directly by God do not. However, like material things created by God, human actions are composites of matter and form. Albert connects the matter of actions with the objects they concern, and their form to the circumstances attending their performance. An action’s matter endows it with a basic moral character, either good or bad. Its circumstances complete its moral character, fixing it as either good or bad.

Actions that are basically good are so because they concern fitting objects. Thus, feeding the hungry is basically good, since the hungry are those it is fitting to feed. Likewise, freeing what is to be freed and killing what is to be killed are basically good. Albert allows that an action’s “form” or circumstances can change its moral quality. Some actions with good matter become morally bad when performed in the wrong circumstances. By way of example, Albert claims that feeding the hungry becomes bad when one feeds the hungry for the sake of vanity. Likewise, some actions with bad matter become morally good when performed in the right circumstances. Albert says that when a judge happens to know personally that a man legally convicted of a capital crime is innocent, he is nevertheless right to execute him if sparing him death would engender contempt for law. Such killing of someone not-to-be-killed becomes morally good through the addition of these circumstances.

Albert’s discussion of circumstances is largely composed of excerpts from Cicero’s *De inventione* and Boethius’s *Topics*. Albert claims that Cicero’s aim in discussing circumstances was to show their usefulness to lawyers who need to describe the actions of agents in the context of arguing points of law. The full description of an action would address who

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27 Alb., *De nat. boni* 1.2.3.2, 7: “si enim non attendimus finem, propter quem sumus et agere debemus omne quod agimus, inutilis est nobis ratio, in qua creati sumus, quae non propter alius data est nobis, nisi ut sicamus, ad quid actiones et opera tendere debeamus.”

28 Alb., *De nat. boni* 2.1.1, 8.

29 Alb., *De nat. boni* 2.1.1, 9.

30 Alb., *De nat. boni* 2.1.1, 8.
performed it, what he did, as well as why, when, where, how, and by what means he did it. Albert himself insists that circumstances pertain not only to jurisprudence but to morals too; again, he sees actions as composites, and likens the object of an action to its matter, and the circumstances to its form. This point is arguably the chief contribution of his otherwise rather unoriginal discussion of circumstances. He makes it, and then copies material from Cicero and Boethius, supplementing their accounts of circumstances with examples from the Bible meant to illustrate them. In the course of this presentation, he pauses at least once to point out the far-reaching agreement of Cicero, Aristotle, and Augustine about the moral evaluation of actions.

Albert's overarching aim is to enrich the calculus employed in the moral evaluation of actions. We see this in the incomplete section he appends to his discussion of circumstances. According to the plan he announces, having discussed the matter and form of actions, he was next to discuss their "causes": voluntariness, choice, deliberation, and the will. He evidently intended here too to collect various authoritative definitions of these subjects, this time from Aristotle, John Damascene, and Nemesius, and then to exemplify them with biblical examples.

In his section on acquired virtue, Albert aims to define it, to account for the various names by which it is known (i.e. acquired, civic, cardinal, moral), to explain how it is acquired, and to address the question of the unity of the virtues. A first striking thing about this discussion is its comprehensiveness and concordism; Albert's discussion of the definition of virtue claims to collect all the definitions of the philosophers and saints available to him. Another striking thing is the pride of place that he affords Aristotle. The ten definitions he profiles of virtue, for example, culminate with Aristotle's. In presenting it, Albert discusses favorably and at length the argument Aristotle gives in defense of it. He seems to regard as particularly instructive Aristotle's distinction between natural and acquired virtue, his notion that virtue consists in a mean or intermediate state, and his distinction between arithmetic means and means "relative to us" (quoad nos). He supplies biblical warrants and parallels for these and other notions. For example, the notion that a virtuous action strikes a mean between excess and deficiency is reinforced through the

31 Alb., *De nat. boni* 2.2.1.1, 10–11.
33 Alb., *De nat. boni* 2.2.2 proemium, 26.
34 Alb., *De nat. boni* 2.3.1.1.1, 31.
citation of a petitioner’s prayer in Proverbs that God protect him from want and superfluity.\(^{35}\) In a similar vein, he connects Aristotle’s thesis that most people lead lives ordered to one of three ends (i.e. physical pleasure, civic activity, or study) with a similar scheme he reads in Augustine.\(^{36}\) Albert concordizes not just the philosophers and the saints, but also the philosophers with the philosophers; he takes Aristotle, for example, to endorse Plato’s doctrine that there are four cardinal virtues, and finds corroboration for the doctrine itself in an allegorical reading of the Song of Songs.\(^{37}\)

The discussion of acquired virtue is very far from complete. Having promised to examine each of the cardinal virtues, Albert succeeds only to discuss temperance. That discussion is quite uneven. After distinguishing temperance in respect of food from temperance in respect of coitus (which he calls chastity or continence), Albert devotes many pages—two-thirds of the entirety of *De natura boni*—to a discussion of virginity as one of the three forms of continence (beside widowhood and conjugal continence), and more narrowly to a treatment of the virginity of Mary. In the analysis of virtue in general that precedes the discussion of individual virtues, Albert nevertheless adopts several clear positions. Although he does not properly present, defend, or develop it, he does endorse a thesis that the cardinal virtues constitute some kind of unity, and suggests that he understands it along the lines presented in Bernard of Clairvaux’s *De consideratione*.\(^{38}\) He also affirms that human beings can acquire some virtue by natural means. Human nature is ordered to natural and supernatural ends, and reaches a kind of perfection when each is attained. The virtues that human beings acquire without special assistance serve to perfect their natures. This perfection facilitates an even more complete supernatural perfection. Albert finds an analogy in the Gospel account of the healing of a paralytic. Natural virtues are like the men who carried the paralytic to Jesus—they do not suffice to “heal” or supernaturally perfect the imperfect man, but create the conditions that make such healing possible.\(^{39}\)

\( ^{35} \) Alb., *De nat. boni* 2.3.1.1.3, 35.

\( ^{36} \) Alb., *De nat. boni* 2.3.1.2.1, 36.

\( ^{37} \) Alb., *De nat. boni* 2.3.1.2.2, 37.

\( ^{38} \) Alb., *De nat. boni* 2.3.1.4 proemium, 39.

\( ^{39} \) Alb., *De nat. boni* 2.3.1.2.5, 38–39.
Like *De natura boni*, Albert’s second moral work, *De bono*, is at its core a treatise on the four cardinal virtues, albeit a much longer and more rigorous one. It too, however, is incomplete, despite the promises Albert makes in the extant part of the work to discuss the theological virtues and their relation to the cardinal virtues. The *De bono* treats all of the main subjects treated in *De natura boni*, maintaining much the same positions in respect of them and indeed repeating with little amendment parts of his earlier analysis.

The close connection of the two works is apparent in the discussion of circumstances. Both works list the same number of circumstances and define them in the same way. In doing so, both follow Cicero’s *De inventione* closely. *De bono* however drops the biblical examples that comprise the bulk of Albert’s discussion in *De natura boni*. Both texts endorse the same model for the role of circumstances in fixing the praiseworthiness or blameworthiness of actions—that is, both present circumstances as causes that help bring an action into being and make it the kind of action that it is. In respect of this last point, Albert raises learned new questions, laboring, for example, to specify what kind of causality (e.g. efficient, formal, etc.) circumstances exert on actions. Regrettably, despite new detail and sophistication in his discussion of the number and definition of the circumstances, he gives no fuller account of how circumstances relate to the other features that specify actions (e.g. their objects and ends), and so leaves the reader to ponder just what role they play in moral evaluation. Those who would wish to know more about how it is that generically evil acts may become good, and vice versa, and eager to have additional examples of such changes in moral quality, find little guidance.

In *De bono*, Albert analyzes closely what he calls the “causes” of virtue. His analysis carries forward, with heavy dependence on Aristotle’s *Ethics*, the very schematic notes on voluntary action in *De natura boni*, adding a detailed discussion of deliberation and choice. Following Aristotle, he presents virtue as a stable disposition of the soul with both a proximate efficient cause (virtuous human actions) and remote efficient cause (the will). We become disposed to act and react in excellent ways through the repeated performance of like actions and reactions. Albert

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40 See, for example, Alb., *De bono* 1.2.1, Ed. Colon. 28, 24.
41 Alb., *De bono* 1.2.6, 32–33.
emphasizes that not just any act disposes the soul, but only those that are, first, willed or voluntary and, second, chosen deliberately.  

*De bono* also makes good on the detailed analysis of the cardinal virtues that Albert intended in *De natura boni* but appears never to have realized. He defines each virtue and specifies its matter or objects as well as the action in which it is paradigmatically expressed—its proper act (*actus proprius*). His treatises on bravery, temperance, and prudence are divided into two sections, the first on the virtue itself and the second on its “parts”—that is, on allied habits or dispositions. Albert defines these parts too and specifies their matter and proper acts. His work on the parts of the cardinal virtues has been praised for its depth and breadth. Albert’s analysis builds on lists and descriptions of the parts from Cicero and Macrobius. Whereas Cicero, for example, names continence, clemency, and modesty as the parts of temperance, Macrobius names modesty, shame, abstinence, chastity, integrity (*honestas*), moderation, frugality (*parcitas*), sobriety, and purity (*pudicitia*). Albert labors to account for the differences between Cicero and Macrobius in a way that preserves the authority of both authors and reconciles their views with Aristotle’s. He also clarifies the nature of the relation of a virtue’s parts to the virtue itself, presenting them as potestative rather than integral parts. Virtues and their parts are at bottom capacities to act or react in certain praiseworthy ways. The parts of a virtue are moreover ordered to one another, some higher and some lower. Those who possess higher parts enjoy the corresponding capacity as well as the capacities of lower parts ordered to it. A person in possession of the virtue itself possesses all the capacities of that virtue’s parts.

Albert’s discussion of virtue engages critically the treatment of the topic by Philip the Chancellor. Although Albert rarely refers to Philip by name, the Chancellor’s doctrines figure importantly in Albert’s own analysis; within Albert’s questions, for example, Philip’s solutions sometimes figure as objections to Albert’s own position—objections that Albert refutes. Albert’s treatment of courage illustrates this stance of conscious criticism. He addresses the same traditional questions that Philip had addressed

42 Alb., *De bono* 1.4.3–8, 50–66.
44 Alb., *De bono* 3.1.6, 134.
about the definition, proper act, and object of courage, and contradicts Philip's replies to each. Further examination of Philip's discussion of the object of courage will clarify Albert's engagement with it.

Philip's discussion starts from the Ciceronian premise that courageous action consists in the confrontation and endurance of “difficulties” (difficilia) and hence that difficulties are the virtue's proper object. In an effort to identify the nature of these difficulties, Philip quotes theological authorities who maintain that courage confronts and endures diverse things: verbal insults, damages to one's possessions, physical illness, disordered sexual desire, and temptations to wealth and power. These authorities lead Philip to ask whether courage's proper object can comprehend so many diverse things. The impetus for asking that question is an authority from Aristotle which asserts that the passions alone, and not any of these other items, are its proper object. Philip tries to show that the Aristotelian authority is compatible with the theological ones through a fuller discussion of Aristotle's views. For Aristotle, he claims, courage rules passions that arise from difficulties. These difficulties involve goods that are internal to the agent as well as goods external to him. Moreover, Aristotle distinguishes innate passions, such as the desire for sex, which have their origins in agents themselves, from the induced passions, such as fear of death on the battlefield, which have their origins in external circumstances. Philip asserts that when these Aristotelian doctrines are called to mind, it is clear that Aristotle's narrow account of courage's object does not exclude any of the items on the broad list compiled from theological authorities. The passions are indeed the proper object of courage, but they are a broad set.46

This strategy for accommodating various claims about courage has systematic importance for Philip, as it leads him to a justification for the unity of virtues and a final nuanced position regarding courage's proper object. Following Cicero, Philip affirms that every virtue, and not just courage, involves what is difficult. Every virtue, moreover, primarily involves either actions (things we do) or passions (things that are done to us). While prudence and justice primarily involve action, temperance and courage primarily involve passion. Prudence involves difficult actions connected to our personal interests, and justice difficult actions connected to the interests of others. While temperance involves difficult passions

that arise from within (innate passions), courage involves difficult passions that arise from without (induced passions). Accordingly, the proper object of courage is induced passion.\footnote{Philippus Cancellarius, \textit{Summa de bono} 4.2.2, 796.}

So much for Philip’s analysis. It is quite telling that each of the eight objections Albert considers regarding courage’s object take Philip’s solution as their point of departure; they are objections to the claim that the proper object of courage is induced passion.\footnote{Alb., \textit{De bono} 2.1.2, 86–88.} Albert raises several puzzles for Philip’s view. How, he asks, can the virtue of courage concern passions induced from without? If that were so, courage would depend on external contingencies beyond the control of the agent, such as whether some fearful circumstance should arise for him. This would have the effect of preventing the agent from the free, deliberate, and repeated practice of fear management that is required for the acquisition of the habit of fearing rightly, and courage cannot be acquired without such practice.

This puzzle and others Albert raises all interrogate the consistency of Philip’s position with general principles of Aristotle’s thought. Albert seems to presume the general adequacy of Aristotle’s framework; he does not work towards it so much as start from it—an approach that enables him to engage deeper questions. For example, instead of merely asking how diverse authoritative accounts of courage’s object can be reconciled, Albert instead asks what theoretical basis there is in Aristotle’s thought for arbitrating among rival accounts of any virtue’s object. His answer to that question here appeals to Aristotle’s statement in \textit{De caelo} that virtue is the ultimate state of any potency. Every virtue insofar as it is a virtue is the ultimate state of a potency, and the object of any virtue is itself a kind of summit or limit within its genus. The summit or limit of fears induced in the soul from without is death, and that is why courage properly concerns mortal danger.

Managing this fear well is thus exceedingly difficult. It is, moreover, different in kind from managing fear of three other contingencies that Aristotle himself considers as putative objects of courageous action: namely poverty, bad reputation, and death in a shipwreck, insofar as these contingencies are either the product of external causes such as nature and fortune, or are such that we have no possibility to resist them through our actions (e.g. death at sea). Similar reasoning explains why certain candidates for the object of courage advocated by the saints, such as resisting
concupiscence and the promptings of the devil, are also not its proper object. Albert summarizes his dismissal of these candidates by distinguishing the virtue of courage proper from the general condition of all virtue to which it is closely related and yet from which it is distinct, namely, confrontation and endurance of the difficult.49 Here Albert’s effort to buttress Aristotle’s account of the object of courage by appeal to the “principle of the ultimate” opens out into a wider discussion of the unity of the virtues and, more broadly still, into a defense of the compatibility of Aristotle’s list of moral and intellectual virtues with the Socratic list of virtues.50

Despite challenging Philip on many points, Albert employs the same general structure in his De bono that Philip employs in his Summa de bono: that is, he prefaces his treatise on virtue with a treatise on goodness as a transcendental property of existing things. It affirms that everything that exists, insofar as it exists, is good. The deep connection of being and goodness is exemplified for Albert in God, who unites perfect being with perfect goodness. Every created good, he contends, including the goods sought and realized through human action, is good by means of the “First Goodness”, or God. More exactly, created goods are an effect of God’s goodness, and God’s goodness shines forth in it. Indeed some goods, such as the good of a deiform intellect, participate in God’s goodness more perfectly than others. Albert labors to clarify the relation between created goods and the uncreated good. There is no underlying nature of goodness that is shared by Creator and creature, but rather a community of proportionality insofar as created goods are ordered to the uncreated good, with which they connect insofar as they are able. No created good is good save insofar as it is created by God, the uncreated good, and ordered to Him, insofar as in actualizing the potentiality in its nature to the highest degree, it approximates God, who is perfectly actualized.51

The analysis of this relation is quite abstract; it is hard to see how the discussion of good as transcendental advances the analysis of virtue. It is noteworthy that the form for moral discourse that Philip introduced was very short-lived; the treatise on good as transcendental remains, and is indeed cultivated to a high art by Albert’s student Ulrich of Strasbourg,

50 Alb., De bono 2.1.2, 87.
51 Alb., De bono 1.1.2, 7–8.
but it becomes separated from the treatise on virtue. Arguably one of the reasons for this is the influence of Aristotle’s argument in *Nicomachean Ethics* 1.6, that a transcendental good is not the good sought by human agents in acting, and so need not be discussed in moral philosophy.

**Sentences**

Albert authored *De bono* while a regent master in Theology at Paris. He began commenting on Peter Lombard’s *Sentences* in the same period. In Book 3 of the *Sentences*, Peter Lombard offers his most direct and detailed discussion of moral subjects; morality is one of the two main subjects of Book 3, the other being the Incarnation. The two subjects are connected, Albert explains following the Lombard, insofar as each pertains to the process by which human beings are redeemed from sin. In Book 3 of his commentary, Albert discusses a wide range of moral subjects such as the theological virtues (Dist. 23–32), the cardinal virtues (Dist. 33), the gifts of the Holy Spirit (Dist. 34–35), and the ten commandments (Dist. 37–40).

The virtue of charity stands out as the subject most extensively examined among those surveyed; it is the focus of six chapters. Albert asks whether charity is a virtue and how it is defined. Having determined that it consists in love of God and neighbor, he asks how the two loves relate and are expressed (e.g. who is a neighbor? Are all human beings to be loved equally? Does the love of neighbor include the love of angels?). He also asks what levels there are in its acquisition and practice, and how charity is practiced by souls in heaven. The treatment of charity concludes with a comparison of human love or charity with divine love.

The brief section on cardinal virtues here revisits questions entertained about them in *De bono* regarding the number and definitions of the cardinal virtues and the meaning of the qualifier “cardinal”, before entertaining a new question, occasioned by the Lombard’s text, on whether human beings in heaven possess cardinal virtues. In these questions, Albert affirms many of the same doctrines, albeit in much less detail.

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52 Ulrich of Strasbourg, *De summo bono* 1, ed. B. Mojsisch, (Corpus Philosophorum Teutonicorum Medii Aevi) 6 (Hamburg: 1989). For some remarks about the relation of Ulrich’s thought in this text to Albert’s, see René-Antoine Gauthier, *Magnanimité. L’idéal du grandeur dans la philosophie païenne et dans la théologie chrétienne*, (Bibliothèque thomiste) 28 (Paris: 1951), 351, n. 3.


What is new in the *Sentences* commentary is the discussion of theological and infused virtues. Although Albert announces the intention to discuss them in both *De bono* and *De natura boni*, neither work includes such discussion. Those interested in how Albert relates theological and philosophical moral doctrines may be disappointed to observe that Albert barely addresses the question. He certainly says nothing significant about it in his short discussion of cardinal virtues, which stands thematically isolated from the discussion of theological virtues and gifts of the Holy Spirit that surround it. This separation of subjects seems grounded in a theoretical conviction that theological and philosophical virtues are profoundly different things. That conviction comes to expression in a series of questions on the connection of the virtues.

Albert asks first whether the cardinal virtues are connected. He does so in response to the claim that the virtues are connected such that a person who lacks any of them possesses none of them (the Lombard quotes Jerome and Augustine in support of this claim). He adduces several philosophical and theological authorities which suggest that they are so connected. Most simply affirm the connection without elaborating upon it. The authority from Bernard of Clairvaux connects the cardinal virtues through the concept of moderation or measure: justice seeks it, prudence finds it, bravery wins it, and temperance possesses it. Another authority contends that prudence and justice are the chief perfections and good dispositions of the rational part of the soul, and these perfections are required in order to induce temperance and bravery, which are the chief perfections of the sensitive part of the soul (more exactly, of its concupiscible and irascible powers, respectively). Yet another contends that prudence is the virtue that enables a person to choose what helps instead of what hinders, and this connects it to the other cardinal virtues, since matters of justice, temperance, and bravery are at stake in every choice.

In his solution, Albert notes that the philosophers, in particular Aristotle and the Stoics, disagree about the connection of the virtues. Their disagreement on the question follows from an underlying disagreement

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56 For a speculation about the absence of such discussion from *De bono*, see Stefan Ernst, “Philosophische Ethik im Rahmen der Theologie,” in *Albertus Magnus. Zum Gedenken nach 800 Jahren: Neue Zugänge, Aspekte und Perspektiven*, ed. Walter Senner, Quellen und Forschungen zur Geschichte des Dominikanerordens, NF 10 (Berlin: 2001), 292–296.
57 On the incommensurability of philosophical and theological *modi loquendi*, see Alain de Libera, *Méthaphysique et noétique*, 55–61.
regarding how virtues or excellent states of soul are generated. While for Aristotle human actions generate virtues, according to the Stoics the intelligences or separate substances generate them. On their view, although actions do not generate virtues, they do dispose a person to receive virtues from the intelligences.60

Albert sketches the Stoic view in some detail and reports that Augustine knew this view and rejected it. He himself rejects it in favor of the Aristotelian view. Although he states his position in the solution, he does not argue on its behalf there. What argument he makes is found in his replies to objections. On the Stoic account, every virtue is acquired when wisdom is acquired, and without wisdom, none is possessed. Like Aristotle, the Stoics see virtue fundamentally as a disposition of the soul and, moreover, as the ultimate or final development of the soul’s potentiality. Yet because their account of the soul differs, their characterization of its excellent disposition does too: they see it as kind of ordering of the four natural affections (fear, hope, joy, and perturbation), one of the distinctive features of which is the elimination of perturbation. The person so disposed possesses wisdom and for this reason is able to recognize the right order in things and instill the right order in his actions and reactions. Convinced that recognition of right order would not be possible unless the whole soul, with its higher and lower powers, is itself rightly ordered, the Stoics insist that the excellent disposition of the soul is one unified thing. The Stoics allow that it is possible to act like a virtuous person without being virtuous, attributing the performance of virtuous action by the non-virtuous person to the agency of the intelligences.61

In reply to the arguments quod sic, Albert insists on the distinction between unconditional and conditional possession of a virtue—between the possession of a virtue simpliciter and its possession secundum quid. While it is true, for example, that a kind or prudence is required in order to act temperately, this does not show, as the objector would have it, that prudence and temperance are connected such that one cannot have the one without the other. While the prudence required for acting temperately enables the temperate man to choose rightly in matters of self-control, it does not enable him to choose rightly in every matter. Albert endorses

60 Alb., Super III Sent. 36.A.1, 665.

Aristotle’s view that the moral virtues are generated through repeated action, and the intellectual virtues through time and experience. The fact that virtue is generated by two different sources, he suggests, proves that they are not connected.62

The infused virtues are, however, connected such that a person who has one of them necessarily has all of them. Albert advances three arguments in support of this claim, the first and most important of which, he says, is that they are infused through God’s grace, and God’s grace is a perfection which unites every virtue in itself and perfects both the essence of the soul and the soul’s powers. As he makes this point, Albert affirms that there is nevertheless a difference between grace and virtue, and refers his reader to his elaboration of it in Sentences 2. Second, every infused virtue is a form of the virtue of charity; no person can possess infused virtue without charity, and charity cannot be possessed without every other infused virtue. Albert develops the view of charity as the form and end of every infused virtue in his earlier treatise on charity. Third, only those justified in the eyes of God possess any infused virtue, and the possession of such justification is incompatible with the possession of any vice. Because vice is only expelled from the soul by the virtue opposed to it, it follows that the justified soul, free of every vice, must possess every virtue.63

Albert’s Sentences is the first place where he tackles the relation between philosophical and theological virtues. He endorses an Aristotelian over a Stoic account of the former, in part because the Aristotelian account denies that the philosophical virtues are a unity and insists that they are acquired rather than infused. This makes them a different kind of moral excellence than the theological virtues, which are infused rather than acquired, and each of which is a form of charity.

**Ethics Commentaries**

We have seen Albert embrace Aristotle’s moral philosophy in several ways in his early works. His early enthusiasm for Aristotle was premised on incomplete knowledge of Aristotle’s thought, owing to the unavailability of a Latin translation of all ten books of the *Nicomachean Ethics*. Months after Robert Grosseteste remedied this deficit, Albert departed from

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tradition to make the text the subject of a lecture course at the Dominican studium in Cologne.\footnote{See Jean Dunbabin, “Robert Grosseteste as Translator, Transmitter, and Commentator: The Nicomachean Ethics,” Traditio 28 (1972), 465.}

Thomas Aquinas took notes on the course, and Albert edited them to compose Super Ethica.\footnote{Thomas’s Tabula Libri Ethicorum attests how important Albert’s commentary was for Thomas. It is an “index of principal themes (index rerum notabilium) of the Nicomachean Ethics and of the commentary Albert the Great had once made on it”: Jean-Pierre Torrell, Saint Thomas Aquinas: The Person and his Work, rev. ed. (Washington, D.C.: 2005), 225–226.} It comments on Aristotle’s text line-by-line, outlining its argument and exploring its doctrines within hundreds of Scholastic questions. Some 15 years later, Albert authored Ethica which, remarkably, is itself the second complete Latin commentary, albeit a paraphrase rather than a literal exposition.\footnote{For discussion of the relations between the two commentaries, see Müller, Natürliche Moral, 69–73.}

Aristotle’s Ethics came to exercise enormous influence on Christian moral theology in the 13th century, and Albert’s commentaries played a crucial role in this process. One important contribution was to combat misreadings of it that prevailed among Albert’s predecessors—in particular among the masters in the Faculty of Arts at the University of Paris who lectured on the Ethics in the second quarter of the 13th century. The arts masters failed to recognize basic features of Aristotle’s outlook, such as his view that happiness, the ultimate aim (\textit{finis ultimus}) of moral action, is acquired in this life through virtuous actions performed by human agents acting without any special assistance from God.\footnote{Among the pre-1250 Latin commentators, Robert Kilwardby stands out in various ways for having seen through Christianized misreadings. See Anthony Celano, “Robert Kilwardby on the Relation of Virtue to Happiness,” Medieval Philosophy and Theology 8 (1999), 149–162.} Beholden as they were to Christian moral teaching, in particular to that of Augustine, and in the possession of very little historical consciousness or knowledge of ancient Greek culture, early arts masters such as Pseudo-Peckham and the Anonymous of Paris actually read Aristotle to affirm that happiness consists in a union with God in the afterlife that is attained through intellectual virtue infused by God.\footnote{See Wieland, Ethica—scientia practica, 143–197. Aristotle’s teaching on intellectual virtue appears to have been particularly challenging for his early Latin readers to understand. For some discussion of their characteristic misunderstandings, see Valeria A. Buffon, “The Structure of the Soul, Intellectual Virtues, and the Ethical Ideal of Masters of Arts in Early Commentaries on the Nicomachean Ethics,” in Virtue Ethics in the Middle Ages: Commentaries on Aristotle’s Nicomachean Ethics, 1200–1500, ed. István Bejczy (Leiden:}
substantially the same way, adding that the otherworldly union with God that is achieved through divine agency involves a joining or conjunction of the human agent’s intellect to the intelligences. 69 That this Christian-
ized misreading of Aristotle’s account of the finis ultimus was the authori-
tative reading within the arts faculty is clear from a magisterial “answer key” to examinations on the Ethics administered there in this period. The doctrines ascribed to Aristotle there include the following: happiness consists in union with God, God is the efficient and final cause of this union, and happiness is attained after death by means of intellectual virtues that God infuses into the soul. 70

Albert seems to have recognized incrementally the errancy of this read-
ing. His progress is in evidence in the Super Ethica in his treatment of the question, “Is the highest good achieved through action?” There Albert shows awareness of the conflict between the Augustinian conception of the highest good as something substantial and perfect and the Aristotelian conception of the highest good attainable through the actions of human beings under imperfect conditions. Albert affirms that although there is without doubt something unconditionally Good, and it is God, this is not the sumnum bonum of which Aristotle speaks; Aristotle’s highest good, he explains, is one that belongs properly to human beings—the one to which the activities of human beings are ordered. He maintains a similar position in the question, “Is civic happiness a perfect good?”; his solution to it turns on a telling distinction between what is unconditionally perfect (perfectum simpliciter) and what is perfect for its kind (perfectum in genere). 71

Albert effectively severs Aristotle’s discussion of highest earthly ends and activities from the discussion of God’s supreme goodness. From his perspective, doing so neither denigrates God’s majesty nor detracts from the perfection of the happiness enjoyed in the afterlife; for Albert the affirmation that human beings strive for a human end entails no denial that God is their ultimate end. Neoplatonic language about participation and exemplification helps him to bridge the gap; the human end, Albert insists, like those of all striving creatures, exemplifies and models God.

70 See Müller, Natürliche Moral, 85–87.
71 Alb., Super Ethica 1.7, Ed. Colon. 14/1, 32–33.
While Albert’s God is the first and highest good who imparts His goodness to all things, He does not impart it to all uniformly; there are goods and ends specific to created natures, and these goods and ends are exemplars of God. Albert’s God is thus not merely the source of an ontological goodness, but also shares in a mediated way in the goodness of practical activities proper to created natures, such that the goods proper to their kind cannot be conceived independently of God and yet are not reducible to Him. In making remarks of this kind, Albert shows himself unwilling to jettison entirely the Augustinian concept of a universal end or a *summum bonum simpliciter*.

In addition to advancing a more accurate reading of Aristotle’s text, Albert’s *Ethics* commentaries helped to legitimize the moral-philosophical enterprise itself. Against fellow theologians who arrogated to themselves exclusive authority for the discussion of the aims of human existence, Albert invokes the *Ethics* to defend the view that philosophers, following their powers of reason and without the aim of revelation, could and did reach sound conclusions about such matters. He defends this view within methodological prologues to each of his commentaries.

Each prologue takes the form of a collection of disputed questions on the nature of moral knowledge (*scientia moralis*). As such, each follows the conventions governing the medieval Latin introduction to an authoritative text (*accessus*). In these prologues, Albert defends the view that moral knowledge is possible despite the fact that its subject is human actions that are contingent particulars and not necessary universals. He also specifies what this knowledge is about, and outlines how it is acquired and expressed. Albert defends the proposition that human reason can establish demonstratively the goal of right moral action and, at least in general, the means by which it is attained. Indeed, Aristotle’s *Ethics* itself adumbrates this end and the general means to it. However, for Albert the general guidance that moral philosophy provides for attaining the end of human action can only be understood and followed by prudent agents. Moreover, the end of right moral action known through philosophical reason is less final and complete than the end of right moral action known through Christian revelation.

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Another important legacy of Albert’s commentaries is the endorsement they give not to moral-philosophical reasoning in the abstract, but to Aristotle’s reasoning in the *Ethics*. To appreciate this contribution, one must recall that Albert comments at a time when Latin Christians, including many within the Dominican order, harbor serious doubts about it. Allaying these misgivings is a major preoccupation in these texts. Indeed, the *Super Ethica* is structured in the form of a sustained defense of the truth, sufficiency, and fittingness of Aristotle’s deliverances in the *Ethics* as deliverances of philosophical reason. Albert defends both the main lines as well as the fine points in Aristotle’s text. For example, he argues that the highest good attainable by human beings is indeed, as Aristotle maintains, one realized through human actions, that human beings do indeed have an *ergon* or function, and that external goods are required to acquire and exercise moral virtue. Albert also defends peripheral Aristotelian opinions such as that people who inherit wealth tend to be more generous than those who acquire it, that inordinate sexual desire is less natural than anger, and that it is impossible for animals to be happy. He is consistently concerned to show that Aristotle defines and distinguishes key concepts properly. Thus he defends the idea that there is no better division of moral goods than the one Aristotle makes when he distinguishes the fine, the expedient, and the pleasurable, and there are no other virtues apart from the two kinds Aristotle recognizes, moral and intellectual. Although modern historians think of Aristotle’s differentiation of moral and intellectual virtues as a conscious departure from the Platonic virtue scheme, Albert does not, adducing arguments on behalf of their fundamental compatibility.

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75 It is important to note that Albert’s interpretation of Aristotle’s teaching is strongly colored by the influence of Aristotle’s Greek and Arabic commentators. For an argument against reducing Albert to a mere expositor and proponent of Aristotelianism, see Henryk Anzulewicz, “Albertus Magnus (um 1200–1280),” in *Kölner Theologen*, ed. S. Cüppers (Köln: 2004), 30–67.
76 Alb., *Ethica* 1.7, 32–33.
80 Alb., *Ethica* 7.6, 548.
81 Alb., *Ethica* 1.11, 56.
83 Alb., *Ethica* 2.1, 90–91.
84 Alb., *Ethica* 3.8, 180–181.
Albert investigates not only what Aristotle says, but the manner and even the sequence in which he says it, consistently vindicating the Philosopher of the slightest infelicity or defect. The initial questions of most books in the Super Ethica undertake a defense of the fittingness of the treatment of the subjects in it. Albert argues, for example, that it is fitting and necessary for Aristotle to discuss voluntariness where he does, as he does, within his discussion of moral knowledge. So too, justice, friendship, and continence. What appear to modern readers like accidents in the preservation and transmission of Aristotle's lecture notes are viewed by Albert as intelligent and informed judgments on Aristotle's part. Modern readers see significant doctrinal differences between the discussion of pleasure in Books 7 and 10 of the Ethics; indeed, the later account is read as a correction and repudiation of the former. Albert sees them as of a piece, doctrinally, and as falling where they must within a peerlessly rational investigation of moral knowledge.

The defense of Aristotle's teaching proffered in Albert's Ethics commentaries is in part an accident of his exegetical method and not necessarily an unqualified endorsement of that teaching. He endeavors to defend not only Aristotle's deliverances in the Ethics, but those of the ancient Greek and medieval Byzantine commentators on the Ethics such as Aspasius, Eustatius, and Michael of Ephesus. Eustatius's commentary on Ethics 1.6—the chapter in which Aristotle argues against the Platonic view that sound moral philosophizing proceeds from knowledge of the form of the Good—presents an interesting challenge for Albert, since in it Eustatius argues that Aristotle's critique misses the mark because it misunderstands Platonic forms. Whom will Albert support on this matter, Aristotle or Eustatius? The position he defends is finally non-committal: he refuses to pronounce on the question of whether Aristotle understands Platonic forms correctly, while asserting that if he does understand him correctly, then his critique is justified.

Albert's defense of Aristotle's moral reasoning won over skeptical confreres. At the Council of Valenciennes in 1258, at Albert's urging, its study became part of the curriculum within Dominican houses of study.

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85 Alb., Ethica 3.1, 137–138.
Quaestiones

Albert wrote several self-standing theological questions that are of obvious relevance to his moral thinking. These questions fall into three categories. A first group concerns psychology, treating subjects such as conscience and synderesis. A second concerns the afterlife, treating subjects such as the status of the glorified body, the gifts bestowed on the saints in patria, the halo, and the spiritual status of unbaptized infants. The final group concerns sin and vice. It includes questions on original sin and on the “capital vices” of sloth (acedia), self-indulgence (luxuria), avarice (treated twice), and gluttony (gula).

What study there has been of these questions has been chiefly concerned to fix their absolute and relative chronology. Happily, there is material in them that can help to clarify Albert’s relation to his predecessors in the theology faculty and the character of his Aristotelianism. Albert defends some positions that may surprise readers of other works. In the psychological questions, for example, Albert examines and defends a distinctly non-Aristotelian position, engaging a discursive tradition about higher and lower reason, ratio superior and ratio inferior, which William of Auvergne, Philip the Chancellor, and John of La Rochelle attribute to Augustine, and which shows the influence of Gundissalinus’s translation of Avicenna’s De anima.89

Albert’s Questions are an important part of his moral corpus, not least because they attend explicitly and with sophistication, as De bono and the Ethics commentaries do not, to moral-theological subjects. A brief examination of his set of five questions on the capital vices will illumine the character of Albert’s moral reasoning in these neglected works.

In this question set, Albert explains what a capital vice is and defends the view that there are seven such vices and that one of them, pride, is the root of all others. Following Gregory the Great, Albert defines a capital vice as one from which other vices grow.90 He tries to explain the nature of a capital vice’s relation to the vices that grow from it. Albert is aware of theological traditions that trace all human vices back to certain distant causes, such as the original sin of Adam (and, more exactly, to the first motion of inordinate sensuality in Adam’s soul) and the pride (superbia)

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90 Alb., Quaestio de vitiiis capitalibus 1, 163.
of Satan. Although he does not reject this language, his account of capital vices searches for the proximate causes of human failing; he invokes it to clarify the origin not of human fallenness in general but rather of particular sinful acts. Many particular sins arise, he contends, from preexisting sinful inclinations; vicious acts of one kind recommend the performance of vicious acts of another as a means to the achievement of their sinful purposes. For example, a person who illicitly desires to surpass others in worth and believes that he cannot do so without amassing a fortune, develops an inordinate love of money, and in this way generates avarice from his pride. Although pride commands an act of avarice, it does not elicit it. In this respect, capital vices relate to their offspring as charity does to the virtues it nurtures; charity commands other virtuous acts, but individual virtuous habits elicit the acts themselves. It commands them by presenting them with their end or purpose. The relation is like that of a general to his troops; the head virtues and vices command the actions of their subordinates, setting the ends to be sought, but the subordinates perform the actions that realize them.

Is pride an origin of this kind for every blameworthy disposition and act? Albert knows pride is seen as such by some Christian authorities, and attempts to bring out some of the rationale for this view. While it is easy to imagine how the prideful end of surpassing others in dignity may be sought through acts of avarice, it is more difficult to see how acts of capital vices such as sloth (acedia) may appear as means to that end. Albert counters this impression by describing a scenario in which it could. The prideful person, Albert says, desires preeminence in honors and is saddened by the good fortune of others, since he sees it as thwarting his own aims. This sadness itself engenders weariness or ennui (taedium) in him, since the good fortune of others makes the prospect of his surpassing them seem more remote and difficult to attain. The weariness in turns discourages him from proper solicitude in moral or spiritual matters (spiritualia). This example, Albert thinks, suffices to show that pride can underlie sloth and indeed every other vice.

The number of capital vices can be deduced from the objects of the soul’s powers. All of the capital vices derive from disorder in the soul’s relation to pleasure. The disorder, Albert insists, resides in the concupiscible

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91 Alb., *Quaestio de vitiis capitalibus* 2, 165–166.
92 Alb., *Quaestio de vitiis capitalibus* 1, 165.
93 Alb., *Quaestio de vitiis capitalibus* 3, 168–169.
and irascible powers of the sensible soul, and not in its rational power. The sensible soul can become disordered in its essence because its powers are directed toward particular determinate objects. Because the rational power is not so directed, it cannot become disordered in its essence. This disorder can be characterized generally as consisting in the preference of what is physically pleasurable over what is spiritually pleasurable. He presents each of the capital vices as disordered in respect of a particular physical appetite: gluttony disorders the appetite for self-preservation (by driving the glutton to consume what injures his health), and luxury for the preservation of the species (by driving the glutton to consume what his neighbors need for their well-being). Avarice, which is related to gluttony and self-indulgence, disorders the desire for wealth—that is, for the means necessary to sustain oneself and others. Envy disorders the irascible appetite by inducing sadness in the good fortune of others; wrath does so by inducing the desire that misfortune befall the just. Sloth and pride disorder the rational power—not essentially, since this is impossible, but accidentally. Thus, sloth is disorder of reason’s appetite for spiritual goods; it takes the form of weariness (taedium) that makes the pursuit of them difficult. Pride disorders the same appetite by driving a person to seek spiritual goods not for their own sakes, but for the sake of surpassing others in dignity.94

This passage shows a striking commitment to the principle of reason’s invulnerability to fundamental corruption. It also shows that, despite his enthusiastic advocacy of Aristotle’s moral framework in De bono and Super Ethica, Albert does not hesitate to employ non-Aristotelian concepts and categories when discussing theological themes such as the capital vices.

Biblical Commentaries

Like his theological questions, Albert’s biblical commentaries have been little studied by recent students of his thought. Albert wrote commentaries on each of the Gospels as well as several of the prophetic books of the Old Testament.95 Their neglect is surely owed in part to the fact that only two of these biblical commentaries are currently available in critical editions: Super Isaiam and Super Mattheum. A brief look at Super Mattheum

94 Alb., Quaestio de vitüs capitalibus 3, 168.
95 For an overview, see Anzulewicz, De forma, 17.
will give some sense of what it and Albert’s other biblical commentaries have to offer.

*Super Matthaenum* offers an outline and exposition of the first Gospel. Every line of that text receives substantial commentary from Albert, and he reads many of its lines to provide instruction (*doctrina*) as to how we should live our lives. Like his Aristotelian paraphrases, *Super Matthaenum* includes digressions in which Albert adds to his exposition a fuller examination of some subject raised by it, relating it to various philosophical and theological authorities.

Albert reads the Sermon on the Mount (Matt. 5:1–7:29) to be the presentation par excellence of Jesus’s moral teaching—his complete “moral doctrine” (*moralis doctrina*) and definitive guide to holiness of life.96 The sermon itself, he suggests, provides complete moral instruction insofar as it specifies both the ends we are to seek in acting (Matt. 5:1–16) and the means for achieving them (Matt. 5:17–7:29).97 In discussing it, Albert examines Jesus’s particular instructions regarding giving, prayer, fasting, money, anxiety, judgment, and hypocrisy as well as his general account of the relationship between the Old Law and the New Law. He also examines the Golden Rule (i.e. do unto others as you would have them do unto you, Matt. 7:12), which he says is a command that provides a simple yet complete guide as to how to fulfill one’s moral obligations—one that, insofar as it is universal, practical, beneficial, and rational, possesses all of the characteristics one should expect of such teaching.98

*Super Matthaenum* also includes extensive analysis of the beatitudes, each of which he thinks discloses something significant about the overarching aim and purpose of human action. Albert prefaces his analysis of the beatitudes with a digression on beatitude and its relation to happiness and virtue. Appealing to Cicero and Boethius, he presents beatitude, happiness, and virtue as connected stages of moral perfection.99

The least perfect of these stages, virtue, is a habitual state of a human agent’s soul that enables him to act rightly. The state is achieved through the voluntary performance of actions that are beneficial to the agent and so rational for him to perform. In presenting this view, Albert specifies kinds of voluntary action whose performance benefit the agent (e.g. resisting the enemies of justice) and kinds that do not (i.e. adultery and

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98 Alb., *Super Matt.* 7.12, 255.
99 Alb., *Super Matt.* 5.3, 103.
fornication). He claims that such beneficial actions fall into four broad kinds corresponding to the four cardinal virtues.\textsuperscript{100}

Happiness is more perfect than virtue because it is not a disposition of soul, but rather an action of the soul well disposed; the felicific act presupposes the possession of virtue, and virtue is ordered to it. More exactly, it presupposes virtue of the mind or prudence, which Albert here presents as the culminating product of every other kind of excellent disposition.\textsuperscript{101}

Here we encounter another view on the unity of virtues: just as reason contains eminently within itself and presupposes all of the soul’s other powers, the virtue of mind contains and presupposes every other virtue as well as the materials and conditions required for virtuous action, such as wealth and good fortune. This is why it takes a long time to acquire, and is more commonly found among older people. Adapting (and misquoting) a famous line from Aristotle’s \textit{Ethics}, Albert asserts that one virtuous act does not suffice for the acquisition of virtue any more than a clear day in winter makes spring arrive. Likewise, it takes more than one bird to build a nest, and more than virtue of mind to achieve the supreme ends to which virtue is ordered: the achievement of what is good for oneself, one’s city, and one’s people.\textsuperscript{102}

Beatitude is more perfect than either happiness or virtue, since it excludes all misery and indeed anything that impedes the blessed person’s performance of what is best. Unlike happiness, beatitude is itself a state, not an action or deed—the perfect state that contains within itself every good thing. While virtues are among the good things that beatitude includes, it also contains everything else that leads a person to the best state and preserves him there while excluding anything contrary to it. Although the goods it contains are many, beatitude itself is one thing; if it were not, Albert implies, it would not have the perfection and stability that is its mark. The unity of beatitude is not compromised by the many particular beatitudes presented in the Gospel; the particular beatitudes denote individual forms of perfection within distinct genres of meritorious action and as such are distinct from beatitude itself, which includes them all.\textsuperscript{103}

In this digression, Albert attempts to link the two main ends of moral philosophy, virtue and happiness, to the supreme end of moral theology,

\textsuperscript{100} Alb., \textit{Super Matt.} 5.3, 103–104.  
\textsuperscript{101} Alb., \textit{Super Matt.} 5.3, 103.  
\textsuperscript{102} Alb., \textit{Super Matt.} 5.3, 103–104.  
\textsuperscript{103} Alb., \textit{Super Matt.} 5.3, 104.
beatitude. We note the intellectualism of his position, the importance of the four cardinal virtues in it, and the prominent place accorded to Cicero alongside Aristotle in Albert's conceptualization of virtue and happiness.

**Summa theologiae sive de mirabili scientia Dei**

The last of Albert’s works with an abundance of explicit discussion of moral subjects is the theological *summa* composed at the end of his career. The moral part of the work is largely concerned with sin and vice; Albert discusses the roots of sin, the capacity to sin, the original sin of Adam, venial sins, mortal sins, and “privative sins” (i.e. sins of omission, negligence, and ignorance). Here as elsewhere in his corpus, Albert tackles other subjects with obvious implications for moral evaluation of human action, such as providence, predestination, fate, free will, demons, and demonic possession.

Modern readers have puzzled over the prominence of Augustinian ideas and themes in the text. The Augustinian moral principles of use and enjoyment, for example, are discussed in detail. Albert insists that fruition is an act of charity, performed through the power of “affective intellect”, fortified by faith and hope, to which the cardinal virtues are dispositive.

There is no discussion of the theological virtues as such in Albert’s Cologne *summa*. The one question on the cardinal virtues consists of two articles. The first returns to a familiar subject, the definition of virtue in general. The second asks what individuates virtues.

Albert here examines five definitions of virtue in general: two from Aristotle, and one each from Cicero, Anselm, and Augustine. He defends the adequacy of each definition by raising and resolving objections to them and then explaining the particular perspective or focus underlying them. The structure is the same as in Albert’s much longer examination of the same question in *De bono*. However, whereas in *De bono* Albert presents Aristotle’s definition as the most complete specification of virtue’s essence, here he singles out Augustine’s, declaring it, without any immediate explanation or justification, the best and most fitting of the definitions surveyed.\(^{104}\) He later indicates that it captures the essence of virtue better, and makes better sense of infused virtue.\(^{105}\)

In discussing the individuation of virtues, Albert’s interest is not on particular virtues such as charity and bravery, but rather on the genera

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104 Alb., *Summa de mir. scient. dei II*, 16.103.1, Borgn. 33, 261.
into which such virtues are classed. He discusses three such classifications. The first is a composite of the three theological virtues and the four cardinal virtues. This scheme, he says, is premised on the efficient cause of virtue; will is the efficient cause of the cardinal virtues and grace of the theological virtues. The second scheme, that of Plotinus, recognizes three kinds of virtues: those of a soul that is to be purged, those of a soul that is purged, and those of a mind that is purified; it is premised not on the efficient cause but on the effects of virtue on diverse parts of the soul. The final scheme, Aristotle’s, which distinguishes the moral from the intellectual virtues, is premised on the parts of the soul themselves. Albert indicates that this is an important topic, promising fuller treatment of it in a part of the summa he evidently never completed. He ventures no statement of the relative adequacy of these alternative classifications, and if he implicitly suggests that they are at bottom compatible, he does not show this explicitly.

Conclusion

Albert wrote abundantly and with great sophistication on a wide range of moral subjects. The foregoing survey has focused on those works that discuss moral subjects most fully and explicitly.

Even our partial and selective inventory attests the diversity and range of Albert’s moral thought. In his discussion of subjects such as circumstances, intention, and happiness, Albert expresses his conviction that human reason can reach sound conclusions about moral matters, and that reasoning about them is often subtle and complex. Virtue stands out as the subject that Albert addresses most often and with greatest care, endeavoring in several works to define it and to specify the number of virtues as well as their objects and proper acts.

The forms and contexts in which Albert wrote clearly do complicate the task of interpreting his moral thought, as do the limits imposed by the unavailability of reliable texts by Albert and his interlocutors. Despite these obstacles, Albert’s moral thought has been a subject of increased study in recent years. While much more work is needed to understand how Albert’s moral thought develops and how its theological and philosophical elements relate, enough has been done to convey its breadth and depth and perhaps too to explain why so many medieval thinkers sought to adorn their own views with the mantle of Albert’s authority.

ALBERT THE GREAT AND MATHEMATICS

Anthony Lo Bello

The late James A. Weisheipl edited the volume *Albertus Magnus and the Sciences: Commemorative Essays 1980* to celebrate the 700th anniversary of the death of the Universal Doctor. This volume, published by the Pontifical Institute of Mediaeval Studies in Toronto, contained the articles “Mathematics in the Thought of Albert the Great” by A.G. Molland and “The Commentary of Albert on Euclid’s Elements of Geometry” by Paul M.J.E. Tummers. Here, I will discuss the advances that have been made in this area during the last few decades.

The most important current topic of debate among those historians of mathematics who study the work of Albert the Great is whether or not the manuscript Vienna, Dominikanerkloster 80/45, contains, on folio pages 105r–145r, the commentary of Albert on Euclid’s *Elements of Geometry*. Ostlender, Geyer, Bessel-Hagen, Hofmann, Hossfeld, Ineichen, Anzulewicz, and Tummers hypothesized that the Viennese manuscript is indeed the only surviving witness of that work. The text perhaps extended further than the manuscript, which stops at the end of Book 4. Busard, the preeminent living authority on the transmission of Euclid’s *Elements* in the Middle Ages, has not accepted that the commentary is Albert’s.

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1. See 463–478.
2. See 479–499.
10. See below, notes 34–35.
The commentary preserved in MS Vienna Dominikanerkloster 80/45, which is the first original commentary on Euclid’s *Geometry* in the Latin West, has for its two main sources a 13th-century adaptation of the Robert of Chester version of Euclid’s *Elements,*\(^\text{11}\) called by Busard MS Bonn et al. and by Tummers V-B (for Vatican-Bonn, the locations of the two main manuscripts), and the Gerard of Cremona translation of the commentary of al-Nayrizi (“Anaritius” to the Latins) on Euclid’s *Elements.*\(^\text{12}\) The former source Albert consulted for what belongs to Euclid proper, and the latter for the additions made by previous commentators, such as Simplicius and Heron. The commentary begins with an exquisite philosophical introduction (Fig. 1). The treatment of the mathematics is competent throughout, though with many mistakes. As is to be expected, the most deficient section is that which deals with the axioms and postulates, for the problems there were not fixed until 1899 when David Hilbert did so. Tummers edited the Latin Text of Book 1 in 1984;\(^\text{13}\) the text of the remaining three books has not yet appeared. I published an annotated English translation of Book 1 in 2003;\(^\text{14}\) the translation of the remaining books has not yet appeared. An unpublished excerpt from Book 4 will be discussed below.

It is evident from the following passages from Albert’s undisputed works that he produced a commentary on Euclid’s *Elements:*

> And therefore we too, as we treat the various parts of philosophy, will, with God’s help, first complete natural science. Then we shall talk about all of mathematics, and we shall finish our program in divine science.\(^\text{15}\)

> But how a chord is turned into an arc in such a way that a line is afterwards produced equal to that arc would take a long time to prove, but, God willing, will be explained in our study of geometry and astronomy.\(^\text{16}\)

All these things, however, must be accepted for now; they are to be proven, though, in the books on sight in the study of Perspective, which science

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\(^{13}\) Tummers, *Albertus (Magnus)’ Commentaar*.


\(^{15}\) “Et ideo etiam nos, tractando de partibus philosophiae, primo complebimus, Deo adiuvante, scientiam naturalem, et deinde loquemur de mathematicis omnibus, et intentionem nostram finiemus in scientia divina.” Phys. 1.1.1, Ed. Colon. 4/1, 3, Ins. 37–41.

\(^{16}\) “Qualiter autem corda convertatur in arcum, ita quod linea postea aequalis arcui accipiatur, longum esset hic demonstrare, sed in geometria hoc docebitur et in astronomia, Domino concedente.” Phys. 1.2.1, Ed. Colon. 4/1, 17, Ins. 53–56.
Figure 1. MS Vienna Dominikanerkloster 80/45, fol. 105r, the philosophical introduction to the commentary, reproduced by permission of the Dominikaner-Konvent, Vienna. Photo by Sonja Reisner.
cannot be adequately treated unless we first consider those matters that pertain to geometry.\(^{17}\)

Now that the natural and mathematical sciences have been elucidated as much as was possible, we finally arrive at the true wisdom of philosophy.\(^{18}\)

For this [sc. that the diameter and side of a square are incommensurable] has already been proven by us in our book on geometry.\(^{19}\)

Just as has been proven in the fifteenth and sixteenth [propositions] of the third [book] of our \textit{Geometry} [sc. namely, that a tangent line to a circle intersects it at only one point].\(^{20}\)

As we showed in the first [book] of our \textit{Geometry} [sc. that two straight lines do not enclose a surface].\(^{21}\)

Since, when he wrote the \textit{Physics}, Albert spoke of his geometric enterprise as something still to be accomplished in the future, but when he wrote the \textit{Metaphysics} he referred to it as already having been accomplished, it follows that the commentary on Euclid’s \textit{Elements} was written between 1250 and 1267, if we accept the dates for the \textit{Physics} and \textit{Metaphysics} assigned by Weisheipl\(^{22}\) and the rest of the learned world.

Before proceeding further, we may ask: what motivated Albert to write on geometry? Mathematics has a special fascination for those who appreciate consecutive thought. Both theology and mathematics share the same deductive method, and I suspect that the Universal Doctor was moved by the same guarantee of certainty that made such an impression on Thomas Hobbes centuries later:

He was 40 years old before he looked on Geometry, which happened accidentally. Being in a Gentleman’s Library, Euclid’s \textit{Elements} lay open, and ‘twas the 47 \textit{El. Libri} I. He read the proposition. By G-, says he (he would now and then sweare an emphaticall Oath by way of emphasis), this is impossible! So he reads the demonstration of it, which referred him back

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\(^{17}\) “Haec autem omnia supponenda sunt, probanda autem in libris de visu in Perspectivis, quae scientia complei non potest, nisi primum consideremus ea quae pertinent ad geometriam.” \textit{De sens. et sensato} 1.14, Borgn. 9, 35 b, Ins. 5–10.

\(^{18}\) “Naturalibus et doctrinalibus iam, quantum licuit, scientiiis elucidatis, iam ad veram philosophiae sapientiam accedimus.” \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 1, Ins. 9–11.

\(^{19}\) “Hoc autem iam a nobis in geometricis est demonstratum”, \textit{Metaph.} 1.2.10, Ed. Colon. 16/1, 27, Ins. 73–74.


\(^{21}\) “Sicut nos in I nostrae geometrie ostendimus”, \textit{Metaph.} 5.3.1, Ed. Colon. 16/1, 256, Ins. 69–70.

to such a Proposition; which Proposition he read. That referred him back to another, which he also read. *Et sic deinceps,* so that he was demonstratively convinced of that truth. This made him in love with Geometry.23

The question remains: does the Vienna Manuscript contain Albert's commentary? I believe so. I gave a detailed account of the arguments of my predecessors in 2003;24 I will summarize them here. In 1952, Ostlender wrote that the handwriting in the manuscript was Albert's;25 Geyer, in 1958, announced that the opinion of Ostlender was *sehr wahrscheinlich,*26 and he was followed by Hofmann in 1960,27 who agreed to edit the work for the Cologne edition of the *Opera Omnia.*28 In 1982, Hossfeld presented a modification of these views when he concluded that the manuscript was an autograph in the sense of its having been taken down by dictation from Albert to a scribe.29 This view was accepted in 1984 by Tummers, the most knowledgeable authority in the matter:

Hossfeld's hypothesis (1982) that the manuscript is an autograph in the sense that the text was dictated by the author is correct. The writing seems to indicate that the manuscript was written in the thirteenth century . . . Albert, the author of the Commentary, can indeed be identified as Albert the Great; . . . this Commentary should be dated shortly after 1260, and . . . it gives a representative picture of the geometrical knowledge of a thirteenth century philosopher-theologian who was no mathematician by profession but had an interest in geometry.30

Anzulewicz addressed the subject in his learned paper published in 1999, in which he endorsed the verdict of Tummers.31 At this time, the main objection to Albert's authorship concerned the script, which some said was from the 14th century. I therefore obtained the scientific opinion of an expert. In my English translation of Book 1 of Albert's commentary, I quoted the report of the Chicago paleographer M.I. Allen, whose attitude settled the matter for me, that the commentary is truly Albert's work:

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28 He resigned the task, which still remains to be done. On this matter, read Anzulewicz, "Neuere Forschung," 180–181.
30 Tummers, *Albertus (Magnus)*' *Commentaar* 1, 327, 329.
31 Anzulewicz, "Neuere Forschung".
The script (perhaps by several hands) is a clear, informal book hand (*textualis currens*) of a German sort, not later than the middle of the thirteenth century. I would say that it is of the late second quarter of the thirteenth century. That is my conclusion based on looking through everything. As for details, the German origin is indicated by the lightning-bolt shape of an abbreviation that is sometimes, but not uniformly, used for *est*. (The form is a give-away marker for Germany.) The script is not very late, because the bows of various letters (*b, o, d, p, e, etc.*) virtually never touch in the space-saving unions increasingly characteristic of copy-work as the thirteenth century advanced. This textbook is also not heavily abbreviated, although one would very much expect that [kind of thing] in the jargon-heavy idiom of this sort of text; the situation, again, speaks for an early, rather than a later, dating. The 7-shaped Tironian abbreviation for *et* is also still uncrossed, as also starts to appear after the mid-century north of the Alps. . . . There is [thus] no doubt about the basic region and date. Do not mind that the leaves are now part of a composite volume with later materials [the work of Peter of Alvernia]. That sort of binding was a space and resource saver, and means nothing for the handwritten text...I am quite certain of the things that I observed. I was, in fact, rather surprised to have to conclude that the manuscript is so early.32

*Audiatur altera pars.* In a recent work Busard explains the reasons that lead him to reject the hypothesis that Albert the Great is the author of the commentary in the Vienna manuscript:33

In an article completed in 1944 and published in 1958, Geyer claimed to have discovered a commentary on the first four books of Euclid’s *Elements* in the manuscript Vienna, Dominikanerkloster 80/45, fols. 105r–145r. On the top folio of the beginning of this text (fol. 105r), there is inscribed, probably in another hand: *Primus Euclidis cum commento Alberti.* According to Geyer, the commentary has to be attributed to Albert the Great. This part of the manuscript is dated by Geyer thirteenth century; Folkerts, however, fourteenth century. If the latter is true, the commentary cannot be composed by Albert the Great. That the editor of the Euclid commentary would be named at all is of itself unusual, since anonymity is the rule. As far as I know, in this case only the names of Adelard and Campanus occur. For the composition of his text, the author of the Euclid commentary employed mainly the two following sources: the text preserved in the manuscripts Bonn et al. and Anaritius’ commentary on Euclid’s *Elements*. According to Tummers, who assumes the authorship of Albert the Great, the commentary was written between 1235 and 1260. If this should be true, the text of Bonn et al. was written before that time . . . 34

At this point, Busard starts to discuss the idiosyncrasies of the Campanus edition of the *Elements* and those found in the manuscript Oxford, Bodleian Library, Savile 19, which he believes to be later than Campanus. He then proceeds to examine the V-B edition and the second proofs and additional propositions found therein:

All these additions with proof are also preserved in MS Dresden, Sächs. Landesbibl. Db 86: fol 183r: *Diameter est assimeter coste*; fols. 226–228r: Jordanus, *De proportionibus*; fols. 213r–v: three problems about circles. It is therefore possible that the author of the Bonn et al. text has found the additions in a manuscript. I cannot explain why the author has inserted these propositions. It is clear that the author has used several sources among which [are] Campanus and Savile 19. The author of the Euclid commentary attributed to Albert the Great employed mainly the two following sources for the composition of his text: the text preserved in the MSS Bonn et al. and Anaritius’ commentary on Euclid’s *Elements*. Tummers has said, that the commentary was written between 1235 and 1260, but if I am right, then the attribution to Albert the Great is questionable.35

Since Busard himself agrees that MS Savile 19 could have been written as early as 1251 and the Campanus edition of the *Elements* as early as 1255, it is possible to harmonize all views by holding that the V-B edition of the *Elements* (i.e. what Busard calls the edition Bonn et al.) was written in the second half of the same decade, and that then the well-informed scholar Albert the Great was able to compose his own commentary almost immediately thereafter, before 1260.

Furthermore, and most importantly, Albert quotes from the V-B version of the *Elements* in his undisputed work *De causis proprietatum elementorum*, which Weisheipl has dated to the period 1250–57 by the following chain of reasoning:36 *De causis* is frequently cited in *Meteora*, Book 2, which was composed before *De mineralibus*, as the opening words of the latter attest. But *De mineralibus* was composed before Albert became provincial of the Dominicans in Germany, and is cited by Albert in *De anima*, which was written during his term in that office (June 1254–June 1257). Therefore, Busard’s argument against assigning the commentary on Euclid to the period 1235–60 would also weigh in against assigning *De causis* to the fifties of the 13th century, which is an established fact.

2. That Albert handled mathematics competently outside the *Geometry* may be established by the following passage from the *De causis*

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proprietatum elementorum, which I translate from the edition edited by Hossfeld. This passage is the most significant of all those in which Albert treats mathematics because it is critical for settling the question of the authorship of the commentary on Euclid’s Elements. In the words of Tummers (which I translate from his Dutch): “This passage is of very great importance because here the formulation of I 4 is reproduced in full, and...this formulation appears only in Albert’s Geometry and in V-B, and is not to be derived from any other source.” It is a superb passage entirely in the manner of the commentary on Euclid. The style and diction are the same, and the Euclidean propositions are quoted from the V-B version of the Elements, one of the two major sources of the commentary.

From all that has been said so far, it is obvious and clear that the celestial bodies do not make sounds. For if those things that have been said about the aforementioned assumptions are truly understood, the argument of those who say that the stars make sounds when they revolve in their orbits is demolished.

Let us introduce the following geometrical figure, which shows both visibly and reasonably that what they say cannot be true. Let me draw a circle with center E to represent the mass of the whole earth, and let me indicate by the point B the place of our habitation on the surface of the circle of the earth. Then let me draw another circle, either with a different center or with the same center, in whichever way I should deign to draw it, which is to represent the circular trajectory of the sun for one day, indicating its motion from east to directly overhead to west, and I shall mark three points on this circle, the sunrise by G, the sunset by A, and midday, when it is at its zenith directly above our heads, by point D. I shall then draw the straight lines between these points, first drawing AG, which is the diameter of the circle and passes through the center E of each circle; I shall also draw line AB and line GB, which are the lines that indicate the distance that is between the sun and the zenith-point directly above our heads at the times when the sun is rising and setting respectively. I shall also draw line EB from the center, which line is half the diameter of the earth, and I shall extend the same line continuously all the way to point D. Then line DB will be the measure of the distance from the top of our heads to the sun when the sun is at midday above us. Here is how the figure should look [See Fig. 2]:

Now that this drawing had been so laid out, I confidently declare, that because the sun is bigger than the other stars and nearer to us than some of the so-called planets, it must make more of a sound than the other stars, and, furthermore, that this sound is greater at noon, when it is above our heads, than it is at sunrise or sunset, for it is clear to us that lines GB and AB are longer than line BD. The sun should daily and audibly manifest these

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37 Tummers, Albertus (Magnus)’ Commentaar 2, 214.
Figure 2. The geometrical diagram accompanying the mathematical demonstration in *De Causis Proprietatum Elementorum*.

differences in the sounds that it makes, but what we actually see and experience contradicts this.

In the same way the moon too and the other stars make a greater or a lesser sound according to their greater or lesser proximity, and they will therefore sound less loud at points G and A, which are where they are rising and setting, because they are further away from us there than at point D when they are directly above our heads and less distant from us, and this must be perceptible to our hearing. But mathematical argument by means of the figure that we have introduced shows that the contrary is true. Now we have already stated those things that are necessary for the drawing of the figure, and we now say that line AB and line GB are equal by Proposition 4 of book 1 of Euclid's *Elements*, which says that *In any two triangles, two sides and the included angle of one of which are equal respectively to two sides and the included angle of the other, the base will also be equal to the base and the remaining angles to the remaining angles, and the whole triangle to the whole triangle*. For it is agreed that the two lines GE and EA are equal, since they
are drawn from the same center to the same circumference, and each of them is a radius of the same circle. Furthermore, line EB, which is common to both triangles, GEB, namely, and EBA, is equal to itself. Therefore, two sides of triangle GEB are equal to two sides of triangle EBA. What is more, angle BEA, which is at the center, is equal to angle BEG of the other triangle, which is also at the center, for each of them is right, which is proved by the fact that line BE stands perpendicularly at the center and makes a right angle on each side, for all right angles are equal. Therefore, by the aforementioned proposition of Euclid, base BA of triangle EBA is equal to base GB of triangle GEB, and that is what we said, that GB and BA are equal.

Once this has been established, we say that line GB is longer than line GE. This, though, is proved in the next to last proposition of book 1 of Euclid, which reads: In any triangle, the square of the side opposite the right angle is equal to the sum of the squares of the two remaining sides. For GEB is the right triangle, and its right angle is angle GEB; furthermore, line GB is its opposite side. Therefore, if it is squared, its square is equal to the sum of the squares of the two lines GE and EB. Therefore, its square is greater than the square of the line GE alone. But if a square is greater than a square, then the square root too is greater than the square root. But the square root is line GB; therefore, line GB is greater than line GE. And that is what we wanted to demonstrate.

We next say that lines GE and ED are equal, because they extend from the same center to the same circumference. Now since line GB is longer than line GE, it will be longer than line ED too. But line ED is longer than line BD since line BD is a part of the whole line ED. Therefore, line GB, which is longer than the whole line ED, will be much longer than line BD. But line GB is the distance between us and the sun at sunrise, and line BD is the distance between us and the sun at midday. Therefore, the distance between us and the sun at sunrise is much greater than the distance between us and the sun at midday.

The same sort of proof enables us to establish that the sun is further from us at sunset than it is at midday; therefore, it will sound noticeably louder at midday than it does at sunrise or sunset. But this is not true. It therefore remains that it is false that the sun or any other star in the heavens emits sounds. And that is what we wanted to demonstrate.38

From the modern point of view, sound is propagated by waves through matter, and since there is no matter in outer space, which is essentially a vacuum, there is no sound. Therefore, the heavenly bodies make no sounds as they describe their orbits. Albert cannot be blamed for not being modern enough to know this. As in most cases of error in medieval

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38 De causis propr. elem. 1.2.1, Ed. Colon. 5/2, 61, ln. 13–p. 62, ln. 35. For a complete English translation, see On the Causes of the Properties of the Elements (Liber de causis proprietatum elementorum), trans. Irven M. Resnick (Milwaukee, Wis.: 2010).
thought, his mistakes were with his assumptions, not with his chain of reasoning from those assumptions.

Most of the other references to mathematics in the works of Albert the Great are citations of definitions or propositions that illustrate some point that the Universal Doctor wanted to make, often with regard to the technical terminology of Aristotelian or Scholastic philosophy, or to the physics (if so it may be called) of his time. They are not examples of his doing mathematics as much as proof that he had studied Euclid. The rest are long passages, like the one just translated above, in which he makes a geometrical demonstration to establish some point in the natural sciences: for example, that two solids cannot occupy the same space; or that the surface of the water on the face of the earth is spherical. They show that he understood that physics could not be done without mathematics, a truth that led eventually to the Principia Mathematica of Newton.

3. We next proceed to consider an as yet unpublished passage from Albert’s commentary, namely, his treatment of Proposition 10 of Book 4 on folio pages 143r and 143v of the Vienna manuscript. It is convenient to illustrate the idiosyncrasies of the commentary from this passage. The enunciation is the same as that of Robert of Chester, V-B, and John of Tynemouth (“Adelard III”). As far as I can tell, the proof is Albert’s own and is very detailed; it is a nice, alternate, original proof, the presentation of which could be a little clearer. (For example, the phrase “a common angle DBC having been added to each” should read “since, by the axiom, when equals are added to equals, the sums are equal.”) It differs, with one important exception, from all the other extant proofs and proof-sketches in that it makes no use of Proposition 32 of Book 1, that an exterior angle of a triangle is equal to the sum of the two opposite interior angles; the exception is V-B, which also contains no mention of the exterior angle equaling the sum of the two opposite interior angles. Albert’s amanuensis was in angustiis in making the diagram, which is full of erasures. The picture in the manuscript is incorrect, since the smaller circle is not supposed to be internally tangent to the larger circle; in this the scribe erred in the same way as did the fellow who drew the diagrams for the

40 De caelo et mundo 2.2.3, Ed. Colon. 5/1, 131–132.
41 H.L.L. Busard and Menso Folkerts, Robert of Chester’s (?) Redaction of Euclid’s Elements, the so-called Adelard II Version, vol. 1 (Basel: 1992), 156.
42 H.L.L. Busard, A Thirteenth-Century Adaptation, 163.
43 H.L.L. Busard, Johannes de Tinamue’s Redaction of Euclid’s Elements, the so-called Adelard III Version, vol. 1 (Stuttgart: 2001), 120.
Like all those in the Arabic–Latin tradition of the transmission of Euclid’s *Elements*, Albert’s demonstration cites Proposition 31 of Book 3 (32 of the Greek text) with the unnecessary condition, universal in that tradition, that the line DC must not fall upon the center of the smaller circle; this assumption was no doubt the result of an early misunderstanding of Euclid’s proof of 3.32, in which the chord AB, without any loss of generality, is taken to be a diameter. The references to previously proven propositions (e.g. “undecimum secundī”) are in the style of Robert of Chester.

Proposition 10 of Book 4:

*To draw a triangle with two equal sides, such that each one of the two angles that are at the base is double the remaining angle.*

Let line AB be drawn, and with the immobile foot of the compass placed at A, let a circle be described with its length as radius, and let line AB be divided as the eleventh proposition of the second book shows how, namely, so that the rectangle that is contained by the whole and one segment is equal to the square that is made from the other segment, and let the symbol C indicate the point of division.

Then, by the first proposition of this book, let there be drawn in the circle a line BD equal to line AC, which is less than the diameter of the circle, and let line AD and line DC be joined.

Next, by the fifth proposition of this book, let a circle be circumscribed around triangle ACD. Once this is done, I say that triangle ABD has two sides equal, and that each one of its angles at the base DB is double the angle DAB at the center.

Proof: By hypothesis the rectangle that is contained by the two lines AB and CB is equal to the square of AC. But, by the same hypothesis, AC is equal to DB. Therefore the aforementioned rectangle is equal to the square of DB. Thus, by the last proposition of the third book, BD is tangent to the smaller circle at point D. What is more, triangle ABD has the two sides AB and AD equal, because they are both from the center to the circumference. Therefore, by the fifth proposition of the first book, the angles above the base are equal. Furthermore, line DC, which is away from the center, is drawn from the point of tangency of the line to the smaller circle. Therefore, by the thirty-first proposition of the third book, angle CDB, which it makes with the tangent, is equal to angle BAD, which is in the alternate portion of the

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44 R.O. Besthorn and J.L. Heiberg, *Codex Leidensis 399,1, Euclidis Elementa ex Interpretatione al-Hadschschadschii cum Commentariis al-Nairizii, arabice et latine ediderunt notisque instruxerunt R.O. Besthorn et J.L. Heiberg, ad finem perduxerunt G. Junge, J. Raeder, W. Thomson* (Copenhagen: 1899–1932), repr. as volumes 14 and 15 of the series *Islamic Mathematics and Astronomy*, ed. Fuat Sezgin, (Publications of the Institute for the History of Arabic-Islamic Studies) 15 (Frankfurt: 1997), 49. (There are two pages numbered 49 in this volume; reference is to the first. The page numbers are consecutive within chapters, but each chapter starts on a page numbered 1.)
smaller circle. Therefore the sum of the two angles ABD and BDC is as the
sum of the two angles ADB and DAB, a common angle DBC having been
added to each.

Therefore the two triangles ABD and CDB are such that two angles of
one are equal to two angles of the other, because angle CDB of the smaller
triangle is like angle DAB of the bigger triangle, and angle ADB of the bigger
triangle is like angle ABD, which is the angle common to each.

Therefore, by the thirty-second proposition of the first book, the third
angle, namely DCB of the smaller triangle, is like angle DAB of the bigger
triangle, since otherwise a triangle would have more or less than two right
angles. Therefore, by the sixth proposition of the first book, sides DC and DB
of the smaller triangle are equal, for they are opposite equal angles.

Furthermore, it was assumed above that AC and DB are equal, and now
it has been proved that DC is equal to BD. Therefore, DC is equal to AC.
Therefore triangle ACD has two equal sides, and the angles above the base
are thus equal, namely, angle CAD and angle ADC. The angles ADC and CDB
are consequently equal.

Since, then, angle CDB is equal to angle BAD, and angle CDA is similarly
equal to the same angle, and each angle is thus half of the whole angle ADB,
the whole angle ADB is double angle DAB.

But angle ADB is equal to angle ABD; therefore angle ABD too is double
angle BAD.

And that is what we wanted to demonstrate. Here is the picture [See
Fig. 3].

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I am indebted to Herr Ing. H. Förster for having sent me his transcription of this pas-
sage, which I was then able to compare with my own. I have written out the words that
are abbreviated in the manuscript and modernized the spelling by writing, for example,
obtinebit for optinebit, aequalis for equalis, lineae for linee, and i for y where the latter letter
occurs in diameter and perigraphetur.

Proposition 10 of Book 4:

Duum aequalium laterum triangulum designare, cuius uterque duorum angulorum,
quos basis obtinet, reliquo duplus existat.

Ducatur enim linea AB, et posito immobili pede circini in A, ad quantitem eius cir-
cumducatur circulus; dividatur etiam linea AB prout praecipit undecimum secundi,
scilicet ut quod sub tota et una portione rectangulum continetur aequum sit ei, quod
fit ex reliqua sectione quadrato, sitque signum divisionis C punctus.

Deinde per primam huius applicetur in circulo linea BD, quae sit equalis AC lineae,
quae diametro circuli minor existit, et producatur linea AD et linea DC.

Postea ACD triangulo perigraphetur circulus per quintum huius. Hoc facto, dico
triangulum ABD esse duorum aequalium laterum, cuius uterque angulorum super
basim DB duplus est angulo DAB in centro existenti.

Cuius demonstratio haec est: Rectangulum, quod continetur sub duabus lineis
AB et CB, valet quadratum AC ex hypothesi. Sed AC est aequalis DB per eandem
hypothesim. Ergo rectangulum praedictum valet quadratum DB. Ergo per ultimam
tertii linea DB est contingens minorem circulum in puncto D. Amplius triangulus
ABD duo latera AB et AD habet aequalia, quia sunt ab eodem centro ad circumor-
mentium. Ergo per quinimum primi, anguli supra basim sunt aequales. Adhuc linea DC
prae ter centrum a contactu contingentis lineae ducitur in minorem circum; ergo per tricesimum primum tertii, angulus CDB, quem facit cum contingente, aequalis est angulo BAD, qui est in alternata circuli minoris portione. Ergo coniunctio duorum angulorum ABD et BDC est sicut coniunctio duorum angulorum ADB et DAB, DBC angulo communiter coniuncto.

Ergo duo trianguli ABD et CDB tales sunt, quod duo anguli unius aequales sunt duobus angulis alterius, quia angulus CDB minoris trianguli est sicut angulus DAB maioris trianguli, et angulus ADB maioris est sicut angulus ABD, qui est angulus communis utrique.

Ergo per tricesimum secundum primi, tertius angulus, scilicet DCB minoris, est sicut tertius maioris, scilicet angulo ABD, prout est angulus maioris trianguli, quia aliter triangulus plus vel minus haberet quam duos rectos, Ergo, per sextum primi, latera DC et DB minoris trianguli sunt aequalia, quia respiciunt aequales angulos.

Adhuc supra positum est AC et DB esse aequales, et nunc probatum est, DC esse aequalem BD. Ergo DC est aequalis AC. Ergo triangulus ACD habet duo latera aequalia; ergo anguli supra basim sunt aequales, scilicet angulus CAD et angulus ADC. Ergo per consequens anguli ADC et CDB sunt aequales.

Cum igitur angulus CDB sit aequalis angulo BAD, et iterum angulus CDA aequalis sit eidem, et angulus uterque sit medietas totius anguli ADB, totus angulus ADB est duplus angulo DAB.
At this point, the proof of Euclid's proposition is complete, and Albert now turns to his second source, Gerard's Latin version of al-Nayrizi ("Anaritius"), to supply some additional pertinent information. Very strangely he omits the first paragraph from this source, in which al-Nayrizi shows, first, that the case of 4.5 to be used here is that of an obtuse-angled triangle being circumscribed by a circle, and, second, that circle ACD is not tangent to the bigger circle but intersects it at a second point different from D. The passage that Albert does rework and present is that in which al-Nayrizi explains how, he believes, Euclid must have gotten the idea for the proof. He proceeds by analysis, that is, he assumes the problem solved and examines the consequences, from which one is able to argue backwards. Tummers comments on this passage (I translate his Dutch), "Albert...follows with a resolutio...which depends on Anaritius, and even almost word for word. Nevertheless, Albert has not entirely understood it; the deviations from the text of Anaritius give proof of that." The principal deviation of which Tummers speaks is the last sentence of the second paragraph below, where the equality of the rectangle and the square is treated as a fact that follows from 2.11, whereas it is just a claim of al-Nayrizi and is something to be proved. Also, in the next to last paragraph below, Albert refers to the last proposition of Book 3 when he needs to mention the penultimate proposition. Due to Albert are the many references to previous propositions made in the course of the demonstration; they indicate the critical manner in which he makes use of his sources.

By the method of resolution you will arrive in the following manner at the point whence Euclid began:

Let me assume that triangle ABD has been constructed and that each one of the two angles ABD and ADB is double angle BAD. I shall then divide angle ADB into two halves by the ninth proposition of the first book, and let the dividing line be DC. Each section of the divided angle is then equal to angle DAB by hypothesis. The rectangle, then, that is contained by the two lines AB and CB is equal to the square of AC by the eleventh proposition of the second book.

Therefore, since angle BAD is equal to angle ADC, line AC will be equal to line DC because they are subtended by equal angles, as the sixth proposition of the first book says. And because angle BCD is equal to the two angles CAD, ADC, since it is external to the triangle ADC, as the first part of the

Sed angulus ADB aequalis est angulo ABD; ergo etiam angulus ABD duplus est angulo BAD.

Et hoc est, quod voluimus demonstrare. Figura autem haec.

46 Tummers, Anaritius, 119, ln. 25–p. 120, ln. 34.
47 Tummers, Albertus (Magnus)’ Commentaar 1, 46.
thirty-second proposition of the first book says, and these two angles are equal, therefore angle BCD is double angle CAD. Thus, angle BCD is equal to each one of the two angles ABD and ADB. Therefore, line CD is equal to line BD.

But it was previously shown that line CD was equal to line AC, therefore line AC is equal to line BD. But angle ACD is bigger than angle BCD; therefore, it is obtuse by the fourteenth proposition of the first book, for angles standing around the line CD and falling upon the line AB are either equal (and therefore will be right, which is false) or unequal, in which case the bigger is obtuse and the smaller acute.

And so I shall erect at point D of line BD a perpendicular DZ by the eleventh proposition of the first book. When, therefore, we shall have circumscribed a circle around triangle ACD by the fifth proposition of this book, line DZ will be perpendicular to this circle by the eighteenth proposition of the third book, and line BD will be tangent to the circle, and point B will be outside the circle, and from it the line BA has been joined, a secant to the circle, and line BD is tangent to it. Therefore, the rectangle that is contained by the two lines AB and BC is equal to the square of BD by the last proposition of the third book. But BD is equal to AC. Therefore, the aforementioned rectangle is equal to the square of AC.

Euclid then began his proof at this point. And that is what we wanted to find by resolution. And the first version of the diagram suffices once you add the diameter DZ.48

48 Secundum solutionis modum hoc modo pervenies, in id unde incepit Euclides: Ponam enim ut triangulus ABD sit constitutus et quod uterque duorum angulorum ABD et ADB sit duplus ad angulum BAD. Dividam ergo angulum ADB in duo media per nonum primi, et sit linea dividens DC. Ergo utraque sectio divisi est aequalis angulo DAB per hypothesim. Rectangulum autem, quod continetur a duabus lineis AB et CB, est aequale quadrato AC per undecimum secundi.

Ergo quia angulus BAD est aequalis angulo ADC, erit linea AC aequalis linea DC quia respiciuntur ab aequalibus angulis, sicut dicit sextum primi. Et quia angulus BCD est aequalis duobus angulis CAD, ADC, cum sit exterior triangulo ADC, sicut dicit tricesimum secundum primi, pars prima, qui duo anguli sunt aequales, ergo angulus BCD est duplus ad angulum CAD. Angulus igitur BCD est aequalis unicuique duorum angulorum ABD et ADB. Ergo linea CD est aequalis linea BD.

Sed dudum habitum est quod linea CD fuit aequalis linea AC; ergo linea AC est aequalis linea BD. Sed angulus ACD est maior angulo BCD; ergo, ipse est amplius per decimum quartum primi, quia anguli circumstantes lineam DC cadentes super lineam AB aut sunt aequales et tunc erunt recti, (quo falsum est) aut inaequales, et tunc maior est amplius et minor acutus.

Erigam itaque supra punctum D linea BD perpendiculararem DZ per undecimum primi. Cum ergo constituierimus circa triangulum ACD circulum per quintum huius, erit linea DZ perpendicularis illius circuli per duodecimessimum tertii, et linea BD erit contingens circulum, et punctum B erit extra circulum, a quo prontraxit est linea BA secans circulum et linea BD contingens ipsum. Ergo rectangulum, quod continetur sub duabus lineis AB et BC, est aequalis quadrato BD per ultimum tertii. Sed BD est aequalis AC. Ergo, rectangulum praedictum est aequale quadrato AC.

Hic ergo incepit Euclides probationem suam. Et hoc est, quod resolvento volumus invenire. Et prior forma sufficit addita diametro DZ.
Pursuant to the goal of this collection of essays, the present chapter will aim to provide scholars and advanced students with a general overview, in English, of the ideas of Albert the Great on astronomy. Emphasizing the contribution of Albert the Great specifically to the body of earlier and contemporary ideas on astronomy, it is designed to complement the volume's other chapters, particularly those dedicated to Albert’s interest in natural science. In the context of such a collection, individual essays are afforded the luxury of allowing the proximate resources the others provide to enhance their offering. While this one, like the others, is focused on the thought of Albert himself, at the very outset it must be appreciated that the study of the astronomy of Albert the Great is but a small subfield, nested under the apron of other areas of scholarly investigation, increasingly larger and wider in scope: from astronomy in the Middle Ages, medieval science, and medieval mathematics and numeracy, to 13th-century intellectual history (its combination of philosophical and theological ideas), and medieval thought in general. Only as these pertain to Albert’s astronomy do they become a part of this investigation, but they are each one extremely pertinent.

It must be said that virtually all the major issues, controversies, and debates among those scholars interested in Albert's astronomical ideas have had their source outside the strict study of his specific contributions. While these polemics touch on the thought of Albert and sometimes even use him as an example to support one side or the other, his ideas about astronomy are not the reason for their being. Only a handful of scholars have felt it worthwhile to undertake study dedicated to Albert's ideas on astronomy for their own sake, and for the most part their interpretations and understanding of his contribution have yet to be pursued in a sustained and thorough enough way to have an impact on the discussion of his work more generally.
As a contributor to medieval thought, in general Albert the Great is commonly identified by historians as one of the earliest and most ardent champions of predominantly the ideas of the Greek philosopher Aristotle (384–322 BC), despite the fact that Albert had written in his commentary on Aristotle’s work, the *Metaphysics*, “you ought to know that man cannot become perfected in philosophy except through knowledge of the philosophies of both Aristotle and Plato” (emphasis added). The newly rediscovered and progressively translated natural-scientific and philosophical works of Aristotle, available in their entirety between 1210 and 1225, were, however, a clear catalyst to Albert’s creating a comprehensive series of commentaries on Aristotle’s works alone. Largely because of his Aristotelian commentaries, Albert was considered, during his lifetime and for a good while thereafter, quite generally an authority on any number of topics. These included astronomy. To give just one example, Vincent of Beauvais (ca. 1190–1264) cites Albert in various chapters of his *Speculum naturale* as a source on the celestial bodies.

Many believe that Albert the Great was the leading figure in 13th-century learning. In one current account, part of the reason for this accreditation is that his corpus included a noted eight books on astronomy! It is hard to know exactly which eight works of Albert’s corpus are considered by this author to have been dedicated to that subject; as will be seen below,
important details of Albert’s ideas on astronomy can be found in any number of his works, notably his commentaries on Aristotle’s *Physica, De caelo et mundo*, and *Metaphysica*. It has been found by scholars of Albert to be interesting in and of itself that he devoted so much of his time to writing commentaries on natural-philosophical topics in general, especially since “[T]o write Aristotelian commentaries was not required of a theologian as one of his duties.” It has rightly been puzzled “why eminent theologians like Albert [the Great] and Thomas [Aquinas], devoted so much time and effort to this task while being regent masters in theology.” Even more striking, if not so puzzling given his apparent interest in the subject, is, however, the fact that Albert seems to have intended to write a whole work on astronomy alone, an interest which may have been whetted as early as his first set of works, running from his *De sacramentis* to his *De bono*.

There is little doubt that Albert foresaw natural-scientific and mathematical works to be portions of his projected corpus of commentaries on Aristotle. In the beginning of his commentary on Aristotle’s *Physics* he wrote, “First, with God’s help, we will complete natural science and then we will speak about all the mathematics, and we will finish our project with the divine science.” In the earliest catalogues of the complete works of Albert the Great, there is the title of a work or two which might have been the guise in which a work of his authorship on astronomy, a *De astronomia*, had circulated in the late 13th through the 15th centuries. A work, identified by its first line or *incipit* as *Aliam [summam] copiosissimam* published. A total of 68 non-spurious works of Albert’s authorship are listed by B.B. Price, “Albert the Great,” *Dictionary of Literary Biography, Medieval Philosophers*, ed. Jeremiah Hackett (Detroit: 1992), 15–23, based on the list adopted by the most recent and ongoing critical edition of Albert’s collected works, Albert the Great, *Opera Omnia*, Ed. Colon.

5 B. Carlos Bazán went on to suggest that this “remains an open question that awaits a comprehensive study”. B. Carlos Bazán, “Radical Aristotelianism in the Faculties of Arts,” in *Albertus Magnus und die Anfänge der Aristoteles-Rezeption im lateinischen Mittelalter. Von Richardus Rufus bis zu Franciscus de Mayronis*, ed. Ludger Honnefelder, Rega Wood, Mechthild Dreyer, and Marc-Aeilko Aris (Münster: 2005), 586, n. 7.

6 Note has been taken by many scholars of Albert’s comments about work by him related to the sciences of the heavens. Some interpret these expressions to reveal his intention to have written on astrology instead of astronomy alone. See also Alb., *Speculum Astronomiae*, ed. S. Caroti, M. Pereira, and S. Zamponi, under the direction of P. Zambelli (Pisa: 1977), 124.


8 Alb., *Phys. 1.1.1*, Ed Colon. 4/1, 3, Ins. 38–41.

de astronomia, is noted in the catalogue created by Louis de Valladolid around 1414. This incipit does not, however, appear in any other catalogue of Albert’s works, and no work appears to have been recognized consistently as the work of Albert on astronomy.

It is frequently noted that it took Albert over 20 years to complete his “personal intellectual and cultural project”, although it is more likely were it to have encompassed his treatment of mathematical astronomy that he actually did not finish it all. It is possible that his treatise on astronomy simply did not survive, but more likely still is that it was never brought into existence, under the presumption that Albert just never found time to complete the work he had planned to write. Albert’s near contemporaries, little more than one generation removed from the end of his life in 1280, do not, however, have seemed to doubt that he could or would have written such a work. In one tradition of the transmission of Albert’s texts, that of the De IV coaequaevis, the dominant branch of manuscript copies has rather extensive text additions which reveal from their treatment of themes in the field of astronomy, that, if they are Albert’s (which it is asserted they are), this confidence was not misplaced.

From his own evocations of the proposed work on astronomy, it was conceived as a thematic treatise. Albert wrote a number of treatises, works which are not commentaries of another’s writing but rather about a specific subject, whose treatment is organized by the author. As per the models of his various treatises on the soul, his De astronomia might have taken one of several forms: (a) the lengthy exposition of a particular section of a work of Aristotle, as was his De natura et origine anima, (b) “a discursive form”, as in his De intellectu et intelligibili, “containing objections and their refutations, and also elements of the questio-form, but not in a

11 This is certainly not the generally held, current view of its fate, however. Many present scholars believe that the work was written and circulates today, unrecognized as such, perhaps as the Speculum astronomiae. For example, see the cautious assertion of Henryk Anzulewicz (Leipzig: 2005) in the reedition of Ingrid Craemer-Ruegenberg, Albertus Magnus, (Dominikanischen Quellen und Zeugnisse) 7 (Munich: 1980), 41–42, who, while questioning whether Albert completed his own ambitious desire to write on “all the mathematics”, nonetheless asserts: “On astronomy, namely ‘astrologia’, Albert must, however, have written, according to his own testimonies and the older catalogues of works.”
12 “The authenticity of the corrected text of De IV coaequaevis would be seen as much in the similarity with other of Albertus’s works, as to formulation, style, and terminology, as in the echoing of the content and the sources used.” Rigo, “Zur Redaktionsfrage,” 340.
systematic way", or (c) the form of a *questio disputata* (disputed question), such as is his *De unitate intellectu*, comprised of an introduction, “in which the author explains the problem and qualifies it as a difficult discussion”, and subsequent parts that discuss the problem through defenses of specific positions by others, arguments by others against them, and finally the author’s *determinatio* followed by his refutation of all other positions.

Both the methodologies and the subjects Albert mentioned when referring to his plan shed light on the kind of work he was to write. He described it using verbs indicating both the acquiring of knowledge and the transmission of it. He noted wanting to treat the subjects of the tools of astronomy\(^\text{14}\) as well as the planets\(^\text{15}\) (indicating quite explicitly that he would use the inductive syllogism and visible lines for descriptions)\(^\text{16}\) and the different celestial systems (for which he would use the expository method to collate—or put together—or compare several systems) and, lastly, the nature of stars, and the causes of the earth’s wet and dry areas. Albert’s comments confirm that he intended to write a treatise focused on one part of *Astronomia*, namely, *astrologia*, its essential, first, theoretical part. Even his projected discussion of the celestial bodies as causes would have fallen within its perimeters, since for him it relies exclusively on the demonstrable aspects of celestial causality, not on conjectures.

A great many works related to astronomy and astrology as well as many other natural-scientific writings were attributed to Albert in the earliest catalogues of his corpus of works. The variety of works listed as his might be testimony to recognition that the forms of some of Albert’s works proved to be “a special case indeed”, reflective of “a somewhat later period (from ca. 1260)”, whose “development lies in an increasing separation from Aristotle’s text”.\(^\text{17}\) The attributions could, however, be a sign of nothing more than that shortly after his death Albert was becoming immortalized within the Dominican order as the one who anew, like Aristotle in the past, was thought to have encompassed in his writings the entirety of knowledge and especially the sciences.\(^\text{18}\) The attribute generally ascribed to his

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\(^{14}\) When writing about the tools of astronomy, Albert indicated that he would employ *demonstratio* to teach (*docere*). Alb., *Phys*. 1.2.1, Ed. Colon. 4/1, 17, Ins. 53–56.

\(^{15}\) To treat the planets, Albert projected wanting to explain (*explicare*), to inquire about (*inquisitio*), to investigate (*investigare*), and to determine (*determinare*). Alb., *De caelo et mundo* 2.2.3, Ed. Colon. 5/1, 132, Ins. 84–88 and 2.3.6, Ed. Colon. 5/1, 154, Ins. 87–89.

\(^{16}\) Alb., *De causis propri. elem.* 2.1.2, Ed. Colon. 5/2, 91, Ins. 72–p. 92, Ins. 4.

\(^{17}\) Weijers, “The Literary Forms,” 579.

\(^{18}\) Dominicans Bernard Gui (before 1291), Ptolemy of Luca (shortly before 1322), and Giovanni Colonna (c. 1330), who left lists of Albert’s works, seem to have been attached to
position in his own period of medieval thought was that he worked always
to harmonize the ideas of ancient science with the theology of the church.
Agostino Paravicini Bagliani states that already in the 13th century, it is “a
fundamental element of the legend of Albert the Great . . . [that] [H]e is a
sort of intellectual hero, whose role consists in saving the Christian faith
at the same time as the natural sciences”.19

Albert is, however, also seen as an exemplary representative of what
13th-century intellectuals undertook as astronomers. They practiced their
profession using Scholastic reasoning. They exercised two entry routes
into the subject: taxonomy and epistemology. Albert followed, for exam-
ple, the tradition well established for astronomy by Isidore of Seville20
of employing etymologies and translations. At the same time, given the
sophistication of his analysis, he has been described with high praise
as “the best scholar of his century” in the field of astronomy, of whom
Thomas Aquinas was but “a simple professional echo”.21

The Astronomy of Albert the Great in Medieval
Mathematics and Numeracy

While the topic of the level of mathematics and numeracy in the Middle
Ages has been discussed for many decades, medieval numeracy has come
around again for attention in the early 21st century. The concept of num-
ber within the field of astronomy is and always has been extremely impor-
tant. No ancient or medieval author on astronomy, nor any astronomer
thereafter, writing, other than purely conceptually, could ignore the pre-
cision and role of cardinal or ordinal indicators. In astronomy, numbers
serve as markers for exact points in place and time as well as for quanti-
ties of distance, relation, and duration. For lack of research into his con-
tributions in astronomy, Albert has and continues to be tarred with the
brush of having had “a disregard for numerical specifications”; moreover,
“[E]ven in technical references, where one would expect more exactitude, one encounters imprecise quantitative references.”

As will be seen below, within the technical context of medieval astronomy, Albert most definitely had, perhaps unlike many of his learned contemporaries, “a regard for numerical specification” and precise quantitative references. This ought not to be too surprising, however, even from knowledge of his philosophical orientation alone; it was the source of his posture of precision. In his discussion of the notion of time in the *Physics*, for example, he adopted the accepted Aristotelian formula that number, and hence time, can exist in the mind *in actu*, but that both only exist outside the mind *secundum potentia*. Albert introduced, however, a further reason for their existence *in se ipso*, the *habituale forma discretionis*. That mental “forma” makes the numbering of all things possible. Thus, for Albert, from mathematics or the study of form would stem the premise that permits the assessment of motion through quantity. It is this perspective upon which Albert’s counting, measuring, recording, and calculating quantities related to the study of the planets, stars, and heavens, like those of any other astronomer, were based. It was especially valuable when joined by conclusions which indicate how formal quantity is to be known.

The measuring sticks of quantity derive from at least two conclusions. One, “the measure [of a temporal thing] ought to be the least [variable] quantity possible”, Albert extracted from Aristotle’s *Metaphysics, Book 10*. In astronomy, this becomes one premise for the proper way to measure substance, distance, and time. Further, Albert accepted fully the Aristotelian

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22 A fairly recent collection of essays, *Word, Image and Number, Communication in the Middle Ages*, ed. John Contreni and Santa Casciani, Micrologus Library 8 (Florence: 2002), has drawn together a number of interesting ideas, many of which, without mentioning Albert’s work on astronomy, are pertinent to understanding his accomplishments in that field. The only direct reference to Albert, cited here, is found in the contribution by Frank J. Swetz, “Figura Mercantesco: Merchants and the Evolution of a Number Concept in the Latter Middle Ages,” 398. Swetz goes on to write, “Albert the Great (1193–1280), instructing readers on the processes of alchemy, advised when preparing sal alkali ‘to take a large quantity of putrid oaken ashes’ to which is added ‘a sixth part of quicklime’.” Swetz is citing from a translated selection of passages attributed to Albert the Great in “A description of Alchemical Operations, Procedures and Materials,” in *A Source Book in Medieval Science*, ed. Edward Grant (Cambridge, Mass.: 1974), 586–601, texts which are, however, identified as stemming from *Libellus de alchimia ascribed to Albert the Great*, a work which is not considered authentic by the editors in Cologne of his *Opera Omnia*.

23 Alb., *Phys. 4.3.3*, Ed. Colon. 4/1, 263–265 and 4.3.16, Ed. Colon. 4/1, 289–290.

theory of the existence of motion as a fundamental postulate. Thus, also pertinent to his *Astronomia* was a second premise from Aristotle: time is the measure of motion. These are two of his most general premises.

The linking of a philosophical discussion of time to astronomy was not random, for it was a frequent observation in both metaphysical and natural-philosophical discussions of the 13th century that time is generated by the motion of the celestial sphere. Whether for or against the proposition of motion’s existence, arguments were brought forward which dealt primarily with the possibility of motion yielding time. When considering two motions of varying speeds, an additional conclusion from the *Physics*, Book 6, thus came into play. “The slow one divides the length” of the motion was Albert’s elliptic reference to Aristotle’s demonstration of the compatible continuity of time and magnitude. Time is thus a product of mental construction with an objective basis of validity, and it can be demonstrated that motions in a system are commensurable by reason of time. Albert tacitly accepted Aristotle’s whole conclusion that the quicker of two motions will determine the whole time of the motion while the slower divides it into parts, and that therefore the slower will determine the whole distance moved of which the quicker is the multiple, and he applied it, saying, while “The heaven, which is called ‘aplanes’ by the philosophers, is brought full circle in one day; the sphere of the constellations in the fixed stars is diminished from the completion of a circle.” Thus, for Albert, a faster superior sphere determines the duration of the day as the greatest temporal magnitude; the sphere of the fixed stars divides that block of time into temporal parts. Against the general position was the argument by some that the heaven actually moves its parts all at once, such that there would be no parts of time, since all (the

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26 The correlate to this premise, “whatever suffers change is a body”, is proved in Alb., *Phys.* 1.1.3, Ed. Colon. 4/1, 5, ln. 67–p. 6, ln. 32.


parts of) time would be together as one.30 This philosophical treatment of time turned in part on the various rival understandings of the number and periodicity of heavenly motions. The sophisticated models of the heavens’ movements that Albert recognized provided for him plenty of multiplicity in time and hence many possible divisions of it.

The Astronomy of Albert the Great in Medieval Science

While in 1904 one could read “The utter lack of scientific thought and scientific method is illustrated most vividly in the works of the greatest men of that period—such men as Albert the Great, Thomas Aquinas, Bonaventura, and the hosts of other scholastics of lesser rank” (emphasis added),31 by 1941 Albert would be named the patron saint of science and an association between his renown and science was established, at least symbolically. Part of the transformation has little to do with serious scholarship, but much rethinking did accompany the symbolic shift, which would help explain perhaps the otherwise rather strange choice of a “German theologian, philosopher and naturalist…a thirteenth-century scholar with universal knowledge” after whom to name an asteroid (or minor planet) discovered in 1991.32 Early medieval education had inherited the Roman model of the seven liberal arts comprised of seven branches, divided into two groups: the trivium, comprising the three studies of grammar, rhetoric, and logic, and the quadrivium, comprising the four studies of arithmetic, geometry, music, and astronomy.33 Over the course of almost all of the Middle Ages, virtually everything a teaching master possessed

30 It was arguments of this type which led the search for other sources of time. One counterposition, reported by Albert without naming its source (Alb., Phys. 4.3-3, Ed. Colon, 4/1, 263–265), was that time depends for its existence on the soul. The assertions that time depended either on the soul or on the mind were both regarded as sufficiently important to be included in the Condemnations of 1277 by the bishop of Paris regarding topics of study at the University of Paris; see Ernest L. Fortrin and Peter D. O’Neill in Medieval Political Philosophy: A Sourcebook, ed. Ralph Lerner and Muhsin Mahdi (New York: 1963), 338–354, especially Propositions originally numbered 110 and 200. Since these ideas were connected with positions of Aristotle expressed in Phys. 4.10–14, they were discussed at considerable length by Albert and his contemporaries.


33 The components of the quadrivium are reiterated in connection with Albert the Great in the small study devoted to his life, works, philosophy, and impact originally written by Craemer-Ruegenberg and newly re-edited to bring it up to date by Anzulewicz, Albertus Magnus, 26. Albert himself identifies them as “arithmetica, musica, geometria et
by way of knowledge might be promulgated in these branches. Insofar as anything about astronomy was actually taught at the lower educational levels, in a small way, some of the content determination might have fallen to Albert. In 1259 at Valenciennes at the general chapter meeting of the Dominican order, he was appointed to a special commission to discuss studies for brethren of the order.34

At the university level, in Paris, where Albert studied and taught, the theoretical as well as the judicial science of the stars were already “alive and well”. A university handbook, dated from before 1240, *De disciplina scolarium*, “suggesting the contours of the natural-science curriculum”, devoted a whole one of its “just three sections to issues of astronomy and astrology”. Among the recorded series of questions, which, S. Marrone asserts, intermingles the two “without distinction”,35 one finds the following, “whether fixed stars are moved by a single sphere or each by its own”.36

The inspiration for the astronomy curriculum of Albert’s time would have been Ptolemaic astronomy, although it gave representation to many different authors: to Plato and Aristotle, as well as Ptolemy. Some of Albert’s statements specifically on the subject of astronomy reveal an attribute ascribed generally to his intellectual position: he worked always to harmonize the ideas of ancient science, and hence those of Plato, Aristotle, and Ptolemy, with the theology of the church. Albert was, from the perspective of a Scholastic who considered the Scriptures and Christian theology in general as the guiding truth to be followed in studying and understanding nature at all levels, able to harmonize them with the pre-Christian scientific ideas of Aristotle’s thought quite well. His astronomy in particular reflects both his adherence to many of the assertions of Aristotle,
but at the same time his critical attitude to the writings of a man not a God.\footnote{One among many, S.M. Albert, OP, has noted Albert’s measured skepticism of Aristotle’s assertions in his treatment of many fields including astronomy, but, “because he did not free himself from all [the many myths which were prevalent] he has long been regarded by most scientists as a romancer and the slavish and uncritical follower of Aristotle, and it is only within the last seventy or seventy-five years that his true position as a scientist has begun to be recognized”, citing Albert’s famous quote, “whosoever believes that Aristotle was a god, must also believe that he never erred. But if one believes that he was a man, then doubtless he was liable to error just as we are”. [Alb., Phys. 8.1.14, Ed. Colon. 4/2, 578, Ins. 23–27] S.M. Albert, OP, \textit{Albert the Great} (Oxford: 1948), 66. By this author’s generous calculation, Albert the Great’s scientific contributions began to be appreciated as early as the 1870s.} Throughout his work, Albert periodically played on the skepticism of Maimonides about the knowledge of Aristotle and his era in astronomy. He nonetheless made it fit with Christian doctrine that Aristotle’s prime mover imparts motion to the outermost sphere of the heavens, by means of which in turn each of the spheres within it is moved, until the terrestrial elements of earth, water, air, and fire and their mixtures on the earth, the center of the universe, are also affected.

\textbf{The Astronomy of Albert the Great in Medieval Astronomy}

The list of Albert’s contemporary and near contemporary writers who considered the astronomers Eudoxus of Knidos (410/08–355/47 BC) and Ptolemy (ca. AD 100–ca. 170), and the mathematician Euclid (ca. 325–ca. 270 BC), among the great thinkers of antiquity is long. Eudoxus, whose account of the universe Plato described in the \textit{Timeaus}, was partly responsible for the Scholastics having accepted the lineage of Socrates, Plato, and Aristotle, not only as the fathers of logic, but also as almost infallible authorities in physics and astronomy. Among those listed would be many who acquired their respect for these authors from Albert the Great, most notably Thomas Aquinas and Dante Alighieri. Given Albert’s passion for scientific texts and his evocation of the details and logic of Ptolemaic astronomy, he became for them a source for quick reference. While his most renowned student Thomas could not be, Albert is counted among the \textit{moderni}, “the partisan followers of Ptolemy”. Significantly, he is also considered among those who understood Simplicius, “the wise and progressive commentator of Eudoxus”.\footnote{Dufeil, “Obscure clarté,” 120.}
One of the questions which historians have posed regarding Albert’s astronomy pertains to the sources of his own knowledge.39 A rather persistent assertion about Albert is that he was more philosopher than scientist and, turning specifically to astronomy, less technical than conceptual.40 The assertion is of concern for a number of reasons, most importantly due to the fact that Albert demonstrated knowledge and command of some quite technical aspects of astronomy, such as the use of astronomical tables. He did so, however, without attributing his training or information source to any particular contemporary. Other factors that render the question of his sources worth asking are that Albert took intellectual positions on larger issues within the study of astronomy that required a grasp of relatively sophisticated mathematical astronomy and, further, that he was taken as an authority and therefore considered by contemporaries to command attention for the knowledge conveyed in what he wrote.

Some work has been done on the university curriculum in astronomy, and the title of a work, *Theorica planetarum*, keeps resurfacing.41 Campanus of Novara (d. 1296) was one author who used this title for his accessible text on astronomy, written upon the request of Pope Urban IV. It has been posited relatively recently by P. Zambelli that Albert the Great probably met and spent some time with Campanus of Novara, both being part of the papal curia of Urban IV (1261–64) in Italy, perhaps in 1263. Since Campanus was a contemporary of Albert, extremely learned in astronomy and from the evidence of his works alone, clearly a fine teacher of the subject,42 it would have been a very rich encounter for the two. Barring, however, formulation of a relatively easy story of knowledge transmission, it appears that “the paths of the learned Dominican and the young astronomer from Novare at most just crossed, if they ever met at all”, since there is no evidence in their respective biographies for time spent together at the papal curia.43

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39 This question has loomed behind the scene in the discussion of the attribution to Albert of works of unknown authorship, most notably the *Speculum astronomiae*. See, for example, Paola Zambelli, *The Speculum astronomiae and its Enigma: Astrology, Theology, and Science in Albert the Great and his Contemporaries* (Dordrecht: 1992), 122, who has Albert “perhaps working and collaborating with the scientific group assembled at the papal curia in the 1260s”.

40 We are reminded here again of Bezza’s categorisation. See n. 1 above.


43 Bagliani, *Le Speculum astronomiae, une énigma?*, 159; see also 161.
Whether or not he knew Campanus, Albert was aware of many works on astronomy and, as was alluded to above, quite early on in his writing career. His “prescribed texts” for astronomy included: (a) first and foremost, the *Almagest*, or Ptolemy’s *Μαθηματική Συνταξις* in Gerard of Cremona’s Arabic–Latin translation (1175), with the commentary of Geber; (b) Latin translations of many Arabic writers; and, (c) books by Masha’allah (fl. 762–ca. 815) and others on the astrolabe. Most of the influences of a lesser degree on Albert remain unnamed. The most prominent receive, however, the honorable mention they deserve. Among others, Albert depended on those works which were the only sources of ideas on astronomy in the early Middle Ages: *De nuptiis philologiae et Mercurii* of Martianus Capella (fl. ca. 365–440), *Somnium* of Macrobius (fl. early 5th century) and *Matheseos* of Firmicus Maternus (fl. AD 330–54). He also, however, signals a remarkable point in the Latin assimilation of Islamic–Jewish astronomical and astrological writings.

It has been noted that Albert referred to authors on certain subjects in groups; for example, on the subject of the prime or first mover, he linked Maimonides, Avicenna, and Al-Farabi, and Averroës and Avempace, among others. Between his writing and revising of *De IV coaequaevis*, thus ca. 1244–48, Albert noted many works, apparently newly encountered:

1. The anonymous 13th-century Hebrew–Latin translation of Moses Maimonides *Dalālat al-hā’irīn*, which he called *Dux neutrorum*, a work from which Albert created important leads to the development of his teaching on questions of concern in the realms of cosmology and astronomy, for example, regarding celestial movers. The influence of Maimonides’s astronomy is revealed above all in Albert’s commentary

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45 The *De astrolabio* of Masha’allah was a very popular work on the astrolabe in the early corpus of teaching texts on astronomy; see Pedersen, “The Origins,” 114.
46 This is seen largely as a result of his integration of new text resources in the revised *De IV coaequaevis*: Rigo, “Zur Redaktionsfrage,” 344. See also by Caterina Rigo, “Zur Redaktionsfrage von *De IV Coaequaevis* des Albertus Magnus” [forthcoming].
48 Although Albert did not identify the sections which influenced his ideas, on the subject of astronomy, he would have been referring to Chapters 1–12, and/or Chapter 25 in which Maimonides gave his account of creation.
49 Four citations from the work are found in the second redaction of *De IV coaequaevis*, Rigo, “Zur Redaktionsfrage,” 338 and 343.
on *De caelo et mundo* where he relies on Maimonides implicitly many times, for example on the subject of epicycles and eccentrics, which Maimonides set out in his account of creation, and on the question of whether the fixed stars each are attached to a separate sphere, as well as the differences between Aristotle and Ptolemy on the position of Venus and Mercury in relation to the sun.\footnote{Alb., *De caelo et mundo* 2.2.5, Ed. Colon. 5/1, 135, Ins. 62–66; Moses Maimonides, *Dux neutrorum* 2.25 (Paris: 1520; repr. Frankfurt: 1964), fol. 54v–55r. Alb., *De caelo et mundo* 2.3.3, Ed. Colon. 5/1, 147, Ins. 39–44; Maimonides, *Dux neutrorum* 2.11, fol.44v. Alb., *De caelo et mundo* 2.3.4, Ed. Colon. 5/1, 159, Ins. 13–20; Maimonides, *Dux neutrorum* 2.12, fol. 45r. Alb., *De caelo et mundo* 2.3.11, Ed. Colon. 5/1, 169, Ins. 3–17; Maimonides, *Dux neutrorum* 2.10, fol. 44v.}

2. Al-Farghānī’s *Kitāb jawāmiʿībīn nuğūm wa-usūl al-harakāt as-samāwīyya* or *Elementa astronomica*, translated by John of Seville (1135), called by Albert *De radicibus astrorum*.

3. Al-Bitrūjī’s *Kitāb fī ’l-hay’a or De motibus caelorum*, translated by Michael Scot (1217) and called the *Liber Aven Alpetraus*, identified by Albert as the author’s “Astrologia”\footnote{See note 141.}.

4. Al-Battānī’s *Kitāb al-Zīj* or *Opus astronomicum*, translated by Plato of Tivoli (first half of the 12th century), known to Albert as the *De motu stellarum* by Albategni. As will be seen below, according to Albert, al-Battani revised the Ptolemaic values for the motions of the fixed stars.

His Arabic sources would also be enhanced by his encountering Avempace, the Latinized name of Abū-Bakr Muhammad ibn Yahya ibn al-Sāyigh, also known as Ibn Bājjah (d. 1138/39), the Andalusian-Muslim scholar of astronomy, among other areas of his vast knowledge.

## The Astronomy of Albert the Great

### The Place of Astronomical Knowledge within Albert’s Thought

It has been observed that it was only between 1240 and 1320, and not without fits (“pittoresques repentirs”) and starts (“erreurs”), that ancient and medieval thinkers truly progressed beyond contemplating “the fixed stars, the layered spheres, from 4 to 56 in number, and the 7 planets, among which the sun and moon figure as two, as more than objects of astrological or magical interest” (emphasis added)\footnote{Dufeil, “Obscure clarté,” 120.}. Albert seems to have gone largely unnoticed as being at the leading edge of this shift and instead
acquired much medieval renown for so-called “natural magic”. Numerous collections of superstitious experiments and sensational marvels, spuriously under Albert the Great’s name, circulated as his treatises during the Middle Ages and appeared in numerous editions in the early years of printing. Some historians take this as proof that these brief works on natural magic were more popular than Albert’s longer, more difficult and argumentative theological and scientific works. His own natural magic made use of both terrestrial nature and the stars. It linked to his alchemy, or the transmutation of metals, and also pertained to his mineralogy and psychology. He advocated the use of herbs and magical stones, animal potions, and images engraved on gems. Albert recommended employing psychic abilities and techniques, such as potions, to clog and stupefy the senses, thereby producing visions and readings, to find metals within the earth and to interpret dreams. He maintained that an individual’s psychic qualities were so important that, when these practices did not work, the defects were not to be found in the science of natural magic but in the souls of those who abused it.

Albert’s natural magic also included astrology, a subject of more detailed discussion in two other chapters of this collection. Two questions are, however, of concern here: Did Albert conceive his astrological learning to be different, if not independent of his understanding of astronomy? And did Albert’s interest in astrology reflect his knowledge of astronomy? From the 14th century on, there seems to have been a continuing desire to peg Albert as either an astronomer or an astrologer, and with his winding up far more frequently in the latter category. In similar tone, it has also been asserted, that even as scholars like Albert may have reflected on both subjects, “it would be reasonable to pay greater attention to what we call astrology than to the more theoretical and neutral astronomy in weighing the concerns of twelfth- and thirteenth-century natural philosophers”. For some, it turned on parsing the terms found in Albert’s writings as, for example, John Chambers wrote in the late 16th century: “if at any time they name Astronomiae, they shew that they meane only that which considereth the course of the Heavens”. His contemporary Christopher

53 Albert is frequently identified as an alchemist or a teacher of alchemy, as, for example, in the poem Piers Plowman, Version A 11.152ff. (EETS.28.129); Version B 10.207 (EETS 38.153).
55 This passage is quoted (in italics) by Christopher Heydon, A Defence of Iudiciall Astrologie (Cambridge: 1603), 300. To Chambers’s mind, this distinction and the orientation of Albert’s interests toward Astronomiae absolved Albert of any taint of astrology.
Heydon wrote strongly against Chambers’s position, reflecting the notion widespread even by historians of the 20th century that “astrological theory had, since the days of Ptolemy, become so inseparable a part of Aristotelian cosmology that the Christian theologians, in welcoming the one, were inevitably compelled to offer a favorable reception to the other”.56 As Heydon himself put it:

Wherefore I define Astrologie to be that Arte which teacheth by the motions, configurations, and influence of the Signes, stars, and celestiall Planets, to Prognosticate of the natural effects, and mutations to come, in the elements and these inferior and elementarie bodies. Which definition is gathered out of Ptolomie, I, 1. cap. 1 of his Quadripartite,57 where, what we call Astrologie, he nameth Astronomie, not distinguishing betwenee the one and the other, but expressly comprehending both the motions and effects (which these adversaries doe attribute to two divers Arts) under one and the same knowledge.58

Heydon continued on to say about Albert, whom he classified as a philosopher, and not an astronomer: “I know that Porphyrie, Themistius, Albertus magnus, Aquinas, with infinite others, that have interpreted Aristotle, doe magnify Astrologie with one consent, and acknowledg the efficacy of the Heavenly bodies.”59 While he was correct that Albert did not eschew astrology, other authors who felt Albert was able to make a distinction between astrology and astronomy have captured his thinking more accurately.60

Albert submitted *Astronomia*, synonymous to *scientia astrorum*,61 to a division into two parts, *astrologia* and *astronomia*. He identified each part by its particular subdivision of the whole subject matter of *Astronomia* and by its methods of investigation. The celestial body and its characteristics is

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59 Heydon, *A Defence*, 300.
60 Akin to his discussions of the distinctions between *astronomia* and *astrologia* is the one in which Albert distinguishes between two kinds of *mathetici*: the ones who engage in the pure science of mathematics (*mathesis*) and those who practice the practical art of astrology (*mathesis*). This distinction, hardly Albert’s own, had already had during the 12th century a long legacy from Hugh of St Victor (*Didascalion* (written before 1125), 2.4, ed. and trans, Jerome Taylor [New York: 1963]) through John of Salisbury (*Policraticus* 2.19, written ca. 1159). See also Alb., *Super Matt.* 2.2, Ed. Colon. 21, 46, Ins. 27–47.
Albert's most general description of the subject of *Astronomia*. The first part concerns the positions, sizes, motions, and properties of the superior or celestial bodies, determined by the demonstrative method. Although the more scientific and mathematical of the two halves, this is the one Albert called *astrologia*; it is, however, the one we currently consider most close to astronomy. Dominicus Gundissalinus (fl. ca. 1150) had already reversed the use of “astronomia” and “astrologia” we would anticipate; therefore, far from being confusing, Albert had simply adopted the nomenclature of the greatest use and clarity to his contemporaries.

Albert's *astrologia* is primarily about the mathematical nature as opposed to the sensible nature of celestial things, but it is also in agreement with physics, both in terms of its subject and in terms of the characteristics of its subject. This subject is recognized as mobile but not in terms of qualitative motion or change, only in terms of local motion. Its recognized characteristics are primarily quantitative, the familiar abstractions from matter, that is, form, arrangement, size, location, and speed. Thus configurations, sizes, and positions of the heavenly mobiles, the distance between them, and the length of their periods are among its specific concerns.

Albert does not mention any particular sources of information or of methods for his *astrologia*. He is also not specific about the information derivable from its use of instruments: the armilla, “instrumentum aequinocti” (the meridian quadrant or plinth), “instrumentum latitudinis stellarum” (armillary spherella), and the astrolabe. He is definitely most...
absorbed in determining the concrete subjects of its concern. Perhaps this
was because, for Albert, *astrologia* is itself a science of two parts: *astrolo-
gia*¹ and *astrologia*². He does not distinguish its two parts by a difference
in method used to investigate one subject, but concludes rather that the
subjects of each part are different.

The first part of Albert’s *astrologia*, *astrologia*¹, deals with the heavenly
mobiles. To Albert’s mind, its scientists, unlike the *logeometrici*, were
recognized more for their statements of fact than for their reasonings.⁷³
Some of their conclusions are purely statements of numerical quantity, for
example, the number of celestial bodies or the number of their motions.⁷⁴
Albert mentioned most often such authoritative conclusions without
stating how they were obtained. *Astrologia*¹ appears to depend largely on
other than *astrologi*, professionals in its field, for its empirical infor-
manion. Its *astrologi* are instead occupied primarily with proving the results
of observations inductively by geometrical demonstration. The most fre-
quent observations under noted scrutiny are eclipses and changing plan-
etary positions.⁷⁵

Just as arithmetic and geometry do, *astrologia*¹ posits as given the
existence and properties of geometric shapes of quantity at rest,⁷⁶ such
as the triangle.⁷⁷ The conclusions of those mathematical sciences are its
principles,⁷⁸ and through them exclusively, “demonstratio quia per
causam remotam”⁷⁹ is its method. Aided by observation, both with and
without instruments,⁸⁰ *astrologia*¹ determines the geometric configura-
tions actually present in the mobile subject.⁸¹ Many of its affirmations
concern more complex mathematical abstractions, as, for example, those
which make statements concerning geometrically derived quantities: the
path and shape of stellar rays or the times of tidal changes.⁸² *Astrologi*
also rely on inductive, mathematical demonstration to determine, for

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⁷³ Alb., *De caelo et mundo* 2.4.8, Ed. Colon. 5/1, 195, lns. 32–35.
⁷⁵ Alb., *De caelo et mundo* 2.3.12, Ed. Colon. 5/1, 170, lns. 25–28.
⁷⁶ Alb., *Metaph.* 1.5.4, Ed. Colon. 16/1, 73, lns. 30–36.
⁷⁷ Alb. defines a triangle as a shape having three angles equal to two right angles;
Alb., *De animal.* 11.1.2.12–13, ed. H. Stadler, (Beiträge zur Geschichte der Philosophie des
Mittelalters) 15 (Münster: 1916), 765, lns. 11–18.
⁷⁸ Alb., *De caelo et mundo* 2.3.11, Ed. Colon. 5/1, 167, lns. 83–85.
⁷⁹ Alb., *Phys.* 2.1.8, Ed. Colon. 4/2, 91, lns. 9–12.
Magnus,” *Angelicum* 35 (1958), 171, lns. 28–33.
Ed. Colon. 5/2, 70, lns. 19–20.
interpreting albert the great on astronomy

example, the relative sizes of the celestial bodies and of the spaces in between them.83

Astrologia is not a science about “this sensible sky”, erit ipsa circa caelum medium, Albert wrote.85 Using mathematics, astrologia makes statements only about the parts of the celestial bodies that are the abstracted geometric forms, not the whole bodies. By the same token, Albert did seem to believe that to say something mathematically accurate about the center of a star, a celestial “point”, was also to say something about the physically real body, and that is why astrologia is not simply mathematics. Albert, an Aristotelian, considered the existence of mathematical properties to be subsequent to that of physical quantity, and both subsequent to the existence of a physical nature. The most frequent use of demonstrative reasoning with mathematical premises was made to extend the information obtained by observation in order to create or modify the tables and establish quantitative explanations of the whole moving system for which astrologi were known.

The second part of astrologia, astrologia2, Albert called mixed or conjoined with physics.86 As might be expected, this part is about the physical natures of celestial bodies imbued with form and in a mobile state. The characteristic physical properties, such as shadow87 and light88 of the spherical, heavenly bodies, and celestial motion, in recurring, regular finiteness, are its particular subjects. Astrologia2 is thus less abstract than astrologia1 in respect of its subject. In astrologia2, the physical causes of celestial mathematical interrelationships are considered.

The connection of astrologia, through astrologia2, to physics is not unique. Albert ranks it with at least five other named sciences that, by reason of their subject, “approach physics rather than mathematics”: optics, music theory, the science of weights, the science of devices, and the science of the moved sphere, “et huiusmodi scientiae”.90 Their subordination to physics is only “according to the consideration of their subject”. Like the other quasi-physical sciences, astrologia does not employ the principles of physics for its investigation. No part of astrologia, a mathematical science by reason of its principles, makes use of the principles of

83 Alb., De caelo et mundo 2.2.4, Ed. Colon. 5/1, 133, Ins. 3-4.
84 Alb., Metaph. 3.2.3, Ed. Colon. 16, 118, Ins. 28–29.
85 Alb., Metaph. 3.2.3, Ed. Colon. 16, 117, Ins. 41–42.
86 Alb., Metaph. 1.5.4, Ed. Colon. 16, 73, Ins. 34–43.
87 Alb., Meteora 1.2.6, Ed. Colon., 6, 23, Ins. 38–44.
88 Alb., Summa de mir. scient. dei [Summa theologiae] 2.11.51.1, Borgn. 32, 536b.
natural philosophy. Principles of motion are the premises by which natural philosophy, in particular celestial physics, examines the same subject as astrology; depending on the choice of principles, Albert says, one could construct either a mathematical (“astrological”) or a physical proof of a celestial phenomenon.

Albert does not often indicate the actual method which the astrologi practicing astrology use to arrive at an authoritative statement. When he does, however, the “facts” are often attributed, if not tacitly to “demonstratio quia per effectum”, then to conjecture. It is in part through conjecture that the practicing “moderni” distinguish themselves from the “antiqui”. In the act of opining, a method actually proper only to the second part of Astronomia, the “astrologi” seem to step beyond the limits of astrology to offer their ideas of the celestial effects on generation. To Albert, their unprovable opinions appear in marked contrast to the longstanding definitions of the ancient “astrologi”, which have achieved the timelessness of demonstrated proofs.

Astrologia, with its two parts, is only one half of Astronomia. The second part, which carries the title astronomia, concerns celestial virtue and the effects of stars on inferior or terrestrial things assessed by conjecture. It is the method for pursuing this knowledge which separates it most strongly from the other branch of Astronomia. While only the astrologi can demonstrate their findings, both groups of practitioners were, how-

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91 Alb., Phys. 2.1.8, Ed. Colon. 4/1, 89, ln. 35.
93 Alb., Super Dion. De div. nom. 4, Ed. Colon. 37/1, 150, Ins. 20–23.
94 Alb., Metaph. 11.2.24, Ed. Colon. 16, 513, Ins. 94–95.
96 Alb., De nat. boni 2.3.2.2.3, A, 1, 1, Ed. Colon. 25/1, 49, Ins. 78–79.
97 Alb., De animal. 20.2.2, ed. H. Stadler (Beiträge zur Geschichte der Philosophie des Mittelalters) 16 (Münster: 1921), 1310, Ins. 41–42.
98 Alb., De fato, a. 4, Ed. Colon. 17/1, 73, Ins. 35–44. Cassiodorus (d. ca. 575), unlike some of Albert’s later sources, did not divide his “astronomia” into parts, Cassiodorus, An Introduction to Divine and Human Readings, 7 and conclusion, trans. Leslie Webber Jones (New York: 1946), 199–205. See also Alb., De causis propr. elem. 1.2. 12, Ed. Colon. 5/2, 84, Ins. 83–p. 85, Ins. 6.
99 Not to mention the infiltration of theological explanations, connected to “light”, which were highly developed by Albert’s time. Occurring in discussions of the Dionysian literature and deriving from the Platonic interest in it at least since the 12th century, explanations of effects derived metaphorically from theology. For example, just as in the Incarnation, in which Christ had penetrated and passed through the Virgin Mother without breaking her, so too could the sun’s presence as light penetrate the spheres in the heavens or stained glass windows on earth without diminishing them.
ever, engaged in the transmission of their science and the codifying of its terminology. The main resource of *astronomia* is the observable effects caused by the combination of all the celestial bodies’ properties.

To limit the risk of error, the practitioner of *astronomia*, the *philosophus-astronomus*, has to be well educated in natural philosophy\textsuperscript{100} as well as in the subalternating *astrologia*.\textsuperscript{101} He must be able to recognize the inherent natures of terrestrial bodies in order not to confuse those with celestial effects. In classification, *astronomia* is logically dependent upon *astrologia* for its premises,\textsuperscript{102} while dependent upon physical manifestations for its source of empirical information.\textsuperscript{103} Physical signs determine first and foremost the necessary existence of this part of *Astronomia*. Without them the celestial bodies would not be conceived as causes of terrestrial phenomena at all.

Further, all the conclusions of *astronomia* must be considered conjectures. Therefore, *astronomia* benefits greatly from the necessary conclusions of *astrologia* which prove some of the attributes of the heavenly bodies: the arrangements of the planets at any time, their various independent motions, as well as facts concerning their physical properties of light, heat, and color. Although the *philosophi-astronomi* use hypothesis exclusively, Albert noted, as mentioned above, that those who pursue *astrologia* resort to it as well, in attempting to number all the motions of the heavens,\textsuperscript{104} for example, or in deciding whether all planetary paths have a latitudinal variation.\textsuperscript{105} The difference in their respective uses of conjecture is one of degree rather than kind, for conjecture is always a secondary method, employed when the proper principles for induction are not yet known, but when observation indicates a probable true conclusion. Albert’s *astrologia* actually rests, however, exclusively on demonstrated principles, which validate the science and serve as premises for many of its conclusions.

Here follows the schema of Albert’s classification of the sciences, limited to those whose study is in some respect linked to that of the heavens:

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\textsuperscript{100} The *philosophi-astronomi* had the task of distinguishing their vocabulary from that of the *physici*, especially concerning latitude and longitude and directions in the world.

\textsuperscript{101} Alb., *De causis propr. elem.* 1.2.9, Ed. Colon. 5/2, 78, lns. 29–37.

\textsuperscript{102} Alb., *De causis propr. elem.* 1.2.2, Ed. Colon. 5/2, 64, lns. 18–22.


\textsuperscript{104} Alb., *Super Dion. epist.* 7, Ed. Colon. 37/2, 508, lns. 20–56.

\textsuperscript{105} Alb., *De caelo et mundo* 2.2.5, Ed. Colon. 5/1, 196, lns. 18–26.
In addition to theoretical philosophies, Albert also classified practical divisions of philosophy, which form a symmetrical counterpart to the theoretical ones. He paired practical theoretical mathematics with an applied mathematics in four parts: arithmetic with calculating, geometry with cosmimetrica, music with operationes musicas, and astronomia with divination. As the pairing of the practical subdivision with its theoretical one could form an educational group or discipline, arithmetic or number theory would be studied with calculating or reckoning; geometry with the practice of measuring; music theory with the actual making of music; and "astronomia" with divination. Alh., Ethica 1.1.2, Borgn. 7, pp. 4b–5a.

Albert added that more branches of mathematics could be noted, and indeed some branches could be subdivided: for example, cosmimetrica into "planimetrics", "profundimetrics", and "altimetrics" to which specific parts of theoretical geometry are related. Alh., Ethica 1.1.2, Borgn. 7, p. 5a. See Alh., Phys. 2.1.8, Borgn. 3, 109b for a discussion of the divisions of the mathematical and 'middle' sciences. This section appears to hark back to a version of the divisions of practical geometry given by Hugh of St. Victor and Gundissalinus: [Hugh of St. Victor], The Didascalicon of Hugh of St. Victor, trans. and annotated by Jerome Taylor (Records of Civilization. Sources and Studies) 57 (New York, 1961) p. 70, whose content derives in part from Hugh's Practica geometrae, and Gundissalinus, De divisione philosophiae, 4.2, p. 108, lns. 6–14.
The Content of the Astronomy of Albert the Great

How does one measure the importance of the study of astronomy for Albert the Great? In the absence of a treatise solely dedicated to astronomy authored by him, his own De astrononmia, any and all of the following measures could prove useful and illuminating to establishing his contribution: how much of the corpus of his work is dedicated to astronomy; the frequency of his references to astronomical instruments or specific observations of celestial bodies; and the authorities in astronomy whom he cites and/or the number of whole theoretical discussions he dedicated to the topic. In the history of science, as has already been noted, use of technical tools, whether observational or mathematical, by astronomers, particularly premodern astronomers, seems to have become a kind of litmus test for detecting serious understanding of things astronomical. This might thus be the place to start in analyzing Albert’s astronomy.

For Albert, the science of Astronomia employs six different methods of investigation of which the “technical” were three: naked-eye observation, observation with instruments, and the use of astronomical tables. All observations of the heavens, done in Albert’s lifetime, before the invention of the telescope, were undertaken without vision-enhancing lens, and thus known as “naked-eye” observations. In his own personal travels, Albert was afforded many opportunities to observe natural phenomena. One observation he recorded is of particular interest to the history of astronomy. In his commentary on Aristotle’s Meteorologica, he reported that, while in Saxony in 1240, he had seen a comet. The comet “appeared as if near the North Pole and it projected its rays between the East and the South, directing toward the East”. Although Albert recounted this in a work written more than ten years after the sighting, he was still so sure of the accuracy of his observation that he used it to dispute a claim concerning the planet-like path of a comet. He had not observed idly.

Albert gave the impression, however, that most of his contemporaries’ sightings were made by means of observational instruments, both

106 Dufeil uses a variant of this method for Dante, noting the number of evocations of the sun and the moon in the Divine Comedy; see also Dufeil, “Obscure clarté,” 127.
calibrated and non-calibrated ones. They not only used sighting instruments, but, he noted, they devised and made them themselves.\textsuperscript{109} Albert rarely mentioned the practices in undertaking specific naked-eye and instrument observations, although techniques devised for viewing solar eclipses were an exception, perhaps because of the potential for serious eye damage in observing them.\textsuperscript{110} The data collected from observations generally, and notably those made with the astrolabe or the “armillae”,\textsuperscript{111} figured prominently, however, in Albert’s work. His concern with *Astro nomia*’s collection of observational data and the calculations found in astronomical tables is witnessed primarily in his discussions of vocabulary, where he notes the heading of a tabular column\textsuperscript{112} or a term such as “dies”, in light of its meaning in the tables.\textsuperscript{113} His astrologi were particularly concerned with defining motions so that the observed ones could be differentiated from the calculated ones.\textsuperscript{114}

A subject of some discussion was the comparison of the results derived from actual observation and those obtained through calculation from tables.\textsuperscript{115} The *astronomus, quia scit astronomiam*\textsuperscript{116} used astronomical tables both to countercheck observations and to predict phenomena, by considering values he could not derive from singular observations, such as the periods of all the celestial bodies.\textsuperscript{117} The most significant use of technical astronomical skill discovered to date in the works of Albert the Great is his own use of tables to establish whether or not the darkness at the time of the Crucifixion of Christ was natural or miraculous. In his discussion of it, Albert referred to at least four different kinds of astronomical tables—“ordered compilations of observed and calculated

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data concerning the position and appearance of celestial bodies”—and introduced the conventions of astronomical tables necessary to explain the steps of his investigation. He concluded after a complex process of elimination by calculation that the lunar eclipse that obscured the sun on Good Friday, extending its shadow from India to Spain, namely over the whole earth, was due to a divine miracle, in that not all of the requisite celestial relationships, the apposing longitudinal positions of the sun and moon, a modest latitudinal position of the moon, and a position of the lunar-solar conjunction relatively close to the vernal equinox, were occurring at the time.118

Influenced perhaps by the technically grounded arguments of his master, Thomas Aquinas held to the same assertion. Dante, however, refused to see the recorded darkness produced by the eclipse as caused by a miraculous retrograde movement of the moon, preferring, perhaps as a good Aristotelian, to ascribe the movement instead to the normal mechanism of the heavens and treat any other opinions as insane.119 While the discussion in Thomas probably stems from Albert, the topic itself arose from one of Albert's sources, Dionysius the Areopagite, who was considered an eyewitness to the Crucifixion and hence the eclipse. Albert's commentary on the pertinent passage in a letter attributed to Dionysius is disproportionately long and drawn out, reflecting presumably his interest in its astronomical content. He addressed the same issue also in his commentary on the biblical book of Matthew. It has been noted that by the time of Albert's student, Thomas Aquinas, from comments on this same question, the subject “obviously belonged among the assignments in a young bachelor's biblical studies”,120 perhaps due to Albert's having put it on the agenda.

In addition to evocations of astronomical observations and authors' works, the study of astronomy included for Albert the Great a number of whole theoretical discussions dedicated to the topic. In 1997, Edward Grant wrote an article entitled “The Medieval Cosmos: Its Structure and Operation,” in which he provided a survey of the topics of greatest concern in

medieval discussions of cosmology and astronomy. It provides a useful overview of themes within which the interests of Albert the Great found expression, among them: "The macrostructure of the medieval cosmos" and "Operational details of the Universe" (creation and eternity; other possible worlds and extracosmic space; the order of the planets; the celestial spheres; the problem about the Ptolemaic and Aristotelian systems; the three-orb compromise; the number of orbs in the cosmos; the theological spheres; are the orbs hard or soft?; on the causes of celestial motion; external movers; internal movers; the properties of celestial bodies; the terrestrial region; and dimensions of the universe). Further, the assertion, that "With its scholastic perspective and rational calculation of natural forces, this century of observers and academics did little more than continue to make the stars and galaxies turn as they had since their initial common explosion" (well, perhaps not since the big bang, but perhaps since Ptolemy), also implies that an understanding of medieval astronomy in general would allow for full comprehension of Albert's ideas. Indeed, this approach goes much of the way toward reaffirming that at least by 1240 medieval thinkers were progressing well beyond contemplating the heavens solely as subjects of astrology and that all their facets—the fixed stars, the nested spheres, and the planets—were of interest.

It would require, however, far more detail than is possible here to identify within each sub-area of medieval astronomy the nuances made by Albert which might be considered to be his unique contributions. Nonetheless, a few comments which have come under more recent discussion will be highlighted. On the substance of the heavens and the celestial bodies, Albert followed Aristotle in positing that all parts of the heavens are made from a fifth element of absolute purity, "aether". He interpreted the spots on the moon not, however, as due to the unequal distribution of matter, namely, the density or rarity of the concentrations of aether. Its observable surface features he considered instead to be the proper

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122 Dufeil emphasises that part of “une nouvelle problematique” of the 13th century was to make the planets turn without "disturbing the angels"; see Michel-Marie Dufeil, “Obscure clarté,” 134.


attributes of the celestial body itself, its mottledness distinguishing it from others, as do their different colors, for example.

Under Grant’s large category of “Operational details of the universe”, Albert can be seen to have addressed any number of topics of discussion, particularly the configuration of the heavens and the number and type of independent parts and motions in the celestial realm. Beyond the particular components of the universe, Albert concerned himself most genuinely with the universe as a whole. In sum, he considered the celestial realm, everything above and surrounding the terrestrial realm (the earth stationary at the center comprised of the four elements, earth, water, air, and fire) to be comprised of the nested spheres of Greek cosmology. From the astronomy of Eudoxus, through Aristotle, Albert had inherited the conception of a heavens comprised of naturally rotating (but otherwise immobile) spheres, to one of which the fixed stars and to the seven other the planets, visible to the naked eye, are attached, each planet moved by a set of spheres, with the outermost turning as the sphere of the fixed stars, an inner one yielding the uniform orbital path of the planet, and any additional spheres producing the individual irregularities of the planet in orbital longitude and latitude. An ultimate outermost sphere, the first, defined for Albert likewise the outer limits of the material world. Outside it, there was thought to be nothing: no other heavenly bodies, no motion, no space, or place. The basic system included the assumption that each celestial body moved in one circle or on one sphere with constant speed and uniformity about the earth.

Albert considered Ptolemy, as all successors of the Babylonians, Egyptians, and classical Greeks, to have received a rich inheritance on which to build a sophisticated system of the heavens. He understood Ptolemy’s system, like Aristotle’s, to be composed of sets of physical spheres. Since Albert denied the necessity for all celestial motion to have one center, the earth, the way for him was clear to posit eccentrics, or “circles with centres removed [from the earth]” in any system. On the subject which was frequently linked to this allowance, the impossibility of the intersection or co-penetration of two objects with spatial extension, Albert offered more

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125 Alb., De caelo et mundo 2.3.15, Ed. Colon. 5/1, 178, Ins. 27–88.
126 Every reference Albert makes to Eudoxus reflects the identity he has in Aristotle’s Metaphysica.
127 It is not clear how Albert received details of the physical Ptolemaic system, found in Ptolemy’s Planetary Hypotheses (not in the Almagest), a work which he does not seem to identify as such.
128 Alb., De caelo et mundo 1.1.3, Ed. Colon. 5/1, 10, Ins. 77–94.
than one explanation to counter the criticism launched against Ptolemy's sets of spheres, some of which incorporated eccentric spheres and/or epicycles: for example, the rotation of epicycles does not divide the deferent (or the epicycle-bearing sphere) because “centrum eorum sit in deferente excentrico”.129

Albert described the phenomenon of the earth not being at the exact center of the orbit of the sun around it, as follows in a passage from his commentary on Dionysius’s *De divinis nominibus*:

> Therefore it ought to be said first of all that the diameter of the sun is always of the same quantity, but that at different elongations of it from us, it seems to be sometimes bigger and sometimes smaller, because, as Euclid proved in his book *On the Fallacies of Sight*, when something round is more distant from us, it seems smaller, because it is seen under a smaller angle, although more of the sphere is subtended by sight, because by however much longer the sides of a certain triangle are extended, the angle is less and the base, which is in contact with the observed sphere, is greater. And therefore when the sun is at its highest elevation, it seems to have the least diameter, and when it is at its greatest depression and nearest to us, it is seems to have its greatest diameter, and accordingly from one end to the other of the orbit it seems to grow; it has thus an eccentric motion.130

According to Albert, the whole Ptolemaic system consisted of nine sets of concentric spheres, but he felt that it was not complete in that it did not account for an observed motion called trepidation. To account for trepidation, Albert incorporated a mechanism that conceived it as the revolution of the equinoctial zodiacal points on their own sphere, for which he felt the addition to Ptolemy’s system of another or a tenth sphere was required. Dietrich von Freiburg (ca. 1250–1310), who has been described as “one of the most important—for his originality—thinkers of the thirteenth–fourteenth centuries”, took Albert the Great in particular as one of his authorities.131 In his *De intelligentiis et motoribus caelorum*, however, he criticized Albert’s cosmology. Dietrich turned explicitly from Albert’s ideas to the model he attributed to Thabit ibn Qurra (836–901).132 According to Dietrich, Albert’s theory had yet to be corrected by Thabit’s, and

129 Alb., *De caelo et mundo* 2.3.9, Ed. Colon. 5/1, 162, lns. 48–50.
130 Alb., *Super Dion. De div. nom* 4, Ed. Colon. 37/1, 147, lns. 31–46.
Dietrich, claiming that he, and not Albert, was following the “modern” ideas of Thabit, advanced that there were only nine heavenly spheres, not the ten he claimed Albert asserted existed.

This discussion actually turned not around the number of the sets of spheres needed to accommodate the celestial bodies per se, but on the transmission of motion within the heavens. The “first” or outermost sphere was the cause of a constant or unending circular motion for each of the inner lying spheres, with each sphere carrying out one motion transmitted to it. The most striking motions were those of the planets, which move closer to and farther from one another, but from a geocentric perspective, the fixed stars were also observed to have at least two motions, those of the shortest and longest periods in the heavenly realm. It had been observed over the centuries that the motion of that collective of stars that forms the backdrop to the planets’ motion, the so-called stars “fixed” in relation to one another, was not regular. The shortest celestial motion is their 24 hour east–west revolution, a diurnal period, therefore. The longest is the motion of the sphere of the fixed stars known as precession, whereby it completes one circuit of the heavens in the west–east direction (the opposite of its daily east–west rotation) in 36,000 years.

Albert interpreted Ptolemy’s reasoning to assume the existence of a ninth heavenly sphere, to account for the fact that in addition to the seven (sets of) spheres which produce the motions of all the planets, and another for precession, the fixed stars’ motion from west to east, a ninth sphere allows all the spheres of the heavens to partake of the fixed stars’ diurnal motion. Dante seems to have been steered by a passage of Albert’s commentary on the De caelo et mundo to share this opinion, that the movable heavens are therefore nine in number.

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133 Alb., De IV coaeq. 3.12.2, Borgn. 34, 426b; Alb., De caelo et mundo 2.3.11, Ed. Colon. 5/1, 166, Ins. 31–51.
134 Alb., Metaph. 11.2.22, Ed. Colon. 16, 510, ln. 42–p. 51, ln. 6. Albert reflected that perhaps not all the stars partake of this motion, Alb., De IV coaeq. 3.12.2, Borgn. 34, 426b.
135 The period of the Milky Way was observed to be the same as this slow one of the fixed stars, Alb., Meteora 10.2.6, Ed. Colon., 6, 22, Ins. 42–52.
136 Dante Alighieri, Il Convivio 2.3.7, ed. Maria Simonelli (Bologna: 1966), 36–37 and Dante [Alighieri], Vita Nuova, 29, trans. Mark Musa (Bloomington, Ind.: 1973), 62. Among the other astronomical characteristics of the heavens Dante attributed to Ptolemy were his contention that errors in astronomy are to be imputed not to the science itself, but to the inefficiency of the observer (Dante, Convivio 2.13.30, ed. Simonelli, 63, 30) and his opinion on the nature of the Milky Way (Dante, Convivio 2.14.7, ed. Simonelli, 64–65, from Ptolemy, Almagest. viii. 1). He also noted Ptolemy’s description of the planet Jupiter as a star of temperate complexion, holding a middle place between the frigidity of Saturn and the fieriness of Mars (Dante, Convivio 2.13, ed. Simonelli, 62, 25).
Albert mentioned Ptolemy's one degree per century most frequently as the value of precession, the heaven's slowest motion.\(^{137}\) Albert also noted, however, a shorter period of precessional motion,\(^{138}\) and a theory of trepidation or variation in the rate of precession. Both are attributed by him not to Thabit ibn Qurra, but to another Arabic astronomer, al-Battani (ca. 850–929).\(^{139}\) The only value Albert ascribes to al-Battani, presumably for his combination of the two motions,\(^{140}\) is a period of one degree every 80 years,\(^{141}\) and it is not always clear whether Albert thought al-Battani adhered to a theory of trepidation or not. In Super II Sent. Albert seems to attribute to him simply a faster rate of precession.\(^{142}\) Al-Battani actually rejected the theory of trepidation and held that the rate of precession was constant at one degree per 66 years.\(^{143}\) He did, however, mention a theory of the trepidation of the equinoxes which he attributed to Ptolemy.\(^{144}\) The value of one degree per 80 years originally derived from Theon's

\(^{137}\) Alb., Super II Sent. 1.10, Borgn. 27, 24b; Alb., Super II Sent. 14.2, Borgn. 27, 260a; Alb., Super Dion. De div. nom. 4, Ed. Colon. 37/1, 151, lns. 20–23; Alb., De caelo et mundo 2.2.6, Ed. Colon. 5/1, 139, lns. 68–p. 140, ln. 3; Alb., De caelo et mundo 2.3.11, Ed. Colon. 5/1, 166, lns. 31–47; Alb., De causis propr. elem. 1.2.3, Ed. Colon. 5/2, 66, lns. 16–24. It is interesting to note that maintaining precision with regard to this value formed a part of the text transmission tradition of at least one of Albert's works, De IV coaeq. (Borgn. 34). In two manuscript copies of the work a pertinent passage in Alb., De IV coaeq. 4.73.9 reads: "Ad alium dicendum quod dies est mensura unius revolutionis caeli, in qua revolutione etiam moventur elementa ad commixtionem generabilium." In the balance of the manuscripts, among them at least two from the 13th century, is a longer version of the same passage, which was adopted for the Borgnet edition: "Ad alium dicendum, quod dies naturalis est revolutio una aequinoctialis circuli cum tanta parte zodiaci vel lineae eclipticae, quam naturali motu ab Oriente in Occidentem describit sol: et haec pars est quinquaginta et duo minuta secundum illam quantitatem, qua gradus componitur ex sexaginta minutis, in qua revolutione etiam moventur elementa ad commixtionem generabilium." Caterina Rigo notes, as part of her research on this transmission phenomenon, that the text ought to read 59 instead of 52; see “Zur Redaktionsfrage,” 334.


\(^{139}\) The text tradition of Albert's works has him referring to al-Battani as "Albategni" in Alb., De IV coaeq. 3.12.2, Borgn. 34, 426b, Alb., De homine 81.1, Borgn. 35, 658b, Alb., Super II Sent. 14.6, Borgn. 27, 266a; Alb., De causis propr. elem. 1.2.3, Ed. Colon. 5/2, 66, ln. 9, and Alb., Problem. determ. 2, Ed. Colon. 17/1, 50, ln. 21, as "Albetegni" in Alb., Super II Sent. 14.2, Borgn. 27, 260a, as "Abbatemo" in Alb., Super IV Sent., 44.3, Borgn. 30, 549a, and as "Albetegny" in Alb., De caelo et mundo 2.3.11, Ed. Colon. 5/1, 166.

\(^{140}\) Rigo notes Albert's relying on al-Battani as presenting a "correction" of Ptolemy's calculation of this "motus naturalis"; see “Zur Redaktionsfrage,” 344.

\(^{141}\) Alb., De caelo et mundo 2.3.11, Ed. Colon. 5/1, 166, lns. 45–47 and Alb., De causis propr. elem. 1.2.3, Ed. Colon. 5/2, 66, lns. 4–12.

\(^{142}\) Alb., Super II Sent. 14.2, Borgn. 27, 260a.


\(^{144}\) Al-Battani, Opus astronomicum 1, 126.
commentary on Ptolemy’s *Handy Tables* as the period of an 8 degree oscillation of the solstitial points.\textsuperscript{145}

It was a very common assumption in the Middle Ages, shared by many of Albert’s contemporaries, including presumably Dietrich, that Thabit was the author of the so-called trepidation theory and had devised a model to account for the observed motion of the sphere of the fixed stars,\textsuperscript{146} which required an addition of one sphere to the eight other spheres.\textsuperscript{147} Even until rather recently, the 9th-century Baghdad astronomer was indeed credited with the ingenious mechanism introduced to account for the perceived irregular motion of the fixed stars. Albert, however, thought that Thabit was simply a verifier of the concept of celestial trepidation.\textsuperscript{148} His source for the ideas he attributed to Thabit was the anonymous Version M which circulated widely in the Middle Ages under the title *De motu octavae sphaerae*,\textsuperscript{149} a short work whose Arabic original has been lost. Albert was correct, it would seem, in that the assumed attribution to Thabit now appears to have been wrong on two counts: (1) there were much earlier theories of trepidation, that of Hipparchus (ca. 190–ca. 120 BC)\textsuperscript{150} being probably the earliest; and, (2) it is doubted whether Thabit ibn Qurra was originator of the parameters of the trepidation theory that circulated under his name.\textsuperscript{151}

Whatever its true origins, it was appreciated by Albert’s contemporaries that the addition of trepidation to the precessional motion of the sphere of the fixed stars allowed the motion of the most apparently non-stationary points in that sphere, that is, the points at which the equinoxes take place in relation to the fixed stars. These points that define the intersection of the ecliptic, the path of the sun and other planets, and the equator vary their position in the model attributed to Thabit, by being points on the great zodiacal circle (or on the equator, depending on the interpretation)\textsuperscript{152}

\textsuperscript{147} Grant, “The Medieval Cosmos,” 157.
\textsuperscript{148} Alb., *Super II Sent.* 14.2, Borgen. 27, 260a and Alb., *De causis propr. elem.* 1.2.3, Ed. Colon. 5/2, 66. lns. 4–12.
\textsuperscript{150} Neugebauer, *A History* 1, 297–298.
\textsuperscript{151} Mercier, “Studies,” 209–220.
\textsuperscript{152} Mercier, “Studies,” 210 and 218.
that is moved according to the rotation of the first point of the zodiacal sign, Aries, about a small circle. With regard to a theory of trepidation, Albert certainly relied on the description provided by Thabit and factored it into his own conception of the system of the motion of the heavens.\textsuperscript{153} Albert does not refer directly to the direction of the motion of the equinoctial points in this discussion of the motion of the eighth sphere.\textsuperscript{154} He was primarily concerned with the location of the first point of Aries with respect to the spring equinox\textsuperscript{155} that is, whether it is north or south of it, information that amounts to knowing whether the equinoxes are acceding or receding.\textsuperscript{156}

Albert noted having consulted a set of tables for the motion of the eighth sphere, “Tabulae accessus et recessus octavae sphaerae.” They were the first set of tables Albert ever mentioned in his works. In \textit{De IV coaequaevis} he wrote that they were compiled according to a second zodiacal motion of points on the sphere of the fixed stars.\textsuperscript{157} He briefly describes the motion as that of the first point of the zodiacal sign, Aries, and of a zodiacal sign, Libra, moving backward and forward on a circle 8 degrees in diameter. Albert attributes the identification of the motion to “Thebit” or Thabit ibn Qurra, but it is not clear whether he believed that Thabit himself had constructed the tables.

When writing his exegesis of the Dionysian letters Albert might also have had before him that Version M of the Latin work ascribed to Thabit which circulated widely in the Middle Ages under the title \textit{De motu octavae sphaerae}, but more likely he used a form of the original that was found in a complete set of astronomical tables like the Toledan ones to which Thabit’s theory was generally associated. In his commentary on the seventh Dionysian letter Albert does not actually refer to the tables, but only

\textsuperscript{153} For example, Albert uses the terms “accession” and “recession” when referring to Thabit’s model. In Thabit’s context, these terms actually apply to the equinoctial points (Mercier, “Studies,” 211). They describe, by virtue of the first point of Aries, whether the equinoxes are moving westward with the diurnal motion of the fixed stars, in “accessio”, or eastward against their daily motion, in “recessio”.

\textsuperscript{154} By “motus accessionis et recessionis octavae sphaerae”, he meant rather the angular distance of the first point of Aries from a zero point on its circle of rotation.

\textsuperscript{155} Alb., \textit{Super Dion. Epist. 7}, Ed. Colon. 37/2, 509, Ins. 49–52.

\textsuperscript{156} The quantity of this angular motion, which reaches a limit of 10°45, is conventionally designated as being in the north with a positive sign (+) and in the south with a negative one (−).

\textsuperscript{157} Alb., \textit{De IV coaeq. 3.12.2}, Borgen. 34, 426b.
to the value of the motion of the eighth sphere which he derived from them: 8 degrees, 14 minutes, 1 second, south of the equinoctial point.\textsuperscript{158} At the time concerned, the equated motion of the eighth sphere, according to one set of astronomical tables, the Toulouse Tables, is 8 degrees 17 minutes, 30 seconds south, or negative.\textsuperscript{159} This agrees to the nearest second with the more popular Toledan tables of \textit{De motu octavae sphaerae}, which strengthens the argument that Albert, arriving at a different value, did not use either set of tables directly to obtain his quoted values.

Only one other system of heavenly motions and planetary configuration, that of al-Bitruji, was to Albert’s mind a contender to the Aristotelian/Ptolemaic one. According to al-Bitruji, the only true motion of the planets was an east to west diurnal one, which could be accounted for, it was argued, with nine or ten\textsuperscript{160} contiguous,\textsuperscript{161} geocentric celestial spheres. Order in his system was established according to the premise that the more apparent motions a body has, the more intermediaries have come between its sphere and the most simple prime mover.\textsuperscript{162} The amount a planet drags behind one full diurnal revolution every day, its daily lag or retardation, is what increases from sphere to sphere, yielding the moon as the slowest body. It is quite obvious from Albert’s accounts of al-Bitruji’s system that he was most impressed with his mechanistic explanation of the planets’ periods, and perhaps it is his association with al-Bitriji’s system that allowed Dietrich to assume that Albert considered the universe to be comprised of ten and not nine sets of spheres.

Albert drew particular attention to al-Bitruji’s “laulab”. He defined “laulab” literally as a twisted piece of wood. “Laulab” was for a medieval thinker an example of an apparent motion or the visible path of a moving body: in this case, the circular motion by which a planet spirals its way up and down the path of its orbit. This name is applied to the spiral path of a planet’s periodic motion, for the diurnal circles the planet takes in the heavens as it moves along the ecliptic through its northern and southern

\begin{footnotesize}
\begin{itemize}
  \item[159] The table is found in MS Paris B.N. 16638 on fols. 82v–83v.
  \item[162] Alb., \textit{Super II Sent.} 14.2, Borgn. 27, 260a and Alb., \textit{De intell. et intellig.} 1.1.8, Borgn. 9, 489a.
\end{itemize}
\end{footnotesize}
extremes actually comprises one long spiral. Albert considered “laulab”
the effect of a planet’s revolutionary motion or “motus in gyro (gyrum)”.
Francis Carmody wrote of Albert’s use of the term “laulab”: “The most
instructive echo of the spiral in European writings appears in Albert the
Great, who gives details not found in the same terms in Al-Bitruji.”
Paul Hossfeld, referring to Albert’s discussion of the term “laulab”, gives this
quote from Carmody as an example that Albert, despite mistaken impres-
sions that might come from non-critical editions of his works, was not
simply an efficient copyist. In his commentary on Aristotle’s *Metaphys-
ics*, Averroes paraphrases a passage from Ptolemy’s *Planetary Hypotheses*,
using “harakat lawlabiyya” to mean “spiral motions”. Al-Bitruji used the
term “lawlab halazuni” or “spiral” to describe the open curve a fixed star
makes in its daily rotation because of its precessional motion. Albert’s
definition of “laulab” as a twisted piece of wood, Hossfeld believes, stems
from Albert himself. Along with his perceptively accurate use of the
language, Albert presented no revisions of the al-Bitrujian system.

The major debate, if such there ever has been, about the astronomy of
Albert the Great, has turned on whether he favored the Ptolemaic or the
al-Bitrujian systems of planetary motion. Six scholars, all of whom dis-
cussed Albert’s ideas on astronomy to some extent, might have offered
an opinion. Hossfeld and Carmody do not, however, discuss his ideas in
terms of a preference. Julio Samsó and Giovanni Stein do not reveal
their reasons for their statements that he preferred Ptolemy or al-Bitruji

163 Alb., *De mot. animal*. 2.1.1, Borgn. 9, 285a and 2.1.2, Borgn. 9, 287.
165 Paul Hossfeld, “Die Arbeitsweise des Albertus Magnus in seinen naturphilosophis-
chen Schriften,” in *Albertus Magnus. Doctor Universalis 1280/1980*, ed. Gerbert Meyer and
166 Bernard R. Goldstein, *The Arabic Version of Ptolemy’s Planetary Hypotheses*, (Trans-
or “spiral” is also, and confusingly, the word employed in the Arabic translation of the
Metaphysics Averroes used to convey the concept of the Greek for counteracting spheres.
al-Haytham’s Treatise: Solution of Difficulties Concerning the Movement of Iltifaf,” *Journal
168 Paul Hossfeld, “Die naturwissenschaftliche/naturphilosophische Himmelslehre
Alberts des Grossen (nach seinem Werk *De caelo et mundo*),” *Philosophia naturalis* 11/3
169 Julio Samsó, “al-Bitruji,” *Dictionary of Scientifíc Biography* (New York: 1978), Supple-
mentary Volume, 33–36.
respectively. Only Pierre Duhem and William Wallace confront the issue, and their evidence and method for reaching a conclusion are worth examining here in closing. Both believe his sympathies lay with Ptolemy.

In his analysis of Albert’s texts, Duhem concluded that Albert, the “veritable savant”, rejects al-Bitruji’s system for one main reason: it could not account for changes in the apparent size of the planets. Two comments are in order. (1) Albert’s objection to this weakness in any planetary system was strong, and indeed one of his statements of criticism cites al-Bitruji’s system in particular. Another text, however, which Duhem used to support his claim makes no mention of al-Bitruji. The antagonist here is Averroes. Thus, while it would not be rash to conclude, with Duhem, that the objection that distance changes are not accounted for could apply to the al-Bitrujian system as well as that one Averroes envisioned, one cannot argue from this second critical passage to Albert’s dissatisfaction with al-Bitruji. (2) In the passages where Albert criticizes al-Bitruji’s system with respect to its ability to account for certain celestial phenomena, he often seems to be contradicting praise he gave to it elsewhere. It might be argued that Albert was simply making a distinction between different conclusions that retain their identity as mathematical or physical, but become in some sense “astrological” when incorporated into a descriptive system of the heavens. Particularly when describing the endeavors of al-Bitruji to reconcile the results of observation with a description of the heavens based on reasoned principles, he labeled his efforts those of astrologia.

Duhem provides no evidence to show that Albert felt the Ptolemaic system could account for the observed changes in planetary diameters. Duhem does make two other points worth mentioning. Albert did compare

\[ \text{Alb., De caelo et mundo 1.3.5, Ed. Colon. 5/1, 66, lns. 78–82.} \]
\[ \text{Alb., De caelo et mundo 1.3.5, Ed. Colon. 5/1, 66, lns. 49–92 especially lns. 83–92.} \]
\[ \text{Alb., De caelo et mundo 2.2.5, Ed. Colon. 17/1, 136, lns. 34–40.} \]
\[ \text{Alb., De caelo et mundo 2.2.5, Ed. Colon. 17/1, 136, lns. 34–40.} \]
\[ \text{Alb., De caelo et mundo 1.3.5, Ed. Colon. 5/1, 66, lns. 78–82.} \]

Albert did in fact believe that motion on eccentric circles could account for such changes, and his understanding of Ptolemy’s system certainly included its eccentrics. This must, however, have been argued by Duhem for his own case to be balanced.
al-Bitruji’s system several times with the dynamics of the Peripatetic one. Duhem felt Albert argued that the former compared very favorably as the more probable and definitely the simpler of the two.\textsuperscript{177} According to Duhem, however, the strength of these arguments is weakened by the simplistic, if not false, understanding of al-Bitruji’s system Albert seemed to have had.\textsuperscript{178}

Once again the criticism could be brought against Duhem that he did not really investigate the accuracy or the sophistication of Albert’s understanding of Ptolemy. In placing Albert in the camp of the “Mathématiciens” whose only concern “with the heavens was to create instruments suitable for observing the courses of the stars” and “to construct tables which would permit the position of each planet to be predicted for any point in time”,\textsuperscript{179} he implied that Albert’s understanding was narrower in scope than Albert himself reveals. Duhem’s analysis is flawed, despite the fact that his conclusion, that Albert seems to have favored Ptolemy, is correct. His main analytical error lies in attempting to see the lines of tension for Albert as drawn between the partisans of a homocentric universe, which for Duhem meant al-Bitruji and Aristotle, and those who used epicycles and eccentrics, that is, Ptolemy. First of all, this is not the way Albert divided the systems he analyzed.

The second, and more important correlate to understanding Albert’s division between Ptolemy/Aristotle and al-Bitruji is to see that for Albert the issue was to determine which system could both account for observed phenomena, and do so according to accepted principles. In favoring Ptolemy, Albert did not reject Aristotle, “in spite of his admiration for him”, as Duhem would see it. Instead, Albert thought he was embracing Aristotle in a form the Philosopher had in part and would in toto embrace were he alive, that of Ptolemy’s physical universe.\textsuperscript{180} By the same token, Albert certainly did not believe that he was finding fault with Aristotle in criticizing al-Bitruji. Since Albert did not see a conflict between Aristotelianism and eccentrics and epicycles, it must be concluded, as Duhem essentially does, that Albert’s choice between the systems was based on his impression that al-Bitruji’s system could not account for observations as well as Ptolemy’s.

\begin{footnotes}
\item[178] Duhem, \textit{Le systeme} 3, 328 and 3, 331–332.
\item[179] Duhem, \textit{Le systeme} 3, 327.
\item[180] Alb., \textit{De caelo et mundo} 2.3.11, Ed. Colon. 5/1, 169, Ins. 13–17.
\end{footnotes}
It must not be thought that Albert was wrong in arriving at this conclusion. Throughout history, homocentric sphere systems like al-Bitruji’s have been criticized for their inaccuracy. It is not for his conclusion that Albert can himself be faulted, nor, without the arguments of his work on *Astronomia*, for the brevity he gave it in his extant writings. His attitude concerning al-Bitruji leads one to suspect, however, an independent analysis on his part of Ptolemy’s system as well. Albert does not in his extant works articulate his understanding of how either the al-Bitrujian or the Ptolemaic system was the better design to account for celestial motion. As he weighed one or the other in the texts presently available, he may not really have expressed the difficult but essential crucial judgments about their quantitative accuracy.

Since, however, Albert had planned to undertake a thorough comparison of the two systems, he must have had in mind a method to do so. Wallace, in a study of Albert’s scientific methodology, addressed this same problem from the angle of method in particular. A long passage by him, quoted here, is of concern to this discussion:\footnote{William A. Wallace, “The Scientific Methodology of St. Albert the Great,” in *Albertus Magnus. Doctor Universalis*, 1280/1980, 399.}

Albert’s astronomical views have been analyzed by Pierre Duhem, and these show a certain ambivalence, for he generally subscribed to the philosophical account of the heavenly spheres provided by Alpetragius (al-Bitrūjī) while preferring Ptolemy’s mathematical theory to account for observable phenomena. In his *De caelo et mundo*, moreover, Albert refers several times to eccentrics and epicycles, suggesting that these present problems for the philosopher, but not offering any solution as to their real existence. Such a procedure, as Edward Grant has remarked, was not unusual for a medieval astronomer. What Albert was probably seeking was a compromise between Aristotelian cosmology and Ptolemaic astronomy, but he apparently lacked sufficient observational information to provide any detailed account of the arrangement of orbs. He probably regarded eccentrics and epicycles as providing some type of plausible representation of the physical arrangement of the celestial spheres, and thus saw them as more than convenient geometrical fictions to account for the appearances of the heavens.

Wallace continues in his next paragraph to make a very important point in stressing the role for Albert of suppositional necessity as one kind of demonstrative causality in the science of astronomy. Also, although Albert was not always in agreement with Ptolemy’s statement that mathematics is the only science that can give certain knowledge of its subjects, Wallace
has, it would seem, understood the way in which Albert approved of Ptolemy’s division of the sciences.182 There are, however, several statements by Wallace in the paragraph quoted here that merit some discussion. Albert indeed quite clearly saw the Ptolemiac system as something more than a convenient geometric fiction. His discussions of the problems that epicycles and eccentrics pose for the philosopher are aimed at demonstrating that not only does legitimate interpretation of Aristotle allow them, but also that the phenomena, the first source of all natural-philosophical knowledge, require them. The importance of Albert’s discussions lies in the fact that they are his attempts to show that Ptolemy’s system provided a plausible physical representation of the physical arrangement of the celestial spheres. Albert had indeed no illusions about having the last word regarding the quantitative accuracy of the Ptolemaic system or the al-Bitrujian system. In his extant works, he did not undertake to test them or criticize their quantitative detail. The evaluation of them he adopted was that Ptolemy’s system gave the more accurate account of celestial motion, since the eye, instruments, and tables could countercheck it. He seems to have believed that the Astronomi had shown that the phenomena were accounted for properly by the Ptolemaic system.

The burden was on the philosophers to see whether physical principles were also “accounted” for by it. In this sense, Albert was seeking conformity in Aristotelian cosmology and Ptolemaic astronomy. Courtesy of Ptolemy’s introduction to the Almagest, De dispositione sphaerae, and the transmitted content for Ptolemy’s Planetary Hypotheses, Albert found that Ptolemy himself had conformed to Aristotle in many respects. To Albert’s mind, Ptolemaic astronomy already incorporated the spherical heavens, a central, fixed earth, regular motion about a point, non-intersection of heavenly bodies, an acceptable relationship of mover to moved, and so on. From such foundations, Albert seems to have believed that any further mathematical complexities of the proposed system would have a feasible physical counterpart that the philosopher could establish as such.

Many philosophers, especially Averroes, objected to Ptolemy’s use of eccentrics and epicycles. Albert addressed this issue, for although he did not himself see it as a stumbling block to accepting Ptolemy, he recognized that it was for others. He knew that even if he were to provide a

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182 Albert does not always reflect a wholehearted embrace of Ptolemy’s division of the sciences, for example in Alb., Anal. Post. 2.1.1, Borgn. 2, 158a. Wallace cites only passages from Albert’s Physica, Metaphysica, Super Ethica, De intell. et intellig., and Geometria to support his interpretation.
detailed account of the arrangement of the celestial orbs as Ptolemy envisioned them, it would not strengthen his arguments for the acceptability of eccentrics and epicycles. It is not that he lacked sufficient observation to do so, as Wallace states. It is clear that Albert believed that Ptolemy had already defined the particulars of his system and that they were available for those who chose to study them. What Ptolemy had not provided for himself was a good philosophical case for the use of epicycles and eccentrics, and it is this which Albert saw as his own task.

On the other hand, the al-Bitrujian system needed something Albert knew he had not yet provided: revision. It needed to be modified, reworked, and perfected by checks and rechecks with observations. As Albert might have wished to do, later, others, most notably Girolamo Fracastoro (ca. 1478–1553), were to take up the fight for the al-Bitrujian ideal, an accurate homocentric sphere model. It must be said, however, that he, for example, in contrast to Albert, was far more dedicated to the philosophical principles that the system embodied. Compared to him, in this way Albert appears to be the “mathematician”, although anyone who undertook the laborious technical revisions of a system he believed in would truly deserve the title.

Albert, it must be concluded, did not really declare himself exclusively partisan of any one system of the heavens. Since he did not defend the al-Bitrijian system with the requisite observations, he therefore found himself at the mercy of those who judged it inaccurate despite its philosophically pleasing principles. He did not judge the Ptolemaic system either as to its accuracy. Capable of understanding Ptolemy’s approach as that of an enlightened Peripatetic, he thought he could, however, help others see it that way as well. The discussion Albert reserved for his proposed De astronomia, devoted to comparing Ptolemy and al-Bitruji, would have been an interesting one. Should Albert have compared their respective accuracies and abilities to account for observation he would undoubtedly have relied to some extent on the observations and conclusions of others. His cross comparison of their philosophical worthiness would have encapsulated the most hotly debated issues in 13th-century cosmology, yet in a most certainly independent and engaging way.

It is not easy to establish the list of criteria by which Albert judged any proposed system of the heavens. It is particularly difficult to draw any conclusions from the case of Ptolemy’s deviation from strict Aristotelian

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183 Girolamo Fracastoro, Homocentricorum sive de stellis, in Opera omnia (Venice: 1555).
motion about a physical center, for Albert thought that Aristotle himself had wavered on this principle. The judged accuracy of a system obviously carried a great deal of weight with Albert, but other than the example of al-Bitruji, Albert gives no clues as to the concessions he would expect philosophers to take in the name of observational accuracy. In underlining Albert's openness to different systems, Wallace may have pinpointed the limits of his acceptance: "At the same time he was probably aware, as was his student, Thomas Aquinas, that other combinations of spheres might later be devised that would give a more accurate account of the appearances, and was reluctant, on this basis, to commit himself to one or other theory current in his time." It is, however, also worthy of the scientist Albert the Great to hypothesize about him as well that during his own lifetime, he was aware that there was simply an insufficient body of observations to affirm the accuracy of one over the other proposed systems of which he was knowledgeable.
The Speculum astronomiae is a short work that provides the medieval reader with a guided tour in quantitative astronomy and judicial astrology. The aim of this deliberately “anonymous” text is to set out a division between “licit” and “illicit” books in astronomy/astrology with a view to distinguishing them from books of magic that misuse titles of valid astronomy/astrology books. Written most likely at Paris in the mid-13th century, the author is critical of those in authority who, in matters relating to astrology/astronomy, tend to dismiss the good with the bad. This is the kind of work that indicates the reading concerns of those Christian scholars such as Albert the Great, Campanus of Novara, or Roger Bacon. For most of the past century, scholars associated the text with either Albert the Great or with Roger Bacon. It is now clear from recent scholarship that the author of the Speculum astronomiae was acquainted with the work of Campanus of Novara.

The purpose of this chapter is quite modest. It is simply a brief and selective introduction to the development of the scholarship since the beginning of the 20th century. It will become apparent, however, that the scholarship of the past 30 years has made advances in our understanding of this important work. It has also for the first time provided adequate palaeographical, codicological, and historical contexts for a proper understanding of the Speculum astronomiae. This work is a most helpful introduction for the modern reader; it presents a guidebook towards understanding the issues in astronomy/astrology that 13th-century theologians and canonists would have found to be problematic.

The recovery of Aristotle, as the late Richard Lemay had argued for a long time, was accompanied by the discovery of many books on science and on what we might call pseudo-science. The distinction between the two was not always clear to medieval readers. The “anonymous writer” of the Speculum astronomiae wished to put his expertise at the service of Christianity. He is designated as “a certain person dedicated to faith and philosophy” (quidam vir, zelator fidei et philosophiae). Further, he is
aware that certain “powerful persons” (*magni viri*) had, in his judgment, condemned good astronomy/astrology works with the bad and dangerous pseudo-works.

1. **From Mandonnet to Paravicini-Bagliani**

Pierre Mandonnet placed the *Speculum astronomiae* in the context of the Parisian Condemnations of 1270 and 1277. He remarks:

Roger Bacon, who cherished an exaggerated faith in the divinatory sciences, and had written with enthusiasm about them, must have felt particularly called upon by the action of the Bishop of Paris. Inconsiderate as he was, he wrote the *Speculum* . . . Notwithstanding the moderation of the tone—commendable for Bacon—and the appellative of “friends” addressed to the promoters of the condemnation, the *Speculum* was nevertheless a very serious critical venture, as the work of a private individual who dared oppose the effects of the Episcopal condemnation . . . The wrong position Bacon soon found himself in, as well as the sanction which immediately followed the publication of the *Speculum*, brings us to suppose that the Bishop of Paris had something to do with the serious subsequent events which overran the Franciscan Friar.¹

This is perhaps an allusion to the condemnation of Roger Bacon in 1278 “on account of certain suspected novelties”.²

Whereas Mandonnet attributed the authorship of the *Speculum* to Roger Bacon, Robert Steele, the editor of Bacon’s works, doubted the attribution to Bacon mostly on stylistic grounds; Mandonnet and Geyer, as we will see below, saw stylistic parallels between Bacon’s works and the *Speculum*, whereas G.G. Meersemann concluded that the content of the

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¹ Pierre Mandonnet, “Roger Bacon et le *Speculum Astronomiae*,” *Revue neo-Scholastique de philosophie* 17 (1910), 313–335, see 330–331, as well as 320–321 where Mandonnet notes the absence of the attribution of the *Speculum* in Dominican lists, and where Mandonnet calls into question the trustworthiness of the attribution of the text to Albert in the later Middle Ages.

² *Chronica XXIV Generalium Ordinis Fratrum Minorum* (1209–1374), (Analecta Franciscana) 3 (Quaracchi: 1897), 360: “Hic Generalis frater Hieronymus de multorum fratrum consilio condemnavit et reprobavit doctrinam Frater Rogerii Bachonis Anglici, sacrae theologiae magistri, continens aliquas novitates suspectas, propter quas idem Rogerius carceri condemnatus, praecipiendo omnibus fratribus ut nullus illam teneret, sed ipsam vitaret, ut per Ordinem reprobatum. Super hoc etiamscript Domino Papae Nicolaio praefato, ut per eius auctoritatem doctrina illa periculosa totaliter sopiretur.” This imprisonment must not have lasted long. Sometime ca. 1278–80, Bacon was back in Oxford where he edited the *Secretum secretorum*. See Steven J. Williams, “Roger Bacon and his Edition of the Pseudo-Aristotelian *Secretum secretorum*,” *Speculum* 50 (1994), 57–73.
Speculum "perfectly fits the views of Albert expressed in his other works". Following this, Giovanni Semeria argued that the work ought to be attributed to the Chancellor Philip or to Roger Bacon. In 1953, Bernhard Geyer came to the definitive conclusion that the work was not written by Albert. Geyer attributed the text to the chancellor, Philip de Thory. In Geyer's considered view, it was not the practice of Albert to write anonymous texts. Albert generally stood behind his writings and took responsibility for them. For Geyer, the parallels between the text of the Speculum and the Opus maius of Roger Bacon were so great that he argued that Bacon was a better candidate for authorship than Albert. Geyer acknowledged that Albert, Bacon, and the author of the Speculum shared common views about the legitimacy of astrologia as the science of the effects of the motions of the heavens on terrestrial changes. He notes, however, that Albert set more limiting conditions on the practice of astrology than one finds in the work of Roger Bacon and in the Speculum.

The groundbreaking research of Lynn Thorndike broadened the context of this debate. He noted correctly that "Roger Bacon had hitherto been studied too much in isolation", leading to the view that he was some kind of exceptional figure in 13th-century philosophy. Contrary to Mandonnet, Thorndike pointed to the ubiquity of astrological concerns in the works of Albert, and to the fact that while Albert often changed his opinions, he maintained a lively interest in magic and in natural phenomena. Thorndike's great contribution was his demonstration that the justification of astrology in the Speculum was not unique; rather, it was a position commonly shared by Christian thinkers in the 12th and 13th centuries. He notes that while some Christian thinkers such as William of Auvergne and Aquinas would disagree with Bacon's more favorable appreciation of the role of astrological images and the description of religious groups on the basis of the conjunctions of the planets, Albert's views on astrology and its place in the classification of the sciences is almost identical to

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that of Roger Bacon. Thorndike concludes that Bacon’s condemnation of magic is a deliberate attempt to avoid an accusation of practicing magic. He concludes that the absence of a discussion of magic in the Speculum gives weight to the view that Bacon was not the author.7

Why then have scholars continued to attribute this work to Albert and to Chancellor Philip of Thory, while in one case the name Thomas Aquinas is added in the manuscript? Part of the answer is that many of the extant manuscripts provide the title Speculum astronomiae and also designate Albert as the author. Some manuscripts attribute the work to Philip of Thory. Further, one has the extant testimony of the Franciscan Bonaventure d’Iseo that he had been a companion of Albert and that he had heard from Albert that the pope had given special permission to Albert to do a study of the sciences, including astrology, so that he could distinguish licit from illicit sciences. I believe the testimony of Bonaventure d’Iseo has strongly influenced some modern scholars in their attribution of the Speculum astronomiae to Albert, and this in turn has been given strength by the primacy of Albert’s name as author in the manuscript tradition.8

So the main questions are: can the testimony of Bonaventure d’Iseo be taken at face value? And how original and solid is the manuscript attribution of the work to Albert? After all, one is dealing with an anonymous work written by an unnamed author and without a title named Speculum astronomiae in a context, most likely Paris, where discussions of astrology were greeted with theological and canonical censure, as can be noted from the works of Roger Bacon and John of Fidanza (St Bonaventure, the master general of the Franciscan order).9

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7 Thorndike, A History of Magic and Experimental Science, vol. 2, 705n. See also vol. 2, 551.
8 See Richard Lemay, “Roger Bacon’s Attitude Toward The Latin Translations and Translators of the Twelfth and Thirteenth Centuries,” in Roger Bacon and the Sciences: Commemorative Essays, ed. Jeremiah Hackett (Leiden: 1997), 25–47, see 36. Lemay connects Albert’s presence at the Council of Lyons with the testimony of Bonaventura d’Iseo that the pope gave a mandate to Albert to read good and evil books “and to pass judgment on their acceptability…”. This raises a very interesting topic: could the presence of Bonaventure and possibly also Thomas Aquinas at the Council of Lyons in 1245, and writing of the Speculum astronomiae, be linked to the overcoming of the early Parisian Condemnation of Aristotle and other authors? Did the Council have any influence on the gradual acceptance of Aristotle at Paris which became normative in 1255?
2. The Present Status of the Scholarship

The modern edition of the Speculum astronomiae by S. Caroti, M. Pereira, S. Zamponi, and P. Zambelli appeared in 1977.\(^\text{10}\) It has since been supplemented by Paola Zambelli’s work *The Speculum astronomiae and its Enigma.*\(^\text{11}\) This study with text and English translation provides a useful summary of the scholarship. It also argues strongly for the attribution of the text to Albert.

In 2001, Agostino Paravicini-Bagliani published a complete review of the manuscript traditions of the text under the title: *Le Speculum Astronomie, une énigme? Enquête sur les manuscrit.*\(^\text{12}\) In this valuable comprehensive study, the author provides a critical review of the arguments for and against the attribution of the Speculum to Albert. Perhaps the most important finding is the fact that prior to 1339 the extant manuscripts are “anonymous” and lack the title *Speculum astronomiae*. There is no attribution of the work to Albert. Paravicini-Bagliani argues that the origin of the attribution of the work to Albert begins as part of the establishment in the early 1300s of the legend of Albert as an expert in all the sciences. From that date on to the Renaissance, the extant manuscripts bear the title *Speculum astronomiae* and the authorship is attributed to Albert.

There are then four critical issues: (1) What is the status of the witness of Bonaventure d’Iseo? (2) What grounds exist to attribute the work to Philip of Thory? (3) Are there other sources of attribution? (4) Is the absence of attribution to Albert in the early manuscripts sufficient evidence against a possible attribution of the work to Albert?

a. Bonaventure d’Iseo as a Witness

In his *Liber compostelle*—MS Riccardiano 119 (L.III.13), fol. 143va—Bonaventure d’Iseo remarks: “Indeed, I Brother Bonaventure d’Iseo of the Order of Friars Minor am a household friend and colleague of the German Brother Albert of the Order of Preachers. We both collected sciences


\(^{11}\) Paola Zambelli, *The Speculum Astronomiae and its Enigma*, (Boston Studies in the Philosophy of Science) 135 (Dordrecht: 1992). This study includes the Latin text and English translation.

and experiences of the secret of secrets such as nigromancy, alchemy and so on."\(^{13}\)

In another manuscript of this work (Munich, Staatsbibliothek, clm 23809, fol. 3v), one finds a different version:

Indeed, I Brother Bonaventure d'Iseo of the Order of Friars Minor was a household friend of the German Brother Albert and of Brother Thomas Aquinas of the Order of Preachers, who indeed were great and worthy composers of written works on the wisdom of wisdom. For Brother Albert in his times because of his well known holiness, intellect and prudence, had permission from the lord Pope and was allowed to learn, know, examine and investigate all arts of sciences both good and bad for the purpose of praising books of truth and condemning books that were false and erroneous. Whence he worked much in completing the books begun by Aristotle and he made new collections of books about many arts of the sciences such as about astrology, geomancy, nigromancy, precious stones and the experiences of alchemy.\(^{14}\)

Bonaventure d'Iseo was a person of great reputation in the Franciscan order. He had attended the Council of Lyons in 1245, where he would have met Robert Grosseteste, Adam Marsh, and Albert the Great. Could he also have met Albert's student, Thomas Aquinas? Would a bright student have accompanied his master to the Council? Bonaventure d'Iseo accompanied John of Parma on his visit to the mid-East in 1249. In 1273, he mediated the struggle between Venice and Bologna. He is referred to by Salimbene as antiquus minister, although he died before 1284, the date of the composition of the *Chronicle of Salimbene*. The *Liber compostelle* was composed in Venice between 1256 and 1270.\(^{15}\)

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\(^{13}\) Cited in Paravicini Bagliani, *Le Speculum Astronomiae*, 125: “Ego quidem frater Bonaventura de Yseo ordinis minoris sum amicus domesticus et familiaris fratris Alberti Theutonici de ordine predicatorem; multa contulimus de scientiis et experimentis secretis secretorum ut nibromancie, alchimie et cetera.”


Can one assume on the basis of the second text above that Bonaventure d’Iseo makes a specific reference to a special permission given by the pope to Albert to compose the *Speculum astronomiae*? Apart from the difference in the manuscripts at the beginning (*sum* and *fui*), the reference seems to be very general in scope. However, it is not improbable that a pope could have given a general permission to Albert, on account of his sanctity and learning, to study all the sciences, authentic and inauthentic, so that he could praise the books of valid science and condemn books of invalid science (pseudo-science). And in fact Albert worked much in completing the works of Aristotle and he himself wrote new books about the arts of sciences such as astrology, geomancy, nigromancy, precious stones, and the experiments of alchemy. But the reference in Bonaventure d’Iseo is not to a specific text.

Even Martin Grabmann was not sure about the authenticity of this text in the Munich manuscript. The only reference to permission from the pope to Albert is to be found in the text of the Munich manuscript. The problem is that the text refers to Albert as one who has passed away (*in diebus vitae suae*). Hence, it must have been written after 1280. Bonaventure d’Iseo had died in 1273, however, and Salimbene’s *Chronicle* was composed in 1284–86. In any case, the Munich text makes quite an addition to the text found in MS Riccardiano. Paravicini-Bagliani expresses skepticism concerning the text of the Munich manuscript as being a strictly specific reference to the actual *Speculum astronomiae*. Rather, he sees the reference in the Munich manuscript as a very important index of the emergence of the “Albert-Legend”, that is, of the glorification of Albert as the only one in the 13th century who had the capacity to make a determination on the nature of licit and illicit science.

One can, however, raise some issues here. When and where did Bonaventure d’Iseo encounter Albert? What about the reference to Thomas Aquinas? Could Bonaventure have met both Albert and Thomas at the same time? Further, is it credible that the pope may have assigned Albert to write a work like the *Speculum astronomiae*? It seems reasonable that
the pope would have encouraged Albert in his almost decade-old project of commenting on Aristotle and the sciences. This task, as is clear from *De fato*, included a general study of the sciences and philosophy so that one can make a distinction between honorable sciences and inauthentic sciences and books of science. This latter assignation is not impossible; in fact, it is probable. The Munich text is correct about Albert. He expanded on Aristotle’s texts and he composed his own works on the sciences. In the final analysis, however, the Munich text does not provide sufficient evidence for one to claim that it is a direct reference to the *Speculum astronomiae* as an authentic work by Albert. And while one cannot rule out contact between Albert and the author of the *Speculum*, one cannot prove on the basis of the testimony of Bonaventure d’Iseo that Albert wrote the *Speculum astronomiae*.

b. Philip of Thory, Chancellor of the University of Paris

Paravicini-Bagliani notes that the oldest manuscript with a title—*nomina librorum astronomie*—namely Oxford, MS Digby 228, contains a title and attribution in another early 14th-century hand: *Tractatus mag (istr)i Philippi cancellarii de libris astronomie qui tenendi sunt secundum integritatem fidei catholice et qui non*. He comments on this important phenomenon, and notes that the existence of this attribution in one of the oldest of the group A manuscripts is something that cannot be ignored.

The early manuscripts of Group B do not have the words *Speculum astronomiae* in the incipit. Further, Professor Paravicini-Bagliani emphasized the all-important fact that,

2. The oldest added title which one finds in a manuscript of the type A (×4), keeps the form of writing linked to the words *titles of books of astronomy*, and has the name of an author other than Albert the Great, namely, Philip the Chancellor. The antiquity of the title built about the words *titles of books of astronomy* arises from an analysis of the titles written by the hand of the copyist and is plainly confirmed here. The presence in the oldest added title of the attribution of the work to an author different from Albert the Great

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19 Paravicini Bagliani, *Le Speculum Astronomiae*, 36. For the reference in the Munich MS to Thomas Aquinas, see 99.
20 Paravicini Bagliani, *Le Speculum Astronomiae*, 49: Ox.4 Oxford: Bodleian Library, MS Digby 228—“Le fait que le manuscript Ox. 4, l’un des plus anciens du ‘Speculum Astronomiae’, contient l’attribution à Philippe le Chancelier dans un ajouté du XIVe siècle n’est pas un élément négligeable. Il est en effet singulier qu’un ajout dans un des manuscrits les plus anciennne du groupe A, de peu postérieur à la transcription originale, présente un nom d’auteur différent de celui d’Albert le Grand.”
is an element that acquires a very specific value in the realm of the history of the attribution of the *Speculum astronomiae* to the Cologne Dominican, one that no doubt should not be neglected.\(^{21}\)

The attribution of the *Speculum astronomiae* to Albert the Great does not begin until 1339, and from that point on scholars generally and for the most part attribute the work to Albert:

> The attribution of the *Speculum astronomiae* to Albert the Great is present for the first time in a manuscript (\(K\)) which should be a little after 1339 and which was perhaps written in Paris. In any event, from the second quarter of the fourteenth century, the attribution to Albert the Great spread rapidly. From this time on, it became the norm. It is from this context that we should judge the fact that in 70% of the manuscripts (forty-three out of sixty) the copyist of the text, either at the beginning or end, presents an attribution to Albert the Great.\(^{22}\)

Thus, with the exception of Pico della Mirandola, most later authors attribute the anonymous list of licit and illicit books on astronomy to Albert the Great. However, no author before William of Pasgregno (1339) attributes this work to Albert, and in the Dominican order there seems to be no notice of a connection between Albert and the *Speculum astronomiae* before 1300.\(^{23}\) All of this evidence points to the fact that, beginning in the late 13th century, one has the development of the “Albert Legend”, that is, the image of Albert as the one great expert in the 13th century who alone

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\(^{21}\) Paravicini Bagliani, *Le Speculum Astronomiae*, 77: “2. Le plus ancien titre ajouté, qui figure dans un manuscript du type A (\(\times 4\)), reprend la typologie liée aux mots *nomina librorum* astronomie et contient le nom d’un auteur qui n’est pas Albert le Grand, mais Philippe le Chancelier. L’ancienneté du titre construit autour des mots *nomina librorum* astronomie, emerge de l’analyse des titres écrits par la main du copiste, est ici donc pleinement confirmée. La presence, dans le titre ajouté le plus ancien, de l’attribution de l’oeuvre à un auteur différent ‘Albert le Grand est un élément qui acquiert une valeur toute particulière, dans le cadre d’une histoire de l’attribution du ‘Speculum Astronomiae’ au dominicain de Cologne, qui ne peut sans doute pas être negligee.”

\(^{22}\) Paravicini Bagliani, *Le Speculum Astronomiae*, 153: “3.2 L’attribution de ‘Speculum Astronomiae’ à Albert le Grand est présente pour la première fois dans un manuscript (\(K\)) qui devrait être de peu postérieur à 1339 et qui a peut-être été compose à Paris. Dès la deuxième moitié du XIV\(^{e}\) siècle, l’attribution à Albert le Grand se diffuse en tout cas rapidement, à partir de cette époque elle s'impose meme: c'est dans ce contexte que nous devons juger le fait 70% des manuscripts (guarante-trois sur soixante) présentment une attribution à Albert le Grand, écrite, avant ou après le texte, par la main du copiste.” See also 154: “5.2 Le fait que l’attribution à Albert Grand figure pour la première fois dans un manuscrit qui appartient, au plus tôt, à la dernière decennie de la première moitié du XIV\(^{e}\) siècle (\(K\)) est confirmé par la tradition littéraire: aucun auteur n’attribue le ‘Speculum Astronomiae’ à Albert le Grand avant Guglielmo de Pastregno (1290 ca.–1362), dont l’oeuvre *De originibus rerum libellus, in quo agitur de scripturis virorum insignium* est posterior a 1346.”

among his 13th-century peers was capable of giving a determination in all of the sciences and pseudo-sciences.\(^{24}\) It would appear that the assignation of Albert as author of the *Speculum astronomiae*, which takes on new emphasis in 1339, is responsible for the dominance of the attribution to Albert in the later Middle Ages and the Renaissance.

Moreover, there is no mention of the *Speculum astronomiae* in the two ancient catalogues: the Catalogue of the Sorbonne and the Dominican Stams Catalogue.\(^{25}\)

c. *Campanus of Novara and the Speculum Astronomiae*

One very probable argument of Paola Zambelli seems to work in favor of Albert as author: Albert could have cooperated with Campanus of Novara at the papal court between 1261 and 1263. Reference to the *Parvum almagestum* in the *Speculum* suggests some rationale for a connection of this work to Campanus of Novara.\(^{26}\) Further, the existence of his works in some of the manuscripts which contain the *Speculum* suggests a possible hypothesis, namely, that Albert met Campanus of Novara at the papal court and that they both cooperated in writing the *Speculum*. From the historical evidence, it cannot be proved that both of these scholars were together at the papal court. Albert was there in 1256 but Campanus was not. During this period, Albert wrote the *De fato*, a text which deals with some of the same items as does the *Speculum*. Albert was there again between 1261 and early 1263, but it appears that Campanus was not there until late 1263. It would also appear that Albert, Campanus of Novara, and William of Moerbecke were not there at the same time.

Fundamentally, one must acknowledge that the *Speculum astronomiae* was deliberately designed as an “anonymous work” with the intention of dissimulating and hiding the author. It provides a good example of the

\(^{24}\) Paravicini Bagliani, *Le Speculum Astronomiae*, 161: “1.2 Dans la perspective de la présente enquête, il importe donc de tenir que les raisons qui expliquent l’attribution à Albert le Grand deviennent compréhensibles, si on se place à l’époque de ses premières apparitions et si on les étudie dans le cadre de la naissance de la légend d’Albert le Grand; cette attribution rencontre par contre de très sérieux obstacles-codicologiques et textuels—si l’on se reporte à l’époque de la rédaction (années centrales du XIII\(^\text{e}\) siècle) du *Speculum astronomiae*, aucun indice, ni codicologique (groupe A etc.) ni textuel (la dissimulation de l’auteur, la présence de deux *quidam vir*, la tradition littéraire), n’étant en faveur d’Albert le Grand avant les décennies centrales de la première moitié du XIV\(^\text{e}\) siècle.”


phenomenon studied by the late Leo Strauss. The author of the *Speculum* is called “a certain person dedicated to faith and philosophy” (*quidam vir zelator fidei et philosophiae*). He is writing in a context in which “certain powerful persons” (*aliquibus magnis viris*) condemn certain evil books that usurp the names of the sciences but, in the process, also attack some perfectly good books in astronomy. In such a context, it would be wise for an author to be tactful. I believe, however, that Bernhard Geyer was correct. Albert had such a status in the church as bishop of Regensburg (*Ratisbona*) that he would not have needed to hide his identity. Such a move was not in his style. He would have straightforwardly made his case, as he did in 1271 in regard to the propositions condemned in Paris in 1270. Whoever wrote the *Speculum*, he did not have the kind of status enjoyed by Albert.

But of course, there is another reference to a second “certain person” (*quidam vir*), and this would seem to be an allusion to the *Parvum Almagestum* thought to be the work of Campanus of Novara.27 In her study of the *Speculum astronomiae*, Paola Zambelli had claimed that Albert had written this latter work in cooperation with Campanus of Novara in the papal court in 1260.28 As we have seen above, Paravicini Bagliani provides significant evidence against the thesis that Albert and Campanus worked together at the papal court on the text of the *Speculum astronomiae*.

In conclusion, Paravicini-Bagliani’s very valuable manuscript study leads to three negative conclusions: (1) The title and attribution of the *Speculum astronomiae* in the manuscript traditions does not point to Albert as the author. (2) The codicological study and the study of the external context suggests that the attribution to Albert began in the late 13th century with the building up of the legend of Albert as the one great expert on science in the 13th century. (3) As noted above, there is no strong evidence for the thesis that Albert composed the *Speculum astronomiae* in collaboration with Campanus of Novara. And so the authorship of the *Speculum astronomiae* remains “anonymous” as the author had intended. The authorship is not an enigma, since it is not impossible that further study will shed new light on this work. This is especially so since the various studies of the text and the content of the text by Professor Zambelli and her collaborators, and the comprehensive review of the manuscript tradition by Professor

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27 Paravicini Bagliani, *Le Speculum Astronomiae*, 159: “Le deuxième *quidam vir* fait en effet allusion au commentaire (-traduction) du *Parvum Almagestum* et contient, peut-être, un clin d’œil au commentateur de *Euclid*, ce qui fait penser à Campanus de Novare....”.

Paravicini-Bagliani, have moved the research well beyond the guesswork of the scholarship of the early 20th century. Pierre Mandonnet proposed that the *Speculum astronomiae* was connected with the Parisian Condemnations of 1277, and he connected this with the fate of Roger Bacon in 1278, namely, his condemnation “on account of certain suspected novelties” (*propter aliquas novitates suspectas*). He did not, however, provide good evidence for this thesis.

 Whoever wrote the *Speculum*, it had to have been a scholar who did not have immediate access to all of the texts he is citing.²⁹ Of course, he once upon a time saw these texts, but the author of the *Speculum astronomiae* suggests that he is citing some texts from memory and cannot now verify everything about them. Can one still claim, in the light of the researches of Professor Paravicini-Bagliani, that Albert is still a good candidate for the authorship of this work? Probably not, since the burden of palaeographic, codicological, and historical evidence works against this claim. But what are we to say about the content of the work? Here matters are much more difficult. Albert, Roger Bacon, Campanus of Novara, and other scholars would have found the *Speculum* to be a very valuable list of “licit” and “illicit” books on astronomy/astrology in the 13th century, and they would probably be in agreement with the claim of the author of this work, that certain “powerful persons” had mistakenly condemned the good with the bad. Lynn Thorndike had it right when he suggested that it is not a good idea to study these 13th-century natural philosophers and astronomers in isolation from each other. They traveled, communicated, and encountered one another. Thus, one cannot overlook the possibility that they had some form of written communication that we do not now possess. People do not have to be in one place physically in order to cooperate in a writing venture. Does such a possibility rule out any possible communication between Albert and Campanus of Novara? Could Bonaventure d’Iseo have been correct about meeting Albert and Thomas Aquinas in 1245?

 I raise these questions because the authorship of the *Speculum astronomiae* is still a live issue, and while the burden of the historical evidence

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²⁹ *Speculum Astronomiae*, ed. Caroti, Pereira, Zamponi, Zambelli, in Paola Zambelli, *The Speculum Astronomiae and It’s Enigma: Astrology, Theology and Science in Albert the Great and his Contemporaries*, 242–243: “Isti sunt libri quos modo ad memoriam revoco…” [trans. Burnett, Lippincott, Pingree, Zambelli.]: “These are the books that I can remember now, although I may have seen many others of them, that is on images, which as I said, were made with suffumigations, invocations, exorcisms, and the inscriptions of characters, which are the two types of necromantic images, as I said.”
now seems to rule out Albert as the author, one cannot rule out the possibility that the author of this work was or even had been in contact with the major scholars on the topic of astronomy/astrology at this time, including Albert. Perhaps the author had been advised to write this work “anonymously” due to the fact that it was very dangerous for a scholar with a public reputation to put their name to such a list of “licit and illicit books”, especially in Paris. After all, it was the task of the magisterium, that is, the bishop, guided by experts in canon law and theology, to give a determination about the relation to Christian faith of books that were deemed noxious. That a single scholar or group of scholars would dare to publish such a work “anonymously”, and thus usurp the work of the canonist and the theologian was indeed a provocation. It still seems unlikely that Albert, as a major theologian, would have done such a thing. He would have spoken as a theologian and would have given a determination only with ecclesiastical approval.

Bonaventure d’Iseo may have been correct in a general sense. Albert may have received papal approbation for his work on natural philosophy and the sciences as a Dominican master and one time bishop of Regensburg. But whether one can connect such a general approbation with Albert as the author of the Speculum astronomiae is doubtful. The weight of the palaeographical, codicological, and historical evidence points to some other as yet “anonymous author”.

Concerning astrology, Albert the Great made two major contributions, one undoubtedly authentic, the other questionably so. First, he articulated astrology’s natural-philosophical foundations in his authentic Aristotelian commentaries and related works. When I say “foundations”, I do not mean just a passage here or there; rather, for Albert, celestial influences (and thus astrology) are woven into the very heart of Aristotelian natural knowledge, appearing in central processes of nature in several fundamental works, including his paraphrase commentaries on Aristotle’s De caelo and De generatione et corruptione. “His” second contribution appears in the deliberately anonymous Speculum astronomiae, which circulated under Albert’s name for centuries. In it, the four canonical types of astrological practice were described and supplied with extensive bibliographies, and legitimate practices were authoritatively distinguished from illegitimate ones. Regardless of the Speculum’s authenticity, however, from the middle of the 14th century both contributions were increasingly connected with Albert’s name.
In this chapter, I will reconstruct central features of Albert's undoubtedly authentic astrologizing Aristotelian natural philosophy, primarily from his Aristotle commentaries and closely related works. I will also discuss relevant features of the most likely pseudonymous *Speculum astronomiae*. In addition to the astrological dimension, I will also address magic in these texts, especially the controversial theory and practice of making astrological images (*imagines astronomicae*) or talismans. In what follows, two central questions should be clearly distinguished: (1) What were Albert's own views, for which we must rely on unquestionably authentic works? (2) And how did texts long attributed to Albert influence later understanding of his thought? I will focus on the former, but I hope also to contribute to the latter.

This chapter also addresses some thorny historiographic problems along the way. In general, it has not been properly realized that both astrology and its natural-philosophical foundations had deep roots in medieval and Renaissance Aristotelianism, and that Albert was a major figure in laying those foundations and making them accessible to the Latin-reading West. In particular, my reconstruction supplements and corrects Edward Grant's boldly stated but erroneous interpretation of the relationship between astrology and Aristotelian natural philosophy in his magnum opus, *Planets, Stars and Orbs: The Medieval Cosmos, 1200–1687* (Cambridge, Eng.: 1994), where astrology's centrality to medieval natural knowledge is overlooked and Albert significantly underrepresented.

Pierre d'Ailly (1351–1420), and Jean Gerson (1363–1429) contributed to this tradition. The results of Paravicini Bagliani's investigation are conveniently set out at *Le Speculum astronomiae*, 151–162.

3 Other pseudo-Albertan works with a significant astrological dimension are the *Secrets of Women* and *Liber aggregationis*, but their discussion would take us too far afield. For *Secrets of Women*, see Helen Rodnite Lemay, *Women's Secrets: A Translation of Pseudo-Albert the Great's De Secretis Mulierum with Commentaries* (Albany, N.Y.: 1992). For the *Liber aggregationis*, see Isabelle Draelants, *Le Liber de virtutibus herbarum, lapidum et animalium* (*Liber aggregationis*), *Un texte à succès attribué à Albert le Grand* (Florence: 2007).

4 For much relevant information on this and many other issues, see *Albertus Magnus and the Sciences: Commemorative Essays 1980*, ed. James A. Weisheipl (Toronto: 1979); hereafter cited as Weisheipl, ed.

5 Also, in a widely cited article on celestial influences in the Middle Ages, John D. North does not discuss Albert's contribution as he skips from Robert Grosseteste and Roger Bacon to Albert's most distinguished student, Thomas Aquinas; “Celestial Influence—The Major Premise of Astrology,” in *‘Astrologi Hallucinati’: Stars and the End of the World in Luther's Time*, ed. Paola Zambelli (Berlin: 1986), 45–100. The neglect of Albert is particularly surprising, since Lynn Thorndike had much earlier drawn attention to some of this material in the second volume of his indispensable *History of Magic and Experimental Science*, in
With characteristic vigor, Grant claims that the astrologers used Aristotelian natural philosophy as the foundation of their belief in celestial influences, but without themselves contributing anything of value to those foundations. The natural philosophers, on the other hand, had nothing significant to do with either astrological theory or practice. He then clarifies what he means by “astrology”, that is, astrological practices, whereby predictions are made about the future:

> If by astrology, however, we mean the prediction of natural events and human behavior on the basis of knowledge of alleged powers inherent in individual celestial bodies and their positions in the heavens, as well as their manifold configurations and interrelationships, then astrology plays very little role in Scholastic natural philosophy. Commentaries and questions on Aristotelian treatises rarely contained specifically astrological discussions or predictions. Such discussions would have been deemed irrelevant, for which reason they will be inconspicuous in this account.\(^6\)

We will test Grant’s claim by examining several of Albert’s Aristotle commentaries and other closely related texts.

Perhaps surprisingly, more scholarship has been devoted to the *Speculum astronomiae* and its attribution than to Albert’s authentic astrologizing Aristotelianism, so I will focus more on the latter here, especially since it is arguably his most important contribution to medieval natural knowledge, and it proved to be very influential indeed.\(^7\) We can also use this material to compare the overtly astrological views of the *Speculum astronomiae* with what Albert had to say in undoubtedly authentic works as a partial test of the *Speculum’s* authenticity.\(^8\)

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\(^6\) Accordingly, Grant does not say much about astrology in his very big book on medieval cosmology, *Planets, Stars and Orbs*; see 35–36 (with note 66) and 569, from which this quote is taken.

\(^7\) I briefly discuss Albert’s *Nachleben* in the conclusion below. Further, Jean-Patrice Boudet argues that Albert was also the first theologian to fully integrate astrology in the medieval Latin West; *Entre science et nigromance. Astroligie, divination et magie dans l’occident médiéval, XII\(^{e}\)–XV\(^{e}\) siècle* (Paris: 2006, hereafter cited as Boudet), 220: “Il (sc. Albert) semble tout d’abord avoir été le premier théologien chrétien a proposer un compromis doctrinal avec les astrologues…”.

The astrologizing Aristotelian natural philosophy articulated by Albert and others in the 13th century provides nothing less than the nervous system (as it were) of premodern natural knowledge, linking the various parts of nature to each other, and all of nature to the divine. In this system, God created the heavens and the earth, and he used the heavens as the instruments of his creation, and for his acting in and on the world. Celestial influences integrated the heavens with the earth, its atmosphere and inhabitants in both macro- and microphysical dimensions and on every level of existence, including in generation, gestation, and other fundamental life processes. Indeed, this astrologizing Aristotelian natural knowledge informs many aspects of Albert’s understanding of human beings, nature at large, and their dynamic interactions. As such, we should explore it in detail, not only because of its interest as a system—with respect to both its fundamental roles in Albert’s natural philosophy itself and its foundations for astrological practice—but also for its long-term influences, which have not yet been fully studied.9

Two additional facets of the story must also be clearly distinguished:10 (1) astrologizing Aristotelian natural philosophy as a scientific structure utterly central to Albert’s system of natural knowledge;11 and (2) astrological practice, for which (1) provides the natural-philosophical foundations. Astrological practice is represented in a range of Albert’s texts, but is not nearly as pronounced as the astrologizing natural philosophy. In this chapter I offer a partial view of this system focused primarily on processes of human generation. A full treatment would be very welcome, especially one that also engaged the related work of Albert’s contemporaries: Robert Grosseteste, Roger Bacon, and Thomas Aquinas.12 Caveat lector: at this

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9 My chapter thus also offers another “Aristotelianism” for both the Middle Ages and the Renaissance to supplement the four Charles B. Schmitt delineated in his groundbreaking, Aristotle in the Renaissance (Cambridge, Mass.: 1983).
10 My thanks to David Juste for helping to straighten me out on this.
11 We might also call it an “astrological physics”, as Steven Vanden Broecke does in The Limits of Influence: Pico, Louvain, and the Crisis of Renaissance Astrology (Louvain: 2003), 18–21 and passim.
12 In the meantime, for more information, see volume one, part one of my forthcoming monograph (Reframing the Scientific Revolution: Astrology, Magic and Natural Knowledge, ca. 1250–1800), which develops Chapter 2 of my dissertation, “Astrology, Natural Philosophy
stage of the scholarship, basic structures should be built up from primary sources, and all conclusions checked before considering them reliable; hence my extensive use of primary source quotations in what follows.13

Although the focus of this chapter will be on Albert’s influential articulation of astrology’s natural-philosophical foundations, I will not neglect practical astrology, which involves the making and interpreting of horoscopes and has four main branches, namely, revolutions, nativities, interrogations, and elections. Revolutions primarily concern the ongoing motion of the planets and their larger influences on earth, including wars, epidemic disease, agricultural yields, politics, and the weather. Revolutions also provide the main elements of annual prognostications, as well as the broader structures of historical astrology, namely, great conjunctions.14

Nativities, on the other hand, interpret the astrological circumstances at a person’s birth, and will be discussed at some length below. Interrogations are horoscopes cast for the time a question is asked (or received by the astrologer), and pertain to a broad range of concerns, from the success of a business undertaking to the sex of a child. Medical interrogations are a significant subset. In elections, finally, one chooses (eligere) an astrologically propitious time to begin any sort of venture, from a business trip to the laying of a building’s cornerstone. In the murky and often dangerous border regions between what we call “science” (for our purposes: mathematics, natural philosophy, and medicine), “magic” and “religion”, astrological images (imagines astronomicae) or talismans were subsumed under elections, as discussed in detail below.15


13 I have not appended full citations of the Latin due to space limititations, but also because the magnificent Editio Coloniensis is now widely available. The translations are entirely mine except for the De mineralibus, Speculum astronomiae, and Aristotle’s De generatione et corruptione, where I rely on (but modify where appropriate) the published English translations cited below. A complete English translation of Albert’s Aristotelica is a desideratum.

14 Albert discusses these in detail in the De causis proprietatibus elementorum, a very interesting text which I unfortunately cannot discuss here due to limitations of space. Please see part one of my book and On the Causes of the Properties of the Elements (Liber de causis proprietatum elementorum), trans. Irven M. Resnick (Milwaukee, Wis.: 2010).

The *Speculum astronomiae* described these four types of astrological practice in outline, and distinguished legitimate from illegitimate practices in a way that became extremely influential at the University of Padua (where Albert studied in the 1220s) and elsewhere, from Pietro d’Abano’s time in the late 13th and early 14th centuries, through Regiomontanus’s in the mid-15th century, until at least the middle of the 17th century, as we can see with Andrea Argoli, professor of mathematics at Padua from 1632 to 1656, who attributed the *Speculum* explicitly to Albert.16 These types of practical astrology will first be discussed as they arise in Albert’s authentic works. Later I will discuss relevant features of the *Speculum* itself, particularly its analysis of astrological images. Whether Albert wrote the *Speculum* or not, it clearly reveals astrology’s basic disciplinary structures (including its relation to mathematical astronomy) in an extremely influential formulation, and relates them in a strikingly interesting manner to broader patterns within the map of knowledge.

I will set the conceptual stage by making a preliminary distinction and problematizing another. The author of the *Speculum astronomiae*, whom Nicolas Weill-Parot suggests we call *Magister Speculi*, clearly distinguishes the two distinct but closely related parts of the “science of the stars”, what we call “astronomy” and “astrology”, which in premodern usage were normally referred to collectively (and indifferently) as either *astronomia* or *astrologia*. Although the same term referred to both parts, they were clearly distinguished conceptually and in practice from at least the 2nd century of the Common Era, at the very beginning of Ptolemy’s immensely influential *Tetrabiblos* (1.1).17

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16 I discuss this further below. Zambelli treats the important question of the *Speculum’s* influence through the end of the 15th century. She does not mention Regiomontanus, however. A comprehensive study of its later Nachleben in the 16th through 18th centuries would be of great interest.

17 For a useful text and translation, with introduction, see Ptolemy, *Tetrabiblos*, ed. and trans. Frank E. Robbins (Cambridge, Mass.: 1940). In his *Lucidator dubitabilium astronomiae*, Pietro d’Abano (ca. 1250–ca. 1315) is one of the first to make our terminological distinction: “[Q]uidam assignarunt differentiam inter astronomiam et astrologiam dicentes astronomiam fore illam que partem motus pertractat; astrologia autem que iudicia instruit.” Il “Lucidator dubitabilium astronomiae” di Pietro d’Abano, ed. Graziella Federici-Vescovini (Padua: 1988), 108. Giovanni Pico della Mirandola (1463–94) also makes a strong terminological distinction along modern lines in his extensive attack on astrology, the *Disputationes adversus astrologiam divinatricem* (Bologna: 1496); vol. 1: 40, lns. 1–11 in the Garin edition cited just below. I discuss this changing configuration in my “The Use and Abuse of Ptolemy’s *Tetrabiblos* in Renaissance and Early Modern Europe: Two Case Studies,” in *Ptolemy in Perspective: Use and Criticism of his Work from Antiquity to the Nineteenth Century*, ed. Alexander Jones (Dordrecht: 2010), 135–149. For the Latin text and an Italian trans-
In the authentic De fato (to be discussed below), Albert makes the distinction as follows:

It should be said that there are two parts of astronomia, as Ptolemy says: one concerns the locations (de sitibus) of the superior [= celestial bodies] and their quantities and proper passions; and this is arrived at by demonstration. The other concerns the effects of the stars on things below (de effectibus astrorum in inferioribus), which are received changeably in mutable things; and therefore, this is only arrived at by conjecture, and it is fitting that the astrologer (astronomus) in this part be in some respect a natural philosopher (physicus) and makes conjectures from physical signs.18

What we call “astronomy” is thus concerned with celestial motions and is (or strives to be) demonstrative and thus certain. “Astrology” is concerned, in its turn, with the effects of the heavens on the earth, its atmosphere and inhabitants, and is conjectural or probabilistic, due to the complexity and mutability of its interpretive factors. For Grant and others, prognosticating is central to astrology and will thus be emphasized in Section 1.

I would also like to problematize the terms “astrology” and “magic”, and especially their relation to each other. There is a pervasive tendency in the scholarship to configure astrology more or less closely with magic, and to include both within the so-called “occult sciences”, a phrase that more often distorts than illuminates.19 For a sound conceptual analysis, all relevant presuppositions should be identified and examined. The interpretation of key terms and concepts should be built up in a soundly historicized manner in terms of actors’ categories, that is, how they were actually used in particular historical circumstances. Only then should they be compared and generalizations made. These are not universal analytic categories, however convenient that would be.20 For our purposes, “magic”
is concerned with operating in and on the world, primarily with astrological images or talismans, and will be discussed extensively in Part 2 below. “Astrology”, on the other hand, is concerned with knowledge: past, present, and especially future.\(^{21}\)

1. **ASTROLOGY AND NATURAL PHILOSOPHY IN ALBERT’S AUTHENTIC WORKS\(^{22}\)**

Albert provided astrology’s natural-philosophical foundations in his paraphrase commentaries on central Aristotelian texts, including *De caelo* and *De generatione et corruptione*, and in texts explicitly composed to fill holes in the *Corpus Aristotelicum*, including *De natura loci*. The first two of these three closely related texts—all composed between 1250 and 1254 for his teaching in the Dominican studium at the University of Cologne—were core texts in the philosophy curriculum there and elsewhere.

Although Albert composed and taught Aristotle’s natural works (with additions) in the following order: (1) *Physica*, (2) *De caelo*, (3) *De natura loci*, (4) *De causis proprietatibus elementorum*, and (5) *De generatione et corruptione*,\(^{23}\) I will reconstruct Albert’s astrologizing natural philosophy in a slightly different order to delineate the basic structures more clearly, namely *De generatione et corruptione, De caelo*, and *De natura loci*. My reconstruction will take place in several stages, the first of which occur in two particularly rich chapters of Albert’s commentary on Aristotle’s *De
A foundational text for understanding central features of both Aristotle’s and Albert’s natural philosophy. I discuss other of Albert’s texts below.

De generatione et corruptione

Aristotle provided the basic conceptual structures that will ultimately link natural philosophy with astrology in his account of generation and corruption and the closely related “periods of life”. In this account, the sun’s annual motion as efficient cause relates the heavenly motions integrally to all earthly life and activity, indeed to all movement or change in every sense on earth.25 Although the sun played utterly central roles in generation, Aristotle’s natural philosophy was not strictly speaking astrological, primarily because astrology itself as a system of thought and practice—in particular, horoscopic astrology—did not yet exist in the Greek culture of the 4th century BC.26 Nevertheless, we will see how easily Aristotle’s concepts were refined and coordinated with the central structures of horoscopic astrology.

After treating generation and corruption in a variety of domains, including the generation and transmutation of the four elements, Aristotle argued at De generatione et corruptione 2.10 that the sun in particular, as the universal efficient cause in its annual motion around the ecliptic, was ontologically prior to and thus necessary for generation and corruption, that is, coming-into-being and passing-away (which includes being
born and dying for living things) in the sublunary world. Therefore, in biological reproductive processes of generation (human and otherwise), the sun as efficient cause was required along with the male, who provided the formal cause in the seed, and the female, who provided the material cause in the womb. Inter alia, Albert (and others) added the rest of the planets to Aristotle’s account of generation, thus expanding the astrological possibilities and providing the natural-philosophical foundations for nativities (as well as other astrological practices).

In the first section (on Albert’s Chapter 2.3.4), I will present Aristotle’s ideas along with Albert’s commentary. In this way, we can clearly see what Aristotle thought and how Albert did or did not transform it. Indeed, the Latin text of Albert’s commentary in the *Editio Coloniensis* is typeset to show the precise relationship between it and the Latin translation of Aristotle, by italicizing the words in the commentary that Albert drew directly from the translation. To capture this in my translation, I put Albert’s additions and explanations in fancy brackets “{“}.”

27 Aristotle discusses these fundamental structures in *Phys.* (260a26ff.) and *Gen. Corr.* 2.10.
28 This came to be called the “specific form”, that is, the form of the species.
29 For the basics of Aristotelian natural philosophy, see e.g. Friedrich Solmsen, *Aristotle’s System of the Natural World: A Comparison with his Predecessors* (Ithaca, N.Y.: 1960). See also Chapter 2 of my dissertation and volume one, part one of my book where I go into greater detail on the Aristotelian background, including comparisons with al-Kindi, Robert Grosseteste, Roger Bacon, and Thomas Aquinas.
31 For Aristotle’s Greek text, with commentary and introduction, I use *Aristotle On Coming-To-Be and Passing-Away: De generatione et corruptione,* ed. Harold H. Joachim (Oxford: 1926; repr. 1999), whose numbering of the text I follow here. Joachim’s commentary is very useful for elucidating the challenging features of this rich but difficult text and its relation to Aristotle’s other works. I have found E.S. Forster’s translation for the Loeb Classical Library series to be very helpful; Aristotle, *OnSophistical Refutations, On Coming-To-Be and Passing-Away, On the Cosmos* (Cambridge, Mass.: 1955), 159–239, whose translation I cite below. In addition to the Latin text of Albert’s commentary, the *Editio Coloniensis* also publishes the Latin translation of Aristotle (the *translatio vetustior* on
Stage 1: The Sun’s Role in Generation and Corruption

In Chapters 2.3.1–5 of his commentary, Albert explains Aristotle’s causal analysis of the sun’s essential role in generation from *De generatione et corruptione* 2.10. Chapters 1–4 are explicit paraphrase commentaries on Aristotle’s text, in which Albert paraphrases Aristotle’s text and explains what is obscure, often by filling out elliptical phrases in the original. By contrast, Chapter 5 is an explicit “digression”, where Albert speaks in his own voice in explaining Aristotle’s often challenging texts.

In Chapter 4, “On the true opinion concerning the efficient cause of generation” (*De sententia vera de causa efficiente generationis*), Albert describes Aristotle’s central conceptual structure, namely, the twofold movement of the efficient or moving cause, and thus provides the material for the first stage in my reconstruction. Concerning heavenly motion, Aristotle distinguished two complementary but different types. The first motion (*prima allatio*) is the first motion of the entire cosmos and accounts for the existence of all motions on earth, and for the fact that the cycles of generation and corruption are never-ending. Being singular, however, the uniform daily motion cannot be the cause of generation and corruption because contrary processes require contrary causes. Rather, the sun’s twofold annual motion of “approaching” and “receding” along the inclined circle (the ecliptic) provides the two contrary movements of the efficient cause. We also learn that by their nature generation and corruption—both in general and for particular entities—take place over the same period of time.

In his exposition, Albert follows Aristotle closely in describing this general structure, but then modifies it significantly as he explains the nature of the causality more precisely. The entire passage is Albert speaking in his own voice:

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which Albert primarily drew, namely, the Greco-Latin translation by Henricus Aristippus (d. 1162). Apparently Albert also knew the Arabo-Latin version by Gerard of Cremona (before 1187); Weisheipl, ed., 567 and Alb., *Gen., Corr.*, Ed. Colon., x. In quoting Albert’s text, I follow the practice of the *Editio Coloniensis*.


33 We will see the daily motion’s role more clearly below in discussing Albert’s *Gen. Corr.* 2.3.5.

34 Albert discusses the two types of motion more fully at *Gen. Corr.*, Ed. Colon. 5/2, 205, ln. 78–p. 206, ln. 29.

35 *Gen. Corr.*, Ed. Colon. 5/2, 204, ln. 54–p. 205, ln. 17.
Nevertheless, the motion of one part of a circle is not contrary to the different motion of another part of a circle per se,\textsuperscript{36} but [it is contrary] with respect to the relation of a ray to the place of generation (\textit{sed secundum respectum radii ad locum generationis}),\textsuperscript{37} because, when it approaches, it encounters the place of generation with a straighter ray (\textit{rectior radius}) and therefore warms more (\textit{plus calefacit}), and when it recedes, it encounters it with an oblique [ray] and thence a killing cold (\textit{frigus mortificans}) dominates.\textsuperscript{38}

For Albert, then, generation and corruption take place not by the two-fold annual motions in themselves (\textit{qua} local motion alone),\textsuperscript{39} but by rays projected in the course of the different motions to the places of generation. The geometrical optical model of celestial action adumbrated here—and discussed more fully below—is a major modification of Aristotle’s analysis.

Albert completes his explication of this passage by explaining why the times of generation and corruption are the same by nature. In so doing, he clearly identifies the general motions (and their implied rays) as being from the sun:

\begin{quote}
{And because the motion of the sun in the oblique circle is the cause of generation and corruption}, therefore the time of generation is equal to the time of corruption {and vice versa, because the sun generates when ascending through the six signs which are from the beginning of Capricorn to the beginning of Cancer, and, in descending through the six signs which are from the beginning of Cancer to the beginning of Capricorn, it corrupts; and these movements are between the two solstitial tropics}.\textsuperscript{40}
\end{quote}

The twofold nature of the sun’s annual motion along the ecliptic, then, is an essential cause of generation and corruption. Due to the obliquity of the ecliptic, in middle north latitudes the days do indeed get longer (and warmer) and the sun gets higher in the sky as it travels from winter to summer solstice, and thus increasingly approaches a place’s meridian, and the days get shorter (and colder) and the sun gets increasingly lower in the sky as the sun moves back (recedes) from summer to winter solstice.

\textsuperscript{36} That is, with respect to the motions themselves.
\textsuperscript{37} The centrality of the place of generation will be discussed further below. See also Albert’s discussion at \textit{Gen. Corr.}, Ed. Colon. 5/2, 205, Ins. 49–58.
\textsuperscript{38} \textit{Gen. Corr.}, Ed. Colon. 5/2, 205, Ins. 17–23. Albert also points to this precise distinction in a very interesting digression at \textit{Phys.} 1.1.4 (Ins. 64–74).
\textsuperscript{39} Joachim (relying on Heath) explains the basics of Aristotle’s cosmology, namely, the complex mechanical rotations of the system of homocentric spheres, where Aristotle followed Eudoxus and Callipus; 253–254.
\textsuperscript{40} \textit{Gen. Corr.}, Ed. Colon. 5/2, 205, Ins. 23–30.
For Aristotle, the approaching and increasing phase of the motion corresponds to “generation”, and the receding phase to “corruption”. Albert enhances this conception and makes it more precise by specifying the sun’s location within the zodiac during both the approaching and receding phases, and by adding a geometrical optical model of celestial influence.

Stage 2: The Period of Life

In the second stage of my reconstruction, Aristotle clarifies the notion of generation and corruption by analyzing the period of something’s life, that is, the time between its generation (birth) and ultimate corruption (death), including the time of growth and decay (Ins. 336b10–15). Albert’s interpretation develops the celestial dimension implicit in Aristotle:

{And because the generation and corruption of things below (inferiora) are caused in this way by a superior motion in the oblique circle [sc. the ecliptic-zodiac]}, therefore every time, {which is in a temporal thing}, and every life (vita) of each living thing has a number {from the celestial circle} and is determined {by the celestial circle itself, because from that circle is considered to what extent the power of the generating entity (virtus generantis) extends itself, in accordance with which it produces the existence of the thing (esse rei) before it produces the complete corruption of the thing, as is revealed from the science of the stars (ex scientia astronomica)}. For the order {of the causes} of all {lower things is dependent on the superior order}, and every time, {which is of a thing that arose in the duration of time}, and {every} life is measured by a period.41

With this passage and its final reminiscence of another astrologizing Aristotelian locus (namely, Aristotle’s Meteora 1.1), we find ourselves within an account of the cosmos where the causal structure of the lower world (inferiora) depends ontologically on that of the higher (superiora). Albert claims that the science of the stars can play a central role in understanding the essential processes of generation and corruption, and the particular patterns and timing of each thing’s existence. This is so because the power of the generating force to influence life on earth is derived from the celestial circle. We will return to a living thing’s life (vita) and existence (esse), and the order (ordo) of their causes below.

Albert then gestures to a crucial factor that was present but less fully articulated in Aristotle, namely, the role of matter in a full causal analysis. Here he explores why periods are not always of the same duration:

41 Gen. Corr., Ed. Colon. 5/2, 205, Ins. 31–42.
Nevertheless, not everything is measured by the same period, but some have a larger, and some have a smaller one. The period of some is a year, but of others it is less, and of others it is more, {insofar as they are more susceptible and retentive of the power (virtus) which flowed into them from the celestial circle}.\footnote{Gen. Corr., Ed. Colon. 5/2, 205, Ins. 44–48: "Sed tamen non omnia mensurantur eadem periodo, sed haec habent maiorem et haec habent minorem. Horum enim periodus est annus, horum autem minor et horum maior, secundum quod magis susceptibilia et retentiva sunt virtutis sibi ex circulo caelesti influxae."}

The variable receptivity of celestial influences thus significantly conditions the period of life in general, about which we will learn more below. Although this interpretation is solidly grounded in his reading of Aristotle, Albert characteristically sharpens the astrologizing implications, as we can readily see.

In accounting for different actual periods, however, Albert emphasizes the role of the material cause. This time Aristotle too is more explicit (336b20–23):

> It often happens that things pass away in too short a time owing to the commingling of things with one another; for, their matter being irregular and not everywhere the same, their comings-to-be must also be irregular, sometimes too quick and sometimes too slow.\footnote{Gen. Corr., Ed. Colon. 5/2, 204, Ins. 71–73.}

In interpreting this passage from Aristotle, Albert clarifies the astrologizing dimension of his own analysis:

But if it so happens that at some time some thing becomes corrupted in less time, {that is, before the celestial generative force (vis generationis caelestis)—according to the structure (ratio) of its period—recedes, this happens per accidens} because of the confusion {of its matter from some cause}, because when the matter is unbalanced (inaequalis), {and not able to receive or retain the virtus caelestis}, and does not exist in the same manner and in a balanced way {during its period}, then the generations and corruptions would necessarily be unequal; some will be faster and some slower.\footnote{Gen. Corr., Ed. Colon. 5/2, 205, Ins. 58–67: "Si autem contingit aliquando corrumpi aliquam rem in minori tempore, hoc est, antequam vis generationis caelestis secundum rationem periodi recedat, hoc contingit per accidens propter confusionem materiae ex aliqua causa, quia cum materia est inaequalis et non susceptibilis vel retentibilis virtutis caelestis et non est codem modo et aequaliter se habens in periodo, tunc etiam nescesse est, quod generationes et corruptiones sint inaequales, et haec erunt citiores et illae tardiores."}

Albert here further articulates Aristotle’s view that a confusion of the matter can limit the natural length of the period by describing what results
from such a confusion: the matter is then unable to fully receive or retain
the celestial force (vis or virtus caelestis). We have seen so far that Albert
consistently interprets Aristotle’s more general formulations in a way that
more fully astrologizes them by linking the causal structures of genera-
tion and corruption directly and more precisely to the influences of the
heavens.

De generatione et corruptione 2.3.5

We can more clearly see Albert’s modification of Aristotle in a strongly
astrological direction in Chapter 2.3.5, a digression added by Albert in
his own voice, where he explains more fully what Aristotle had just said
about periods. Albert’s two main modifications provide the next stages
of my reconstruction, namely, he expands the role of the efficient cause
from the sun alone to include all the planets, and he relates Aristotle’s
views more fully to fundamental astrological structures, in particular, the
horoscope itself. This chapter is worthy of detailed study, both for its own
intrinsic interest bearing on our subject, but also because of its virtually
complete neglect in recent studies of celestial influences.45

To open the chapter, Albert begins with a brief but significant and
deeply astrological definition of “period”: “A period is a measure which is
impressed on or flows into a thing from the celestial circle [the zodiac],
[a thing] caused by the [celestial] circle in the lower realm.”46 Thus, when
anything is generated in the world, an essential part of its causal profile
(namely, the efficient cause) derives from the celestial circle. In this pro-
cess of generation, then, its period (the measure of its life and/or exis-
tence) is impressed upon it also from the celestial circle. How this works
in detail is discussed further below.

Stage 3: Expansion of the Efficient Cause

In the next stage, Albert further articulates the realm of the efficient cause,
expanding it from the sun in Aristotle to include all the planets. So far, we

45 There is complete neglect in Grant, Planets, Stars and Orbs; North, “Celestial Influ-
ence”; Richard Lemay, “The True Place of Astrology in Medieval Science and Philosophy:
Towards a Definition,” in Astrology, Science and Society: Historical Essays, ed. Patrick
Curry (Woodbridge, Eng.: 1987), 57–73; Price, “Physical Astronomy and Astrology”; and
Vanden Broecke, Limits of Influence. There is a brief mention in Zambelli, 62, but with no
discussion.

46 Gen. Corr., Ed. Colon. 5/2, 205, Ins. 76–78: “Est autem periodus mensura, quae ex
circolo caelesti imprimitur vel influitur rei causatae a circulo in inferioribus.”
have mainly discussed celestial influences in terms of motion; light will now receive more attention:\textsuperscript{47} Moreover, it is to be observed that the sun is not the only generating cause (\textit{causa generans}), although it is pre-eminently \textit{generans}, unless it were said that generation comes to be by the light of the sun alone, because, as the finest philosophers—Aristotle and Avicenna, Ptolemy and Messellach—say, only the sun illuminates by its own light and all the other planets and stars are illuminated by the sun, as also the moon is. But the light is received by them into their depths and imbues them with a different nature than it [the light] has in the sun.\textsuperscript{48} And therefore, in the Moon it [its light] is cold and moist intemperately; in Saturn, cold and dry intemperately; in Jupiter, hot and moist, temperately; and in Mars, hot and dry intemperately; and in Venus, cold and moist temperately. But in Mercury it is mixable (\textit{commiscibile}), because it augments the property of each star it gazes upon. And in the sun, which moves all of them, it is hot and dry temperately. Moreover, all the other fixed stars follow the properties of some one of these. Since this is the case, it is to be noted that in no way does the access and recess of the sun alone make a period, because otherwise no animal would be able to be born in the winter, but rather everything would die, and the life of no living thing could be extended beyond a year, which is patently false.\textsuperscript{49}

Albert here characterizes each planet’s light in terms of the traditional astrological attribution of a set of primary qualities to each planet—following Ptolemy himself and many others\textsuperscript{50}—in order more fully to differentiate his natural-philosophical picture. I should also emphasize that Albert’s argument, based on experience, requires the other planets to have a share in efficient causality, otherwise everything would have the same period of generation and corruption by nature, which, as he says, is patently false.

In developing Aristotle, then, Albert removes the sun from its sole position as \textit{generans}, and in the process differentiates the qualities of each planet’s light, one of the primary modes of their influence. This move

\textsuperscript{48} Albert discusses this further in \textit{De caelo et mundo} 2.3.6, and \textit{De causis propr. elem.}
\textsuperscript{49} \textit{Gen. Corr.}, Ed. Colon. 5/2, 206, Ins. 29–51.
\textsuperscript{50} See, e.g. Ptolemy \textit{Tetrabiblos}, 1.4.
is central to astrology’s natural-philosophical foundations.\textsuperscript{51} Traditional astrology and natural philosophy thus appear to reinforce each other here, and so might appear to have become dangerously intermingled. Regardless, they still remain on their proper sides of Grant’s boundary, since he explicitly permits the attribution of qualities to planets in Aristotle commentaries.

\textit{Stage 4: The Period of Life and the Natal Horoscope}

Albert now begins to move much more quickly in a properly astrological direction as he further develops his analysis of the period of life and links it explicitly to the structure of the natal horoscope:

But what makes a period is the relation of the sign ascending over the horizon to all the other signs of the circle [the zodiac] with their stars and planets in the hour of conception or birth (\textit{nativitas}) of the thing below, which is caused by or caused together with the celestial circle.\textsuperscript{52}

This is a striking description of the situation reflected in an astrological figure constructed for the time and place of birth, a geniture or nativity (natal horoscope) with the rising degree (\textit{horoscopus}, ascendent) calculated.\textsuperscript{53}

Albert continues, further articulating the celestial dynamics of the birth of things on earth:

For in this manner, the measure of certain things is a year, and of certain others more or less, in accordance with the effects of the signs and the strength of the stars [i.e. sun, moon, and planets] situated in the signs. And in this manner it is true that the time of the generation of a thing is equal to the time of its corruption, because the growth of a thing (\textit{profectus rei}) is calculated from the first sign ascending in the hour of the thing [i.e. of the thing’s generation (birth)] up to the seventh sign of the same circle, and the

\textsuperscript{51} This view has a rich history. Among many others, Johannes Kepler embraced it in the 17th century in his \textit{De fundamentis astrologiae certioribus} (1602). The text is published in vol. 4 of Kepler’s \textit{Gesammelte Werke} (Munich: 1937–). For an English translation, see Judith V. Field, “A Lutheran Astrologer: Johannes Kepler,” \textit{Archive for History of Exact Sciences} 31 (1984), 189–272. Ephraim Chambers articulated and defended it in the 18th century in the article, “Astrology,” for his influential \textit{Cyclopedia}, vol. 1 (London: 1728), xxvii and 162–163.

\textsuperscript{52} \textit{Gen. Corr.}, Ed. Colon. 5/2, 206, lns. 51–55: “Sed periodum facit relatio ascendentis signi super horizontem ad omnia alia signa circuli cum suis stellis et planetis in hora conceptus vel nativitatis rei inferioris, quae causatur vel concausatur a circulo caelesti.”

\textsuperscript{53} For details on the actual construction of astrological nativities in this period, and for information on the different methods of calculating the ascendant, see North’s masterly, \textit{Horoscopes and History}. In my usage, “horoscope” refers to the actual astrological figure altogether, whereas “\textit{horoscopus}” refers to the rising point or ascendant.
winding down (\textit{defectus}) is computed from the seventh sign to the first.\footnote{A little elementary astrology: the square of a nativity representing the circle of the ecliptic is composed of 12 mundane houses. The beginning of the first is determined by the degree of the zodiacal sign rising over the eastern horizon at the moment of birth and is called the ascendent or \textit{horoscopus}, which is calculated for the time of the nativity (or conception—or for other astrological purposes at other times) at a particular place. There are then 11 further divisions made on the figure, based always on the degree of the ascendent (and usually also on the degree of the midheaven, where the meridian cuts the ecliptic at the time of birth). Each of the first six house cusps have a precise counterpart on the opposite side of the figure of the chart, so that the seventh house is exactly opposite to the first, and would mark the beginning of the second half of the chart; this holds regardless of the house system chosen.} And therefore, the seventh sign in astrology (\textit{in astronomia}) is called the house of death (\textit{domus mortis}), and the ascending [sign] is called the house of life.\footnote{The “houses” of life and death refer to the so-called “terrestrial” or “mundane” houses, and are to be contrasted (not conflated) with the “celestial” houses, which are more commonly called the signs of the zodiac. The eighth (not the seventh) house is normally considered the house of death.} And therefore the growth up to the full natural state is called the generation of a thing, and after the \textit{status} to the decline and from the decline to death is called the period of corruption, because they are equal according to nature, because from the first to the seventh is the same distance as from the seventh to the first by measuring through the other part of the circle. For example, from Aries through Taurus and Gemini and thence to Libra is the same distance as from Libra through Scorpio and Sagittarius and so thence to Aries. And therefore, if the period of growth (\textit{periodus profectus}) of a human being is 35 or 40 years, as the physicians (\textit{medici}) say, the \textit{periodus defectus} will be the same, and the age of a person will be 70 or 80 years. Nevertheless, this can be impeded \textit{per accidens}, by bad food or a violent death or in some such other manner. Aristotle calls this the inequality [or imbalance] of matter (\textit{inaequalitas materiae}), namely, because by many accidents it is disposed otherwise than it would be by the [celestial] circle.\footnote{\textit{Gen. Corr.}, Ed. Colon. 5/2, 206, Ins. 55–81.}

Albert thus appears to have grafted Aristotle’s doctrine of generation and corruption onto an overtly astrological framework here by means of Aristotle’s concept of the period of life. The astrological dimension can no longer be denied or explained away. The simple description of the cosmos is the same for both astronomy and astrology, but Albert’s use of the particularities of the structure of a natal horoscope, and the discussion of the different strengths and effects of the planets and signs has pushed us fully into the astrological realm, or at least into a fully astrologizing natural philosophy.

In so doing, Albert has clearly inverted one of Grant’s major propositions about the relationship between natural philosophers and astrologers—that astrologers use conclusions based on the philosophical structures...
and arguments of the natural philosophers, but that natural philosophers would never stoop so low as to employ fundamental features of astrology to support their natural-philosophical positions, at least not beyond a simple enumeration of the qualitative nature of the planets. Nevertheless, Albert is still safely within the bounds of Grant’s final defensive bastion, that is, he has not yet mentioned prognostications.

Albert finally crashes headlong through even this last barrier, by defending an explicitly prognosticatory astrological position:

And therefore, human beings die differently, more quickly and more slowly, than they would die by nature, and likewise the other animals. Also, the ages of all things exist in this manner, because the planets located in the periodic circle (in circulo periodali, sc. the zodiac), when they are stronger, give more years of life; and when they are weaker, they give fewer. And in this manner it comes to be known, since he who knows the strengths of the signs and of the stars placed among them in the periodic circle when some thing is born can prognosticate about the entire life of the generated thing, as much as there is from the influence of the heavens. Nevertheless, this does not postulate necessity, because it could be impeded per accidens, as has been said.

So ends the digression. Albert has thus transformed Aristotle’s analysis in De generatione et corruptione to become nothing less than the scientific foundation for prognosticative astrology—true astrology in Grant’s sense—and particularly for nativities. Thus, the stark dichotomy Grant postulated between Aristotelian natural philosophy and astrology appears, on closer examination, to reveal a rather different and far more integrated relationship, at least in this important case.

De caelo et mundo

Albert confirms and develops this interpretation in De caelo et mundo 2.3.5, also a digression, which offers a natural causal analysis for the effects of the stars. In it Albert even more clearly relates astrological

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58 Gen. Corr., Ed. Colon. 5/2, 206, ln. 81–p. 207, ln. 7. In Tetrabiblos 1.2, Ptolemy strongly argues against those who claim that celestial influences alone can provide a full causal analysis. Among other factors, Ptolemy cited a person’s upbringing, their matter, and their place of generation as mitigating circumstances. Albert also discusses this in De fato below.

59 Alb., De caelo et mundo, Ed. Colon. 5/1.
practice to its natural-philosophical foundations, informing us explicitly that astrologers, particularly those who specialize in elections and nativities, will use the causal analysis provided here as the foundation of their proper work. We will recall that elections are the astrological choosing of propitious times:

Moreover, on the different effects of the stars [i.e. planets, stars, and luminaries], two questions are asked in [natural] philosophy, namely, (1) what (\textit{quis}), and (2) when (\textit{quando}) and where (\textit{ubi}) the effect of any star is. Investigating this is the job of the practitioner of elections (\textit{elector}) and of the diviner by means of the stars (\textit{divinans per astra}),\textsuperscript{60} whose job is to choose (\textit{eligere}) and to know hours, in accordance with which, what come to be in the lower world [that is, things generated on earth] are referred [causally] to the configurations of the stars.\textsuperscript{61}

What are the effects of the stars? When and where do they take place? These central questions of a scientific astrologizing Aristotelianism relate directly to what is generated on earth and in its atmosphere (\textit{in inferioribus}).

Practitioners of elections and nativities, which he relates closely to each other here, need to find systematic answers to these questions:

And it is proper to leave this to the knowledge of the practitioners of elections (\textit{scientia electorum}), who are called \textit{geneatici} [genethlialogists or nativity astrologers]\textsuperscript{62} by another name, for this reason in particular, because what they investigate by the configurations and effects of the stars are the births (\textit{nativitates}) of what is generated in the lower world and the outcomes of [i.e. what happens to, the life experiences of] what is born (\textit{eventus nascentium}).\textsuperscript{63}

Here Albert closely associates something’s birth, its nativity, with the beginning of a project or endeavor, which would also metaphorically signify its “birth”. What is generated and what happens to it after it begins to exist are both considered by these astrologers.

Albert then evokes Ptolemy, the foremost ancient authority in the field:

\textsuperscript{60} Albert uses “divination” here in a much looser sense than Thomas Aquinas does in his \textit{Summa theologicae} II\textit{a}, II\textit{ae}, 95.

\textsuperscript{61} \textit{De caelo et mundo}, Ed. Colon. 5/1, 150, Ins. 49–54.

\textsuperscript{62} \textit{Geneatici} can also be used as a term to refer to astrologers dealing with human affairs in general, that is, to all four branches of astrology, not just nativities.

\textsuperscript{63} \textit{De caelo et mundo}, Ed. Colon. 5/1, 150, Ins. 54–58. My apologies for the stilted English in the translation of \textit{eventus} and its dependent genitives here and in what follows.
For Ptolemy authoritatively articulated this body of knowledge (*scientia*) in two volumes, of which one concerns great universal events, having eight distinctions. These events are great, such as changes of kingdoms from one people to another, and the movements (*translationes*) of sects [religions] and new religious doctrines and such things.\(^6^4\)

Although Ptolemy treated these general concerns in *Tetrabiblos* Book 2, the description seems to refer more closely to Abumashar’s *De magnis coniunctionibus*, which contains eight *differentiae* or *tractatus*.\(^6^5\) Albert refers here to revolutions in the astrological sense, including the effects of “great conjunctions”, that is, of the outer planets, Jupiter and Saturn, and their world historical implications.\(^6^6\)

Albert then turns from astrological concerns with the big picture of society and the world at large to that of individuals: “Moreover, the other [volume] concerns small particular events, as are the outcomes of a person born under this configuration or that.”\(^6^7\) This last phrase, *eventus unius hominis nati in hac constellatione vel illa*, thus instantiates *eventus nascentium* just above. Ptolemy treated these small particular outcomes or events in discussing nativities in *Tetrabiblos* Books 3 and 4.

The passage concludes by referring to astrology’s causal structure:

Moreover, concerning what is asked about the effects of the stars, there is a natural cause, because of which a star is said to have this or that effect; and this is to be determined here and presupposed by nativity and election astrologers.\(^6^8\)

Thus Albert states explicitly that astrological practitioners should presuppose and ground their practice on this astrologizing Aristotelian causal framework, with its relevance for understanding the world of politics and society, and their transformations, as well as what happens to individuals

\(^6^4\) *De caelo et mundo*, Ed. Colon. 5/1, 150, lns. 58–64.

\(^6^5\) My thanks to David Juste for confirming this identification. It is unclear what the following title refers to. Below, I discuss the implications of this misattribution for Albert’s patrimony of the *Speculum astronomiae*.


\(^6^7\) *De caelo et mundo*, Ed. Colon. 5/1, 150, lns. 64–66.

\(^6^8\) *De caelo et mundo*, Ed. Colon. 5/1, 150, lns. 67–71: “Secundum autem quod quaeritur de effectibus stellarum, est naturalis causa, propter quam stella dicitur habere hunc vel illum effectum, et hoc hic determinandum est et a geneaticis sive electoribus supponendum.”
born under particular celestial configurations. Astrological practices and prognostications at several levels are thus explicitly provided with their natural-philosophical foundations.

De natura loci

Stage 5: Mathematizing the System

The next stage in my reconstruction is to articulate the mathematical side of Albert's system adumbrated above by examining his treatise, *De natura loci*, which falls within the series of Aristotle commentaries, filling a lacuna in Aristotle's system where no authentic work exists. Albert locates it just after the *Physica* and *De caelo et mundo*, and before *De generatione et corruptione*, thus among Aristotle’s core natural-philosophical texts. He begins the first chapter, entitled “That it is proper in *scientia naturalis* to know the nature of place”, in this way:

We will treat the nature of places, which come from the relation of the place to the heavens (*quae provenit ex habitudine loci ad caelum*); first we will mention what was determined in the *Physics*. For there it was proved that place is an active principle of generation, like the father is.

The nature of place thus concerns the relationship of the heavens to the earth, and place is a principle of generation. These are fundamental themes that will be further developed.

In another passage, we get more detailed information, particularly on the importance of place and its qualitative nature for a full natural-philosophical analysis of generation:

[W]e ought to know the diversities of places in particular and the cause of their diversity and the accidents of diverse places, for then we would completely know what is generated and corrupted in places. Because of which, those err who treat *scientia naturalis* and do not bring in anything about the diversity of places. And they seek solace for their inexperience if they say

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69 Alb., *De nat. loci*, Ed. Colon. 5/2. This section also provides strong evidence against the attribution of Albert as “The Unnamed Master” in Roger Bacon’s *Opus tertium*. Jeremiah M.G. Hackett provides the *status quaestionis* in “The Attitude of Roger Bacon to the *Scientia* of Albertus Magnus,” in Weisheipl, ed., 53–72. I discuss this matter in detail in Chapter 2 of my dissertation and in part one of my monograph. The central issue, in my view, is Roger’s explicit criticism of the unnamed master for a complete ignorance of *perspectiva* (including its astrological dimension, as here), and that it never appears in any of his many books.

70 *De nat. loci*, Ed. Colon. 5/2, 1, Ins. 9–13.
that it is not fitting to inquire about this; for it does not suffice that this sort of diversity is treated in the mathematicians, where is treated which stars, above which places, rise or fall in this or that manner. Because, although from these the location of the climates may be known, nevertheless the nature of places and the diversity of their complexions are not sufficiently known.71

Albert here indicates the necessity of an integrated framework of mathematical astronomy and geography, but also their insufficiency in themselves for the natural philosopher. Although the locations of celestial bodies vis-à-vis places on earth may thus be calculated, the qualitative natures (or “complexions”) of actual places cannot be known by this mathematical framework alone.

In Chapter 5, Albert develops his analysis by discussing the particularities of places and how they should be analyzed, emphasizing the importance of this knowledge for a full understanding of generation:

If anyone wished to understand all the natures and properties of particular places, he would know that there is not a point in them which does not have a special property from the virtue of the stars gazing upon the middle habitation of mixed things [sc. the earth]; for the circle of the horizon is varied in relation to each point of the habitation of animals, plants and stones; and the entire orientation of the heavens with respect to the middle of the habitation is varied in relation to the variation of the circle of the horizon.72 From which cause their natures, properties, customs, actions and species, which seem to be generated in the same perceptible place, are varied, to such an extent that diverse properties and customs are attributed to twins' seeds, both for brute animals and for men, from this different orientation. And this is reasonable because it has been learned that the heavens pour forth formative virtues into everything that exists (caelum diffundere virtutes formativas in omne quod est). Moreover, it mostly pours them forth by means of rays emitted by the lights of the stars (per radios emissos a luminibus stellarum), and therefore it follows that each pattern and angle of rays causes different virtues in things below.73

71 De nat. loci, Ed. Colon. 5/2, 2, Ins. 28–49.
72 De nat. loci, Ed. Colon. 5/2, 8, Ins. 43–51: “Si quis autem particulariter velit cognoscere omnes naturas et proprietates particularium locorum in aqua et aere et terra, sciet, quod non est punctus in eis, qui non habeat specialem proprietatem ex virtute stellarum mediam habitationem commixtorum respicientium; ad quodlibet enim punctum habitationis animalium et plantarum et lapidum variatur circulus horizontis, et ad variationem circuli horizontis totus respectus caeli ad medium habitations variatur.”
73 De nat. loci, Ed. Colon. 5/2, 8, Ins. 43–62. This last phrase also refers to the astrological “aspects”, namely, significant angular relationships between the planets which thus affect their influences on earth.
Inspired by central ideas in al-Kindi’s *De radiis stellae* and Robert Grosseteste’s *De natura locorum*, Albert here refers to a geometrical optical model of celestial influences, where the differently oriented patterns of celestial rays striking different points on earth cause different influences or virtues in things below. He uses the horizon to individuate each place on earth in relation to the celestial situation, thus sharpening and mathematizing the analysis in *De generatione et corruptione*. This is precisely the analysis of *perspectiva* articulated explicitly and in much greater detail—but toward the very same end—in Roger Bacon’s *Opus maius*, Books 4 and 5.

Albert then further articulates the geographic dimension, focusing on the horizon:

> Since, therefore, from a change of the horizon, it is necessary that the entire circle would be changed; and from the change of the circle, the entire configuration of the rays would be changed; and, since each point of a habitation constitutes one special center of a horizon, it follows necessarily that each point of the habitation has special virtues which inform what is located there. Therefore, no generated thing is found to be completely similar to something else in every [detail]. This is *locus* properly, about which Porphyry says that it is one of the individuating [features].

Places thus become qualitatively unique due to each place’s unique angular relationship to a particular configuration of celestial elements, and this is mediated by the horizon. With this qualitative knowledge, then, the fully equipped astrologizing natural philosopher can more fully understand what is generated in any given place, and thus what makes each individual unique. The horizon also links this analysis closely with that in Albert’s commentary on *De generatione et corruptione*, discussed above, since the horizon is also essential for determining the rising point or *horoscopus* of an astrological figure, which also marks the beginning of the first house, where generation begins, and the seventh, where corruption begins, as we will recall.

Albert then articulates the celestial dimension more fully:

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74 See Chapter 2 of my dissertation and volume one, part one of my forthcoming book for further discussion of this background.


76 *De nat. loci*, Ed. Colon. 5/2, 8, Ins. 63–73.
A [celestial] configuration (constellatio) causes the qualitative virtue of the stars, which are poured into things below, and it is formative of these [the inferiora] by means of the qualities of the elements, which are as instruments of the celestial virtues. Moreover, not only is each particular place of a different property than another, but also each [place] in itself is made of different properties successively, for this reason, that by means of the rise and fall of the stars above it, and the different relationship of these [stars] to each place, it is necessary for its properties to be varied. And this is the cause why generated things are transformed by what contains them.

Albert's causal analysis here emphasizes each place's unique qualitative makeup, and that the nature of the celestial influences changes over time. Stars pour forth qualitative virtues into all things below—the inferiora—according to particular celestial configurations, which in turn have a unique collective angular orientation to each place on earth. The richness and complexity of this system is starting to come into focus.

Albert completes this description by showing us how an astrologizing natural philosopher would approach such an analysis and its potential for use in prognostication:

[T]hose who are wise concerning the stars (sapientes in astris) first diligently consider the [celestial] circle of each place, then they proceed to consider the virtues of the places as a second [set of] stars, and from these two joined together they prognosticate about the nature of the thing generated; for the stars flow their virtues in (influunt virtutes) by means of something else, not without an intermediary, and they use a twofold medium for the influx of their virtues, of which one is a ray (radius) and the second, a containing place. And by means of these two they come to the matter of the generated thing, which the flowed-in virtues form and delimit. Moreover, the variety of the stars' locations causes the varied configurations which the rays describe above the circle of the horizon. And this varies the virtues of places and what is generated there; therefore it is necessary that a natural philosopher know these variations.

Albert here uses a geometrical optical model of celestial influences within a mathematical astronomical and geographical framework to explain the fundamental role of place in generation. Celestial virtues operating by rays of light thus influence everything on earth's generation and continued existence as the planets move in their different rhythms over time.

77 “constellatio est causans virtutem qualitativam stellarum, quae infunditur inferioribus et est formativa ipsorum per qualitates elementorum, quae sunt sicut instrumenta virtutum caelestium”. De nat. loci, Ed. Colon. 5/2, 9, Ins. 9–12.
78 De nat. loci, Ed. Colon. 5/2, 9, Ins. 8–19.
79 De nat. loci, ed. Colon. 5/2, 24, Ins. 70–84.
in relation to every point on earth. This mathematically articulated natural philosophy permits sophisticated astrological analyses of and prognostications concerning everything born on earth (nativities)—and of all projects begun (elections, on analogy)—as well as for larger patterns of change over time (revolutions), thus for three of the four branches of practical astrology, which all rely on astrological figures to represent particular celestial configurations.\footnote{As for the remaining branch, interrogations, the \emph{Magister Speculi} offers a somewhat obscure analysis of how interrogations work that links the mind of the practitioner to the current state of the heavens (Chapter 9). I do not know of a text where Albert does so.} In this way, the essentially Ptolemaic mathematical structure of the horoscope has been outfitted with a fundamentally Aristotelian natural-philosophical interpretive apparatus, augmented by a geometrical optical model of celestial influences. The basic natural-philosophical and mathematical features of Albert's system have now been sufficiently described. The final stages of my reconstruction will further articulate its metaphysical and epistemological dimensions.

\textbf{De Fato}

In \emph{De fato}, which Albert disputed in 1256 while at the papal curia for the first time, in Anagni, he further refines his astrologizing Aristotelian natural philosophy—now properly mathematized—and takes us to a deeper level of understanding.\footnote{Alb., \emph{De fato}, Ed. Colon. \textit{17/1}, 65–78. On \emph{De fato} in particular and on Albert’s views on fate more generally, see now Alessandro Palazzo, “The Scientific Significance of Fate and Celestial Influences in some Mature Works by Albert the Great: \emph{De fato}, \emph{De somno et vigilia}, \emph{De intellectu et intelligibili}, \emph{Mineralia},” in \emph{Per perscrutationem philosophicam: Neue Perspektiven der Mittelalterlichen Forschung. Loris Sturlese zum 60. Geburtstag gewidmet}, ed. A. Beccarisi, R. Imbach, and P. Porro (Hamburg, 2008), pp. 55–78. This fine essay unfortunately came to my attention only after this volume had gone into press. He also has a relevant and extensive essay on \emph{fascinatio}, "Albert the Great's Doctrine of Fascination in the Context of his Philosophical System" in \emph{Via Alberti. Texte—Quellen—Interpretationen}, ed. L. Honnefelder, H. Möhle, and S. Bullido del Barrio (Münster, 2009), pp. 135–215.} Fate is here treated within the context of necessity and free will (among other subjects), and thus within an explicitly moral and theological context.\footnote{Zambelli treats issues of free will and determinism in Albert’s authentic works at 64–71.} Both practical astrology and astrologizing Aristotelian natural philosophy are used to explicate Albert’s understanding of fate, and will thus give us a deeper insight into the uses of astrology in his works.\footnote{Hossfeld (Ed. Colon. \textit{17/1}, xxxiii–xxxiv) argues strongly for \emph{De fato’s} authenticity, indicating the range of undoubtedly authentic texts on which it draws and with which}
Stage 6: The Metaphysics of Fate (the Formal Dimension)

After floating many possible definitions of fate in Article 1, Albert narrows the field to three in Article 2, focusing in particular on the third:

[F]ate is said to be the form of the order of the existence and life of things below, caused in them from the period of the celestial circle, which surrounds their births with its radiations.84

Here Albert configures fate astrologically in direct relationship to the discussion of periods at De generatione et corruptione 2.10, and within the same geometrical optical model of planetary action articulated in De natura loci.

Assuming this framework, Albert characterizes the type of form fate is, and in the process offers insight into deeper causal structures, this time at the metaphysical level, treating form, matter, and their deep relationship. Generation is still utterly central:

This form, moreover, is not the form which gives existence (non forma dans esse),85 but, rather, it is the form of a universal order of existence and life, simple in essentia, multifold in virtute. It has the simplicity of essence from the simplicity of the circulation of the common circle [the zodiac], but it has its multiplicity of power (virtus) from the multitude of what is contained in the circle. For it flows from many stars (fluit enim a multis stellis), locations (sitibus), spaces (spatiis), constellations (imaginibus), radiations (radiationibus), conjunctions (coniunctionibus), eclipses (praeventionibus) and multiple angles described by the intersecting of the rays of celestial bodies, and by the emission of rays over the center, in which alone, as Ptolemy says, all the powers of those [celestial bodies] in the celestial circle are gathered together and united.86

In Albert’s system, unity is derived from the celestial circle, and diversity from the multiplicity of powers contained therein, including all the planets, their various locations, rays, and aspects. This is precisely the complex celestial situation represented in a horoscope. In De fato, then, this

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84 De fato, Ed. Colon. 17/1, 68, lns. 31–33: “Tertio modo dicitur fatum forma ordinis esse et vitae inferiorum, causata in ipsis ex periodo caelestis circuli, qui suis radiationibus ambit nativitates eorum.”
85 That is, the soul.
86 De fato, Ed. Colon. 17/1, 68, lns. 36–49: “et multiplicibus angulis, qui describuntur ex intersecationibus radiorum caelestium corporum et productione radiorum super centrum, in quo solo, sicut dicit Ptolemaeus, omnes virtutes eorum quae sunt in caelesti circulo, congregantur et adunantur.”
astrologically articulated form—fate—with its unique celestial configuration profoundly affects the earth and its inhabitants by means of rays, and thus deeply informs or imprints everything that exists. In this way we derive a clearer understanding of the formal causal role that celestial influences play, in addition to their earlier established efficient causality. This passage also more fully and precisely represents the system Albert adumbrated in *De natura loci*.

To provide a fuller explanation, Albert also relates the form in itself to its instantiation in an actually existing thing with its material nature, thus differentiating two fundamental ontological moments:

Moreover, such a form is in the middle between the necessary and the possible; for whatever is in the motion of the celestial circle is necessary; but whatever is in the matter of generable and corruptible things is possible and changeable. But this form [1] caused by the celestial circle and [2] inhering in generable and corruptible things is in the middle between each.87

Albert distinguishes three levels in his system: (1) What is in the motion of the celestial circle (*quidquid est in motu caelestis circuli*), namely, the planets and luminaries. These exist necessarily. (2) What is in the matter of generable and corruptible things (*quidquid est in materia generabilium et corruptibilium*), that is, of everything on earth. These are possible and changeable (*possibile et mutabile*), that is, they do not exist necessarily as the celestial bodies do; they may or may not exist and they are subject to change. Between these two extremes are the forms, which participate in both, that is, they are (1) caused by the celestial circle (which necessarily exists), and (2) inhere in actual generable and corruptible things, thus providing an essential link between the heavens and the earth in the overall economy of nature.

Next Albert reveals an underlying metaphysical principle relevant to the scale of causality and its concomitant hierarchy of being, which also further relates the two levels of existence mediated by forms:

For everything which proceeds from a noble cause [sc. the heavenly bodies] into something ignoble that has been caused [sc. with its terrestrial matter], although in some respect it retains the property of the cause, nevertheless, it is not its existence (*esse suum*), except insofar as the potential of the subject permits, in which it exists. For everything received—as Boethius says, and Aristotle in the sixth book of the *Ethics*—exists in what receives it in

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87 *De fato*, Ed. Colon. 17/1, 68, lns. 50–56.
accordance with the ability of the receiver (*secundum potestatem recipientis*) and not of the cause (*causa*) from which it exists.\(^{88}\)

Causes can only be fully realized to the extent that the receiving substance permits. This relates directly to Albert’s discussion of *De generatione et corruptione* 2.10, where he explained why some periods of life are longer or shorter for members of the same species. This relates both to the variable strength of the celestial influences and to the variability of how they are received in generated things, thus intimately integrating this element of the formal cause with both the efficient and material causes.

Albert then uses this principle to develop an analogy for fate and its status within the hierarchy of being:

> We can see this in what are called “divine processions” by Dionysius,\(^{89}\) just as life, reason and wisdom etc., which, inasmuch as they proceed further [ontologically] from God on the scale of being (*gradus entium*), are made more temporal, mutable, and mixed with material potential and privation, even though in God they are extremely simple, eternal, immutable, and immaterial. And it is likewise concerning the form of the order of existence and life (*forma ordinis esse et vitae* [the definition of fate above]), which in the celestial circle is necessary and immutable, that is, unalterable, but in generated things because of the mutability of their existence, it [the *forma ordinis esse et vitae*, i.e. fate understood as the particular celestial configuration at the moment of birth] is received contingently and mutably.\(^{90}\)

The form of the order of existence and life, then—derived from the celestial circle by means of motion and light and analyzed in terms of geometrical optics—is circumscribed in its actual effects by the limitations imposed by both the receptability and mutability of the particular generated thing, in which the form inheres.

Albert develops this analysis further with reference to Ptolemy. First he recapitulates the general point:

> Moreover, this form, since it is an image of the period (*imago periodi*), has, in advance, potentially and virtually, the entire existence and actuality of the duration of what is generated and corrupted; and thus, although it

\(^{88}\) *De fato*, Ed. Colon. 17/1, 68, ln. 56–p. 69, ln. 3.

\(^{89}\) [Ps.-]Dionysius the Areopagite. The influential pseudonymous texts thought to be written by a contemporary of St Paul were actually composed by a contemporary of Proclus five centuries later. Albert produced commentaries for all of his major works.

\(^{90}\) *De fato*, Ed. Colon. 17/1, 69, lns. 3–14.
exists [in itself] necessarily, nevertheless it is mutable and contingent [with respect to its actual expression in a generable and corruptible thing].

Albert’s formulation here of the form as an “image” of the “period of life” is worth emphasizing, especially since it has in itself in potentia information that represents the entire course of the generated thing’s existence. One can easily see how valuable access to such insider information would be in a range of circumstances, medical, political, and otherwise.

Albert then turns to Ptolemy for an explanation:

Ptolemy in the Tetrabiblos assigns the cause of this excellently, saying that the powers of the stars come to be in what is below per aliud and per accidens, through something else (per aliud) because through the sphere of actives and passives [i.e. the four elements], through whose active and passive qualities they [the virtutes stellarum] inhere in things below; by accident (per accidens), moreover, because although this form flows out from a necessary and immutable cause, it happens to it to have existence in contingent and mutable things. Therefore, it has mutability from these two, namely, [1] from the qualities of the elements, through which it is brought down to what is generated, and [2] from the existence of what is generated, in which it exists as in a subject. Therefore, this is fate.

Albert has here very deliberately analyzed fate, which he defines as the form of the order of existence and life. Although this is necessary in itself (as that of which it is an image exists necessarily, namely, the celestial bodies), when it has been instantiated in an actually existing thing, it is modified in the expression of its potentialities by the limitations of its actual matter and existence. Although celestial influences and the potential for the practice of nativities are woven deeply into this analysis, then, necessity and its concomitant determinism are fully undermined at the deepest levels of analysis, a conclusion Albert states explicitly in Article 3, and which he uses to good effect in what follows.

Stage 7: The Epistemological Dimension

The final stage of my reconstruction addresses the epistemological nature of astrological analysis and the implications for prognosticating. In Article 4, Albert turns from ontological to related epistemological concerns,
asking “Is fate knowable?” He begins the *solutio* with Ptolemy’s distinction (discussed above) between the two parts of the science of the stars.94 Astronomy, concerned with planetary motions, admits of certain knowledge, whereas astrology is concerned with celestial influences and their effects, and operates by conjecture. He then turns to discuss the logical structure of conjecture:95

The making of conjectures (*coniecturatio*), moreover, since it is from mutable signs, generates a condition of less certainty than either knowledge (*scientia*) or opinion (*opinio*) does. For since signs of this sort are common and mutable, the *via syllogistica* cannot be had from them, for this reason, that neither in every nor in most cases do they include what has been signified (*significatum*), but insofar as it comes from itself, certain judgments are mutable from many causes, as is clear from what was said before. And therefore, an astrologer (*astronomus*) often says something true and, nevertheless, what he says does not come to pass, because his statement was extremely true (*verissimum*) with respect to the disposition of the celestial [bodies], but this disposition was excluded by the mutability of things below.96

Although the astrologer makes a true prediction based on the celestial dynamics, matter’s opposing dispositions exclude the predicted outcome from actually coming to pass. Thus Albert’s epistemology is clearly rooted in the ontological causal structures already discussed.

Then, responding to an objection that fate cannot be known due to the vast number of interpretive factors, Albert develops this analysis further:

And it seems that fate is not knowable (*quod non*); for, since it is an effect of the celestial circle and is a certain likeness of it (*similitudo quaedam ipsius*), just as the form of the order of something is similar to the cause itself of the same order—and in the celestial circle as far as we are concerned there are an infinite number of factors to consider, as stars (*stellae*) in number, type (*specie*), and powers, and their locations in the inclined circle (*in circulo declivi, sc. the zodiac*) and beyond it, and distances and conjunctions and the quantity of the angle, under which a ray strikes, and the part of fortune, and the degrees of light and shadow in wells and towers, and an infinite number of this sort, as far as we are concerned—it will also seem that its effects cannot be known by us.97

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94 *De fato*, Ed. Colon. 17/1, 73, Ins. 36–56.
95 This important topic is worthy of further study.
96 *De fato*, Ed. Colon. 17/1, 73, Ins. 45–56.
97 *De fato*, Ed. Colon. 17/1, 72, Ins. 56–66.
Alluding to the multiplicity of factors discussed above, the objection precludes the knowledge of fate due to our inability to interpret the excessive number of celestial causal factors, of which Albert indicates a few.

As we would expect by now, Albert disagrees with the objector’s assessment:

[W]e should say that indeed there are many factors to consider and that as far as we are concerned they are infinite, but only a very few are to be considered [sc. in an interpretation], which the others obey, and from these a prognosticatory conjecture (pronomesticabilis conincturatio) can be had. For this reason, Ptolemy says that the practitioner of elections (elector) ought not to make a judgment unless it is probable and general, that is, by means of superior general causes which the proper [= proximate] causes of things (proprie rerum causae) frequently exclude.\footnote{De fato, Ed. Colon. 17/1, 73, Ins. 57–64.}

There are indeed many factors, but only a very few are required to make a prognosticatory conjecture; unfortunately, Albert does not identify what they are. He does, however, explicitly mention elections. He also discusses universal celestial causes in relation to the proximate causes of actually existing things (including the material cause), a distinction Giovanni Pico della Mirandola exploited repeatedly and to good effect (albeit inconclusively) in his attempt to undermine astrology’s natural-philosophical foundations and thus the possibility of prognostication.\footnote{This theme runs throughout Pico’s Disputationes adversus astrologiam divinatricem. I have studied it particularly in Book 3, Chapters 1–6, in Chapter 5 of my dissertation, to which I may refer the interested reader. This is, indeed, the vera causa, whose discovery Ernst Cassirer attributes to Pico; see his Individual and Cosmos in Renaissance Philosophy, trans. Mario Domandi (New York: 1964).}

We have now seen Albert graft explicitly astrologizing features onto central Aristotelian conceptual structures that causally relate the heavens to life on earth in general, and to the generation of individuals in particular. These ontological structures, then, provide the basis for the knowledge-oriented practices of interpretation and understanding. Albert expanded Aristotle’s efficient causality from just the sun to include all the planets, and he articulated this within a fundamentally Ptolemaic cosmographic framework fitted with a geometrical optical model of planetary influences. Using the central mathematico-geographical tool of the horizon, Albert linked this astrologizing Aristotelian natural philosophy to the particular structure of the horoscope, and so to an individual’s astrologically conditioned (but by no means inexorably determined) fate. Albert thus configures astrological practice solidly within the patterns of
normal Aristotelian-Ptolemaic natural knowledge of the sort to be taught at the finest universities in Europe from the 13th through the 16th and 17th and into the 18th century. Although Albert further articulates his system in greater depth and detail in these and other authentic works, this reconstruction must suffice for now, as we turn to engage the deliberately anonymous *Speculum astronomiae*.

2. The *Speculum astronomiae* and the Problem of Magical Images

In the questionably authentic *Speculum astronomiae*, the text was composed primarily to describe and defend legitimate astrological practices, and to articulate clear boundaries and criteria for distinguishing them from illegitimate ones. To get there, the author first articulated the four canonical types of practical astrology—the revolutions, nativities, interrogations, elections—in the first part of the text, to which he added extensive bibliographies (Chapters 1–11). In the second part (12–17), he discussed controversial areas as *quaestiones* to be investigated; in particular, the more problematic areas where astrology touches on theological and moral issues, such as determinism, freedom of the will, and demons. He offered his opinions, but not as authoritative determinations. This explicitly and very effectively anonymous work is discussed at greater length in Jeremiah Hackett’s contribution to this volume.

In setting out astrology’s basic structures, the *Magister Speculi* distinguished the two great wisdoms both called *astronomia*, namely, what we call “astronomy” and “astrology”, which study, respectively, the motions of the planets and their influence on the world (Chapters 1–3), as we saw with Albert. Most of the *Speculum*’s first part (Chapters 4–11) characterizes the four types of astrological practice. The most controversial practice for the *Magister Speculi* was elections, because astrological images or talismans, a particular type of magical object, were subsumed under this rubric, which he discusses at some length.

I will focus on astrological images (*imaginæ astronomicae*), since the discussion here provided authoritative support over several centuries (although not without controversy) for astrologically informed magical

100 I use the Latin text and English translation in Zambelli, 204–273. I modify the translation at times.

101 I here follow Weill-Parot’s reasonable suggestion for referring to the anonymous author.
practices, which the author here considers perfectly legitimate with respect to religious concerns. Astrological images are kosher, if you will, because they act naturally and, in particular, not through demonic interventions (themes to be developed below). The *Magister Speculi* sharply contrasts these natural and thus legitimate *imagines astronomicae* with what he calls necromantic images (*imagines necromanticae*), which he considers to be abominable or detestable, and whose manufacture and use he emphatically rejects. After treating talismans in the *Speculum astronomiae*, I will compare them with discussions of magic and talismans in Albert’s authentic writings, primarily *De mineralibus*. To these I will contrast Thomas Aquinas’s equally authoritative but strikingly different views.

*Caveat lector*: We are about to enter the equivalent of a conceptual swampland—fetid, dank, and dark—and with very little terra firma on which to build solid conceptual structures. The flashlights, and the mosquito netting to protect us from the conceptual malaria that most investigators fall prey to—namely, a belief in “the occult sciences” as a useful analytic concept—will be a close attention to terminology and the underlying conceptual structures. Comparatively speaking, astrology is the firmest of conceptual terrae. Thus, we will use a well-defined understanding of astrology and its conceptual domain to shore up our understanding of where astrology borders on (and overlaps with) magic and necromancy, and their familiar denizens, namely, demons.

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102 According to Burnett, although “necromancy” etymologically and historically means divination by means of bringing a dead person back to life (however briefly), it is to be contrasted with “nigromancy”, which became the normal term to translate “sihr”, the Arabic term for magic; “Talismans: Magic as Science? Necromancy among the Seven Liberal Arts,” in his *Magic and Divination in the Middle Ages: Texts and Techniques in the Islamic and Christian Worlds* (Aldershot, Eng.: 1996), 3. Drawing on Jean-Patrice Boudet’s discussion in “La genèse médiévale de la chasse aux sorcières: Jalons en vue d’une relecture,” in *Le mal et le diable: Leurs figures à la fin du Moyen Age*, ed. N. Nabert (Paris: 1996), 35–52, but especially 38, Weill-Parot (32, note 22) defines nigromancy as “all magical practices grounded on the invocation of demons”. Boudet also discusses this distinction at 92–94. I simply follow the usage of the primary texts discussed here, which all seem to refer to the same body of practices, none of which are “necromancy” in the strict sense. There is an increasing body of excellent scholarship in this murky domain, including works by Pin-gree, Burnett, Kieckhefer, Weill-Parot, and Boudet, some of which will be cited below.

103 In the loose sense. When I use the term in a general sense as here, the reader may translate “necromancy” (or ‘nigromancy’).

Elections are discussed in Chapters 10 and 11 of the *Speculum astronomiae*; relevant questions are also treated in Chapters 16 and 17. Chapter 10 is very brief, describing the practice of elections as the choosing of propitious times to begin any sort of venture, which is then related to both nativities and interrogations. Chapter 11, on the other hand, is very long and addresses the issue of *imagines* with respect to astrology, which I will translate here indifferently as talismans or astrological images, depending on emphasis. Indeed, the *Magister Speculi* seems to have introduced the term *imago astronomica* and the underlying concept with this text.

Chapter 11 begins by stating that the science of astrological images is subordinated to the part on elections, and that they come to be in three ways, which are discussed in turn. The first kind is abominable, and requires the use of incense (*suffumigationes*) and prayer (*invocatio*), including the names of demons, prayers to Venus, and so on. These sorts of improper rites and practices he calls the worst sort of idolatry, that is, exhibiting to a creature (i.e. something created, whether planet or demon) the honor owed the Creator, to whom alone all such honor is due.

Astrological images of the second type are slightly less problematic, but they are still detestable, and should therefore be rejected. These concern the writing of characters (*inscriptio characterorum*), and they are suspect because the content hidden in an unknown language could surreptitiously or inadvertently harm the Catholic faith. Both the first and

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105 “*Imagines*” in this context can almost always be translated as “talismans”, as Burnett does consistently in “Talismans.” Likewise, Weill-Parot uses them synonymously: “images’ ou talismans”, (33), as will I. Don C. Skemer usefully discusses the distinction between amulets and talismans in his extremely informative introductory “Note on Terminology”; *Binding Words: Textual Amulets in the Middle Ages* (University Park, Pa.: 2006), 6–19, esp. 6–9 (with further bibliography), as does Brian P. Copenhaver in his “Scholastic Philosophy and Renaissance Magic in the *De vita of Marsilio Ficino*,” *Renaissance Quarterly* 37 (1984), 523–554, at 530.

106 For an extensive and persuasive argument for this claim, see Weill-Parot, 32, 91, etc.

107 For a close reading of chap. 11, see Weill-Parot, 34–38.

108 Zambelli, *Spec. astron.*, chap. 11, 240, ins. 19–20. This relates directly to Thomas Aquinas’s penetrating and influential analysis of idolatry vis-à-vis superstition in relation to divination and astrology in *Summa Theologiae* II, II², 92 and 95. See below and volume one of my book for further discussion. See also Dieter Harmening’s penetrating analysis with much relevant discussion: *Superstitio: Überlieferungs- und theoriegeschichtliche Untersuchungen zur kirchlich-theologischen Aberglaubensliteratur des Mittelalters* (Berlin: 1979).

109 In *Spiritual and Demonic Magic from Ficino to Campanella* (London: 1958; repr. 1976), D.P. Walker makes the point that such characters could only be understood by an intelligent being, hence they are to be altogether avoided, in order to rule out the possibility that the intelligences addressed were demons (48, 80). Weill-Parot develops this insight, referring to it as “addressative” (*destinatif*) magic; see especially his “Astral Magic and Intellectual Changes (Twelfth-Fifteenth Centuries): ‘Astrological Images’ and the Concept
second types use the language of exorcism, and the Magister explicitly
distances himself from both types of practices: “These are two modes of
necromantic images (imagines necromanticae), which (as I have said) pre-
sume to usurp to themselves the noble name of astronomia.”110 Before
offering bibliography here, the author describes the intense distress he
felt on reading these works, which he used to excuse his inadequate recall
of their bibliographical information. Nevertheless, he still lists three full
pages of titles, authors, and incipits.111

I will now more closely examine the third, legitimate type of images:

The third type is that of astrological images (imagines astronomicae [as
opposed to imagines necromanticae]), which eliminates this filth, does not
have suffumigations or invocations and does not allow exorcisms or the
inscription of characters, but obtains its power solely from the celestial
figure.112

Legitimate astrological images thus have no demonic or idolatrous taint,
over or tacit.

First the claim is stated negatively: these legitimate talismans do not
have suffumigations, invocations, exorcisms, or inscribed characters, all
the hallmarks of what Weill-Parot calls addressative magic. Then the
criterion is stated positively: legitimate talismans explicitly derive their
power naturally—and solely113—from the celestial realm.114 The Magister
Speculi immediately offers examples, the first of which aims to eliminate
an unwanted species from a place by a magical form of pest control: “For
example, if there were a talisman for eliminating some species from some

110 Zambelli, Spec. astron., chap. 11, 240, ln. 34–p. 241, ln. 35.
111 Zambelli, Spec. astron., chap. 11, 242–247. Weill-Parot describes the texts mentioned
by the Magister Speculi, and how such abominable and detestable necromantic talismans
were made and towards what ends (41–60). There is indeed much talk of exorcism in these
texts, as the Magister Speculi himself noted.
112 Zambelli, Spec. astron., chap. 11, 247, Ins. 104–06: "sed virtutem nanciscitur solum-
modo a figura celesti".
113 Weill-Parot (37) rightly emphasizes the importance of the adverb solummodo (solely)
here. Astrological images are “all-natural” and thus legitimate.
114 This precise distinction also occurs in the Ut testatur Ergaphalau, the text of which is
edited as an appendix in Burnett, “Adelard, Ergaphalau and the Science of the Stars,” also
published in his Magic and Divination, 2 (133–145; originally published 1987): “Dividitur
autem imaginaria [scientia, sc. the science of images] in puram et exorcismalem. Pura est
que sine incantationibus et exorcismis imagines fundi, inspecto statu tantummodo super-
norum [superiorum seems to be a superior variant reading] docet. Exorcismalis est que
exorcismis et incantationibus imaginibus cooperandis spiritus includere docet.” (144)
place”—the example he gives is for the eradication of scorpions—“about which I have received requests”. This is legitimate because the talisman’s power is natural, deriving from the heavens, and not from demons.

The *Magister Speculi* then explains how the talisman should be made, namely, under what astrological circumstances; for example, under the same ascendant (rising sign) as that which rules the species (in this case, Scorpio), under the ascendant of a relevant interrogation if those signs indicate removal,\(^{115}\) or under other baleful aspects. After it has been made—and other undisclosed conditions observed—the image should be buried in the middle of the place from which the species in question is to be banished, and its stomach filled with dirt from the place’s four quarters.

The second example concerns love and money, issues of perennial concern:

But if the talisman is to be made to attain love and profit, let it be made in the opposite way to what I have said [i.e. from the instructions above, that is, not to repel something but to attract it], with the addition that its shape is to be engraved under an elected hour (*forma eius sculpenda est sub hora electa*); and it will have an effect from the celestial power by God’s command, because images which are found in this sensible world [made] from the four elements obey the celestial images.\(^{116}\)

Implicitly following the pseudo-Ptolemaic *Centiloquium* (*Verbum* 9), the *Magister Speculi* states clearly that earthly talismans draw on celestial powers.\(^{117}\) For bibliography on these images, only one book is listed, Thabit ibn Qurra’s *De imaginibus*.\(^{118}\)

*Imagines astronomicae*, then, are legitimate and operate by means of celestial virtues. In comparison with Albert’s authentic astrologizing Aristotelian natural philosophy, therefore, we have moved from the realm of knowledge per se to that used for acting in and on the world, that is,

\(^{115}\) This seems to refer to an astrological interrogation made to discover the success of such an extermination. If the horoscope constructed for the time of the interrogation were propitious, the talisman could then be made under the influence of its ascending sign.

\(^{116}\) Zambelli, *Spec. astron.*, chap. 11, 248, Ins. 121–26: “et habebit effectum iussu Dei a virtute caelesti, eo quod imagines quae inveniuntur in hoc mundo sensibili ex quatuor elementis, oboediunt caelestibus imaginibus”.

\(^{117}\) This implicit echo to *Verbum* 9 is confirmed below. For an insightful discussion of this text and its commentary by Haly (Ali ibn Ridwan), see Weill-Parot, 80–83.

from a more gnostic or prognostic (knowledge-based) use of astrology to a more operational or technological use, which may also be called magical.119 We can see from Burnett’s discussion that talismans were sometimes considered the highest part of astrology precisely because they were the most practical, that is, the most able to affect changes in the world.120

The Magister Speculi addresses these issues further in Chapters 16 and 17, the last two chapters in the text. Chapter 16 is short and worth quoting in full, since it affirms the basic structures as it offers more detail:

I do not defend that section concerning astrological images on account of the nearness they have to necromantic [images], beyond what is said above in the chapter devoted to them, [namely] that they take their power from a celestial figure (eas nancisci virtutem a figura caelesti) according to the ninth verbum of Ptolemy’s Centiloquium which is touched upon there (that is, that “Images which are, etc.”).121 And [I would not defend them] unless [it were the case (as it is)] that nothing prohibits one from defending them . . . So, let it be that when an image should be cast with the conditions mentioned previously for expelling scorpions from some place, if God should wish it, it does not appear [1] to be an exorcism or an invocation if it is said during its casting: “This is an image for the destruction of scorpions from

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119 Raymond of Marseilles articulated a related distinction in the mid-12th century, as quoted by Burnett, “Adelard,” 138 (and note 24): “Contemplativa [astronomia] est que habet in se solo cursu planetarum . . . Activa est que habet in opere sigillorum et imaginum.” This quotation is from the preface to Raymond’s Liber cursuum planetarum VII. Roger Bacon makes the distinction even more clearly in the introduction to his version of the pseudo-Aristotelian Secretum secretorum: “Et hec mathematica continet quatuor scien
cias, scilicet, Geometriam, Arismetriam, Musicam, Astrologiam sub qua Astrologia, Astronomia judicaria et operativa vulgari nomine continetur (astrologia, under which (i) astrologia (= astronomy), (ii) astronomia iudicaria (= judicial or practical astrology for knowledge purposes) and (iii) operativa [astronomia] (= operational or magical astrology) are contained in a common term).” Roger Bacon, Opera hactenus inedita Rogeri Baconi, Fasc. V: Secretum secretorum cum glossis et notulis, ed. Robert Steele (Oxford: 1920), 3, 1–3. Indeed, for Roger in the Secretum, the use of talismans is the ultimate end of natural knowledge. See also George Molland, “Roger Bacon's De laudibus mathematicae: A Preliminary Study,” in Text and Context in Ancient and Medieval Science: Studies on the Occasion of John E. Murdoch’s Seventieth Birthday, ed. Edith Sylla and Michael McVaugh (Leiden: 1997), 68–83. I treat Roger more fully in Chapter 4 of my monograph.

120 Burnett, “Talismans: Magic as Science?” 8–13, but esp. 13. Thabit also utters this sentiment in version 1: “Sublimitas autem et altitude astronomie est imaginum scientia”, a phrase quoted word for word in chapter 4 of the Spec. astron.; Weill-Parot, 65 (nn. 125–26). Kieckhefer awkwardly handles this distinction in discussing talismans in Magic in the Middle Ages (132), where he follows Frances Yates’s decision to call talismans a form of “astral magic” as opposed to “astrological magic”, because for both Yates and Kieckhefer, astrology only has a knowledge dimension, not an operative one.

121 Weill-Parot discusses this text at 80–83.
that place as long as the image is preserved in it."¹²² Nor, again, does it seem [2] to be an inscription of characters if the word "Destruction" (destructio) is engraved on its back [any more than] if the word "Love" (amor) is written on the heart and on the back on talismans for love; nor if on its forehead the word "Scorpion" (Scorpius) were inscribed (that is, the name of the species to be banished) and the name of the ascendant or the name of its [planetary] Lord (which is Mars) or the name of the Moon were written on its breast. Again, what cult [worship, religious practice] is shown by this: if in the middle of the place from which you want some species banished, the image were buried with its head downwards and its feet turned upwards? Not that I recommend them but there is no reason for them to carry the iniquity of the other [type of images, that is, necromantic].¹²³

Useful astrological images of this sort are perfectly legitimate, the author argues, because the sorts of utterances and writing do not cross the line into invocatio (prayer) or inscriptio characterum, a problematic practice with mysterious symbols, including letters in foreign languages.¹²⁴ The examples given are of perfectly straightforward Latin terms and clauses. Nor does the spacial orientation of the talisman imply its worship and thus idolatry. Although the described practices are legitimate, the author takes an explicitly neutral position, neither commending nor condemning them.

Chapter 17 discusses a range of necromantic practices, and also distinguishes legitimate from illegitimate forms of divination. Geomancy,¹²⁵ and chiromancy (as a part of physiognomy),¹²⁶ seem to be acceptable,

¹²² “Haec est imago destructionis scorpionum a loco illo quamdiu fuerit in eo imago servata.” (Chapter 16, lns. 11–12).
¹²³ Zambelli, Spec. astron., chap. 16, 271.
¹²⁴ For later examples in the same tradition (with illustrations), see Richard Kieckhefer, Forbidden Rites: A Necromancer's Manual of the Fifteenth Century (University Park, Pa.: 1997).
¹²⁵ Geomancy is a divinatory technique loosely related to astrology, but which does not require knowledge of actual planetary configurations. Albert’s Dominican confrere, William of Moerbeke, the great translator, composed a geomantic treatise, his only preserved original work. See Lorenzo Minio-Paluello’s informative article in the Dictionary of Scientific Biography, vol. 9 (New York: 1970–), 434–440, and esp. 435. For a penetrating study of geomancy in the Middle Ages, see Thérèse Charmasson, Recherches sur une technique divinatoire: La géomancie dans l’Occident médiéval (Geneva: 1980).
¹²⁶ On the origins of chiromancy in the West, see Burnett, “The Earliest Chiromancy in the West,” (X, originally published 1987), 189–195, and “Chiromancy: Supplement. The Principal Latin Texts on Chiromancy Extant in the Middle Ages,” (X, 1–29), both in Magic and Divination. For much on physiognomy within the map of knowledge (where it forms part of the link between astrology and medicine), and as taught at the universities in the 13th and 14th centuries, including in the work of Albert the Great himself, see Jole Agrimi’s groundbreaking studies collected in her Ingeniosa scientia nature: Studi sulla fisiognomica medievale (Florence: 2002).
in contrast to aeromancy, pyromancy, and hydromancy, that is, divination by means of air, fire, and water, which have an idolatrous demeanor, apparently because there is no natural way that these elements could legitimately signify anything concerning the future without the assistance of demons.127

On the basis of such texts, we derive a more accurate sense of the late 13th-century map of knowledge, and an authoritative and influential delineation of which practices were considered legitimate and which not. Necromantic texts—including problematic necromantic images as well as the enumerated problematic divinatory practices—are idolatrous and/or demonic, and thus illegitimate for religious reasons. The four canonical types of practical astrology (including non-demonic astrological images), on the other hand, are legitimate because they rely only on natural celestial powers and thus have no taint of idolatry. For the Magister Speculi, “necromancy” is always a disparaging term (whether abominable or detestable) in the same way that “divination” is for Thomas Aquinas in Summa Theologiae IIa, IIae, 95 and for the same reasons, as I will discuss further below. Nevertheless, we will soon see that the Magister Speculi’s clear terminological distinction does not hold for Albert’s authentic De mineralibus.

**Magic in Albert’s Authentic Writings**

We have just discussed the Speculum astronomiae’s influential treatment of astrological and necromantic images,128 and several divinatory practices, most of which fall within modern historiographic notions of “magic” and are thus discussed here, even though we will have noticed a striking lack of the term “magic” itself in any of the texts treated so far. I now turn to Albert’s authentic views on magic, which, according to Thorndike, he did not discuss much at all.129 Albert does, however, discuss magical

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127 For more on the nature of divination in the 13th century and its earlier roots (with further bibliography), see Boudet, Chapter 2: “Divination et arts divinatoires aux XIIe et XIIIe siècles,” 89–117.

128 Weill-Parot reconstructs the history of astrological images in great detail from its 13th-century inception (with some prehistory) throughout the 15th century, ending with Hieronymus Torrella, Opus praeclarum de imaginibus astrologicis (Valencia: 1496). See also Weill-Parot’s critical edition of Torrella’s Opus with an extensive introduction: Jérôme Torrella (Hieronymus Torrella), Opus praeclarum de imaginibus astrologicis, ed. Nicolas Weill-Parot (Florence: 2008).

129 HMES 2, 555: “He [Albert] nowhere in his commentaries on Aristotle or other works of natural science really stops and discusses magic at any length.” On 260–272, Weill-Parot
objects in *De fato*, where he actually refers to magical images (*imagines magicae*) while drawing parallels between art and nature, a theme he also treats in detail in *De mineralibus*.\(^{130}\)

In *De fato*, Article 4 (*ad 7*), Albert discusses talismans:

> For, just as the radiation of the period (*radiatio periodi*) impresses (*imprimit*) the disposition of the order of existence and [its] duration on natural things, so it impresses it [sc. the *dispositio*] on man-made [objects]. Because of which, the figures of magical images (*figurae imaginum magicarum*) are taught to be made in relation to an aspect of the stars.\(^{131}\)

Man-made magical images—which seem very similar to the *Speculum astronomiae*’s *imagines astronomicae*—are thus informed by the heavens just as natural things are. The authentic Albert thus provides exactly the same natural-philosophical foundations for making talismans that we saw for astrology in Part 1.\(^{132}\)

Further, in a conceptually related passage of *De natura loci*, Albert refers to the practical benefits of astrological knowledge:

> Therefore, these things noted in general concerning place are similar, which, nevertheless, by accident from the closeness of mountains or their location, and the closeness of seas, are frequently impeded. They also sometimes receive an impediment by means of the handiwork (*artificium*) of experienced men, who know the locations and virtues of the stars and impede their effects, because, as Ptolemy says in the *Tetrabiblos*, the effects of the stars can be impeded and expedited through the wisdom of men experienced in the stars.\(^{133}\)

Albert seems to refer here specifically to talismans made in accordance with astrological timing, as we found in *De fato* and *Speculum astronomiae*, and in very similar language. Thus, from the texts examined here, the authentic Albert and the author of the *Speculum astronomiae* both

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\(^{131}\) Alb., *De fato*, Ed. Colon. 17/1, 76, lns. 38–43.

\(^{132}\) Albert also explicitly states that he was experienced in magic (*nos ipsi sumus experti in magicis*) in his paraphrase commentary on Aristotle’s *De anima*; see Loris Sturlese, “Saints et magiciens: Albert le Grand en face d’Hermès Trismégiste,” *Archives de Philosophie* 43 (1980), 615–634, see 617.

\(^{133}\) Alb., *De nat. loci.*, Ed. Colon. 5/2, 9, lns. 38–46.
seem to hold strikingly similar views, although the authentic Albert never uses “imago astronomica”, the term coined in the Speculum astronomiae. Albert does, however, call them imagines magicae in De fato.

De mineralibus

According to Weill-Parot, De mineralibus (also written before 1254) is Albert’s most important treatise for his views on astrological images, and thus it should be compared closely with views expressed in the Speculum astronomiae. I will be very selective here. At the beginning of Book 2, Tractate 3 on talismans (imagines) and seals (sigilla) in stone (De imaginibus autem lapidum et sigillis), in defending why he is writing about such things—because of the goodness (bonitas) of the doctrine (!) and the insistence of his associates—Albert locates these practices within the map of knowledge. He states explicitly that this part of the study of minerals is a part of necromancy (pars necromantiae), and concerns that species of necromancy which is subalternated to (dependent on) the science of the stars (quae astronomiae subalternatur) and treats talismans and seals.

Images and sigils are thus located within the part of necromancy associated with the science of the stars, just as we saw in the Speculum astronomiae, where talismans were placed within the context of astrological elections. There, however, the Magister Speculi also distinguished sharply between two illegitimate types of talismans, both of which he explicitly called necromantic, and the one legitimate type, for which he coined the term imago astronomica. In contrast to the Speculum astronomiae, then, Albert in De mineralibus uses the term necromancy more broadly and without a negative connotation to include what he calls imagines and sigilla made of stone.

To further articulate his position, Albert states immediately below that this subject cannot be fully known unless at the same time the science of the stars (astronomia), magic (magica), and the necromantic sciences

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134 Weill-Parot, 268.
136 Alb., Mineral. 2,3,1, Borgn. 5, 48a; Wyckoff, 127.
(necromantiae scientiae) are also known, thus locating talismans and seals as overlapping at their respective borders. Likewise, after an intensive chapter on the significations of talismans in stone (De mineralibus 2.3.5, to be discussed just below), Albert reprises the point: “These matters cannot be proved from the principles of natural philosophy (ex principiis physicis): For this, one should know astronomia, magica and the necromantic sciences (necromantiae scientiae).” Thus for Albert the science of the stars, magic, and necromancy are interrelated, and, with natural knowledge, can offer a complete understanding of talismans and seals in stone.

Albert sheds light on what he means by magica at De mineralibus 2.3.3, where he discusses why gems were taught to be engraved (insculpi) in the first place, and what sort of aid these seals can have. The cause is known, he says, from the science of the Magi, among whom he names Magor the Greek, Germa (Iorma) the Babylonian, and Hermes the Egyptian in the first group, and Ptolemy, Geber Hispalensis, and Tebith (Thabit) in the second. I will treat the material in this chapter in some depth.

After naming the early authorities, Albert states the “first tenet (principium) in this science, that everything which comes to be by nature or art is moved at first by celestial powers, and concerning nature there is no doubt”. We find ourselves immediately in familiar territory, but here it is stated as a first principle of ipsa scientia, that is, the scientia Magorum. Celestial virtues are, once again, utterly central. Since what comes to be naturally is not controversial in this respect, Albert extends the analysis to engage what is made by man (arte):141

In art also it is established for this reason, that something now and not before stimulates a person’s heart to make [or do something]: And this

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137 Alb., Mineral. 2.3.1, Borgn. 5, 48a; Wyckoff, 127.
138 Alb., Mineral. 2.3.5, Borgn. 5, 55a; Wyckoff, 145.
139 Wyckoff discusses the identities of these figures at 272–278; Weill-Parot brings our knowledge up to date at 41–42. For Hermes in particular, see Sturlese, “Saints et magiciens,” and Paolo Lucentini, “L’ermetismo magico nel secolo XIII,” in Sic itur ad astra: Studien zur Geschichte der Mathematik und Naturwissenschaften (Wiesbaden: 2000), 409–450; repr. in his Platonismo, ermetismo, eresia nel medioevo (Louvain-la-Neuve: 2007), 265–324. He treats the Speculum astronomiae at 289–294, stating clearly at 289 that Albert is not its author. He then treats the authentic Albert at 294–306.
140 Alb., Mineral. 2.3.3, Borgn. 5, p. 51a: “Est autem principium in ipsa scientia omnia quaecumque fiunt a natura vel arte, moveri a virtutibus coelestibus primo: et hic de natura non est dubium.”
141 We will recall the talk of man-made objects just above.
cannot be the case unless a celestial power (\textit{virtus coelestis}) [does so], as the aforementioned wise men say.\footnote{Alb., \textit{Mineral.} 2.3.3, Borgn. 5, 51a–b, Wyckoff, 135.}

Celestial powers thus inspire people to make or do something at a particular time. Although Albert does not mention it here, this also provides the natural-philosophical foundations for interrogations, an astrological practice we have not yet encountered in Albert’s authentic works, but only in the \textit{Speculum astronomiae}.

Albert supports this claim and shows how it works by further analyzing how people act:

For there is in man a twofold principle of actions, namely nature (\textit{natura}) and will (\textit{voluntas}). Nature is ruled by the stars, but the will is free.\footnote{“et natura quidem regitur sideribus: voluntas quidem libera est.”} But unless it resists, the will is drawn along by nature and becomes less flexible; and since nature is moved by the motions of the stars, the will then begins to be inclined to the motions and configurations of the stars.\footnote{Alb., \textit{Mineral.} 2.3.3, Borgn. 5, 51b, Wyckoff, 135.}

Although the will is ultimately free, in most cases people follow the inclinations of nature and thus the stars. This argument thus provides the natural-philosophical and psychological foundations for practical astrology while also protecting man’s freedom of will.

How, then, do celestial virtues enter a work of art? Since the heavens ultimately incline people to do this or that by first providing them with their particular abilities,

Therefore, if the force and effluence of the stars flows some influence causing art into the artisan, it is certain, unless it is impeded,\footnote{We will recall talk of “impeding” these virtues in the text recently mentioned from \textit{De nat. loci.}} that it will flow something of its power into all works of art.\footnote{Alb., \textit{Mineral.} 2.3.3, Borgn. 5, 51b, Wyckoff, 135: “Si igitur vis et afflatus siderum influit quamdam causalitatem artis in artefice, pro certo nisi impediatur, influet omnibus operibus artis aliquid suae virtutis.”}

Celestial virtues thus enter a work of art by means of the artisan and the timing of his inspiration. These virtues can then be further focused and particularized toward specific ends by means of conscious astrological timing (elections), as we will see.

Having established this first principle, he turns to the second: “That the figures of the heavens are the first figures, and [that these exist] before the
figures of everything generated by nature and art.” On this basis, he establishes the metaphysical principle that “what is first in the genus and order of generators without a doubt flows its causal ability in a fitting manner into everything that follows”.147 Thus, the celestial figure will have its causality in everything generated by nature. Moreover, because art is resolved into a principle of nature, this also follows for what is made by art.148

Albert then draws his conclusions:

Therefore we must (ex necessitate) conclude that if a figure is impressed upon matter, either by nature or by art, [with due regard to] the configuration of the heavens, some force of that configuration flows into the work of nature or art. And this is the reason why Ptolemy149 recommends that all actions, comings and goings, and even the putting on and taking off of clothing, be performed [with due regard to] the configuration of heaven. And therefore, too, in the science of geomancy it is recommended that the figures made up of points be reduced to those [of constellations]; for otherwise they are of no use.150 And therefore also in considering the craft of making gems and metallic images (imagines metallicae) in the likeness of the stars, the first teachers and professors of natural knowledge (physici) recommended that the carving be done at duly observed times, when the heavenly force is thought to influence the image most strongly, as for instance when many heavenly powers combine in it. And they worked wonders by means of such images.151

Albert’s language is very strong (absque dubio, ex necessitate, etc.) and leaves no room for doubt as to the main thrust of his analysis. Images made at astrologically elected times can be very powerful indeed!

After this general analysis, Albert lists the five most important astronomico-astrological features to be observed for strengthening talismans, including the constellations, and planetary positions in zodiacal signs that strengthen other signs. He focuses on the fourth and fifth:

(4) “From the amount of elevation and elongation, according to the latitude

147 Alb., Mineral. 2.3.3, Borgn. 5, 51b, Wyckoff, 135: “Quod autem primum est genere et ordine generantium, absque dubio causalitatem suam per modum cuique congruum, omnibus influit sequentibus.”
148 Alb., Mineral. 2.3.3, Borgn. 5, 51b, Wyckoff, 135.
149 This is the Ptolemy of the Centiloquium once again; see Wyckoff’s note at 136, note 4.
150 Charmasson discusses how geomancy was considered to be derived from (and thus dependent on) astrology; Recherches sur une technique divinatoire, 9–14.
151 Alb., Mineral. 2.3.3, Borgn. 5, 51b–52a, Wyckoff, 136: “gemmas et imagines metallicae ad imagines astrorum observatis temporibus quando vis coelestis fortissima ad imaginem eandem esse probatur, ut puta coelestibus multis virtutibus admixta, sculpi praecipiebant, et mira per tales imagines operabantur.”
and longitude measured from the equinoctial and the ascendant.”  

(5) “From the relation of all these to the latitude of the clime [where the observation is made].” The relationship of the place of making to the celestial situation thus reappears as directly relevant to the strength of images. Albert’s conclusions are utterly central to our concerns:

And the last must be carefully observed, since from this and the fourth the entire quality of the angles is varied, which the rays describe on the figure of anything generated [by nature] or made by art. And it is in accordance with this quantity of angles that celestial powers are poured into things. Few people make these observations, and fewer still know how to make them.

Albert has now explicitly provided a geometrical optical analysis of how to strengthen the power of talismans that is exactly the same as what we found in De natura loci and elsewhere. From this treatment we can clearly see how Albert’s astrologizing natural philosophy deeply informs his analysis of the making of magical images. One last passage will confirm this:

But we are not unaware that, just as the natural powers endure for a certain time and no longer, so it is also with the power of talismans; for a certain power is poured down from the heaven only during a certain period of time, as we have said at the end of On Generation [and Corruption]. And afterwards, the empty useless talisman remains cold and dead.

Here Albert explicitly uses the language of “periods” from De generatione et corruptione 2.10 to inform his understanding of astrological images.

Albert concludes Book 2 (3.4–5) practically by providing detailed descriptions of how to make images that represent all the signs of the zodiac and all seven of the planets, but we will not follow him there, beyond giving one example, that for Saturn:

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152 “Quarto autem ex quantitate elevationis et elongationis secundum longitudinem et latitudinem a linea aequinoctiali et ascendente.” Alb., Mineral. 2.3.3, Borgn. 5, 52a.
153 “Et quinto ex respectu omnium horum ad latitudinem climatis.” Alb., Mineral. 2.3.3, Borgn. 5, 52a.
154 Alb., Mineral. 2.3.3, Borgn. 5, 52a, Wyckoff, 136–137: “hoc enim multum est observandum, quia ex hoc et quarto variatur tota quality angulorum quos describunt radii super figum rei generatæ vel factae per artem, et secundum quantitatem illam angulorum infunduntur rebus virtutes coelestes: hoc enim pauci observant, et pauciores observare sciant.”
155 Alb., Mineral. 2.3.3, Borgn. 5, 52a–b: “Sed non lateat nos, quod sicut virtutes naturales perdurant in quodam tempore, et non ultra, ita etiam de virtutibus imaginum: non enim influitur aliqua virtus de coelo nisi in quodam tempore periodi, sicut diximus in fine Peri geneseos: et postea cassa et inutilis remanet imago frigida et mortua.”
The engraving (*inscriptio*) of Saturn is that of an old man holding a curved sickle in his hand. He is not cheerful and smiling, but dark, with a scanty beard. This, by reason of its cold and dryness, is said to confer a steadily increasing power, especially if it is on a stone of the same power (*virtus*, i.e. cold and dry). And you may know that it confers this more quickly on the ignoble than the noble, since Saturn, according to the art of the stars, does not love nobles.\footnote{Wyckoff, 143.}

Wyckoff notes (following Haskins) that whoever composed the lapidary that Albert used here seems to have had an illustrated manuscript of the constellations before him.\footnote{Wyckoff, 140: “This chapter (sc. 2.3.5) incorporates an astrological lapidary of engraved gems which is found also in Arnold of Saxony and Thomas of Cantimpré and elsewhere.” She discusses this further in appendix C (“Astrology and Magic”), Section 4, on astrological seals, especially at 276–277. She refers the reader to Charles H. Haskins, *Studies in the History of Medieval Science* (Cambridge, Mass.: 1924), 285–288 and 336–345, and to the photographs in the Houghton Library of Harvard University. Weill-Parot discusses this iconographic tradition at 105–109.} She also notes that Albert in the *De mineralibus* offers exactly the same authorities as does the *Magister Speculi*, except for Geber Hispalensis.\footnote{Wyckoff, 275.} Finally, every benefit Albert claims in the *De mineralibus* is all-natural, even for ligatures and suspensions, namely, stones bound to any part of the body or hung around the neck, which are the subject of the second book’s final chapter (3.6): “in these, medicine and aid are conferred solely by natural powers”.\footnote{“in illis non nisi naturaliter ex virtutibus conferunt medicinam et iuvamen”. Alb., *Mineral*. 2.3.6, Borgn. 5, 55b; Wyckoff, 146. The medical dimension is emphasized in Marsilio Ficino’s *De vita libri tres* and Girolamo Torrella’s *Opus praeclarum*.}

Albert’s treatment of what we would call magical images (or talismans) in *De mineralibus* thus closely coheres with his authentic astrologizing Aristotelian natural philosophy. Indeed, *De mineralibus* offers some of the practical benefits to be derived from studying natural philosophy in general, and the science of the stars in particular. Despite minor differences in terminology, then, the legitimate talismans Albert discussed in *De mineralibus*, which he refers to there as necromantic, all fall within the legitimate type of talismans in the *Speculum astronomiae*, where they are called astrological (and contrasted with necromantic) talismans. The fundamental distinction turns on whether the talisman is powered by natural and thus legitimate celestial means, or by illegitimate demonic ones.
Thomas Aquinas on Images

For Albert’s most famous and influential student, Thomas Aquinas, however, matters were strikingly different. Although he considered both astronomy and astrology to be perfectly legitimate modes of knowledge, he utterly rejected the view that *imagines astronomicae* were legitimate and natural, claiming instead that they concealed a tacit pact with demons.160 Thomas discussed this in *Summa Theologiae* IIa, IIae, 96 (ad 2), which also uses the phrase *imagines astronomicae*, and responds precisely to the argument in *Speculum astronomiae*, Chapter 11:161

[A] With respect to the second [argument], we should say (i) that the natural powers of natural bodies follow on their substantial forms, which are allotted from an impression of the celestial bodies (*quas sortiuntur ex impressione caelestium corporum*); and therefore (ii) from the impression of these same [celestial bodies] active powers are allotted. [B] But the form of artificial [i.e. man-made] bodies come from the idea of the artisan; since they [artificial bodies] are nothing other than composition (*compositio*), order (*ordo*) and shape (*figura*), as is said in [Aristotle’s] *Physica* I, they cannot have a natural power for acting (*non possunt habere naturalem virtutem ad agendum*). [C] From this it [follows] that from an impression of celestial bodies, no power is allotted (*nullam virtutem sortiuntur*), insofar as they are man-made bodies, except with respect to their natural matter.162

Thomas stakes his claim strongly here: No power is allotted to man-made objects from the heavens, beyond what exists naturally in their material substrate.

Thomas supports his argument by pitting Augustine’s great authority against Porphyry:

Therefore, what seemed to be the case for Porphyry is false, as Augustine says: “with herbs and stones (*lapidibus*) and living things (*animantibus*) and specific sounds (*sonis*) and voices (*vocibus*) and representations (*figurationibus*) and images (*figmentibus*)—[and] with the motions of the stars observed in the turning of the heavens—that suitable powers of the stars (*potestates idoneas siderum*) can be fabricated in (on?) earth by men for achieving various effects": as if effects of magical arts come forth from the power of

160 See Weill-Parot, 38–39 and 223–227. On 227 he characterizes Thomas’s position as “un rejet global”. On 72–77 and especially 77 he also attributes some level of subterfuge to the *Magister Speculi*’s presentation.

161 Since (1) Thomas here seems to respond directly to the *Speculum* and (2) this chapter of the *Summa* is firmly datable to 1271–72, 1271–72 thus provides a *terminus ante quem* for the composition of the *Speculum*. Also to the same effect, the 12th *Quodlibet* (dated 1270–72) is the only other text by Thomas to use the phrase *imago astronomica*. Weill-Parot discusses the dating of both texts at 39–40.

the celestial bodies (*quasi effectus magicarum artium ex virtute caelestium corporum provenirent*). But as Augustine adds there: “this entire [matter] pertains to demons (*ad daemones*), who play games (*ludificatores*) with the souls under them.”163

Rather than nature through the heavenly bodies, demons are responsible for whatever powers magical arts have. With this argument, Thomas clearly shows his awareness of the central issues as he takes a strong general stand against the magical arts.

He then turns directly to astrological images:

> Whence also, what they call *imagines astronomicae* have their effect from the operation of demons. The sign of this is that it is necessary for certain characters to be inscribed in them, which do not act naturally on anything (*naturaliter ad nihil operantur*); for a figure is not a principle of natural action. But astrological images differ from nigromantic [images] in this, that in nigromantic [images], expressed invocations and a certain deception come to be, whence they pertain to express pacts entered into with demons; but in other images there are tacit pacts by means of signs of figures or characters.164

Although astrological images are claimed to be all-natural and thus legitimate, Thomas vehemently disagrees, asserting strongly that they indicate instead a tacit pact with demons, thus folding the *Speculum astronomiae’s* third legitimate type of images into the second detestable class, and using the *Speculum’s* precise terminology to do so.165

With these distinctions, Thomas shows full awareness of the issues at stake, since, in the previous chapter of the *Summa Theologiae* (IIª, IIae, 95), he discussed in detail astrology’s relation to divinatory practices, arguing forcefully for astrology’s legitimacy as a mode of predicting the future precisely because it is all-natural.166 Regardless, for Thomas, astrological images of all types cross the very same line of legitimacy, which both Albert and the *Magister Speculi* (despite some striking differences in terminology) had extended to one particular type of talisman. In so

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165 Thomas makes a similar argument at the end of his *De occultis operibus naturae*, which I unfortunately cannot discuss here due to lack of space; Thomas Aquinas, *De occultis operibus naturae*, ed. Leon., 43: 186, lns. 259–308.
166 For Thomas, all the practices he labels “divinatio” (including hydromancy, pyromancy, and aeromancy) are idolatrous and ultimately demonic. He distinguishes all of these “divinatory” practices sharply from both astronomy and astrology in our sense, which he strongly argues are both legitimate ways of deriving knowledge of the future, albeit with different degrees of certainty, exactly as we saw with Albert.
doing, Thomas intended to wholly remove astrology’s operative (magical) dimension, rendering it fully a knowledge-focused practice. Albert, Thomas, and the Magister Speculi thus all completely agree that astronomy and astrology are legitimate practices offering knowledge of the past, present, and future. In this respect, the only controversial issue concerns astrological images or talismans, one non-demonic, natural part of which Albert and the Magister Speculi consider legitimate, and which Thomas entirely rejects.

Thomas’s position thus contrasts starkly with Albert’s and the Magister Speculi’s on this hotly contested issue. Not surprisingly, the tensions between these two opposed positions by two great Dominican authorities carried on with their followers, and was indeed used by Girolamo Torrella to structure his Opus praeclarum de imaginibus astronomicis of 1496. The remainder of astrology, however, was perfectly legitimate for both Thomas and Albert, a point worth emphasizing.

Finally, although Thomas’s position as represented here seems adamantly set against any sort of natural and thus legitimate astrological images, he was not always interpreted this way, at least in the 16th and 17th centuries. In fact, in the officially endorsed Tridentine edition of Thomas’s works with Cardinal Cajetan’s (Tomasso de Vio’s) commentary, Thomas was (re)interpreted to have a strongly pro-natural view of talismans, at least as Geralomo Vitali (1623–98) represented it in the article “Imagines astronomicae” of 1668, where Vitali also interprets Thomas in this way. Vitali even describes the practical experiences with images that converted him to this position from his earlier more straightforward interpretation of Thomas’s view. Indeed, as part of Vitali’s article, he also quotes verbatim from Albert’s positive discussion in De fato of the radiatio periodi (discussed above) as Opusculum 28 (Art. 4) by Thomas himself. Strangely, Albert’s name does not appear at all in Vitali’s four page discussion.

Conclusion

Albert’s authentic astrologizing Aristotelian natural philosophy thus provides the scientific foundations for practical astrology in two major
respects: (1) knowledge-focused (gnostic or prognostic), allowing for prognostications within the context of the four main types of practical astrology (revolutions, nativities, interrogations, and elections), and (2) operational or magical, which acts on people and the world (including love magic and pest extermination), with its characteristic object, namely, an astrological image or talisman. The latter also uses some of the practices of the former, including elections (of which it is a sub-part) and interrogations, as we saw; and there is every reason to think that it could also use nativities and revolutions in the right circumstances.

These conclusions have been established from Albert’s paraphrase commentaries on core texts of Aristotle’s natural philosophy (De caelo and De generatione et corruptione), an addition to the Corpus Aristotelicum in his own name (De natura loci), a theological disputation (De fato), and now another original work meant to fill a gap in Aristotle’s natural philosophy (De mineralibus). Albert’s theory and practice concerning talismans (with their natural-philosophical foundations) are also strikingly similar to—and deeply harmonious with—the views articulated in the deliberately anonymous Speculum astronomiae, thus indicating another strong argument for Albert as its author. In this respect, we can also strongly contrast both Albert and the Speculum with Thomas Aquinas’s radical rejection of talismans.

Moreover, concerning the distinction emphasized earlier, Albert’s reputation as the purported author of the Speculum astronomiae, then, did not subvert an otherwise more orthodox position revealed in his authentic works, as for example, we found in Thomas Aquinas’s, where astrology qua knowledge was perfectly legitimate, but qua magic was rejected as non-natural and thus demonic. We saw that Albert’s authentic astrologizing Aristotelianism provided the natural-philosophical foundations for astrological practice in both respects, and thus harmonizes well with the picture offered in the Speculum astronomiae. Indeed, if anything, the Speculum served to enhance the astrological dimension of Albert’s project to reconstruct Aristotelian natural knowledge for the Latin West.

How, then, should we relate these conclusions to the issue of the Speculum’s authorship?171 Despite significant continuities with talismans and other more general points of comparison, the evidence offered in this chapter presents some major challenges to Albert’s authorship, including the striking discrepancy in terminology concerning talismans and

171 Weill-Parot discusses the arguments for Albert as the author of the Speculum astronomiae at 278–280 and reviews the scholarship on this issue at 27–32.
necromancy. As we just saw, Albert in *De mineralibus* described legitimate astrological images as being a part of necromancy, whereas the *Magister Speculi* radically rejects that term, reserving it only for illegitimate demonic practices.

Furthermore, in the *De caelo*, the two astrological books that Albert refers to, betray a remarkable ignorance of practical astrology.\(^\text{172}\) The fact that he attributes the *De magnis coniunctionibus* (one of the most influential astrological texts ever written in Latin!) to Ptolemy, and that he refers to an obscure text, also supposedly by Ptolemy, sharply contrasts with the author of the *Speculum*, who has an unparalleled knowledge of the literature on all branches of astrology, who is obsessed with accurate and detailed references, who perfectly knows that Abumashar is the author of the *De magnis coniunctionibus*,\(^\text{173}\) and who says nothing about the other book supposedly by Ptolemy (although the *Magister Speculi* was certainly aware of many obscure and rare texts!). Likewise, Albert calls the seventh sign the house of death and uses an uncommon technical terminology, for example, *elector*, *scientia electorum*, and *geneatici*. That a single author wrote both texts is hard to believe. But, of course, *De caelo* (between 1250 and 1254) was probably written several years before the *Speculum astronomiae* (most likely in the 1260s and almost certainly by 1270), thus giving Albert up to 15 years to catch up with his astrological homework and to modify his terminology concerning talismans and necromancy.

Regardless, from the mid-14th century, Albert was increasingly held to be the author of the *Speculum astronomiae*, as we can see continuously through at least the middle of the 17th century. Unfortunately, the influence of both Albert’s authentic astrologizing Aristotelian natural philosophy and the *Speculum astronomiae* have yet to be fully studied.\(^\text{174}\) The examples offered here—mainly from the University of Padua, where

\(^{172}\) This paragraph is deeply indebted to David Juste’s insightful comments.

\(^{173}\) Zambelli, 228; the incipit “Scientia significationum…” is correct.

\(^{174}\) Zambelli discusses the influence of the *Speculum astronomiae* in various respects; as does Paravicini Bagliani in *Le Speculum astronomiae*; Weill-Parot specifically discusses the influence of *imago astronomica* and related topics. These three all trace influences through about 1500. Graziella Federici-Vescovini provides some evidence for the influence of Albert’s authentic works for the 14th century in *Astrologia e scienza: La crisi dell’Aristotelismo sul cadere del trecento e Biagio Pelicani da Parma* (Florence: 1979), and in the article cited just below. Although Edward Mahoney mainly treats the influence of Albert’s natural philosophy (including *De natura loci*) at Padua in the 15th century, there is characteristically a much broader range of useful bibliography in his “Albert the Great and the *Studio Patavino* in the Late Fifteenth and Early Sixteenth Centuries,” in Weisheipl, ed., 537–563.
Albert studied in the 1220s and the site of his joining the Friars Preacher—merely point to a much larger story that deserves further attention.

In his early 14th-century *Conciliator controversiarum, quae inter philosophos et medicos versantur*, the influential professor of astrology, philosophy, and medicine, Pietro d’Abano, precisely replicated the *Speculum astronomiae*’s structure of practical astrology, but without citing the title nor naming its author.175 In the late 14th century, Biagio Pelicani da Parma, professor of mathematics, astrology, and philosophy at the universities of Padua, Bologna, and Pavia,176 in addition to citing his authentic (and deeply astrologizing) *De natura loci, De causis proprietatibus elementorum, and De caelo et mundo*, calls Albert the author of the *Speculum astronomiae*.177 Further, in his mid-15th-century inaugural oration for a course on al-Farghani’s *De scientia stellarum* at the University of Padua (1464), Regiomontanus explicitly referred to Albert, his fellow countryman, as the author of the *Speculum astronomiae*: “Albertus Magnus in speculo Astronomiae.”178 At the end of the 15th century in his influential *De vita libri III* (1489), Marsilio Ficino refers to Albert as author of the *Speculum astronomiae*, as does Girolamo Torrella in his *Opus praeclarum de imaginibus astrologicis* (1496–1500), although he calls it the *Speculum scientiarum*.179


176 For his career, see Federici-Vescovini, *Astrologia e scienza*, 24–39.


179 Ficino: “Albertus quoque Magnus inquit in Speculo” (3.12.121); Torrella: “Albertum Magnum in Speculo scientiarum” (16). For Ficino’s text, see *Three Books on Life*, ed. and trans. Carol V. Kaske and John R. Clark (Binghamton, N.Y.: 1989); for Torrella’s, see *Opus praecellarum de imaginibus astrologicis*, ed. Nicolas Weill-Parot (Florence: 2008). I discuss Ficino’s treatment of talismans in Part 3 of volume 1 of my book, and Torrella’s in its conclusion. Sturlese also gives evidence for Albert’s reputation as a magician at the end of the 15th century, which his biographer, Peter of Prussia, took pains to refute in his *Vita*
Albert’s astrologizing Aristotelianism was also widely influential in 16th-century Germany in the reformed Lutheran universities under Philipp Melanchthon’s deeply astrological pedagogical leadership.\textsuperscript{180} Sachiko Kusukawa has argued persuasively that Melanchthon promoted mathematics primarily toward the study of astronomy and astrology, the two sister sciences of the stars, with the ultimate aim of helping students to understand God’s providential role in the world. This is one of her book’s central arguments:\textsuperscript{181}

Melanchthon’s message was always the same: the studies of astrology, astronomy, arithmetic and geometry are necessary because they all aim at the same goal of knowing God the Ruler and Creator; the inseparable studies of astrology and astronomy had to be studied because they were the knowledge of God’s government of the heavens; geometry and arithmetic had equally to be learnt because they were necessary preparations for this knowledge of God’s government.\textsuperscript{182}

She repeatedly emphasizes Melanchthon’s remarkable consistency in this respect during the final 30 years of his career (1531–60).

Kusukawa’s claims are too strong, however, for the uniquely Lutheran nature of this vision.\textsuperscript{183} Indeed, Albert’s authentic astrologizing Aristotelianism as well as ideas in the \textit{Speculum astronomiae} (Chapter 3 in particular), which by Melanchthon’s time was most often attributed to Albert, were Melanchthon’s likely sources for this view. This is all the more likely considering how deeply Melanchthon’s teacher at Tübingen, Johannes Stöffler, was influenced by Albert.\textsuperscript{184} A close comparison of Melanchthon’s

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\textit{b. Alberti Magni} (1486–87); “Saints et magiciens,” 616. David J. Collins devotes a recent article to this topic: “Albertus, Magnus or Magus? Magic, Natural Philosophy, and Religious Reform in the Late Middle Ages,” \textit{Renaissance Quarterly} 63 (2010), 1–44.

\textsuperscript{180} In addition to Kusukawa’s work cited below, see also Claudia Brosseder, \textit{Im Bann der Sterne: Caspar Peucer, Philipp Melanchthon und andere Wittenberger Astrologen} (Berlin: 2004).


\textsuperscript{182} Kusukawa, \textit{Transformation of Natural Philosophy}, 142.

\textsuperscript{183} Kusukawa, \textit{Transformation of Natural Philosophy}, 143: “[T]hat the providence of God is knowable through \textit{this} world is a specifically Lutheran interpretation.” “His natural philosophy was designed to address an issue which was specific to the Lutherans and thus Melanchthon created a natural philosophical astrology of his own (p. 144).”

natural philosophy textbook, the *Initia doctrinae physicae* (1549), with the basic treatises of Albert’s commentaries on Aristotle would be very worthwhile.

Finally, in the 17th century, Andrea Argoli, professor of mathematics at the University of Padua (1632–56) and an internationally renowned compiler of state-of-the-art ephemerides,\(^{185}\) refers in the same breath to both God’s Providence and Albert as the author of the *Speculum astronomiae* (1648):

> The eternal Providence of God, the best and greatest, entrusted this lower world to secondary causes for governing; and lower things coming from God, with the angels and celestial bodies mediating, were distributed for the use of man, almost all of which It [sc. Divine Providence] shows us in the book of the universe, (as Albertus Magnus says well in the *Speculum [astronomiae]*)], which is the parchment of the heavens.\(^{186}\)

Within the mathematical disciplines at the university of Padua (and elsewhere) through at least the middle of the 17th century, then, Albert the Great was thought to have promoted an astrologizing Aristotelian natural philosophy that God had created in order (among other things) to communicate His Divine Providence to human beings.

I hope I have shown how central astrology and its natural-philosophical foundations were in Albert’s authentic Aristotelian system of natural knowledge, as well as gestured toward the importance of this tradition to the history of premodern science from the 13th through the 17th centuries. This later importance goes both for Albert’s authentic astrologizing Aristotelianism as well as for the influential and probably pseudonymous *Speculum astronomiae*, which was integrated early on into the Albertan corpus. This tradition was influential for centuries, indeed, until the Aristotelian worldview itself was finally rejected from the domain of legitimate natural knowledge in the 17th and 18th centuries—with its concomitant expulsion from university curricula—in the complex and insufficiently understood processes that also led to astrology’s rejection as legitimate natural and political knowledge.\(^{187}\) Much of this story remains to be told.

\(^{185}\) For more on Argoli, see M. Gliozzi’s article, s.v., *Dizionario Biografico degli Italiani*, (Rome: 1960–) vol. 4 (1962), 132–134.

\(^{186}\) *Exactissimae coelestium motuum ephemerides* (Padua: 1648), 259.

There can be little doubt that Albert the Great was among the most prolific of medieval scholars. No less a historian than Étienne Gilson remarked on Albert’s “gigantic literary production that defies analysis” and expressed amazement at the large “amount of philosophical and scientific information heaped up in [Albert’s] writings”,¹ Albert’s Aristotelian commentaries alone—that is, his strictly philosophical as opposed to theological works—comprise one of the most ambitious attempts in the history of the Western intellectual tradition to set out systematically the whole of human knowledge.² One would expect that such a scholar would have a great deal to say on logic, human knowledge, and the nature of scientific research. Indeed, even a cursory investigation of his works reveals that his contributions are so extensive that they can hardly be discussed adequately in a single brief essay. The present study, therefore, will be limited to a series of interrelated topics that especially engaged Albert in his lifelong pursuit of learning.

While the limitations of this study necessitate the exclusion of many of Albert’s significant contributions to logic and epistemology, the focus on those issues most closely related to Albert’s research in the natural sciences is not without textual warrant. When Albert announced at the beginning of his commentary on Aristotle’s Physics his intention to make the whole of the new learning of Aristotle intelligible to the Latins,³ he realized that this would be largely a matter of learning in the special sciences of nature and the method of the natural sciences.⁴ Following Aristotle, Albert considered the study of the soul and its operations as part of

³ *Phys.* 1.1.1, Ed Colon. 4/1, 1.
⁴ On the nature and contents of the Aristotelian commentaries see Weisheipl, “The Life and Works of St. Albert the Great,” 28–32; in the same volume also see “Albert’s Work on Natural Science (*libri naturales*) in Probable Chronological Order,” 565–577.
natural philosophy, mathematics as derived from natural philosophy, and metaphysics as foundational to a knowledge of nature. Even the study of ethics and politics, deriving as it does from the study of the soul, is related to the natural sciences. Again following Aristotle, Albert considered logic primarily an instrument for scientific research. While he did admit that the discipline may be studied as a science in its own right, most of his logical writings are focused on logic as the practical art of discourse common to the specialized sciences. A consideration of Albert’s logic and epistemology in relation to the natural sciences, as will be given here, certainly does not exhaust what can be said of his contribution to these disciplines. Nonetheless, this approach to his conception of human knowledge and scientific method will provide an overview of his position on a series of related philosophical issues that Albert himself considered especially significant.

The first five sections of this study are devoted to Albert’s conception of logic and its use in scientific research. Albert commented not only on all of Aristotle’s logical works, but also on those of Porphyry, Boethius, and Cicero. This work is too vast to survey with any degree of comprehensiveness here and, therefore, only selected elements of his contribution to the subject will be considered. In particular, because of Albert’s focus on the use of logic in research, the present treatment will not detail his contributions to strictly formal logic. Rather, this survey will be devoted to his general conception of logic and its application to various forms of scientific investigation. The following three sections of this study treat a series of epistemological issues that received repeated attention throughout Albert’s works. While the focus is on Albert’s conception of human knowledge of nature, his notions of mathematical and metaphysical knowledge are treated as well.

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5 Phys. 1.1.4, Ed. Colon. 4/1, 6–8.
6 Metaph. 1.1.1, Ed. Colon. 16/1, 2.
1. The Subject of Logic

At a certain point in his commentary on Porphyry’s little introduction to Aristotle’s Categories, Albert provides a direct and explicit statement concerning the subject of logic: the subject of logic is argument. He follows this with a brief division of the elements to be considered within logic so understood, thus delineating the discipline. Argument is composed of propositions, making their analysis part of the subject of logic. Propositions are themselves composed of terms and, consequently, the definition of terms is included in the discipline as well. In another discussion, Albert refers to the same division in terms of Aristotle’s works. Logic concerns argument as discussed in the Analytics and the Topics. This presupposes the treatment of the proposition in On Interpretation and of terms in the Categories.

This way of characterizing the subject of logic, however, leaves unanswered many questions about the nature of the discipline and its relationship to the more specialized sciences. For this reason, Albert provides a more extensive treatment of the subject of logic beginning, not with a topical division of the discipline into its parts, but with a functional definition. In the opening tract of his commentary on Porphyry, he sets out to show that logic is a science distinct from other sciences by considering its intentio: logic is the common mode of the sciences as they proceed from the known to the unknown. That there can be a science of this common mode of reasoning is clear from the fact that abstractive reasoning is necessary for movement from the known to the unknown and such reasoning has parts which can be defined, proceeds from principles, and possesses characteristic properties. This definition, however, shows that logic is unique among the sciences, for the principles and conclusions of logic take the form of rules for proper reasoning in the other sciences and in this way constitute the common mode of the sciences. Because of its intentio, then, logic can be understood as an art as well as a science.

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9 De V univ. 1.4, Borgn. 1, 7b.
10 Peri hermeneias 1.1.1, Borgn. 1, 373–376.
11 De V univ. 1.1 and 3, Borgn. 1, 2a and 5a–b; De praedic. 2.1, Borgn. 1, 149a.
12 De V univ. 1.1, Borgn. 1, 2a–b.
13 De V univ. 1.1 and 4, Borgn. 1, 2b and 6b–8b.
14 De V univ. 1.1, Borgn. 1, 3b where Albert calls logic a scientia contemplativa; see also De V univ. 1.4, Borgn. 1, 6b and Top. 1.2, Proaemium operis, Borgn. 2, 235b–237b.
This is why Albert, following Aristotle, insists that logic be learned before any of the other sciences.\textsuperscript{15}

These two ways of characterizing the subject of logic are clearly related, for Albert argues that the division of logic into its parts arises out of its functional definition.\textsuperscript{16} Because the intention of logic is to provide a procedure for advancing from the known to the unknown, it is necessary that it consider the various kinds of unknowns to be known as a result of scientific investigation. First of all is the uncomplex object of simple apprehension. The intellect apprehends the nature of the object when it possesses an answer to the question of what the object of knowledge is (\textit{quid sit}). Second, there is the complex object of composition or division. Such an unknown complex becomes known when the intellect possesses an answer to the question of whether the object truly is the way it is thought to be composed (\textit{an verum vel falsum sit}).\textsuperscript{17} Given that the unknowns are of two kinds, logic must be divided into two parts, each concerning the mode necessary for arriving at knowledge of its proper type of unknown. Simple objects are known when their definition is known, so logic must be concerned with the definition of terms. Complexes are known when the enunciation signifying their composition is known to be true, so logic must be concerned with propositional enunciations. An enunciation is known to be true when its terms are known to be related in a certain manner through some third term. Thus, logic must also concern itself with argumentation by means of which such relations are made manifest. Albert makes it clear, then, that the division of logic is grounded in the functional definition of logic.\textsuperscript{18}

If the function of logic is to serve as the common mode of the special sciences, then the principles of the discipline are oriented to this end. It is in this sense that Albert understands logic to articulate rules of reason, for such rules are the necessary conditions for attaining knowledge of any subject. Taken together with the division of logic into its disciplinary parts of terms, enunciations, and arguments, the functional definition provides

\textsuperscript{15} De \textit{V univ.} 1.3, Borgn. 1, 5b; \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 3.
\textsuperscript{16} De \textit{V univ.} 1.5, Borgn. 1, 8b.
\textsuperscript{17} The types of \textit{ignota} are related to the four scientific questions; see \textit{Anal. Post.} 2.2.10, Borgn. 2, 188a–190b.
an indication of the place of logic among the sciences. The functional
definition also indicates a priority among the parts of logic: terms are for
the sake of enunciations which are, in turn, for the sake of arguments.
This is why the subject of logic may be said to concern the principles
of argument, the whole being designated by its most inclusive part. Yet,
arguments and their terminal and enunciative parts are articulated in lan-
guage. Thus, logic is also a scientia sermocinalis.\textsuperscript{19} Albert, however, is care-
ful to point out that logic is concerned with language only accidentally.\textsuperscript{20}
Essentially, logic is concerned with what is in the intellect of the one who
proceeds to knowledge of the unknown from the known. Strictly speak-
ing, then, logic is primarily concerned with second intentions rather than
language as such.\textsuperscript{21}

Albert presents an argument for the accidental relation of language to
the subject of logic by drawing attention to a distinction between simple
and complex discourse.\textsuperscript{22} Simple language (sermo incomplexus) cannot by
itself be the means by which knowledge of the unknown is attained. This
is because, while such language does signify something, it cannot signify
that something is or is not. Thus, the logician does not consider simple
language except insofar as it is a functional part of complex language
(sermo complexus). Complex language, specifically that sort of complex
language Albert calls an “enuntiatio”, does signify that something is or is
not. Yet it too cannot by itself be the means of knowing the unknown, for
knowledge not only requires a signification of something, but assent in
the knower that something is the case. While enunciations are necessary
for attaining knowledge of the unknown, they are not sufficient. Albert
argues that enunciations, with their simple components, must be brought
into the form of an argument (quod ad formam argumenti collectivus est)
in order to constitute the means by which the knower proceeds from the
known to knowledge of the unknown. This is why argument is, properly

\textsuperscript{19} De V univ. 1.2, Borgen. 1, 4a–b; Peri hermenias 1.1.1, Borgen. 1, 375b; Anal. Post. 1.1.1, Borgen.
2, 2b. See also De V univ. 1.4, Borgen. 1, 7a–b.
\textsuperscript{20} See De V univ. 1.4, Borgen. 1, 7a where Albert compares logic to grammar, poetry, and
rhetoric.
\textsuperscript{21} De V univ. 1.4, Borgen. 1, 9a; see also Metaph. 1.1.1, Ed. Colon. 16/1, 3 where Albert uses
the term intentiones secundas. This interpretation, put forward by Norman Kretzmann in
his entry on the “History of Semantics” for The Encyclopedia of Philosophy, ed. Paul Edwards
(New York: 1967), 371, has been challenged by Richard F. Washell, “Logic, Language, and
Albert the Great,” Journal of the History of Ideas 34 (1973), 445–50. On this debate see the
remarks of Ralph McInerny, “Albert on Universals,” The Southwestern Journal of Philosophy
\textsuperscript{22} De V univ. 1.4., Borgen. 1, 9b–10a.
speaking, the subject of logic and the discipline is a *scientia sermocinalis* only *per accidens*.

Understood in this way, argument constitutes the subject of logic insofar as it is an instrument—that is, insofar as it is productive of an intentional state of knowledge in the knower. Yet, language is necessarily involved in this production. Simple terms and complex enunciations are used in the process of attaining knowledge of the unknown and this is accomplished in the form or context of argumentation. This contextual instrumentality of terms and enunciations determines their *per accidens* relation to the function of logic. The instrumentality of argumentation, however, is related to the purpose of logic in a per se manner, for argument is used in a non-contextual way to bring the knower to knowledge of the unknown.23

Making use of simple and complex instruments in the process of knowing demands that the logician must attend to the features of terms, enunciations, and arguments as those features are manifested in language. Yet Albert insists that the simples and complexes that engage the logician do not belong to the signified thing insofar as it is a thing, but only insofar as the thing is known. He notes that the known through which knowledge of the unknown is attained can be considered in two ways: as existing apart from the mind or as a certain concept in the mind of the knower. It is only insofar as it exists as a known concept that the known is productive of knowledge of the unknown.24 While logic is in a significant sense a *scientia sermocinalis*, its proper concern is not with language per se, but with second intentions. At the same time, logic is not concerned with things in themselves (*res ipsas*), but with the common mode of those sciences that are directly concerned with things in themselves.25

2. The Logic of Universals

Given Albert’s understanding of the subject of logic, both in terms of its divisions and of its function, the study of universal concepts falls well within the province of the logician. Because argument is the subject of logic, whatever pertains to the terms and enunciations composing arguments is relevant to the principles governing the common mode of the

24 *De V univ.* 1.4, Borgen. 1, 9b.
25 *De V univ.* 2.1, Borgen. 1, 17b–18a.
special sciences. Among those principles are those pertaining to predication, especially universal predication. Universality, predicability of many, attaches to natures as abstracted by the intellect from the individuating conditions of matter. Every abstracted nature, as known, is related to the many in which it exists. Thus, the knower proceeding to knowledge of the unknown is proceeding from a universal concept to another universal concept. The relation, properties, and accidents of things as known must be the concern of the logician in the effort to understand and articulate the principles constituting the common mode of the sciences.

Consequently, Albert follows his treatment of the nature of logic with an extended discussion of the three Porphyrean questions concerning the nature of universals. The dependent relationship between these questions, such that the second arises only given a certain answer to the first and the third only given a certain answer to the second, determines Albert’s focus on the first question of whether genera and species subsist in reality or exist only conceptually. He provides a careful analysis, considering a series of arguments on both sides of the issue. In the end, he decides that the arguments for the subsistent reality of genera and species are the stronger. This determination of the first question provides the grounds for consideration of the other two issues of whether universals as subsistent are corporeal and, if not, whether they exist in sensible individuals.

Setting out his own solution, he begins with a distinction of the three ways in which universals can be considered: as a simple and invariable nature in itself, as existing in this or that, and as referred to the intellect. Taken as a nature in itself, the universal is that which gives a common being, definition, and a name to many things. This nature exists in the most perfect manner, having no other natures mixed with it nor varied in its nature through some other nature. Taken as existing in this or that, the universal is individuated, multiplied, and incorporated. As such, it is subject to an infinity of diverse characteristics, because an infinity of characteristics can inhere in matter. As referred to the intellect, the universal can either be in the First Intelligence or be abstracted. The First Intelligence knows and causes the universal to be in itself simple, pure, immobile, incorporeal, and in relation to the possible intellect as perfectible and mobile. With respect to the abstractive intellect, the nature is

\[26 \text{De V univ. 2.3, Borgen. 1, 20b–24a. For a critical evaluation of these arguments see McInerny, “Albert on Universals,” 16–17.} \]
\[27 \text{De V univ. 2.3, Borgen. 1, 24a.} \]
not caused to exist in itself by the act of intellection, but has universality conferred on it by the intellect’s act of separating it from individuating matter. In human knowledge, then, the nature is universal relative to the act of abstraction, having restored to it the universality that it possessed in itself apart from its being individuated in matter.28

Albert makes the same distinction in another way. A form can be considered apart from a thing (ante rem) as when it is considered in itself as the cause of things. A form can also be considered in a thing (in re) as when it is considered with respect to the thing in which it is individuated. Finally, a form can be considered derived from a thing (post rem) as when it is considered as abstracted from the particularizing conditions of matter. A generic or specific form ante rem is a universal cause of the common being of many generically or specifically similar things. A generic or specific form in re is a universal essence of an individual thing making it generically or specifically like other individuals. A generic or specific form post rem is a universal abstracted by the knower of the generically or specifically similar individuals. Albert goes on to explain that universal natures themselves subsist as ingenerable, incorruptible, and invariable. As such they subsist apart from concepts, as he had already argued. Yet in some significant sense universal natures subsist in things and are individuated. Yet again, universal natures exist in the intellect as concepts, either in the intellect that causes and produces them or in the intellect that knows them by abstraction, producing and educing them as universalities.29

Albert’s solution to the traditional problem of universals, then, is that genera and species can be considered in three distinct ways and will be said to exist differently according to each of these considerations. Considered in themselves, universals exist as stable and eternal forms that cannot be reduced to concepts. Considered in individuals, universals exist as particularized. Considered in relation to the intellect, universals exist as abstracted from individuating matter. This, in effect, not only provides an answer to the first of Porphyry’s questions, but at least the beginning of a response to the others as well. Universals taken in themselves are incorporeal and this is also true of universals as abstracted by the intellect. Even as individuated, however, universals cannot simply be reduced to the individuating material conditions, although they stand in strong

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29 De V univ. 2.3, Borgn. 1, 24b–25a.
relation to such material conditions. Universals considered in themselves and in the intellect clearly exist apart from the sensible individuals from which they were abstracted. As the common nature of an individual, of course, a universal exists in the individual in some significant sense. Albert’s approach to these issues in his commentary on Porphyry has a strongly Platonic flavor that is difficult to reconcile with some of his later work. While this treatment is not without its ambiguities and hardly constitutes the final word on the problem of universals, it does provide a series of important distinctions.

In fact, this discussion was not Albert’s final word on the subject. Later in his *De intellectu et intelligibili*, he again addresses the first Porphyrean question. Considering a series of arguments on both sides of the question of whether universals exist outside of concepts, he appeals to a number of distinctions by way of his own solution. The essential nature of a thing can be considered in two ways: in the first, a nature is considered distinct from the material subject in which it is found, and in the second it is considered insofar as it is individuated in matter. When a nature is considered apart from matter, it is being considered in one of two possible ways. It may be considered insofar as it is a certain essential nature absolute in itself (*essentia quaedam absolute in seipsa*) and it is in this sense that it is called “essence”. Alternatively, it may be considered with respect to its capacity (*secundum aptitudinem*) to be realized in many and in this sense it is called “universal”.30 When known, however, the nature is in many actually and not simply by way of a capacity and this is why, explains Albert, the Peripatetics claim that the universal exists only in the intellect, for they are referring to what is actually in many and not simply an aptitude.31 Albert’s account in this later work, then, provides some advance beyond his earlier treatment, for he is able to distinguish more clearly the universality of a nature as conferred by knowing and the universality a nature has in itself.

Albert also addresses the question of universals in his commentary on the *Metaphysics* in the context of a discussion of the Aristotelian doctrine of substance.32 Identification of a substance by way of a definition may be done in two ways: in itself and with respect to its attributes. When one considers substance respectively, one is considering substance by

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30 *De intell. et intellig.* 1.2.2, Borgen. 9, 492a–493a.
31 *De intell. et intellig.* 1.2.2, Borgen. 9, 493b.
comparison with something other than itself. It follows that considering substance insofar as it exists in the intellect or as it exists individuated in matter is to consider it with respect to accidents that are not essential to it taken in itself. Considering the universal nature as existing in one respect or another is in no way to assert that the universal exists through itself.33

3. The Method of Division

Genera and species come to be known through a process of division, a part of logic to which Albert devoted a great deal of attention. In fact, Albert is the first scholar since antiquity to manifest detailed knowledge of the Aristotelian reform of the Platonic method of division and its application to scientific research.34 The original purpose of division as established by Plato was not classification, but definition. The Aristotelians agreed, considering division a dialectical means by which the scientific researcher proceeds from observation to definition through the study of what does and does not belong to or inheres in the subject under investigation. Albert notes that inherence may be as an accident, genus, property, or definition. Because inhering as a differentia is reducible to a genus and inhering as a likeness is reducible to a definition, the kind of thing the subject is comes to be known through a process of division by differentiae.35 Albert realized, however, that the dichotomous method of division used by the Platonists produced false and accidental divisions, thus failing to provide useful definitions. He followed Aristotle in rejecting such divisions and articulated rules for proper division that would insure valid definitions.36

In his commentary on Aristotle’s Topics, Albert discusses division very generally in relation to the dialectical or topical syllogism. His actual rules for division, however, are to be found in his treatment of zoological

33 For a more detailed comparison of Albert’s several treatments of universals see McInerny, “Albert on Universals,” 3–18, esp. 11–16.
35 Top. 1.2, Proaemium operis, Borgn. 2, 236a.
36 De animal. 11.2.1, ed. Stadler, 1: 780; see also Metaph. 7.4.3, Ed. Colon. 16/2, 370–372 and Quaest. super de animal. 11.7, Ed. Colon. 12, 221.
method in his *De animalibus*. There he characterizes Platonic division as the attempt to define a species by dividing a genus into two by a single differentia at a time. This dichotomous splitting is done at each successive stage of division until the species is identical with the form to be defined. Reading back through the divisions is, then, supposed to provide the definition through the identification of the successively greater genera in which the species participates. By means of this method, for example, squirrel is defined by dividing the genus animal into aquatic and terrestrial, terrestrial into footed and footless, footed into biped and quadruped, and quadruped into toe-footed and hoofed. Reading back through these dichotomous divisions, then, squirrel is defined as a toe-footed quadrupedic terrestrial animal.

Albert argues that such a division will either be invalid or incomplete—that is, the division will either be accidental or it will fail to include sufficient characteristics to constitute a useful definition. There are at least two problems with dichotomous division. The first is that dichotomy divides natural kinds. As a result, the same sub-kind could appear on both sides of a supposedly exclusive division. Given a division of animal into aquatic and terrestrial, the next division cannot be into footed and footless, because each of the species will appear in each division of the magnum genus. Thus, we would have:

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Animal (magnum genus)
   / \                        / \                        / \                        / \   
 aquatic terrestrial  footed footless  footed footless
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The division would fail to show that being footed is a terrestrial trait, because footed does not imply an inclusion in a particular genus. The division, therefore, fails to show the reason for the possession of the trait in terms of the genus to which the subject belongs. Second, dichotomy cannot make use of negative differentiae. Differentiae that indicate privations, such as footless or invertebrate, cannot be further divided in a way

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37 *De animal*. 11.2.1–2, ed. Stadler, 1: 780–792.
38 *De animal*. 11.2.1, ed. Stadler, 1: 780–782.
providing useful definitions. A division of featherless into fish and insects
will not allow for further divisions, despite the fact that there are many
species of fish and of insects. The reason is that what is actually being
divided is not featherless, but the genus animal-lacking-feathers. While
there are many ways of being feathered, there are not infimae species
of featherless. As a result, dichotomy cannot use privative differentiae to
establish definitions that can be “read back” from an infima species to the
genus divided by the privation.

These difficulties with dichotomous division indicate that useful defini-
tion will only result from division by multiple differentiae applied together.
Albert identifies four rules governing the proper division of a genus.\textsuperscript{39} The
first three of these regulations are aimed at avoiding the accidental divi-
sions of the dichotomists. The final rule provides an alternative to Pla-
tonic dichotomy. First of all, the differentiae dividing the genus must be
part of the definition or essential nature of the species and not acciden-
tal. It is especially important to avoid dividing by proper accidents, for
these may seem to yield useful definitions, but will in fact be misleading.
A division of the genus plane figure into the species possessing two right
angles/possessing many right angles is not valid. While it is necessary that
triangles have two right angles, this is an accident of triangles and does
not indicate its proper definition. The second rule is that division must
always be into proper opposites, ensuring that the definiendum will fall
exclusively on one side of the division. Dividing by differentiae belong-
ing to non-opposed genera, such as locomotion and coloration, is invalid.
The dichotomous division of animal into swimming and unpigmented
results in a false division, as the proper division is of fish into pigmented
and unpigmented. The third rule is that division must be by a differentia
that will not appear as a characteristic in both infimae species. The genus
animal can validly be divided into sighted and non-sighted, but not into
walking animals and flying animals. Some species are capable of both
walking and flying and will thus appear on both sides of the division.

The reason why dichotomy is invalid, according to Albert, is that its
differentiae are not continuous. For example, the dichotomous divi-
sion of animal into winged and non-winged, winged into multi-colored
and solid-colored, and multi-colored into domesticated and wild fails in
this way. Being multi-colored is not a way of being winged, but of being
colored. Being domesticated is an accidental determination of being

\textsuperscript{39} De animal. 11.2.1, ed. Stadler, 1: 786.
multi-colored, for nothing about being determined as domesticated prevents the determination of the same infima species by the opposite genus, wild. Albert, therefore, defines a fourth rule stating that division must be polychotomous. All the relevant differentiae must be applied to the genus together. Through the use of several coordinated series of dichotomous divisions, each of which divides with continuous differentiae, valid and useful definitions will result. Non-accidental division begins with magna genera immediately identifiable by known generic properties. Bird, for example, is immediately identified as winged, biped, beaked, and so on. These differentiae can then be divided according to the various ways they appear in the genus. First-level generic differentiae are divided, not by new differentiae, but by the degree in which they appear in the various sub-kinds. Such a division, then, will be by a combination of morphological and quantitative differentiae. All birds are beaked, but not in the same way: some have short, strongly curved beaks such as the hawk, and some have large, flat beaks such as the shoveler duck, and some have long, thin, pointed beaks, such as the curlew.40

The proper method of division, according to Albert, is not simply a matter of making a series of dichotomous divisions and then gathering them together into a hierarchy of formal features in the Platonic manner. Useful definition by division proceeds by dividing off a kind by its specific features and then differentiating the features according to the degree they exist in the morphological variants. In this way, the final differentia will be convertible with the species and the division will provide an intelligible account of the subject.41 The avoidance of accidental division is crucial to ensuring that the final differentia will have precisely the same extension as the species being defined. In a valid division, all the differentiae other than the final one will be superfluous in the sense that each is a determination of its predecessor and will imply it. This is why non-accidental divisions are useful: they function dialectically as a means of sorting out what is known of a subject in such a way that the convertibility of the final differentia with the species defines the species rigorously.

Albert realized that Aristotle’s rejection of the Platonic method of division by dichotomy was not a rejection of the method of division itself. At the same time, he clearly understood Aristotle’s critique of dichotomy as a reform of division as a dialectical tool. Moreover, Albert follows Aristotle

40 *De animal.* 11.2.2, ed. Stadler, 1: 789.
41 *Quaest. super de animal.* 11.7, ed. Colon. 12, 221.
in using division as means of providing rigorous definitions for the purpose of scientific explanation rather than as a scheme of classification. When applying division to the study of animals, for example, Albert has no interest in developing a zoological systematics in the modern sense. He does not use division to attempt a complete taxonomy of animal species with all major and intermediate forms specified and related. Rather, he remains focused on the purpose of the Aristotelian reform of the Platonic method of division to secure non-accidental definitions for the purpose of causal explanation in the special sciences.

4. Inventive Logic

The method of division is an important part of inventive logic or dialectics which Albert distinguishes from judicative logic or demonstration. Non-accidental division is one of several methods of discovery that play a crucial role in the function of logic as the common mode of the sciences. In the process of moving from the known to knowledge of the unknown, the scientific investigator cannot simply begin to produce scientific demonstrations. This is because the process of demonstrating presupposes a discovery and description of something about the subject and in terms of which the subject will be understood. Scientific investigation, therefore, is a complex two-staged procedure of description (narrativus) and causal explanation (causarum assignativus). This is reflected in the division of logic into inventive and judicative parts.

Albert considers the possibility that inventive logic may be unnecessary for arriving at knowledge of the unknown from the known. Given that scientific explanation is knowing a subject through its causes and that causes are known when demonstrated, it seems that there is no room for discovery and description in the process of coming to know a subject. A demonstration, after all, is a syllogism producing knowledge (syllogismus faciens scire) and, therefore, scientific method is demonstrative and not descriptive, it is judicative and not inventive. Albert rejects this suggestion by arguing that the ultimate explanatory goal of scientific research pre-

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42 Top. 1.1, Proaemium Alberti, Borgen. 2, 233a–b.
43 Quaest. super de animal. 11.1, Ed. Colon. 12, 218; De animal. 1.2.1, ed. Stadler, 1: 38.
44 On the distinction of these parts of logic with reference to Albert’s Aristotelian commentaries see Richard L. VanderWeel, “The Posterior Analytics and the Topics,” Laval Théologique et Philosophique 25 (1969), 130–41.
45 Quaest. super de animal. 11.1, Ed. Colon. 12, 218.
supposes a narrative or descriptive phase of investigation in which what has been discovered of the subject is set out in an orderly and useful way. Without such description, there is nothing to explain, for there is nothing demanding to be understood in terms of its causes. While causal explanation is a judicative process of demonstrating, there can be no demonstration without invention.

The distinction between the inventive and the judicative arises out of a consideration of the possible kinds of rational discourse. These kinds, Albert argues, may be designated according to whether discourse is directed to the necessary, the probable, or the merely apparent. Insofar as logic concerns discourse productive of the certain judgment of scientific knowledge, it is a judicative method (logica iudicativa). Such certain judgment results from analyzing or resolving the subject into its principles or causes and is, therefore, a via analytica or via resolutiva. The formal means by which this certitude is attained by the intellect is the syllogism. This, Albert contends, provides the subject matter of Aristotle’s Analytics—the Prior Analytics being concerned with the mode and figure of the syllogism considered abstractly and the Posterior Analytics being concerned with the demonstrative syllogism that produces scientific knowledge. While properly scientific reasoning aims at the certitude of scientific demonstration, not all rational discourse directly produces certain judgments. Insofar as logic concerns discourse productive of probabilities, it is concerned with discovery and is an inventive method (logica inventiva). The syllogism remains the instrument of discourse, but now as the means of probable rather than demonstrated knowledge. Albert notes that probabilistic reasoning is the subject of Aristotle’s Topics, a treatise on the dialectical syllogism. Albert adds that the study of logic may also be directed to sophisms (logica sophistica)—that is, to fallacies and arguments that altogether fail to produce knowledge of the unknown from the known, even probable knowledge. Discourse that is only apparently rational provides the subject of Aristotle’s Sophistical Refutations.

In his paraphrastic commentary on Aristotle’s Topics, Albert notes that the purpose of inventive logic is to provide a method for terminating discussions that would otherwise continue without reaching some sort of useful stopping point. This is obviously necessary if logic is to provide a

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46 Soph. El. 1.1.1, Borgn. 2, 526a.
47 On Albert’s coordination of the divisions of logic with the books of Aristotle see De V univ. 1.2–3, Borgn. 1, 4a–7a and Top. 1.1, Proaemium Alberti, Borgn. 2, 233a–234a.
48 Top. 1.2, Proaemium operis, Borgn. 2, 236a.
means for coming to knowledge of the unknown. Discourse and investigation must be ordered and even if the means by which it is ordered do not themselves produce complete understanding of the subject, these means are necessary for eventually reaching such understanding. It is possible to do this for any problem that may arise in discourse, because all problems are problems of inherence (inessse). Whether it is inherence as an accident, genus, property, or definition, inventive logic teaches us how to syllogize in such a way that we arrive at useful description and definition. Discourse thereby attains a certain goal: that is, either the definition of the subject or the removal of any impediment to definition. The utility of the definitions are respective to the demonstrations that are the concern of judicative logic, making the task of the dialectician that of preparing the way for scientific explanation.

The bulk of Albert’s work on the *Topics* is devoted to setting out and explaining the various dialectical methods by which definitions are established and discourse properly ordered to what is needed for scientific demonstration. Demonstration involves inference to a necessary conclusion that is not known as necessary independently of being demonstrated. The only way in which an investigator could be in a position to demonstrate like this is by already knowing that it is possible to show the necessity of the conclusion. A conclusion cannot be known as demonstrable unless it is known to be probable—that is, if a reason can be given dialectically to accept it and there is no reason to doubt it. In an ongoing investigation of a subject, some conclusions that seem probable may come to have doubt cast on them. When this happens there must be a dialectical means by which this doubt is either laid to rest or a substitute probable conclusion suggested. Such procedures continue in the investigation until the conclusion is known to be probably demonstrable. Thus, dialectical methods stabilize the conclusions of demonstrations in a way that show them to be capable of being established as necessary. As there are different modes of definition, so there are different dialectical methods providing the ingredients for the demonstrations of the judicative stage of the knowing process.

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51 *Top.* 1.1.5, Borign. 2, 245b–249b.
5. Judicative Logic

In his commentary on the *Posterior Analytics*, Albert cites Ptolemy’s *Almagest* claiming that anyone seeking knowledge of the unknown ought not to be satisfied with probabilities and opinions. These products of the various methods of inventive logic are incapable of bringing about stable concepts in the mind. Instead, the scientific investigator ought to be satisfied only with demonstrated certainties that certify and establish understanding precisely because they are certain and eternally stable. While Albert later rejects Ptolemy’s conclusion that this restricts true scientific knowledge to what is mathematically demonstrated, he is here citing Ptolemy with approval. Demonstration is always a revelation of necessity and what is truly known is what is manifestly necessary. Any logical procedure that results in probable conclusions alone cannot fulfill the goal of the discipline in bringing the knower to knowledge of the unknown. Thus, demonstration is necessary for science and the art of dialectics is exercised for the sake of scientific judgment made manifest in demonstrations.

Following Aristotle, Albert defends the possibility of such demonstrative knowledge by considering two errors of the ancients. The first error, attributed by Albert to Heraclitus, claims that, were demonstrated knowledge possible, then its premises would have to be demonstrated through prior premises ad infinitum. Given that the first premises cannot be demonstrated, nothing following from them can be demonstrated. Albert replies that not all truth is demonstrated. Some truths that may serve as the premises of demonstrations are known as self-evident independently of demonstration. Scientific investigation will have recourse to such foreknown principles and this allows for the possibility of demonstrative knowledge.

The second error, attributed by Albert to Empedocles, claims that everything can be demonstrated, because all demonstration is actually circular, merely restating what is already known. Demonstration amounts

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52 Anal. Post. 1.1.1, Borgen. 2, 2b.
54 Anal. Post. 1.1.4, Borgen. 2, 13b.
55 Anal. Post. 1.2.6, Borgen. 2, 33b–34a.
56 Anal. Post. 1.2.6, Borgen. 2, 34a.
to the tautologous claim that, given the existence of the thing, the thing exists—a trivial and meaningless exercise unproductive of true scientific knowledge. There is a distinction, Albert replies, between what is better known in its own nature and what is better known or more familiar to us in experience and common notions. A demonstration revealing the causes of what is familiar to us is not circular and represents a real advance in knowledge. Indeed, the distinction between the products of inventive and judicative logic supports this point.

These ancient controversies provide the opportunity for Albert to clarify the nature of scientific knowledge in terms of the logic of demonstration. Those who possess a scientia of a subject are those who know the reason why (propter quid) the subject is what it is in addition to knowing that (quia) the subject is like this. In other words, the one who knows in the best possible way, knows or demonstrates the reason why the subject is the way it is through principles that are immediate, primary, and true. Knowledge through such proper principles is the only knowledge that is fully demonstrative and scientific. Knowledge through other principles is tentative, dialectical, and probable.\(^{57}\) There are, then, two types of demonstration: demonstration of the fact (demonstratio quia est) and demonstration of the reason for the fact (demonstratio propter quid). It is only in the latter that complete scientific explanation through causes is achieved.\(^{58}\)

Whereas propter quid demonstrations are those that demonstrate through an immediate and proper cause, quia demonstrations are of two kinds: through an effect (per effectum) and through a remote cause (per causam remotam). Scientific investigation typically begins with the observed effect and attempts to discover and demonstrate the initially hidden cause. Such effects, however, may either be or fail to be commensurate or convertible with the cause. In arguments establishing that the fact is convertible with the cause, the quia demonstration can be converted into a proper quid demonstration by a reversal of the major and middle terms. Albert repeats Aristotle’s example of the explanation for the non-scintillation of planetary light as viewed from earth.\(^{59}\) The quia demonstration shows that the observed non-scintillating character of planetary

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\(^{57}\) Anal. Post. 1.2.6, Borgn. 2, 34a–b.

\(^{58}\) Anal. Post. 1.3.6–7; 2.4.7, Borgn. 2, 82a–87b; 222a.

\(^{59}\) Anal. Post. 1.3.6, Borgn. 2, 83a where Albert also provides as another example the quia demonstration that the moon is an externally illuminated sphere on the basis of its waxing and waning through crescent phases and the propter quid demonstration showing that the moon’s sphericity is the reason for its exhibiting phases.
light provides the reason why planets are known to be near: things emitting non-scintillating light are known to be near; planets emit non-scintillating light; therefore, planets are near. This demonstration does show a necessary association of planetary nearness on the grounds of planetary emission of non-scintillating light. Yet, emission of non-scintillating light is not the cause of the nearness, but the result. Given that planetary nearness and non-scintillating light emission are commensurate, these terms can be converted producing a *propter quid* demonstration: near things emit non-scintillating light; planets are known to be near; therefore, planets emit non-scintillating light. This demonstration does show the cause of the non-scintillation of planetary light on the grounds of the connection of non-scintillating light emissions with planetary nearness. Another type of *quia* demonstration that does not allow for a simple conversion into *propter quid* explanation is through an attribute of a genus. Knowing that being raptorial-footed is associated with being a bird of prey, and that the European sea eagle possesses this attribute, provides a reason for including this species of eagle in the genus. A certain necessity is made manifest through the argument, because being raptorial-footed does demonstrate the fact of genus inclusion. Yet, this cannot be converted into a *propter quid* demonstration because the middle term is not commensurate with the major term—there may be birds that prey on other animals without the use of a raptorial foot. From the fact that the European sea eagle is a bird of prey, then, it does not follow that it must be raptorial-footed. The proper cause of being raptorial-footed is the need to seize and tear at food.\(^60\)

In scientific investigation, *quia* demonstrations provide a bridge between the strictly dialectical methods of the inventive stage of research and the attainment of causal explanation through *propter quid* demonstration. A brief look at how the method of division supplies the ingredients for *quia* demonstrations provides a good example of how Albert understood the relation of inventive to judicative logic. Definition through division is achieved by grouping differentiae under genera in order to provide a descriptive account of how attributes of the subject are associated in reality. The ultimate purpose of this is causal explanation of the associations known to exist in the species. Such explanation will be the manifestation of the causal connections among the associated features such that they are

\(^60\) See *De animal*. 12.3.6, ed. Stadler, i: 888.
judged necessary.\textsuperscript{61} Albert realized, however, that the investigator cannot proceed directly from a series of divisions to demonstration of the necessity of the causal connections. Yet he makes it clear that division does give rise to demonstrations.\textsuperscript{62} Assuming the investigator has at hand a set of divisions of a subject-genus, this can be put into the form of a demonstration: taking the genus A as the middle term, let the attribute B inhering in things of the genus A be the major term and a species C of the genus A be the minor term. It will be demonstrated, then, that the reason why the attribute B is characteristic of species C is because C belongs to genus A which is universally characterized as B. Syllogizing this, Albert provides the following example: all animals are sensory beings; all lions are animals; therefore, all lions are sensory beings. Similar syllogisms can be constructed for any other species D, E, and F falling under the genus A—that is, if the species were man or horse or another species.\textsuperscript{63}

The scientific investigator makes the best use of the information provided by his divisions by expressing it in the form of a demonstration. In other words, the genera and species are recast in such a way that the connections among them become clear. Given a certain form being studied, the investigator begins with the most common genus relative to it. He then selects the features which belong to the genus and those features belonging to these. The magnum genus bird, for example, is one known from commonly accepted groupings of animals. The investigator, collecting all the features common to every bird, is then in a position to provide the reason why a given feature belongs to the kinds falling under the genus. This is articulated in the form of a \textit{quia} demonstration manifesting the reason in terms of the kinds and sub-kinds revealed through the divisions. The species under study, then, has been rigorously shown to exist in terms of the associations made through the divisions.\textsuperscript{64}

The role of \textit{quia} demonstrations can be illustrated by Albert’s own research on the various species of eagle in his \textit{De avibus}.\textsuperscript{65} Having established the common features of the major genus bird, he divides the various species according to common nomenclature. In each case, he provides the various differentiae of the species that mark it off from other species.

\textsuperscript{61} \textit{Anal. Post.} 2.4.6, Borgen. 2, 218a–b; \textit{De animal.} 11.2.2, ed. Stadler, 1: 789–792.
\textsuperscript{62} \textit{Anal. Pr.} 1.6.8, Borgen. 1, 647b–650b.
\textsuperscript{63} \textit{Anal. Post.} 2.4.6, Borgen. 2, 218b–219a.
\textsuperscript{64} See Tkacz, “Albert the Great and the Revival of Aristotle’s Zoological Research Program,” 60–63.
\textsuperscript{65} \textit{De animal.} 23.1.1–15, ed. Stadler, 2: 1433–1437.
of birds as well as those that place the determined species in the same genus along with other species. The eagle, for example, belongs in the same genus as the falcon, for both in terms of morphology and behavior they are equally birds of prey. Yet they can be distinguished by, among other features, the relative shape and length of wings: since eagles are characterized by large broad wings as opposed to the falcon’s narrow long wings. Albert goes on to group together under the genus eagle various other differentiated features: massive oblong beaks, large yellow feet, large broad wings, short tail feathers, and so on. These divisions provide the basis upon which he employs a *quia* demonstration to show why it is that the European sea eagle has short tail feathers: it is because this bird is a species of eagle, and in the genus eagle short tail feathers are associated with the other known features of eagle morphology, also possessed by this species of eagle, in a way they are not in every species of the larger genus, birds of prey. By similar *quia* demonstrations, Albert also shows that the golden eagle is of the same genus, for it has the short tail feathers characteristic of eagles. Further, he is able to demonstrate the fact that all species of eagle are rightly considered birds of prey in terms of their possession of the features common to all birds of prey: a strongly curved and pointed beak, taloned feet, and so on.

Using divisions in the form of *quia* demonstrations brings the investigator knowledge of the unknown from the known in two ways. First, when the investigator is able to assign a feature to a species on the basis of inclusion of the species in the genus, he comes to know which kind possesses the feature per se. Second, as a result of his assigning features to a species on the basis of his divisions, the investigator increases his knowledge of how the kinds are related to each other and how they form a unity of kind.66 This type of intermediate demonstration of the facts concerning the properties and differentiae of the subject under study does not constitute a true scientific demonstration insofar as it does not demonstrate the proper cause of the facts so revealed. Rather, such a *quia* demonstration together with the divisions upon which it is based provides a rigorous means by which the information gathered about the subject is organized for the sake of eventual causal explanation through *propter quid* demonstrations. This sort of preliminary stage of scientific investigation is necessary both to clarify by division and definition the subject and its relevant

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66 *Anal. Post.* 2.4.6, Borgen. 2, 219a–b; *De animal.* 11.2.2, ed. Stadler, 1: 790–791.
features as well as to direct the attention of the investigator to possible candidates for an explanatory middle term.\textsuperscript{67}

6. Knowledge of Nature

Toward the beginning of his commentary on Aristotle’s \textit{Physics}, Albert presents an argument against those who would deny that human beings are capable of attaining direct scientific knowledge of natural subjects.\textsuperscript{68} While he ascribes these three objections to Heraclitus, Albert is also concerned with similar objections put forward by others, including some of his contemporaries.\textsuperscript{69} The first objection is that the proposed subjects of natural science, natural beings, exist in an infinite number and so cannot be understood by the finite human intellect. If there exists an infinity of natural subjects that must be known for the attainment of truly scientific knowledge, then such knowledge is impossible because a finite intellect cannot have as the object of its finite operation an infinite number of subjects. The second objection is that the definitions of natural subjects required for scientific demonstrations cannot be constructed. Such definitions will apply to natural individuals equivocally and, as such, cannot serve as the middle terms of explanatory demonstrations. The third objection is that the changeability of natural things prevents them from being the subject of scientific demonstration. Natural subjects are unstable and in constant motion whereas the subject of true scientific demonstration must always be the stable and the necessary.

Albert responds to the first two objections by clarifying the precise subject of natural science in terms of the goal of scientific investigation. The aim of nature is to produce a complete being (\textit{ens completum}) as the perfection of an individual of a given kind. This completed being is finite, and it is so because it is produced by its essential causes of form and matter received through the agency of an agent cause and through the end toward which the agency is tending. The subjects of scientific investigation are not individuals in their infinite number, but rather the causes that

\begin{itemize}
\item \textsuperscript{67} \textit{Anal. Post.} 2.4.7, Borgen. 2, 222a.
\item \textsuperscript{68} \textit{Phys.} 1.1.2, Ed. Colon. 4/1, 3–5.
\item \textsuperscript{69} Later in the same text Albert cites Ptolemy, and Albert’s arguments in his \textit{Metaphysics} show his concern for answering similar views held by his contemporaries; see James A. Weisheipl, “Albert the Great and the Oxford Platonists,” \textit{Proceedings of the American Catholic Philosophical Association} 32 (1958), 124–139 and Ashley, “Albert the Great on Aristotle’s \textit{Metaphysics},” 137–155.
\end{itemize}
produce individuals as beings of this or that kind, and the variety of kinds is finite. Thus, natural science does not require that the human intellect take as its proper object of knowledge an infinite number of individuals. Instead, natural science is concerned with a finite number of species. Similarly, the definitions of natural subjects do not apply to what is true of individuals as individuals, but to individuals as belonging to species. Univocal definitions covering many individual cases are possible because, even though a great diversity of individual differences arising from the dispositions of matter may be observed, these differences are not the end at which nature aims. The function of scientific demonstration is to disclose the final form toward which nature is tending and this belongs to the individual insofar as it is an individual of its kind. Thus, proper definitions will not be equivocal and can provide the middle terms of explanatory demonstrations.

Albert remarks that Heraclitus’s third objection is essentially that of Ptolemy who regarded the diversity of opinion among natural scientists as witness to the instability and non-necessity of natural beings. Ptolemy was convinced that there can never be a true science of natural subjects, as there is of mathematical subjects, but only opinion. In his Posteriora Analytica, Albert explains Ptolemy’s reasons for rejecting the possibility of scientific knowledge of nature.\footnote{Anal. Post. 1.1.1, Borgen. 2, 2b; see also Metaph. 1.1.1, Ed. Colon. 16/1, 1.} Apprehension of the probable and changeable beings of the natural world can never result in stable concepts in the mind. It is only the demonstration of absolutely certain things that results in understanding, because such things are eternal and stable. Scientific explanation is always a demonstration of a necessity in the subject and natural subjects are contingent. For Ptolemy, then, there can be no scientific knowledge of natural subjects as there can be of mathematical subjects which are absolutely necessary and eternal.

Albert agrees that scientific explanation is always a matter of demonstrating necessity, but he does not accept Ptolemy’s claim that natural subjects lack the requisite necessity. On the contrary, Albert insists that there can be a demonstration of natural things because such things have a subject, attributes, and principles through which an attribute is proved of a subject with a certain necessity. If this were not the case, there could be no understanding or knowledge of natural things which we do, in fact, understand.\footnote{Phys. 1.1.2, Ed. Colon. 4/1, 4.} The changeability of natural things does not prevent them
from being the subject of demonstrations revealing a necessity. Just as the essential species of the natural individual allows univocal reference, so abstraction from individuating matter allows a demonstration of necessity in the natural subject. The contingent and the unstable can be the subject of scientific investigation because such investigation seeks to explain the subject in terms of its being the kind of thing that is capable of change, rather than in terms of the change itself.72

7. Suppositional Demonstration

Some years before producing his commentary on the *Metaphysics*, Albert had occasion to refer to Aristotle’s classification of the types of necessity in a theological work.73 Necessity, he there explained, falls into two general categories: simple (*necessitas simplex*) and respective (*necessitas in respectu*). Simple necessity is unconditional whereas respective necessity is always relative to an end (*in respectu finis*) or the production of something (*in respectu esse efficientis*). It is clear from Albert’s examples that he considers respective necessity to be found in both natural and artificial subjects. In his later commentary on this Aristotelian text,74 Albert points out that necessity is not limited to absolute compulsion (*necessitas absoluta*) and may also be suppositional (*necessitas suppositionis*) when what is prior is inferred from what is posterior. While absolute necessity is associated with material cause, suppositional necessity concerns finality. Providing a wealth of examples from both the arts and nature, Albert argues that suppositional necessity is the same “in mechanics and in nature”. If there are to be soldiers, then there must be the fabrication of arms and, if human beings are to exist, then a certain complex of humors is necessary.75 Necessity, then, is not always a matter of force, for what is necessary can also be that required on the supposition that something else be the case.76

73 Super I Sent. 6.A.2, Borgen. 25, 198a–b.
74 *Metaph.* 5.1.6, Ed. Colon. 16/1, 220–222.
75 *Metaph.* 5.1.6., Ed. Colon. 16/1, 221.
Demonstrative knowledge of nature involves the disclosure of both absolute and suppositional necessity. The scientific investigator will seek to know whether the necessity of material things is absolute (*simpliciter*) or on a supposition and condition (*ex suppositione et condicione*). The reason for this is that some things in nature, such as the descending of the heavy and the ascending of the light, do not require the presupposition of anything to be necessary. Other things, however, do require a presupposition and are not necessary except on the supposition of something else, as when it is necessary for a man to be sitting, if he is to be seen sitting. Pointing out that absolute necessity is found in natural things only in the aptitude and necessity of matter (*in sola materiae aptitudine et necessitate*), Albert insists that what is necessary in nature is also, and primarily, according to a supposition (*secundum suppositionem*) and on the basis of some hypothesis (*in ordine hypothesis alicuius*). Thus, while it is not necessary that an animal be asleep, sleep is necessary if the animal’s sensory powers are to be rested.\(^77\)

Albert is concerned to distance himself from the ancient naturalists who attempted to explain nature in terms of chance and force, rather than function. Empedocles, he argues, was wrong to attempt an explanation of the morphology and arrangement of animal teeth in terms of absolutely necessary material characteristics and chance motions. While an account of the shape and hardness of an animal’s molars will make reference to their material composition, their existence in the animal and position at the back of the mouth must be understood in terms of their food-grinding function.\(^78\) An Empedoclean explanation in terms of chance and force alone must be radically incomplete. It is just as if one were to say, argues Albert, that a wall came into existence by chance through the material force and disposition (*propter materiae obligationes et aptitudinem*) of its components, the heavy stones becoming positioned at the foundation and the lighter wood above them. The positioning of the material components of the wall is inexplicable in the absence of any reference to the function of the wall. Were this not also the case in nature, the Heraclitean objection to the possibility of natural science would be telling, because an infinite variety of forms could be produced out of the available matter and nature could never be known. Natural necessity, however, does not operate in the way the ancient naturalists supposed. It is true that the wall exists

\(^{77}\) *Phys.* 2.3.5, Ed. Colon. 4/1, 141.

\(^{78}\) *Phys.* 2.3.1, Ed. Colon. 4/1, 133.
through the “binding force of the matter” (ex materiae obligatione) out of which it is composed, yet it does not exist on account of this absolute necessity. The necessary forces of the materials operate in the wall in the way they do because of the purpose of the wall as a shelter for something. Without an explanation of the wall in terms of its function, whatever necessary properties its materials have are inexplicable with respect to being the properties of the components of the wall. Such is the case with natural forms which can only be fully understood in terms of their functions: the function of natural parts in terms of the natural morphologies composed of them and the function of the natural morphological wholes in terms of their proper operations.\footnote{Phys. 2.3.5, Ed. Colon. 4/1, 141; see also De animal. 11.1.3, ed. Stadler, 1: 776–777.}

References to the materials and their absolutely necessary properties become part of the explanation of the entire given natural form only insofar as they are suppositionally necessary for the form to exist and function as observed. Suppositional necessity, then, is a principle of nature in light of which material necessities are understood. Natural forms exist for the sake of an end, but the end is not to be found in the matter and its material efficiencies. It is, as Albert puts it, \textit{in ratione}, and this reason provides the principle of the whole being and operation of the natural entity explained through demonstration.\footnote{Phys. 2.3.5, Ed. Colon. 4/1, 142; Anal. Post. 1.2.1, Borgn. 2, 23a.}

The possibility of suppositional demonstration in the natural sciences provides Albert with an answer to Ptolemy’s objection that scientific knowledge of natural things is impossible because they lack the necessity and stability of mathematical objects. Like Aristotle, Albert insists on the possibility of strict scientific knowledge of natural subjects in terms of a demonstrative disclosure of their suppositional necessity. Despite their contingency, then, natural things are not lacking a necessity allowing them to be known through demonstrations. Albert points to further parallels between the natural and mathematical sciences. In his \textit{De animalibus}, he argues that research in the mathematical and the natural sciences proceeds in the same general way.\footnote{De animal. 11.1.2, ed. Stadler, 1: 765.} In astronomy and geometry, the investigator first posits those things into which inquiry will be made such as the eclipse of the moon or sun, or the equality of the internal angles of a triangle to two right angles. Once an accurate description is thus obtained, the investigator works out the causes of these properties.
as the middle terms of demonstrations. In a similar way, the zoologist will consider the common properties of animals and then proceed to an investigation of their causes. This procedure is precisely what Albert finds in the order of Aristotle’s zoological treatises: the ten books of the Historia animalium contain theoretical descriptions of animal morphologies and behaviors and these are followed by the treatises on the parts and generation of animals containing causal explanations through demonstrations.\textsuperscript{82}

Thus, the natural and mathematical sciences share the general two-staged structure of scientific investigation that makes use of the various dialectical and demonstrative methods of inventive and judicative logic.

Albert is quite clear, however, on the differences between mathematical knowledge and the sort of knowledge an investigator has of natural subjects. Grounded in the distinction between absolute and suppositional necessity, the mode of mathematical demonstration differs from that of demonstrations in the natural sciences. Mathematical demonstration has a twofold necessity. Because the necessity of the conclusion is on account of its formal relation to the premises, mathematical demonstration exhibits a necessity of consequence (\textit{necessitas consequentiae}). Yet the premises themselves are absolutely necessary in their own right and it is because of their necessity that the conclusion is absolutely necessary. So, mathematical demonstration also exhibits a necessity of the consequent (\textit{necessitas consequentis}). Demonstrations in the natural sciences, however, exhibit a necessity of consequence only, because the conclusion is never absolutely necessitated in its own right except insofar as they are the formal consequence of some premises. As the premises are contingent, they do not communicate to the conclusion itself a necessity. Yet such demonstrations do disclose a necessity insofar as they manifest the conclusion as a necessary consequence of premises presupposed to be the case. These premises will contain a middle term stating an end and the conclusion will state what is necessary on the condition that the end is realized. Demonstrations of this kind, therefore, exhibit a conditional necessity on the presupposition of an end (\textit{necessitas conditionis ex finis suppositione}).\textsuperscript{83}

\textsuperscript{82} Albert refers to this order at \textit{De animal}. 1.2.1, ed. Stadler, 1: 38–39.

The fact that the necessity proper to an eternal thing cannot be attributed to a natural subject does not prevent scientific knowledge of the contingent forms of nature. The natural scientist is able to demonstrate suppositionally, seeking a necessity of consequence such that given the natural form whatever the form presuppositionally requires is necessary, but not the converse. There need not exist birds possessing taloned feet, and strongly curved and sharply pointed beaks. However, given the supposition that there exists a bird that feeds by seizing and tearing its prey while flying, then this bird must possess such a morphology. The function is presupposed on the basis of observation, and the form, also known from observation, is understood in terms of the function by means of the suppositional demonstration. Explanation through causes in the suppositional mode is not a matter of simply deducing empirical conclusions from universal principles. It is, rather, an analysis of an observed form in light of more general principles which have also been established through observation. The investigator of animal nature will have noticed over and over again a certain relation of form to function and will use this as a theoretical principle according to which many more specific observed forms can be understood. Albert, for example, explains the taloned feet of eagles and the sharp teeth of dogs in terms of the fact that eagles and dogs are carnivores. Neither the morphological feature nor the carnivorous nature of the species is deduced from the principle that form follows function. Rather, the observed morphology of the species (talonned feet, sharp teeth) is associated with the species (eagle, dog) on account of the carnivorous function of the species in light of the general principle about form and function. The necessity of the association is established by demonstration on the supposition of both the function and the principle.

8. THE METAPHYSICAL FOUNDATIONS OF KNOWLEDGE

Albert prefaces his paraphrastic commentary on Aristotle’s *Metaphysics* with a treatise “On the Establishing and Nobility of this Science.” Here he argues that there are only three types of theoretical knowledge: knowl-

85 *De animal.* 12.3.6, ed. Stadler, 1: 883–884.
87 *Metaph.* 1.1, Ed. Colon. 16/1, 1–17. Ashley, “Albert the Great on Aristotle’s *Metaphysics*,” 139f., translates Albert’s *stabilire* and the associated noun *stabilitio* as “stabilizing” and “stabilization” suggesting the role of metaphysics as stabilizing or grounding the other sci-
edge of natural things, knowledge of mathematical things, and knowledge of being as being. There are, therefore, three theoretical sciences: natural science, mathematical science, and metaphysical science. These are, in fact, the only theoretical sciences of being. The moral sciences are not theoretical (scientiae contemplativae) for they are not studied for the sake of contemplating the truth. As already discussed, Albert did hold that logic could be considered a theoretical science and studied as such. Yet the subject of logic is the common mode of the sciences and in that capacity it does not concern any particular kind of being or part of being. Rather, logic considers second intentions (intentiones secundas) and is clearly to be distinguished in this respect from the natural, mathematical, and metaphysical sciences.88 Albert goes on to argue that metaphysics provides the foundation for the other two sciences. This seems to suggest that he considered the natural and mathematical sciences as derivative from metaphysical principles and, therefore, not autonomous sciences—that is, that they are not independently productive of true knowledge. That this is not Albert’s view is suggested by his insistence, following Aristotle, that metaphysics is to be studied after the mathematical and natural sciences. Further, he claims that the mathematical sciences can be taught independently from metaphysics—to the young, for example. Moreover, knowledge in the natural sciences arises out of the long accumulation of experience—again, independently of metaphysics. Most telling of all, however, is Albert’s rejection of the error of Plato who held that natural science was grounded in mathematics and mathematics in metaphysics. For Albert, the sciences are autonomous in the sense that each can be studied according to its own principles. In whatever way metaphysics provides the foundation for all the other sciences, then, it cannot be such that all other kinds of knowledge are derived from or reducible to metaphysical knowledge.

Albert was especially concerned with the Platonic reduction of the sciences and was quite critical of his contemporaries whom he identified as the “friends of Plato” (amici Platonis).89 According to these thinkers, natural beings are ontologically grounded and causally dependent on mathematical beings and mathematical beings, in turn, are grounded and

88 Metaph. 1.1.1, Ed. Colon. 16/1, 3.
causally dependent on divine being.\textsuperscript{90} For the Platonists, the subject of natural science is not the material body in its changeable material being, but the eternal subsistent forms. Antecedent to these subsistent forms are the formal mathematical principles generative of them. These principles are subsistent abstract figures and numbers that originate being (\textit{numerus principians entia}). These subsisting figures and numbers are the subject of mathematical science. Antecedent to these is unity, which is the principle of all number, and this is the eternally subsistent God from whom all being emanates. God, then, is the subject of metaphysics.

On this Platonic view, therefore, antecedent to every material body is abstract dimensionality and this depends on the principles of figure. Antecedent to figure is abstract generative number and antecedent to number is God. There are three ascending grades of scientific knowledge corresponding to the three ascending grades of separated being. Scientific knowledge results from a sort of abstractive superduction of the subject to the higher principles from which it derives its intelligibility.\textsuperscript{91}

Albert rejects this Platonic account as completely false and he is especially concerned to deny that the principles of the natural sciences are to be found in mathematics. He points out that dimensionality cannot be the principle of a material body according to any bodily \textit{esse}, because the dimensions of a body follow from the way in which the matter has been formed. Thus, the proper principles of material bodies are matter and form and any quantitative accidents of a body are consequent upon these. To the extent that the scientific investigator considers the dimensionality of a material body in light of mathematical principles, the dimensionality is considered as abstracted from material body.\textsuperscript{92} In discussing the principles according to which animals are to be understood, for example, Albert warns that the zoological investigator should be on guard against introducing forms that are not proper to matter, as did Plato. This is because explanation in the natural sciences can only be in terms of those forms that exist in matter and are brought forth from the potentiality of matter (\textit{in materia existentes et de potentia materiae eductae}).\textsuperscript{93}

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\textsuperscript{90} Metaph. 1.1.1, Ed. Colon. 16/1, 2 where he directly ascribes the view to Plato.
\textsuperscript{91} Metaph. 1.1.2; 1.5.5, Ed. Colon. 16/1, 4–5; 75–76. See Weisheipl, “Albertus Magnus and the Oxford Platonists,” 129–30, for further references.
\textsuperscript{92} Metaph. 1.1.1, Ed. Colon. 16/1, 2–3.
\textsuperscript{93} De animal. 11.2.4, ed. Stadler, 1: 789.
then, is autonomous and has its own principles through which knowledge of natural subjects is attained.\textsuperscript{94}

Albert is likewise concerned to argue that the mathematical sciences are autonomous from metaphysics. The subject of mathematics is abstracted measure and not antecedent form. The unity that is the principle of number is not identical with the unity of being studied by the metaphysician. Numerical unity is an accident derived from material being, but the unity of being is the indivisibility of the actually existing substance as substance.\textsuperscript{95} Numerical form is consequent upon physical form. The quantitative forms considered by the mathematical investigator are attained by abstraction from the measure of bodily forms. Thus, mathematics is consequent on natural science and not metaphysics.\textsuperscript{96} Albert did admit that \textit{propter quid} demonstration through mathematical principles is possible in some of the natural sciences, but only for those mixed sciences concerned with purely quantitative attributes of natural subjects.\textsuperscript{97}

Albert also denies that God is the subject of metaphysics. Rather, the subject of metaphysics is being as being and not being as this or that kind of being which provides the subjects of the special sciences. Thus, the proper concern of the metaphysician is the analogy of being that derives from the demonstration that not all being is physical. If one did not know of the existence of non-physical being, then there would be no distinction between natural and metaphysical science.\textsuperscript{98} Yet, insofar as God is the cause of the beings from which metaphysics analogically takes its subject, being as being is known in metaphysics as related to its cause, which is necessary being.\textsuperscript{99}

Whatever the way in which metaphysics is considered by Albert as foundational to all the sciences, then, it cannot be in the way conceived by the Platonists in terms of a superalternation of mathematics to natural science and metaphysics to mathematics. Having pointed out the error of Plato, Albert cites Ptolemy to the effect that mathematics has a certain stability and necessity that natural science lacks. The forms studied in the natural sciences are considered as they exist in changeable and temporal

\textsuperscript{94} \textit{Anal. Post.} 1.5.6, Borgen. 2, 140a–b.
\textsuperscript{95} \textit{Metaph.} 5.1.8, Ed. Colon. 16/1, 227–229.
\textsuperscript{96} \textit{Metaph.} 1.1.2, Ed. Colon. 16/1, 4–5.
\textsuperscript{97} \textit{Anal. Post.} 1.3.7, Borgen. 2, 85b–86a.
\textsuperscript{98} \textit{Metaph.} 1.1.2; 6.1.3, Ed. Colon. 16/1, 3–4; 305–306.
matter. As a result, knowledge of natural things is mixed with opinion and cannot be confirmed, fixed, or necessary. This is contrasted to mathematics where fixed and necessary knowledge is possible.\textsuperscript{100} As already discussed, Albert had argued in his \textit{Physica} that, contrary to Ptolemy, the natural sciences can arrive at fixed and necessary knowledge through causes despite the changeable nature of their subjects, because the scientific investigator is able to abstract the fixed forms from changeable matter, demonstrating them to be suppositionally necessary. The contradiction between these two citations of Ptolemy, however, is only apparent. Albert admitted that knowledge of natural subjects is often limited to the probable in contrast to mathematical knowledge.\textsuperscript{101} Yet he defended the possibility of a true science of nature and explained in extensive detail how to demonstrate in natural science. Albert can cite Ptolemy approvingly in the \textit{Metaphysica} because he acknowledges that a mathematical science aimed at saving the appearances, such as Ptolemy's astronomy, is more certain and necessary than a science, such as zoology, which deals with less regular processes and less certain outcomes. This is not to deny his position in the \textit{Physica} that certain knowledge of natural subjects is possible.\textsuperscript{102}

While the mathematical sciences are certain, they do not study ontologically independent substances as do the natural sciences. The absolutely necessary subjects of mathematics are abstractive and are derived from the natural substances upon which they are ontologically dependent. As a result, both sciences require metaphysics to establish and fix their proper subjects. Natural science presupposes the existence of its subject and this depends on the establishment of the properties of being in a foundational science. Mathematical subjects, being abstracted from the physical subjects of natural science, also require the foundation provided by the metaphysical study of being as being. This establishing or fixing of the subject is not the grounding of a science in the principles of a superior science. Rather, it is the analogical analysis of what the mathematical sciences and the specialized natural sciences have in common: that is, whatever is true of being considered as being. Metaphysics, then, has no subjects of its own in the sense of a class of being proper to metaphysics alone, for every being is the subject of the appropriate special science. Moreover, this is

\textsuperscript{100} \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 1 and Phys. 1.1.2, Ed. Colon. 4/1, 4 where Albert calls Ptolemy “vir in multis prudens”.

\textsuperscript{101} See, for example, \textit{De animal.} 11.1.2, ed. Stadler, 1: 765.

\textsuperscript{102} Ashley, “Albert the Great on Aristotle’s \textit{Metaphysics},” 140–141; see also Wallace, “The Scientific Methodology of St. Albert the Great,” 399–400.
why metaphysics does not provide the proper principles of the other sciences, as the Platonists claimed. It draws its subject from the other sciences in the sense that it presupposes them. This is why, Albert argues, the special sciences are not reducible to metaphysics: the transcendental truths known in metaphysics are not the explanatory principles of beings because these can only be known in the special sciences.103

For Albert, then, metaphysics has a kind of dependency on the other sciences. This is why it is to be studied last: knowledge begins in experience, and therefore the natural sciences that study being in its diverse kinds precede metaphysics in the order of discovery. The analogical notion of being follows from the knowledge that being can be material or immaterial and this requires knowledge of being in its various kinds as known through their proper principles.104 Yet metaphysics establishes all other sciences and, because it does, it is rightly called “divine science” and excels all the other sciences in nobility.105

9. Conclusion

Albert left behind a massive literary production that addressed every part of human knowledge known in his day. He not only gave his careful scholarly attention to the sciences well known and studied by his contemporaries, but he also revived long dormant scientific research programs and even invented whole new sciences as well. Throughout this work certain themes concerning human knowledge can be identified. Among these is the robust confidence in the intelligibility of nature and the efficacy of the tools provided by the logical tradition for its study. His works evince a certain care to understand the differing forms of being on their own terms and to avoid the sort of reductive tendencies that so often in the history of human thought have resulted in the devaluing of one sort of knowledge in favor of another. This is especially true regarding the study of nature. For Albert, the natures of things represent independent sources of intelligibility and the seeker of truth is obligated to respect this autonomy if knowledge is to be attained. Given his appreciation of the source of knowledge in human experience, it is not surprising that Albert gave a certain priority to the understanding of the various natural sciences.

103 Metaph. 1.1.2, Ed. Colon. 16/1, 4; see also 7.2.1, Ed. Colon. 16/2, 338–340.
104 Metaph. 4.1.6, Ed. Colon. 16/1, 167–169.
105 Metaph. 1.2.3, Ed. Colon. 16/1, 20–21.
In the order of discovery, knowledge is built up from sense experience through the ordered application of a series of dialectical and demonstrative methodologies. These allow not only for the understanding of natural forms, but also for the abstraction and systematic treatment of mathematical forms. They also allow for knowledge that the natural forms so known have a source of being in the immaterial necessary existent. Finally, the methodologies allow for an analogical appreciation of being in its role as establishing the special sciences. The reverse order of teaching provides the seeker of knowledge with the reasoned confidence that the intelligibility of reality reaches through being known best in itself down to what is most familiar to human knowers in their experience.
Introduction

Francisco J. Romero Carrasquillo, David Twetten, and Bruno Tremblay

Metaphysics, for Albert, represents the pinnacle of human reason’s effort to understand reality. As such, primacy of place among the branches of philosophy goes to that discipline to which Albert frequently refers, significantly, as “First Philosophy” or “Wisdom.”

The chapter opens, somewhat in keeping with the way of proceeding of Albert and his Stagirite master, with a set of preliminary questions: what is the subject of metaphysics (Section 1)? How is metaphysics related to theology, if each is characterized as a “science” that is wisdom (Section 2)? Why is metaphysics considered to be the first among philosophical disciplines, especially if its certitude appears to be of a lesser degree than that of a discipline like mathematics (Section 3)? What is the relation between Albert's metaphysics and its sources? Given the breadth of Albert's readings and the richness of the traditions that preceded him and that fed his powerful intellect, we must limit ourselves to two sets of sources of special importance and difficulty for the interpretation of Albert in general and for his metaphysics in particular: first, Plato and the Neoplatonists (Section 4), and then the Arabic philosophers, especially Avicenna and Averroes (Section 5).

Throughout his metaphysics, Albert refers regularly to God (under that name, or as “First”, “first cause”, “first substance”, “first intellect”, etc.), even though the task proving God's existence is assigned, by him to the final parts of the discipline. In Section 6 on the transcendentals, for example, we watch Albert develop an account that reflects a “theological” or theocentric view, and his understanding of universals in Section 7 is presented within an emanationist framework, according to which the First Cause or God is their ultimate foundation. We review, in Section 8, Albert’s discussion of the distinction in creatures between esse (“being”) and quod est (“that which is”), which makes God the reference point inasmuch as he is the only being in which the distinction does not obtain. In setting forth the doctrine of substance (Section 9), Albert presents the first “mode” of substance as being the result of the primary cause, produced according to a similitude to it. Finally, the last three sections articulate in various
ways Albert’s account of God as First Cause: insofar as it is possible for us to deduce his existence, with other primary causes, beginning from effects (Section 10); in accounting for the nature of God’s causation of his first effect, namely being (Section 11); and for his role in the universal but mediated outpouring of all other forms through the hierarchy of beings and in their subsequent “eduction” in the material order (Section 12).

The ubiquitous theme of God raises questions as to the genuineness of Albert’s metaphysics as Aristotelian, that is to say, as being a metaphysics centered on the notion of being as being. We shall see that although for Albert, after the manner of Aristotle, God properly enters into metaphysics as first cause of being as being, Albertan Aristotelianism in First Philosophy is articulated and developed under the influence especially of Avicenna and of Proclus and Plotinus that were reworked into the Liber de causis. Albert can be seen as the first Christian thinker who, in a way analogous to Avicenna and Maimonides, cashes in fully on the promise of Ammonius Saccas and Ammonius of Alexandria—that the philosophy of Plato and Aristotle arrive at one conclusion—by ascribing to Aristotle, not a demiurgic formation of what preexists, but a production of being ex nihilo. Since the collective aim of the authors of this chapter, as in previous ones, is to highlight elements that are distinctively Albertan, the reader should attend to a theme other than God and more proper to Albert’s metaphysics that runs throughout the chapter. That theme is being, simply speaking, as the first form that proceeds from the First, which has, even as an effect, a status ante rem, and which, with such posterior forms as “good” and “substance”, enters into the constitution of all things. If this is immediately recognized as the central theme of the Liber de causis, nevertheless, Albert has woven it into his paraphrase of the Metaphysics and into an Aristotelian treatment—the reader must judge how seamlessly—of methodology, universals, substance, and causality.

We begin, then, with the following questions: is being or God the subject of Albert’s metaphysics, and if the latter, how is this discipline different from theology? Recent work on these questions indicates why they cannot be addressed independently of Albert’s singular attitude to Plato

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and Platonic sources, as well as to the heritage of Greek metaphysical speculation within Islamicate philosophy.

1. Albert on the Subject of Metaphysics

Timothy Noone

The subject of metaphysics is a matter upon which the Latin medieval philosophers were confronted with mutually opposed opinions in the *auctoritates* that they acknowledged as the basis for philosophical investigation. Avicenna had taken a carefully worked out position according to which being as being is the subject of this science, whereas the existence of God belongs principally and methodologically to the metaphysician thanks to the latter’s treatment of being.² Averroes, Avicenna’s chief critic, argued that Avicenna was incorrect to assign to the metaphysician the task of showing the existence of God: physics, not metaphysics, has the duty of showing God’s existence in the form of the proof of a separate entity from a consideration of the nature of motion.³ Albert, no less than any of his contemporaries, is forced to confront the disagreement between Avicenna and Averroes. His position is clearly on the side of Avicenna, but it also contains elements, partly arising out of Neoplatonic sources, which are not easily assimilated into his fundamentally Avicennian position. This phenomenon has led to a range of modern interpretations that are themselves at variance regarding the exact character of Albert’s position. In what follows, we first review the disagreement among modern scholars; second, we examine Albert’s position against the background of Avicenna and Averroes, seeing in the process the extent to which Albert aligns himself with the former; third, we see how Albert’s position involves some qualifications and nuances that are not easy to reconcile with his generally Avicennian approach; and, finally, we reflect on the extent to which the lingering difficulties in Albert’s views may at least in part explain the scholarly disagreements of the present day.

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A. Modern Scholarship

Writing in 1965, Albert Zimmermann, in his classic and lengthy study of the medieval discussion of the subject of metaphysics, *Ontologie oder Metaphysik*, places Albert the Great and Thomas Aquinas together in a distinctive tradition precisely because they, along with Richard Rufus, put God outside the scope of the subject of metaphysics and, thus, are united in a certain understanding of the ontotheological character of metaphysical knowledge.\(^4\) James C. Doig, writing only a few years later, argued in his comprehensive study of St Thomas Aquinas’s *Sententia super Metaphysicam*, that Albert the Great was one of the commentators whose interpretation of Aristotle’s *Metaphysics* St Thomas intended to challenge. In particular, Doig alleges that Albert’s understanding of the formal object (or, in other terminology, the subject) of metaphysics is heavily indebted to the writings of the renowned Islamic philosopher, Averroes, although he acknowledges that Albert does not follow the Averroistic interpretation in all respects.\(^5\) Furthermore, Doig contends that Albert’s own *Metaphysica*, following Averroes’s schema of metaphysical knowledge, contains no proof of the existence of God as the cause of being, but simply relies on the proof of God as the cause of motion developed in Aristotle’s *Physics*.\(^6\)

In his general study of Albert’s philosophy, Alain de Libera argues that Albert’s thought on the subject of metaphysics is distinctively and thematically ontotheological on the grounds that Albert associates the ontological dimension of metaphysics with Aristotle’s treatise of that name, while finding in the pseudo-Aristotelian *Liber de causis* the theological complement to ontology.\(^7\) More recently still, Jan Aertsen has claimed that Alain de Libera’s reading of Albert is overly simplified and does not capture the unity of metaphysical knowledge in Albert’s thought.\(^8\) Aertsen’s own


\(^6\) “Albert, as a Christian theologian, would have believed in the God of creation. As a philosopher, did Albert prove God was the cause of being? If he did, he has certainly left no trace of his proof in his exposition of Book Lambda”; Doig, *Aquinas on Metaphysics*, 202. *Although we cannot discover in Albert the explicit statement that Aristotle’s God is not proved as the cause of being, Albert does systematically disagree with Thomas’s views on the very nature of metaphysics. Thus, by implication, Albert would affirm that Aristotle’s proof of God is not a proof of the cause of being*; ibid., 204.


position recognizes the importance of the texts that indicate that, for Albert, God enters into metaphysical discourse inasmuch as he is the cause of being. Aertsen also points to the importance of the doctrine of creation as the key to understanding Albert’s thoughts on the subject of metaphysics as *divina*. In this regard, many of the issues emerging in the scholarship on Albert seem to be connected both to the expectations of scholars steeped in historically later conceptions of the subject matter of metaphysics—conceptions that are often Scotistic and Thomistic—and to their attempts to find in Albert anticipations of later developments, an analogue perhaps to the quest to find the progenitor of the ontotheological conception of metaphysics that is characteristic of much of recent scholarship on medieval discussions of metaphysical knowledge.9

B. Albert’s “Official” Position Against the Islamic Philosophical Background

Islamic Background

Relying on his masterful command of the Aristotelian scientific methodology, Avicenna points out a difficulty regarding how God is to be treated within First Philosophy or divine science. If God is to be counted as one of the philosophical topics to be treated within metaphysics, he must fall within the scope of the science, either as its subject or as one of its properties; he cannot be both treated as subject within the science of metaphysics and proved within that science inasmuch as no science proves its own subject. But the existence of God cannot, for Avicenna, be presupposed as the subject of the science, since God’s existence is not even sought or inquired after in another science. Alternatively, we cannot claim either that God’s existence is known per se, insofar as many deny that he exists. The only remaining alternative is that God’s existence is not known by another science, but rather sought within the scope of metaphysical investigations and, hence, must be considered to fall within the properties of the subject of the science.10

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It is important to note, for the sake of readers who might be better acquainted with the teaching of Thomas Aquinas on the subject of metaphysics, that Avicenna explicitly denies that metaphysics can examine the principle of all being for the very good reason that not all being has a principle or is caused. Rather, metaphysics examines the cause of caused being under the formula of studying being and what follows upon being. In Avicenna’s outlook, the proof of God’s existence will be shown most clearly in his famous proof of God as Necessary Being and, hence, God will enter into the study of being as being as falling under the disjunctive pair of the necessary and the possible. But in his description of the four parts of metaphysics, appropriated by so many Latin commentators, he describes the part of metaphysics that treats of God as dealing with items totally separate from matter and the things pertaining to matter.

Averroes begins with the same methodological model used by Avicenna. He agrees with the point that no science proves its own subject and, therefore, God’s existence is either shown in metaphysics, is known in some other science, or is known per se. Avicenna’s error, according to Averroes, consists in his affirming the wrong disjunct: God’s existence is proven in natural philosophy, studied in the proper order of learning prior to metaphysics and, therefore, God’s existence is known at the outset of metaphysical investigation:

Accordingly, the consideration of forms belongs to two sciences. The first, natural science, discusses material forms; the second, which is the science of being taken simply (ens simpliciter), investigates the simple forms that are entirely separate from matter. But we should notice that [the existence of] this class of beings, namely, what is separate from matter, is only discovered in this science, natural science. Moreover, anyone who contends that first philosophy tries to establish the existence of separate entities is mistaken. For such entities serve as the subject of first philosophy, and it has been stated in the Posterior Analytics that it is impossible for a science to declare the existence of its subject. Instead, each science assumes that its subject exists either because the subject is evident in itself or because it has been demonstrated to exist in another science. Wherefore, Avicenna was gravely mistaken when he stated that the first philosopher demonstrates the existence of the First Principle and [when] he proceeded along these lines (which he deemed correct and even necessary) in his book On the Divine

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In his own positive teaching on the subject of metaphysics, Averroes argues that the subject of metaphysics is being taken simply (\textit{ens simpliciter}). When he comes to articulate precisely what “simple being” is, however, he does so with reference to the model of \textit{pros hen} equivocation in Aristotle’s book \textit{Gamma}. The metaphysician studies the being of things, but contained within their being in the sense of their substances is God, inasmuch as God enters into the definition of the \textit{divina} studied in metaphysics, just as nature enters into the definition of natural things.\footnote{Averr., \textit{In libros Metaphysicorum Aristotelis} 6, t.c. 2, in \textit{Averrois commentaria} 8, 69B, lns. 26–33.}

\textit{Albert’s “Official” Position}

When we turn to the texts of Albert, we find his “official position” concisely stated precisely where we would expect it in his oeuvre: the end of his commentary on Book 1 of the \textit{Physics}, directly parallel with the place where Averroes advances his criticism of Avicenna:

There is another criticism that Averroes gives of Avicenna and this one is even less appropriate [than the one just mentioned]. For Avicenna speaks the truth when he says that the same thing is not both sought in a science and presupposed in it, and that, since God and separate substances or forms are sought in first philosophy, they cannot, for that very reason, truly be presupposed in it and thus cannot be the subject of first philosophy. Furthermore, I have no idea why Averroes criticizes [Avicenna], since what Avicenna says is necessarily the case. For we know that, since being is the subject of first philosophy, both the divisions and properties of being (\textit{et divisiones et passiones entis esse}) are the matters treated in first philosophy, namely \textit{per se} and \textit{per accidens}, potency and act, unity and multiplicity, and separate and non-separate. And, since separate is a difference and property of being (\textit{Et cum separatum sit differentia et passio entis}), it cannot [itself] be the subject. Furthermore, when the metaphysician is said to be concerned with separate things, “separate” is not understood in the manner in which the Intelligences are separate, but rather it is understood of those things that are separate in their definition and being (\textit{esse}). These, moreover, are the things that are considered in their simple quiddities, just as we stated in the foreword of this book.\footnote{Alb., \textit{Phys.} 1.3.18, Ed. Colon. 4/1, 76, lns. 37–56.}

Noteworthy here is the reasoning that Albert gives for siding with Avicenna. His reasoning, clearly springing from Avicenna’s own, is that “separate”
cannot itself be the subject of a science, if it is shown to be the property of something else in that science. But this, Albert reasons, is precisely what happens in metaphysics: “separate” is demonstrated to be one of differences characteristic of being, apparently in the sense of a *passio*, in the terminology of the *Posterior Analytics*. The subject of metaphysics cannot, therefore, be separate entity, whether the latter be identified with God or the Intelligences. Lastly, there seem to be, by implication, two different meanings of the term “separate”. “Separate” denotes a difference and property of being, but “separate” also describes a characteristic belonging to all the objects of metaphysical investigation. This is just what we find in a related passage in Albert: in language strikingly similar to that later employed by Thomas Aquinas in the proemium to his own commentary on the *Metaphysics*,¹⁶ Albert tells us in his *Physica* that metaphysics treats of objects that are separate or abstract in the sense that their being and definition (*secundum esse et diffinitionem*) are prior to motion and matter, but that this is not identical at all to the way that God and the Intelligences exist apart from matter and motion.¹⁷ The difference between these two senses of *separatum* might be characterized as one between mode and property: all metaphysical objects enjoy an independence of matter and motion in the sense that their notions do not include matter and motion—this is their mode; God and the Intelligences, on the other hand, exist apart from matter and motion altogether and, hence, as beings they are separate and bespeak a property of being. Consequently, what is supposed to be shown in Albertan metaphysics is that God exists as a purely separate substance, and “separate” in this more profound sense is characterized as being a *passio* of the subject matter of metaphysics, which is *ens*.¹⁸

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¹⁷ See Alb., *Phys.* 1.1.2, Ed. Colon. 4/1, 5, Ins. 1–14; ibid. 1.1.1, 2, Ins. 51–63; ibid. 1.1.1, 1, Ins. 60–67.

¹⁸ The same teaching that God is not the subject of metaphysics is reinforced in Albert’s *Metaphysica*. See also Alb., *Metaph.* 1.1.2, Ed. Colon. 16/1, 4, Ins. 38–53: “Quod autem erronea sit haec opinio, constat per hoc quod nihil idem quaesitum est et subiectum in scientia aliquia; deus autem et divina separata quaeruntur in scientia ista; subjecta igitur esse non possunt. Amplius, partes, de quibus multa demonstrantur in scientia hac, non reducuntur ad deum sicut ad deum sicut ad commune praedicatum de ipsis, sive communitas generis sive analogiae accipiatur. Adhuc passiones in hac scientia consideratae, quae supra inducenda sunt, non consequuntur immediate deum et divina; igitur subjectum non potest deus huius esse scientiae. Ideo cum omnibus Peripateticis vera dicentibus dicendum videtur, quod ens est subjectum inquantum ens.”
C. Problems with the “Official” Position of Albert

There are two major problems with the “official” position described so far. First, according to that position, God should be treated as falling under the notion of being studied in metaphysics precisely as maximally instantiating the notion of *separatum* as a division or property of being. This point is clearly made in the text from Albert’s *Physica* quoted above and seems to align well with the sort of treatment found in Albert’s contemporary and fellow Dominican Robert Kilwardby, who has God fall analogically under the notion of being studied in metaphysics. The trouble is that, systematically speaking, this entails that the common notion of being includes God and, therefore, Albert should not speak, as he does, of knowing God in metaphysics as the cause of *common* being. Second, we should expect to find a clear demonstration of God’s existence as *ens separatum* somewhere within the Albertan corpus and this would be the fulfillment of the program of metaphysical knowledge described; however, either there is no such proof to be found in the corpus, or only elements are laid out from which the reader would have to assemble the proof.

Of these two points, the second is less damaging to the official position of Albert: Albert could think that such a proof was possible even if he himself never explicitly constructed one. I propose, then, to focus our attention on the first and pressing issue of Albert’s alternative way of describing God as fitting into metaphysical knowledge. As a preliminary to the discussion, note that even within his *Metaphysica*, Albert seems to identify the subject of metaphysics with created being:

[T]his science is called “transphysical” because that which is a certain nature determined by quantity or contrariety is based upon the principles of being taken simply (*esse simpliciter*), which [principles] altogether transcend everything called “physical” in this way. [This science] is even called “divine”, moreover, because all such [principles] are divine and best and first, giving to all other things /3/ the fullness of their being. For, the being (*esse*) that this science considers is not considered as limited (*contractum*) to this or that [being], but rather as the first outpouring (*effluxio*) of God and the first created thing, prior to which there is no other created thing. . . . Among the theoretical [sciences], moreover, the divine [science], which we are now treating, excels [others] in that it provides the basis for the

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20 For an article showing that, according to Albert’s opinion, the proof of the existence of God is outside the scope of natural philosophy, see Twetten, “Albert the Great on Whether Natural Philosophy Proves God’s Existence.”
subjects, properties, and principles of all the other sciences and is not based, in turn, on any other. And this [science] is the perfection of the divine intellect within us in that it is about explorations (speculationibus) that do not concern “the continuous” or time, but that are simple, free (purae) of what “darkens” this kind of divine being (esse divinum), and firm in that they are the basis of others, yet are not [themselves] based on others. . . . 21

When we see Albert identifying in this wholesale fashion the being studied by metaphysics with the being of created things, we may well think of Thomas Aquinas’s teaching and find the results assuring. But the trouble lies in the point that, for God to fall under a passio entis, as this is understood in the Aristotelian scientific methodology, the being studied in metaphysics must be extended to God and, thus, be common to God and creatures, albeit not necessarily univocally common. In this text, however, we see a delimitation of the being studied in metaphysics to the creaturely realm and, hence, an apparent exclusion of God from the common predicate that would have to attach to him.

This difficulty gets compounded by two other features of Albert’s thought: his strict exclusion of God from the meaning of transcendental terms and his claim, found in the Metaphysics and the De causis commentary, that God is known in metaphysics as the cause of the being that is considered in metaphysics. To take up the second point let us consider a text from Albert’s De causis:

In this book, therefore, we have arrived at the end of what we intended. For, we have shown the First Cause and the order of the secondary causes, and the manner in which the First is the principle of universal being (universi esse), and how the being of all things flows from the First, according to the opinions of the Peripatetics. And indeed once these [discussions] had been adjoined to book 11 of First Philosophy, then the work was for the first time perfected. 22


22 Alb., De causis et proc. univers. 2.5.24, Ed. Colon. 17/2, 191, Ins. 17–23 (for the Latin, see below, note 477).
The manner in which Albert construes God as the cause of all being is telling; God is outside of the being that is considered in metaphysics and is its cause. The being that flows from God is the first created thing, and, by implication, what is considered in metaphysics is created things in terms of their being.

The restriction of transcendental terms is evident in the way that Albert describes how such terms apply, or fail to apply, to God. Having reasoned to the existence of God from within metaphysics by using proofs that in the main derive from the tradition of Avicenna and al-Fārābī and al-Ġhazālī, Albert pauses at the end of Tractate 3 of Book 1 in the De causis to relate what we may safely affirm positively about the First or God. Here he proceeds to tell us that, owing to its preeminence, nothing can be said affirmatively of the First, according to the normal meaning of the terms. So true is this that the First may not be called rightly “substance” or even “being.”

The same analysis pertains to the transcendental notions “one” and “thing”; they, too, are not applied to the First in a positive sense. To justify speaking in a positive vein of God at all, Albert adduces a causal principle: the cause of a substance must be a substance in some sense; the cause of goodness must be goodness in some sense; and so forth. Even then, the meaning that the terms have in our own intellects is not expressed when the terms are applied to God, though Albert acknowledges that features themselves are incomparably more perfectly found in God. There is warrant for the predications based upon the aptitude of effects to imitate their causes; such an aptitude evokes the name of a form that is then predicated of both cause and effect. Still, because effects do not attain the nature and perfection of their causes, the predication is actually inversely proportional: the meaning of a term predicated of the effect (causatum) must be denied in the cause (causa) and conversely (lns. 53–74). Even the disjunctive pair of causa/causatum is not exempt from this predicational limitation (42, lns. 35–63). By extension, we are warranted in inferring that the same restriction would be placed upon the disjunctive pair separatum/non-separatum, which would be the disjunction appropriate to the proof forecast in the text that states Albert’s official position.

The difficulty that such a stance poses for Albert’s account of metaphysical knowledge is the following: if God is to be a topic of metaphysical knowledge, then what is the topic of metaphysical knowledge? The answer is that there is no such topic; only God is the topic of metaphysical knowledge.

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23 Alb., De causis et proc. univers. 1.3.6, Ed. Colon. 17/2, 41, lns. 28–52 (citing Arist., Metaph. media trans.), translated below, at note 396.
discussion and analysis, he must somehow be encompassed under the subject, either as a part or as a division of the subject, being as being, according to the Avicennian model. Yet Albert proposes so attenuated an account of metaphysical terms and theological language in the *De causis* that, despite the statements of the key text of the *Physica*, the First cannot be said to fall under any of the divisions of *ens*, whether we consider *separatum/non-separatum, causa/causatum, or necesse/possibile*.

D. The Scholarly Disagreements Revisited

In concluding, let me return to the diverse scholarly opinions mentioned at the outset. Scholars have been divided over the issue of how to understand Albert’s position on metaphysical knowledge. As we have seen, in Albert’s thought we find two divergent tendencies. First, his official position is Avicennian and in no event does he incline toward the Averroistic solution to the problem of metaphysical knowledge. According to the Avicennian side of Albert’s thought, God’s existence is discovered in metaphysics as *ens separatum*—perhaps we should add *maxime separatum*—and the concept of *ens* seems sufficiently rich and broad to allow God as *ens separatum* to belong to the subject of metaphysics as one of its *passiones* or properties. But this program of metaphysical knowledge does not find its fulfillment in the *Metaphysica*, inasmuch as the theory of transcendental terms advocated in the latter seems to undermine the reliability of the proofs, or at least the defensibility for their inclusion within the horizon of metaphysical knowledge. Second, alongside this Avicennian line of approach, we find a proto-Thomistic theory of metaphysical knowledge. In this program of metaphysical knowledge, God is reached only as the cause of the subject studied by metaphysics (*esse simplex*). But in this second approach, the term “cause” when applied to God is being extended well beyond its normal specification of being insofar as the ordinary use of “cause” is identified as a modification of *ens/esse simplex* within the creaturely order.

Viewed in this light, most of the interpretations advanced by the philosophers mentioned have some merits. Zimmermann’s contention that Albert is within the same tradition as Thomas Aquinas is too simple a description and fails to recognize the properly Avicennian side of Albert’s thought, although elements of Albert are certainly similar to key elements in Aquinas. De Libera is quite right to suggest that the critical juncture for Albert’s thinking is between the view of metaphysics found in the Aristotelian tradition and its commentators, on the one hand, and the negative
theology of Pseudo-Dionysius on the other, inasmuch as it is the negative theology of the latter that inspires Albert to develop the restricted view of transcendental terms that he does. Finally, Aertsen's suggestion that Albert's thinking is more complicated in its conception of the nature of metaphysical knowledge than de Libera allows is certainly justified, while his observation that Albertan metaphysical terms are only transcendental within the creaturely order, that is, only horizontally and not vertically, seems to be well borne out by the texts we have seen in Albert's *De causis*.

In conclusion, we may suggest that the thought of Albert the Great on the topic of metaphysical knowledge is a fascinating combination of the different elements that will be systematized in different ways by subsequent philosopher-theologians. Thomas Aquinas will adopt certain features and render them consistent by never allowing that God falls under the subject of metaphysics as a property; accordingly, he must then present a more elaborate theory of analogy than that found in Albert to try to justify theological language within the scope of natural reason. Henry of Ghent and, following him, Duns Scotus will take up the Avicennian side of Albert's thought and systematize it by eliminating the idea that God is a topic of metaphysical knowledge only as the cause of the subject of the science. Albert's own position is a mixture of both of these elements, presaging in different ways the history of metaphysics and philosophical theology in the Latin West.

2. **Metaphysics and Its Relation to Theology in Albert's Thought**

*Henryk Anzulewicz*

The centerpiece of Albert's metaphysics is his paraphrase of Aristotle's work of that name. But it has been observed that Albert's philosophical vision is broader than that of many of his peers, including that of his student Thomas.24 His philosophical work, even if we think of the central

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Aristotelian “sciences” of metaphysics and physics, is “theological” in a sense that could not be ascribed today to our historical Aristotle (Albert’s Aristotle is one of the remote authors of the thought of the Liber de causis): the entire created world is infused with form that flows, under the mediation of higher causes, out from and back to God. It may not be accidental, then, that Albert penned paraphrases on all of the works of the Dionysian corpus immediately before turning to the Corpus Aristotelicum. And so, before we delve into the details of Albert’s most mature metaphysical paraphrases, the Metaphysica and the De causis et processu universitatis, it is appropriate to reflect in a broad way on Albert’s comprehensive understanding of wisdom, first through a consideration of the relationship between its two main forms—metaphysics and revealed theology—and then by way of a reflexion on the typically Aristotelian primacy of the former within philosophy proper. Subsequently, we shall examine key sources of Albert’s metaphysics apart from the Aristotelian: the Platonic and the Arabic sources. We address these issues which affect the interpretation of Albert’s thought globally, as well as of his “First Philosophy” in particular, in the next four sections.

Already in his early work De IV coaequaevis, Albert draws a parallel between metaphysics, the study of being as being, and the discipline that Augustine defines as cognitio de divinis (“cognition about divine matters”; De trin. 13.19.24), namely, as Albert elsewhere calls it, “sacred doctrine” or simply “theology” (as it shall be henceforth called): he considers both to be science (scientia) and wisdom (sapientia). As also in later works, he does not count theology as a science or wisdom that is purely theoretical (speculativa), since it is also affective (cum affectu) and for the sake of an end other than itself, as are the practical sciences. By contrast, metaphysics is an unqualifiedly theoretical science (scientia speculativa simpliciter): a habitus of speculative intelligence, which, according to Aristotle (Metaph. 1.1), deals generally with being as being and its properties.

Albert clarifies and develops the notions of two kinds of wisdom in Book 1 of his Super Sententiarum. Aristotle, observes Albert, did not identify a science whose truth is beatifying, whose end is in no way amidst

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25 Alb., De IV coaeq. q. 38.1, Borgn. 34. 550b–551b; see also, e.g. Alb., Summa de mir. scient. dei 1, prol., Ed. Colon. 34/1, 2, Ins. 72–76; tr. 1.1, 6, Ins. 53–57.
26 Alb., De IV coaeq. q. 38.1, Borgn. 34. 550b, 551a, 552b. See also below, notes 28 and 30.
creatures. Hence he separated the notions of the true and the good from each other, and he accordingly divided the science of the truth that is in things from the science of the good that is in things. But the science whose end is the truth pertaining to the Christian religion is about an end that combines intellection and affectivity. Thus, to the question whether theology is practical or speculative, Albert answers that it is properly an affective, not an intellectual, science. Yet theology is not mere moral science: it is pursued for its own sake in the highest sense, not for the sake of character, as are moral sciences. Unlike metaphysics, theology is not universal by the universality of a single subject, such as being: it does not consider things insofar as they are things. As its general subject, it speculates about things, not in themselves, but insofar as they bring about in some way a participation in beatitude. And it investigates God, not as its general, but as its special subject; and not absolutely, but as principle and end. Theology is the science that is wisdom to the highest degree insofar as it is about the highest things in the highest manner: about God through the principles of faith based on divine revelation. By contrast, the sciences discovered by the philosophers are also called wisdoms since they concern lofty things, but not in the highest manner, insofar as they are based only on principles that are available to reason.

In Super III Sententiarum, which treats of the “gift” of wisdom, Albert unites metaphysics and theology in contradistinction to “practical wisdom”. “Wisdom” (sapientia) in the broad sense of the word (large), he observes, is derived from “tasting” alone (sapere) and is twofold: practical—and so,
moral science is called "wisdom"; and theoretical, as in Aristotle's three "definitions" of the wise person (Metaphysics 1.2, 982a8–16).33 “Wisdom” in the narrow sense (strictè) is used of that which is its own cause of knowing (sciendi) and of that whose end is within it, so that it is not sought for the sake of another, but other ends are for its sake. Albert links this narrower notion of wisdom, not to “tasting” alone (sapere), but to “flavor” (sapor) as well, and therefore to what is, absolutely speaking, flavorful (quod est sapidum simpliciter), which is none other than “divine things”. In this sense, he concludes, only “divine science” (scientia divina) is wisdom, and especially that science that is “according to piety” (secundum pietatem): theology.34

In his question-commentary on Aristotle's Ethics (ca. 1250–52), Albert appears again to group metaphysical and theological wisdoms together, now under the designation "contemplation of separate substances"—the most honorable endeavor (honorabilissimum), since toward it all human action and thought is ordered.35 God himself, says Albert, performs the operations of this contemplation, and he rewards them the most. Albert’s responses to objections bring out characteristics of wisdom that are of special interest for understanding metaphysics. Wisdom (of metaphysics) has the highest degree of certitude in demonstration (certitudo demonstrationis) because of its middle terms; not because they are the most proximate and enter substantially into the things known through them, but because they are prior to all other definitions, are undervived, and serve in turn as the ultimate causes of all other demonstrative knowledge.36 In a parallel way, metaphysical wisdom is about the highest divine things, not merely because a part of it concerns God and separate substances, which are called “divine” according to the whole of their being.37 But in fact the
whole science is about “divine things” (divina) in a second, broad sense of the word, in which sense things are called “divine” according to part of their being (secundum partem esse). In this sense, “the first principles of substance and the other genera” are called “divine”. For, according to part of their being, the being that they have in matter, they are not divine; but according to the being of substance (esse substantiae)—which is within the first principles—insofar as such things do not depend on matter (secundum quod non dependent ad materiam), they are entirely “divine” in the second sense of the word. Contrast this passage with the very different explanation of the “divina” of metaphysics in the later Metaphysica:

In first philosophy, all things are called “divine” because God is included in their definition. For…all things go out from the first divine principles and are in them as artifacts are in the mind of the artist. And, just as artifacts are traced back (resolvuntur ad) to the light (lumen) of the first active intellect and are defined through it, so all things are traced back to the light of the separate substances, and the separate substances are themselves traced back to the light of God’s intellect, through which they subsist and through which they are defined as through a first principle. And, this is the cause of this wisdom’s being called “divine” and “theology”.

In Book 10 of the Super Ethica, Albert expressly addresses the question whether “theological and philosophical contemplation” are the same. In both, he answers, are found: (1) intellectual intuition of “spiritual things”; (2) being for the sake of “resting in God” as the highest felicity. But they differ in habit, end, and object. Theological wisdom contemplates through a light infused from God rather than through an acquired habit. Its end is vision in patria rather than in via. And its object differs, not as to substance, but as to its “mode of contemplating”. For the philosopher contemplates God according as he or she possesses God as a demonstrative conclusion, whereas the theologian contemplates him as existing beyond reason and understanding. Thus, the philosopher relies on the certitude of demonstration, whereas the theologian relies on the first truth because

\[\text{in qualibet parte eius, sed alia omnia determinantur propter ipsum—vel id de quo communiter determinatur in scientia, et sic ens est subiectum eius.}\]

38 Alb., Super Ethica 6.10.535 ad 3, Ed. Colon. 14/2, 460, Ins. 73–85; see also 6.10.534 ad 1, 459, Ins. 27–34, and note 127 below.

39 See Section 9 below on the primary mode of “substance”. See also Alb., Super Dion. epist. 9, Ed. Colon. 37/2, 539, Ins. 46–57 and 539, In 83–p. 540, In 19: in theology, just as in metaphysics, things without matter are considered.

40 Alb., Metaph. 6.1, Ed. Colon. 16/2, 305, Ins. 38–49. For this sense of divina, and the background in Averroes, see notes 14, 21, and 236.

of itself, not because of reasoned argument, even if he or she possesses reasoned argument. Therefore, even if philosophy begins in wonder, it ends in knowledge, so that only the theologian as such marvels (miratur).\footnote{See Alb., \textit{Super Ethica} 10.16.927c, Ed. Colon. 14/2, 774, Ins. 73–79; and, on Arist., \textit{Metaph.} A.2, 982b17–21: Alb., \textit{Metaph.} 1.2.6, Ed. Colon. 16/1, 23, Ins. 41–43; 1.2.10, 27, Ins. 62–65.}

In a roughly contemporary question-commentary on Dionysius’s \textit{Epistles}, Albert contrasts the mode of reasoning from principles in the two wisdoms as he addresses the question: does it suffice in theology to know and say the truth without refuting errors? For other sciences, he answers, the truth that is communicated by necessary syllogistic connections, because it is derived from the principles of reason, has a cogency that draws even opponents, once refuted, to itself.\footnote{Alb., \textit{Super Dion. epist.} 7, Ed. Colon. 37/2, 502, ln. 78–p. 503, ln. 2.} But “the truth of theology” is beyond the principles of reason and is made clear by the pure divine light that informs the conscience so as to consent to it. Hence, through such truth, errors cannot be refuted unless it is first accepted as a foundation (503, Ins. 14–20). To the objection that it belongs to the most noble science to prove the principles of all other sciences, Albert responds that theology, unlike metaphysics, is not first because of the universality of its subject, to which all other sciences are in some way subordinated.\footnote{Alb., \textit{Super Dion. epist.} 7, Ed. Colon. 37/2, 503, Ins. 33–39.} Rather, all other sciences serve theology because it uses them. So, Albert does not ascribe one Aristotelian attribute of the wise person to the theologian, namely, to order all of the disciplines and to establish for them their first principles. Nonetheless, he does not hesitate to affirm elsewhere, with the help of al-Fārābī and al-Ğazālī, that theology, like metaphysics, is first in the order of nature, though last in the order of study and discovery.\footnote{Alb., \textit{Summa de mir. scient. dei}, prol., Ed. Colon. 34/1, 3, Ins. 50–53; this order is usually ascribed to metaphysics or to “divine science” as wisdom, as, with al-Ğazālī, in \textit{Super Ethica} 6.9.530c, Ed. Colon. 14/2, 455, Ins. 62–77.}

It may appear at first that Albert here separates out all philosophical consideration from theology. But in the same work he responds to an objection to this effect by indicating how theology “uses” philosophy:

Although the mode of natural philosophy is not preserved in theology, nonetheless, natural things are introduced into it. And for this reason, philosophical consideration belongs to it; namely, because theology, although it uses natural things, nonetheless does not use them insofar as they are natural—because it does not consider their motions—but only insofar as there is a “vestige” in them, and again [even then] it does not proceed in the
mode of natural philosophy. And, much less does it take up mathematics.…
Also, it accepts divine things, not in the mode of first philosophy, as made
evident by the motions of the heavens, but insofar as there are articles of
faith about them.46

Albert goes on to give examples of things introduced into theology. Among
them are: lower things, as symbols, such as a rock; comparatively noble,
though still corporeal things, such as light; created spirits, such as angels;
and human laws in historical examples and signs.47

In the Summa theologiae it becomes clear how theology borrows from
the philosophical sciences not just for symbols. In the prologue, his
first account of theology’s subject, Albert again takes up the theme of
“vestiges”:

[T]heology…as a whole is about God according as through all his works
he “reaches boldly from one end to another and disposes all things gently.”
For, in this way he comes to be known in all things: in the effects of nature,
on the one hand, through a trace (vestigium) and an image; in the works of
reparation, on the other, through the likeness of grace; and in the acts of
beatitude or glory through the consummation of glory.48

Among the vestiges of God in creatures, Albert goes on to explain, are
signs by which “something of God” is with probability naturally known.49
In three of the vestiges, the perfection of every creature is found: being,
the true, and the good, the triad highlighted by the Liber de causis.50 And
so, examination of these satisfies the first of the following three ways in
which Albert takes philosophy to be integrated into theology:

To the further question [i.e. whether natural knowledge is at all helpful for
faith], the older [authorities] Praepositinus and William, namely, of Aux-
erre, have responded sufficiently well. They assigned three reasons why it is
good to seek arguments for matters to be believed. One [reason] is so that
what is believed may be better known. But what is known in two ways is
better known than what is known in one. And so, what is known by faith
and reason is better known than what is known by faith alone. The second
[reason] is for the sake of bringing to the faith the simple, who are rather

46 Alb., Super Dion. epist. 9, Ed. Colon. 37/2, 540, lns. 36–53.
48 Alb., Summa de mir. scient. dei, prol., Ed. Colon. 34/1, 1, lns. 23–30, quoting Wisd. 8:1.
49 Alb., Summa de mir. scient. dei 1, q. 15, c. 2, a. 1, pt. 1, Ed. Colon. 34/1, 60, lns. 42–44; 62, lns. 38–70.
easily led by persuasive argument.\textsuperscript{51} The third [reason] is for the sake of convicting of contradiction those without faith who cannot be convinced except through reason, as Augustine says...\textsuperscript{52}

If the \textit{Summa theologiae} thus finds a role for philosophy within theology, it continues to contrast theology with metaphysics. In the course of Albert’s formal presentation of the subject of theology, we find an extended discussion of the subject of metaphysics, in which he distinguishes three senses of subject:

The subject in the sciences is assigned in three ways. [First,] namely, as what is aimed at (\textit{intenditur}) principally and in the principal part of the science; just as God is said to be the subject of first philosophy because in its principal part, God and the divine substances, which are separate, are aimed at. Hence, [first philosophy] used also to be called “theology” by the ancient philosophers, since assignment of names should be based on what is ultimate and best [in a thing]. In a second way, the subject in the sciences is assigned from that about which (\textit{de quo}) and about whose parts the properties (\textit{passiones}) are proved; just as being (\textit{ens}) is called the subject of first philosophy insofar as one and many, potency and act, necessary and possible being are [properties] proved (\textit{probantur}) of being. In a third way, the subject of a science is what it contains for the sake of the goodness and clarity of [its] teaching—and such is whatever serves (\textit{quaecumque sunt adminiculantia}) the subject in the first and second senses, through which the subject in these senses is brought to light; just as first philosophy concerns the stances of the ancients, the principles of demonstrations, what is said in one way or in multiple ways, and also definition (in itself or as physical definition) and the principles of each [i.e. of these two kinds of] definition. And, in all the general sciences it is necessary that there be this threefold determination of the subject.\textsuperscript{53}

Accordingly, continues Albert, the subject of theology can be understood in three corresponding senses: (1) God, after whom the discipline is named; (2) Christ and the church, or, the incarnate word with all his sacraments, which he perfects in the church; or, in short, the works of reparation as proceeding from the head of the church, God qua “enjoyable” (\textit{fruibile}) as an ultimate end; and (3) “things and signs”, in the Augustinian formula.\textsuperscript{54}

\begin{flushright}51\textsuperscript{ For} theology’s use of probable argument, see ibid., 1.5-3, Ed. Colon. 34/1, 19, Ins. 52–83.\textsuperscript{52}\textsuperscript{ Alb.,} \textit{Summa de mir. scient. dei}, i. q. 15.3-2, Ed. Colon. 34/1, 80, Ins. 14–27.\textsuperscript{53}\textsuperscript{ Alb.,} \textit{Summa de mir. scient. dei}, i. q. 3.1, Ed. Colon. 34/1, 10, Ins. 66–87. For other instances of this plural way of taking the subject of metaphysics, see notes 37 and 233.\textsuperscript{54}\textsuperscript{ Alb.,} \textit{Summa de mir. scient. dei}, i. q. 3.1, Ed. Colon. 34/1, 10, ln. 90–p. 11, ln. 11.\end{flushright}
Subsequently, Albert presents the subject of theology as he conceives it in a single formula: the “enjoyable (fruibile), or what is related to it as a sign or as useful”.\textsuperscript{55} In response to objections there, he explains why even where metaphysics overlaps with theology, their considerations are different:

[F]irst philosophy is about God according as he underlies (substat) properties of the first being insofar as it is first being. But [theology] is about God according as he underlies what is attributed to him through faith.\ldots\, [Furthermore,] there are two modes of revelation. One mode is through the light (lumen) that is connatural to us. And, in this way the philosophers have received revelation. This light can only be from the first light of God, as Augustine says in the book \textit{On the Teacher}, and this has been best proved in the \textit{Book on the Causes}. The other light is for contemplating supra-worldly matters, and this is elevated beyond us. By this light this science is revealed. The first [light] shines (relucet) in per se known [propositions], but the second in the articles of faith.\textsuperscript{56}

Thus, concludes Albert, although other sciences may materially treat the same matters as are treated in “divine science”, they are not treated in the same way: in the former they are treated as being and parts of being, as underlying properties that flow from what is essential to them; in the latter they are treated in relation to the “enjoyable” (fruibile) and as underlying properties attributed to them as such (lns. 55–62).

3. Albert on Metaphysics as First and Most Certain Philosophy

\textit{Bruno Tremblay}

As we have seen, metaphysics for Albert is the study of being as being,\textsuperscript{57} undertaken with the ultimate goal of knowing its principles and causes, chief among which is God,\textsuperscript{58} for whom being, as is stated in the \textit{Liber de causis} and as Section 11 explains, is a first effect or primum

\textsuperscript{55} Alb., \textit{Summa de mir. scient. dei} 1, q. 4, Ed. Colon. 34/1, 15, lns. 21–23. For “fruibile”, see also ibid. tr. 2, q. 7, 9.

\textsuperscript{56} Alb., \textit{Summa de mir. scient. dei} 1, q. 4, Ed. Colon. 34/1, 15, lns. 36–50.

\textsuperscript{57} Alb., \textit{Metaph.} 1.1.2, Ed. Colon. 16/1, 3, ln. 31–p. 5, ln. 58, and 4.1.2, 162, ln. 45–p. 163, ln. 34.

\textsuperscript{58} See Alb., \textit{De causis et proc. univers.} 2.1.1, Ed. Colon. 17/2, 58, ln. 34–p. 60, ln. 5; and 2.5.24, 191, lns. 17–23. According to Albert there, the intended goal is finally reached with the considerations of \textit{Metaphysics} 11–13 and the \textit{Book of Causes}; see the translations in notes 22 and 483.
creatum. Metaphysics as a product of natural reason may be an inferior form of wisdom compared to that based on Revelation, as shown in Section 2, but it remains the “true wisdom of philosophy” and it is first among the philosophical disciplines. Accordingly, Albert perpetuates throughout his works the Peripatetic habit of calling metaphysics prima philosophia, “First Philosophy”, and its practitioner primus philosophus, the “First Philosopher”. Yet his mere use of these phrases does not tell us why he deems them appropriate and what they mean when applied to metaphysics and the metaphysician.

To address these questions, we should perhaps consider the different ways in which something may be said to be “first”. Medieval and modern readers of Aristotle have at their disposal two enumerations of (some of) the analogical meanings of the word “prior”—Cat. 12, 14a26–b23 and Metaph. Δ.11, 1018b9–1019a14—which could be of some use since “being first” is simply being prior to everything else, that is, to everything else to which it is compared: in our case to all other parts of philosophy. Despite much overlapping, the two lists are somewhat different, but since that of the Categories is shorter and less complex, it is best suited to our present purposes. It states that something may be first according to: (1) time, (2) nature, (3) learning, (4) honorability, or (5) causality. Even though Albert himself never explicitly linked his notion of First philosophy to the enumeration in question as a whole, its use will nonetheless allow us to understand features of his thought on the primacy of metaphysics and on the general nature of the discipline. Because of the difficulty and importance of the questions that the order of honorability raises about the certitude of metaphysics, it will receive a proportionally greater share of our attention.

A. Metaphysics and the Temporal Order

Since Albert thinks that priority according to time, the first sense mentioned in the Categories, is the first analogate, it may be wiser to respect Aristotle’s order and begin with it: that is prior which comes before in time

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59 Alb., De causis et proc. univers. 2.1.17, Ed. Colon. 17/2, 80, ln. 64–p. 82, ln. 48, partially quoted in note 351 below.

60 Alb., Metaph. 1.1.1, Ed. Colon. 16/1, 1, lns. 10–11.

61 The expression “First Philosophy” is to be found in Aristotle himself, who for example uses it three times in Metaph. E.1, 1026a23–31.
and is therefore older or farther in the past from the present. The application of this sense to our problem is relatively easy and straightforward when one asks: of all the different parts of philosophy, is metaphysics the one that came into existence first, historically? Following in Aristotle's footsteps, Albert clearly believes that practical forms of knowledge related to survival and to the necessities of life came first, and that only later could humankind allot significant time to the pursuit of knowledge for non-utilitarian or non-practical purposes. He maintains—perhaps wrongly in the case of logic—that sciences such as grammar and logic, which are essentially tools ordered to the three speculative disciplines, were established before these. Once that was done, the wonder felt before a universe we do not understand seems to have first yielded things like the study of numbers, then efforts to answer problems such as those concerning eclipses, later concerning the generation of the universe as a whole, thus vaguely suggesting a chronological progression from mathematics to physics. It is also likely that Albert thought that metaphysics came last historically. Indeed, when presenting the chronological progression of human learning, he does so in terms of an increasing resemblance with, and movement toward, wisdom: there is *grosso modo* an ever greater effort and capacity to go beyond sense perception and imagination, to inquire and know about primary causes, and to pursue knowledge that is truly free—all characteristics which, as we shall see in the remainder of this section, can be especially ascribed to metaphysics.

### B. Metaphysics and the Order of Nature

Some of the vocabulary used to describe the second mode of priority has a comparatively metaphysical flavor, so to speak: terms such as “subsistence” and “to exist” appear, even though in Albert's interpretation the

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62 Arist., *Cat.* 12, 14a26–29. Albert’s commentary is in *De praedic.* 7.12, Borgen. 1, 295a–b (I would like to thank Carlos Steel for letting me consult a preliminary draft of the forthcoming critical edition, against which I read the Borgnet text in case the comparison revealed a fundamental difference). On this mode of priority, see also Arist., *Metaph.* Δ.11, 1018b14–19, and Alb., *Metaph.* 5.2.11, Ed. Colon. 16/1, 248, Ins. 4–22.


64 Alb., *Metaph.* 1.2.6, Ed. Colon. 16/1, 23, ln. 66–p. 24, ln. 10.

65 Alb., *Metaph.* 1.2.6, Ed. Colon. 16/1, 23, Ins. 8–40 (on Arist., *Metaph.* A.2, 982b11–17, where no mention is made of mathematics). See also, however, Alb., *Phys.* 1.1.1, Ed. Colon. 4/1, 3, Ins. 26–41, and *De intell. et intellig.* 2.1.6, Borgen. 9, 512b–513a, which may entail that physics came before mathematics.

second mode ends up having more to do with essence or nature than with existence. Here is how he paraphrases and adds to the description of *Cat.* 12, 14a29–35:

Second, that is called prior which is not “convertible” according to the consequence of subsistence. What I mean by “consequence of subsistence” is that if one is supposed actually to subsist in being (*secundum esse*), it is necessary because of that to suppose that the other thing subsists in being, as we say that one is prior to two. Indeed, if two exists, by an immediate consequence one exists and subsists, but if one exists, it is not necessary that two be or subsist. This mode [of priority] is [found] between inferior and superior in the coordination of predicables. . . . Once the inferior is supposed in being, the superior is supposed, but there is no conversion to the fact that once the superior is supposed in being, the inferior is necessarily supposed in being; because the superior is conceived in the inferior, as one in two, but the inferior is conceived in the superior only potentially, as two is in one potentially. . . . And among these, that from which there is no conversion of the consequence seems to be prior, and /296/ that is one; for, from it to two there is no conversion of the consequence.67

Albert’s point may be easier to see when putting both kinds of examples in concrete terms: if there are two tables in the house, it is necessarily true that there is (at least) one table, but if there is one table, there are not necessarily two tables; if on the other side of the wall there is a dog, there is also necessarily an animal, according to the “coordination of predicables”, but if there is an animal, there is not necessarily a dog. So, here, one and animal are prior to two and dog, respectively. This kind of priority is usually said to be “according to nature” (*secundum naturam*).68

As the two different kinds of example given by Albert—one is prior to two, and a genus is prior to its species—seem to indicate, “order of nature” itself is an analogical phrase that includes a certain number of modes, the differentiation of which appears to be initiated in the description of that kind of priority in *Metaphysics* Δ.11. In each example, what is prior seems to be a foundation into which what is posterior is essentially or substantially resolved,69 but the “founding” is not understood in exactly

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68 Arist., *Metaph.* Δ.11, 1019a1–11, and Alb., *Metaph.* 5.2.11, Ed. Colon. 16/1, 249, Ins. 4–30. See the word *natura* being used in conjunction with the definition of the *Categories* in, e.g. Alb., *Gen. Corr.* 1.4.1, Ed. Colon. 5/2, 152, Ins. 18–19; and *Super I Sent.* d. 9, a. 5, Borgen. 25, 278b.
69 See Alb., *Phys.* 8.1.13, Ed. Colon. 4/2, 577, Ins. 30–33. In that sense, says Albert (*De homine*, 1.2.3.3, Ed. Colon. 27/2, 594, In. 48), that order is “according to the nature of the simple”.

the same way. Let us, however, limit ourselves to the priority which we see in a genus in relation to its species, and in which Albert sees not only some kind of logical order, but also an order involving causality, formal causality.70 Now, since being is not strictly a genus, the situation may not be exactly the same in the case of metaphysics, but it seems to be sufficiently similar for Albert to express himself in like terms.71 Metaphysics studies being as being, whereas other parts of philosophy consider being inasmuch as something else is added to it, say mobility (physics), continuity (geometry), or numerability (arithmetic).72 Thus, natural philosophy treats mobile being as mobile, and considers its principles, kinds, and properties precisely as mobile. However, the natural philosopher takes for granted that mobile being is, just as the mathematician takes for granted that continuous being is.73 Only a consideration of simple being, that is, of being without the addition of such things as mobility or continuous quantity,74 will properly establish and account for what is at the foundation of both mobile and continuous beings, but which is simply presupposed in physics and mathematics:

Both of them are founded on the being which is simple being (simpex esse), the existing act of the first essence, which is that in which comes to a rest the ultimate resolution of the composite. For, it [i.e. simple being] does not depend on anything in terms of the principles of being (essendi), because that which is prior in terms of the principles of being does not depend on that which is posterior, but rather that which is posterior in terms of the principles of being depends on that which is prior. For, that which is prior is the principle of being of that which is posterior. This is why when the physicist supposes that mobile body is, and when the mathematician supposes that the continuous or the discrete “quantified” is, he therefore posits being (esse), because from his proper principles he cannot prove being itself; rather, it is necessary that being be proved through the principles of being simply taken. To this science [i.e. metaphysics], therefore, it belongs

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70 See Alb., Quaest. de quiditate et esse, Ed. Colon. 25/2, 278, lns. 19–30; Metaph. 2.9, Ed. Colon. 16/1, 101, lns. 10–28; and De causis et proc. univers. 2.1.6, Ed.Colon. 17/2, 67, ln. 29–p. 68, ln. 45. As he also explains in De praedic. 2.3, Borgn. 1, 169a–172a, the form, in order to be both a principle of knowledge and a principle of being, must be considered in different ways.

71 Alb., De causis et proc. univers. 2.1.17, Ed. Colon. 17/2, 81, lns. 5–18.

72 Alb., Metaph. 1.2.11, Ed. Colon. 16/1, 28, lns. 21–26, and 4.2.11, 173, lns. 27–30.

73 As explained in Section 8 and in the following quotation, to be is here understood by Albert as the act of essence, which entails but is not merely the fact of existing. See also, for instance, Alb., Metaph. 1.2.1, Ed. Colon. 16/1, 17, ln. 65–p. 18, ln. 3; 1.2.2, 19, lns. 61–70; and 1.2.11, 28, lns. 21–38.

74 Alb., Metaph. 1.2.2, Ed. Colon. 16/1, 19, lns. 61–70.
to establish the subjects and the principles of all of the other sciences. For, they cannot be established and founded by the particular sciences themselves, in which “that they are” or being (esse) is granted or supposed. Also, it is not the case that these [i.e. the subjects and principles of physics and mathematics] are primary in such a way that they are as though the foundations of all other things, themselves not founded on something else coming before them according to nature. From these two [points] it follows necessarily that it belongs to this wisdom [i.e. metaphysics] to found and establish these [subjects and principles]. . . [T]he being (esse) that this science considers is not considered as limited to this or that [being], but rather as the first outpouring of God and the first created thing, prior to which there is no other created thing.75

To study being as being is to study what is absolutely first—at least within the created order, since, as we by now see, being for Albert as the subject of metaphysics does not encompass God, who “is” in too different and surpassing a sense76—and this priority of nature ascribed to the subject matter of metaphysics is closely related to the order among the disciplines themselves: “since this science [i.e. metaphysics] . . . is first among all, it must be about what is first, and that is being”.77 It is also easy to see how this relationship between the subject matter of First Philosophy and that of the others is at the root of the appellation “universal philosophy” used in opposition to “particular philosophies” such as physics and mathematics.78

C. Metaphysics and the Order of Learning

The third meaning of “prior” (Cat. 12, 14435–b3) is the order of learning or teaching, according to which the point and the line come before the triangle in mathematics, letters before syllables in grammar, and proemium and narration before accusation in a rhetorical speech.79 Since we learn

75 Alb., Metaph. 1.1.1, Ed. Colon. 16/1, 2, Ins. 67–88, 3, Ins. 1–4 (for the continuation of which, see above, note 21). See also ibid., 5.11, 233, Ins. 59–62, quoted below, note 187.
76 See Alb., De causis et proc. univers. 1.3.6, Ed. Colon. 17/2, 41, Ins. 28–43, translated below, note 396; 2.1.17, 80, Ins. 64–p. 82, Ins. 48; Super Dion. de div. nom. 5.9, Ed. Colon. 37/1, 308, Ins. 43–67; and Summa de mir. scient. dei 1, q. 19.1, Ed. Colon. 34/1, 92, Ins. 46–66.
77 Alb., Metaph. 1.1.2, Ed. Colon. 16/1, 4, Ins. 57–58. See also Phys. 1.1.1, Ed. Colon. 4/1, 1, Ins. 43–67.
78 For (a) “universal philosophy”, and (b) “particular philosophy”, see: (a) Alb., Metaph. 6.2.1, Ed. Colon. 16/2, 305, Ins. 63–p. 306, Ins. 32 (on Arist., Metaph. 6.1, 1026a23–32); De animal. 11.1.3.37, ed. Stadler, v. 77.4; and (b) Alb., Metaph. 4.1.7, Ed. Colon. 16/1, 169, Ins. 91–p. 170, Ins. 19: 4.2.1.173, Ins. 7–54. For “universal science”, see Alb., Metaph. 4.1.1, 161, Ins. 55–p. 162, Ins. 41; and Phys. 1.1.1, Ed. Colon. 4/1, 2, Ins. 85–p. 3, Ins. 8.
79 For Albert’s commentary, see Alb., De praedic. 7.12, Borgen. 1, 296a.
or teach in time, this order has an obvious chronological aspect: what is taught first comes first in time as well. But the examples provided make it clear that what is first in this case is not simply what happens to have been studied or known first, but what had to be studied first, such as the line before the triangle if the latter is to be understood properly. Some of the examples could also make us confuse this third order with the “order of nature”, for it may happen, as it does in mathematics, that what is first according to nature is better known to us and should therefore be studied before what is posterior to it, but it may not be necessarily the case: “teaching does not always begin with that which is prior according to reality (re) and nature, but with that from which teaching is easier”. The human mind can certainly attempt to tackle the parts of philosophy in any order (or even all at the same time). But what should the order of learning among the parts of philosophy be if we take as our criterion ease of learning and of truth acquisition?

Although there may be reasons to think that metaphysics should be taught first, Albert contends that it is to be learned after mathematics and physics. These two are indeed more accessible to the human intellect, which is by nature tied to sense perception and imagination. As quantities, mathematical forms are proportionate to our intellect; and as defined without sensible matter—even though they can exist outside of our mind only in such matter—they are intelligible and obtain a stability and invariability such that mathematical definitions are always perfectly verified in each individual case within our imagination. This fact explains why young people, who have little experience, can excel in mathematics. It is enough to imagine only one triangle to understand that, being made of straight lines, a triangle has as the sum of its inner angles two straight angles, and thus it is hardly surprising that there are so few errors and

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80 Alb., Metaph. 5.1.1, Ed. Colon. 16/1, 207, ln. 53–p. 208, ln. 6.
81 Alb., De anima 1.1.5, Ed. Col. 7/1, 10, lns. 59–60.
83 One of those arguments would appeal to Aristotle’s claim, in Phys. 1.1, 184a23–24, that one must begin with general knowledge and then proceed to the less general, which seems to indicate that in the order of learning “universal philosophy” should come first. In commenting on this claim, however, Albert makes it clear that it concerns the knowledge of physical or sensible things; Phys. 1.1.6, Ed. Colon. 4/1, 9, ln. 85–p. 10, ln. 4.
84 Alb., Ethica 6.2.25, Borgn. 7, 442b–444a; Metaph. 1.1.1, Ed. Colon. 16/1, 1, Ins. 44–56; and De intell. et intellig. 2.1.7, Borgn. 9, 514a. On the kind of “matter” that mathematical beings have, see for instance Alb., Phys. 1.1.1, Ed. Colon. 4/1, 2, Ins. 1–4.
differences of opinion in mathematics.\textsuperscript{86} The study of the natural world presents greater challenges. Physical beings, which exist in matter and are defined with matter, are in themselves less intelligible because they are mixed with potency and are subject to great variation and instability; this fact explains why their study requires much experience and observation and also why natural philosophers often err and disagree.\textsuperscript{87} Nevertheless, the natural philosopher, who deals with sensible things, has an enormous advantage when compared to the situation faced by the metaphysician.\textsuperscript{88} Metaphysics considers things that are and are defined without matter; those may be, as purely intelligible forms, more knowable in themselves, but for us the highest immaterial things are almost unattainable.\textsuperscript{89} Disagreements and mistakes are numerous in metaphysics, although they are due, not as in physics to the imperfection of the things in themselves, but to the imperfection of our intellect.\textsuperscript{90}

Mathematics and physics must be learned before metaphysics, not only because they are more proportionate to our sensory mode of knowing, but also because they are necessary steps (\textit{gradus}) toward the study of being as being (and its principles and properties), to which they “lead us by the hand” (\textit{sunt manuductiones}):\textsuperscript{91}

The light (\textit{lumen}) of intelligible [things] that belongs to this wisdom [i.e. metaphysics] collects [itself] together in all other particular beings, which are by nature much more proportionate to our intellect, which is conjoined with “the continuous” and with time. Hence, little by little, [our intellect] receives more and more of the light by resolving intelligible [things] that are physical and mathematical into the divine [intelligibles]. As regards us, therefore, this science also begins with physical and mathematical [things] and terminates in the contemplation (\textit{speculationes}) of divine [things]. This

\textsuperscript{86} Alb., \textit{Metaph.} 1.2.7, Ed. Colon. 16/1, 24, Ins. 38–57.
\textsuperscript{87} Alb., \textit{Metaph.} 1.1.8, Ed. Colon. 16/1, 12, Ins. 1–9; and 1.2.7, 24, Ins. 40–46.
\textsuperscript{88} Alb., \textit{Phys.} 1.1.1, Ed. Colon. 4/1, 3, Ins. 26–41; and \textit{Metaph.} 1.2.8, Ed. Colon. 16/1, 25, Ins. 35–52.
\textsuperscript{89} Hence Aristotle’s analogy, in \textit{Metaph.} 2.1, 993b8–11, between our intellect and the eye of a nocturnal animal that cannot see very luminous objects even though light is in fact what makes things visible. See Alb., \textit{Metaph.} 2.2, Ed. Colon. 16/1, 92, Ln. 70–p. 94, Ln. 6, for a long commentary on said analogy. Therein, Albert groups the First Cause, the Intelligence, and “the first entity and substance of things” (i.e. being as being) as the things that have the highest degree of intrinsic luminosity and therefore that are the hardest to see for us, even though, as we shall see in subsection E below, he accepts a sharp distinction between the first two, which are almost entirely beyond our understanding, and being as being, for which there is comparative ease of understanding.
\textsuperscript{90} Alb., \textit{Metaph.} 2.2.1, Ed. Colon. 16/1, 18, Ins. 19–47.
\textsuperscript{91} Alb., \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 1, Ins. 57–58.
is why it is taught last and why philosophers, led by the hand by the other sciences, used to “terminate [their] whole life” in it.92

The human intellect is incapable of accessing directly the intelligible things that metaphysics deals with: it can only begin with things that are more proportionate to it and, after having spent sufficient time with the “particular sciences”, turn to intelligible things by a process of resolution or separation rising up through physical and mathematical things.93 So, mathematics and physics must come first in the order of learning,94 even though they are preceded by metaphysics in the order of nature.95 However, they themselves are to be learned after logic, which teaches the scientific mode that is to be applied in all branches of philosophy, and which is therefore to be studied before all of them.96

D. Metaphysics and the Order of Causality

The fifth mode of priority, which we shall examine before the fourth so as to have it in mind in applying the latter to metaphysics, is the order of causality: a cause is prior to its effect, and thus the existence of a man, which causes the truth of the statement “that man exists”, is prior to it.97 Like the second sense of “prior”, the fifth presents important difficulties, whose treatment lies beyond our scope. But the fact that the fifth sense overlaps somewhat with the second does not aid in its interpretation. Albert

92 Alb., Metaph. 1.2.10, Ed. Colon. 16/1, 27, ln. 84–p. 28, ln. 8; see also 1.1.1, 1, ln. 57–p. 2, ln. 15, for the use of the metaphor of “steps”; 1.2.8, 25, Ins. 4–62; 1.2.2, 93, ln. 81–p. 94, ln. 6; and De intell. et intellig. 2.1.6, Borgn. 9, 512b–513a. The last sentence refers to the claim (which Albert does not always attribute to the same author) that the ancient philosophers used to devote themselves to metaphysics or divine science only in the last part of their life. See Alb., Super Ethica 6,9,530c, Ed. Colon. 14/2, 455, Ins. 70–77; see above note 45.

93 Alb., De intell. et intellig. 2.1.6, Borgn. 9, 512b–513a; Summa de mir. scient. dei i, prol., Ed. Colon. 34/1, 3, Ins. 29–53; Super Ethica 6,9,530c, Ed. Colon. 14/2, 455, Ins. 62–78; 12,551 ob 2 and ad 4, 473, Ins. 43–49, and 474, Ins. 39–71.

94 And thus metaphysics, despite being named postnaturalis, comes after mathematics too. See Alb., Super Dion. de div. nom. 4,27, Ed. Colon. 37/1, 134, Ins. 31–33.


96 Alb., De V univ. 1,3, Ed. Colon. 1/1A, 5, ln. 1–p. 6, ln. 29. See also Arist., Metaph. 2,3, 995a14–15, and Alb., Metaph. 2,13, Ed. Colon. 16/1, 104, Ins. 3–28. Alternatively, the case could be made, perhaps under the influence of Avicenna, that moral philosophy comes last in the order of learning; see Avic., Liber de philosophia prima i, vol. 1: 31, Ins. 95–98, and 10, Ins. 3–5. But such a view seems to presuppose that it is a part of metaphysics. See Alb., Ethica 1,1, in Jörn Müller, Naturliche Moral und philosophische Ethik bei Albertus Magnus, (Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters NF) 59 (Münster: 2001), 326, ln. 17–p. 327, ln. 4. On ethics as coming before metaphysics, see for instance Alb., Metaph. 11,1,9, Ed. Colon. 16/2, 473, Ins. 10–24.

97 Arist., Cat. 12, 14b10–22. See also Alb., De praedic. 7,12, Borgn. 1, 296b–297a.
himself often appears to conflate the two into one mode of priority.\textsuperscript{98} At first sight, indeed, it looks as if formal and material causality, and perhaps also (but less obviously) efficient and final causality, involve priority by nature as previously presented.\textsuperscript{99} On the other hand, the second mode can be defined broadly so that some things said to be prior by nature are not \textit{causes} of what is posterior, as when we say that privation comes before or is a principle of motion.\textsuperscript{100} One may infer, at least on one reading, that the second mode concerns principles as such,\textsuperscript{101} whereas the fifth concerns causes as such. Despite such worries, we shall simply ask here whether (and how) metaphysics deserves to be called “first” if the question is phrased in terms of causality in general.

The search for causes is closely linked to wonder and the natural desire to know. Human nature is endowed with cognitive powers that in principle allow us to know all sensible and intelligible things.\textsuperscript{102} In a universe as replete with finality as that of most medieval thinkers, the cognitive inclinations of our nature allow us to infer that knowledge is a good. Accordingly, Albert feels perfectly at ease with Aristotle’s beginning the \textit{Metaphysics} with the statement that “all men naturally desire to know” (A.1, 980a21).\textsuperscript{103} Wonder is what most fundamentally triggers the process of learning or discovery. Wonder is, at first, a certain trouble felt before something we do not quite understand because we do not know its cause, and which subsequently becomes a desire to know that seeks to be satisfied and makes us inquire about the cause.\textsuperscript{104} Philosophers are mainly motivated by a sense of wonder that leads them into the pursuit of the

\textsuperscript{98} See for example Alb., \textit{Phys.} 8.3.1, Ed. Colon. 4/2, 620, Inns. 21–23; \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 2, Inns. 41–43; and 5.2.11, 249, Inns. 52–54.
\textsuperscript{99} Alb., \textit{Metaph.} 5.2.11, Ed. Colon. 16/1, 249, Inns. 52–54.
\textsuperscript{100} Alb., \textit{Phys.} 1.3.10, Ed. Colon. 4/1, 56, Inns. 50–58. So the end result seems to be that the fifth mode is included in, or is reduced to, the second one. See Alb., \textit{De homine} 2.2.3.3, Ed. Colon. 27/2, 594, Inns. 43–53; and \textit{Super Dion. de cael. hier.} 10, Ed. Colon. 36/1, 160, In. 84–p. 161, In. 2.
\textsuperscript{101} See Alb., \textit{De causis et proc. univers.} 1.1.3, Ed. Colon. 17/2, 9, Inns. 40–41; \textit{Super Dion. de cael. hier.} 14, Ed. Colon. 36/1, 217, Inns. 46–51; and \textit{Summa de mir. scient. dei} 1 Q. 39.1, Ed. Colon. 34/1, 292, Inns. 11–23.
\textsuperscript{102} Alb., \textit{De anima} 3.3.12, Ed. Colon. 7/1, 223, Inns. 41–62, commenting on Arist., \textit{An.} 3.8, 43b21–23.
\textsuperscript{103} See Albert’s lengthy introduction to Aristotle’s famous claim in \textit{Metaph.} 1.1.4, Ed. Colon. 16/1, 6, Inns. 7–79.
\textsuperscript{104} Alb., \textit{Metaph.} 1.2.6, Ed. Colon. 16/1, 23, Inns. 13–20 and 50–53. See Arist., \textit{Metaph.} A.2, 982b12–13.
causes that lie behind appearances. For Albert, this fact is a proof that philosophy as such is essentially for the sake of knowing rather than for practical applications. Wonder and the search for causes, however, are not exclusive traits of philosophy, as they can be seen in fables and even in (utilitarian) art. But the more an activity is based on wonder and seeks the causes hidden to our senses, the more sapiential in character it is, and this gradation leads us to the only activity that does not participate in, but rather essentially is, wisdom, that is, metaphysics.

The name “wisdom” as applying per se to metaphysics implies, then, a consideration of causes that are first: “[S]ince wisdom is the ultimate virtue and power of every science, the one that is denominated wisdom without qualification (simpliciter) must be about the first causes….”

The desire to know the reason or the cause behind what we see is fully satisfied only in metaphysics—at least as far as it can be satisfied through natural means. And, since we seek understanding through four kinds of causes, metaphysics, first among the philosophical sciences, will consider all four of them:

To the extent that a cause considered in a science is… prior, to that extent it is “more principal”—and so is the science itself that considers it… Such [a science, i.e. metaphysics]… is about the ultimate end and the good that is the good of the whole universe. It is for the sake of it, as for the sake of one who commands and orders, that all other things come to be. For, every efficient [cause], all matter, and every form “serve” it, and to that good is ordered everything that is… Therefore, since this science principally considers this end, it will be called wisdom. But insofar as this same wisdom is about the first causes… and insofar as the being (esse) of that which by its nature is maximally knowable (which is also that which maximally produces knowledge) has been defined, [this wisdom] will also consider, after the consideration of the ultimate end, substance, which is the form and the whartoness of things. For,… we say that one knows more who by demonstration [knows] the thing in its very formal being (esse)—what the thing itself is as to [its] substance, which expresses “what it is” and “on account of what it is”—than

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105 Alb., Metaph. 1.2.6, Ed. Colon. 16/1, 23, Ins. 8–13; Super Ethica 10.16.926 ad 1, Ed. Colon. 14/2, 774, Ins. 41–46; Anal. Post. 1.2.1, Borgn. 2, 22a; and De caelo et mundo 2.4.4, Ed. Colon. 5/1, 183, Ins. 45–50.
106 Alb., Metaph. 1.2.6, Ed. Colon. 16/1, 23, Ins. 66–71.
107 Alb., Metaph. 1.1.11, Ed. Colon. 16/1, 16, In. 22–p. 17, In. 16; and 1.2.6, 23, Ins. 43–63. See Arist., Metaph. A.2, 982b16–21.
108 Alb., Metaph. 1.1.10, Ed. Colon. 16/1, 15, Ins. 40–81; and 1.11, 17, Ins. 32–42.
109 Alb., Metaph. 1.1.10, Ed. Colon. 16/1, 16, Ins. 6–8; italics mark the lemma from Arist., Metaph. A.1, 982a1–3, as identified by the Cologne edition.
one who does not know such substantial being (esse) of the thing…. Therefore, this will be the chief science by virtue of [its] consideration of the most noble end, and the most certain by virtue of its consideration of form, which is the principal and true whatness of the thing; for, this is the principle of substance as substance and of a being (entis) as being…. This science also considers the efficient [cause]—yet not in such a way [that it does so] principally, but it considers the first movers and makers. And in the last place it considers matter inasmuch as [it is] resolved into (secundum reductionem ad) substance and being (ens)…. This [science] has therefore been called wisdom, because it is the most learned regarding the causes; and it is the chief [science], because its end is within it and is for the sake of knowing; and it is the most certain because of [its] consideration of the first whatness.\textsuperscript{111}

It is perfectly fitting, then, that metaphysics, being the philosophy that is first in the order of causality, deal in some way with all first causes, and especially with the first end, since it is the “cause of causes”.\textsuperscript{112}

E. Metaphysics and the Order of Honorability

Let us now consider the fourth mode of priority, postponed above. Albert writes:

Furthermore, on top of the [modes] that have been mentioned, in which prior is said on account of the nature and the being of the thing itself, prior seems to be said also on account of something added to it which is for well-being. Thus, that which is naturally—on account of that nature added to the being—more honorable and better seems to be prior….\textsuperscript{113}

Something comes before something else, then, because it is better and therefore more honorable. Honor being in ethics the reward of virtue, being honorable is here understood as rooted in the goodness or virtue of

\textsuperscript{111} Alb., Metaph. 3.2.1, Ed. Colon. 16/1, 113, Ins. 7–31, 51–60, 74–77; italics mark the lemmata from Arist., Metaph. B.2, 996b13–22, as identified by the Cologne edition. The text, a very ample paraphrase, is probably influenced by Averr., In libros Metaphysicorum Aristotelis 3.3, fol. 41A–M. See also Alb., Metaph. 3.3.1, 139, Ins. 10–96, for how the metaphysical consideration of the first causes (according to the four modes) is to be understood as a consideration of the parts of the subject of the science, its middle terms and/or its conclusions. As Albert explains, demonstrating through the four causes does not mean that metaphysics uses them in the treatment of everything it considers: a definition or demonstration concerning simple or separate substance, for instance, will obviously not employ material causality; Alb., Anal. Post. 2.2.11, Borgn. 2, 193b.

\textsuperscript{112} Alb., Phys. 2.2.4–5, Ed. Colon. 4/1, esp. 104, Ins. 21–34; and Metaph. 1.3.1, Ed. Colon. 16/1, 29, In. 56–p. 30, ln. 2.

\textsuperscript{113} Alb., De praedic. 7.12, Borgn. 1, 296a. This is part of a commentary on Arist., Cat. 12, 14b3–8.
the thing honored,\textsuperscript{114} assuming that those doing the honoring do so with right reason. This meaning of “prior” immediately reminds the reader of \textit{An.} 1.1, 402a1–3, in which Aristotle says that a science precedes another in terms of honorability “either because of its certitude or because it is of better and more wondrous things”. Here is how Albert develops this idea:

\begin{quote}
Every science is to be counted among honorable goods… and yet, one is to be counted among honorable [goods] more than another, either for one of these two reasons or for both at the same time. One of them is the certitude that it produces about its conclusions by means of very solid demonstrations.… In the case of mathematical [sciences], for example, we see that arithmetic and geometry excel all others that way, whereas there is another that is of better and more wondrous (mirabiliorum) subjects. And we call “better” more noble things, as incorruptible things are better than corruptible ones, and “more wondrous” those that have causes that are higher, more difficult and more remote. Indeed, every wise man wonders and inquires about such things, as in mathematics we see that astronomy excels all other mathematical sciences because it is of an incorruptible subject, whose properties, with their causes, are all wondered about. And may no one wonder why we say that every science or knowledge is to be counted among honorable goods, since there are certain sciences that we pursue not for themselves but so that they may help us for the sake of others, such as… the science of the instrument of the sciences, which is the syllogism.… Those are not true sciences, but the modes of all sciences.… That is of course honorable which we pursue for itself, whereas that which we want for something else is useful.\textsuperscript{115}
\end{quote}

A science is prior or more honorable because it produces more certain conclusions and/or is about better things: nobler things—presumably higher beings in the order of nature—or more wondrous things—things that come from a higher cause. Albert also appeals to the classical definition of an honorable good, that is to say that which is pursued for its own sake, but this definition seems at first sight to concern mainly the honorable in the sense of being about a nobler/more wondrous subject. Indeed, one can doubt that for Albert a science which produces in the mind a great degree of certitude is on that account alone necessarily to be pursued for its own sake.\textsuperscript{116}

\textsuperscript{114} Alb., \textit{Metaph.} 1.2.9, Ed. Colon. 16/1, 26, lns. 20–28.

\textsuperscript{115} Alb., \textit{De anima} 1.1.2, Ed. Colon. 7/1, 3, lns. 23–56; italics indicate the lemma as identified in the Cologne edition.

\textsuperscript{116} Logic is presented here as being pursued merely as a tool or an instrument, and yet for Albert it is a science whose subject is especially proportionate to the human intellect and which we know with so much certitude that logicians, like mathematicians, make
Depending on the criterion of honorability one applies, the ranking will vary. Whereas geometry studies quantity as abstracted from sensible matter\textsuperscript{117}—that is to say a predicamental accident, known in a mode that is different from that in which it exists outside of our mind—astronomy applies the discoveries of geometry as tools in the study of celestial bodies, which, for Albert, are substances that are incorruptible and that play a causal role much greater than the one we now ascribe to them. Thus, astronomy, which deals with things that are higher in the order of nature or causality and whose causes are more hidden and remote, comes before geometry. On the other hand, astronomy, as the study of the local motion of physical beings, cannot yield the kind of certitude that we see in a purely abstract mathematical science like geometry. Hence, astronomy and geometry switch ranks on the scale of honorability depending on the criterion one uses to define said honorability\textsuperscript{118}.

Given what the orders of nature and causality are, it is clear that metaphysics deals with the highest or noblest things—in a sense, they can even all be called “divine”\textsuperscript{119}—and in particular that its subject matter, being as being, is \textit{primum creatum} and as such has as its efficient, exemplar, and final cause that which is for us most difficult and remote of all, God.\textsuperscript{120} With honorability thus understood, metaphysics is clearly about the most honorable things and is itself the most honorable science or First Philosophy.\textsuperscript{121}


\textsuperscript{118} If we consider only the mathematical aspect of both sciences, so to speak, and abstract from the substances astronomy applies its mathematical tools to, then we could say that geometry is about immobile quantity and astronomy about quantity as moved, and that geometry is about something more admirable or wondrous and that it deals with higher causes. See Alb., \textit{Anal. Post.} 1.5.5, Borgen. 2, 138b–140a; and \textit{Metaph.} 1.5.4, Ed. Colon. 16/1, 73, Ins. 30–43.

\textsuperscript{119} Alb., \textit{Super Ethica} 6.10.535 ad 3, Ed. Colon. 14/2, 460, Ins. 72–85. In the context of metaphysics, then, the appellation “divine” applies not only to God as first cause of being as being, but it even applies to being itself. See Alb., \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 2, Ln. 88–p. 3, Ln. 4, and also above, notes 38–40.

\textsuperscript{120} Alb., \textit{Summa de mir. scient. dei} i q. 15.1, Ed. Colon. 34/1, 59, Ins. 21–33; \textit{Super Dion. de div. nom.} 2.45, Ed. Colon. 37/1, 73, Ins. 42–45.

\textsuperscript{121} Alb., \textit{Metaph.} 6.1.3, Ed. Colon. 16/2, 305, Ins. 50–64, commenting on Arist., \textit{Metaph.} E.1, 1026a14–22. Even though we cannot treat this question here, it must be mentioned that moral philosophy, with its direct interest in the good, could also be argued to be most honorable, at least in some way. See in particular Albert’s surprisingly strong language in \textit{Ethica} 1.1.1, ed. Müller, 325, Ln. 4–p. 326, Ln. 6, which is perhaps influenced by texts like Avic., \textit{Liber de philosophia prima} 1.4, vol. 1, 31, Ins. 95–98, and which is somewhat
perfectly to this case and leads to the same conclusion. But is metaphysics the most honorable also in terms of certitude? Albert’s answer to this question is not as straightforward as it first appears, probably because of the ambiguity that surrounds the term “certitude” (certitudo), and will therefore require some detailed consideration. In the following three subsections, we shall distinguish three fundamental senses around which any attempt to bring to light his full answer must be articulated: the intrinsic certitude of things, the certitude of the knower as animal endowed with sensation, and the certitude of the knower as intellect.

1. Metaphysics and the Intrinsic Certitude of Things

At a very general level, certitude is associated with the immutability and necessity of truth, and is opposed to the instability of doubt. Within the multiplicity of more determinate meanings of the term, it appears that the most fundamental distinction concerning the certitude of knowledge, perhaps analogous to the difference between the truth of things and that of our concepts (or language) about them, is between the certitude of the thing which one knows (or attempts to know) and that of the subject who knows the thing in question. The distinction is of some importance, especially if it turns out that the two modes of certitude do not necessarily come together in our concrete intellectual life.

tempered by passages such as Alb., *Ethica* 1.1.1, ed. Müller, 327, lns. 1–4; Alb., 1.5.11, Borgen. 7, 71a–b; Alb., *Super Ethica* 1.3.16, Ed. Colon. 14/1, 14, lns. 46–62; 1.7.36–47, 33, ln. 81–p. 34, ln. 54, and 34, ln. 77–p. 35, ln. 41; 1.10.55c, 55, lns. 44–49; and *Metaph.* 1.2.5, Ed. Colon. 16/1, 22, lns. 11–76.

122 See Alb., *Metaph.* 1.2.1, Ed. Colon. 16/1, 18, ln. 82–p. 19, ln. 21, and especially 1.2.7, 24, lns. 13–92, a lengthy commentary on Aristotle’s comment to the effect that “among the sciences, it [i.e. metaphysics] alone is free” (*Metaph.* 1.2, 982b27).

123 See Alb., *Super I Sent.* d. 40 a. 12c, Borgen. 26, 321b.

124 Alb., *De bono* 2.2.3, Ed. Colon. 28, 162, lns. 29–31 and 84–86.

125 For that difference, see, among others, Alb. *Metaph.* 5.1.11, Ed. Colon. 16/1, 234, lns. 44–72.

As early as in his prooemial discussion of the subject matter of metaphysics, Albert states that the primacy of metaphysics depends on the certitude of the things it considers:

For, all those things that within the nature of all things are most manifest are most divine, most noble and prior to all, and such are being (ens) and the parts and principles of being…. Hence, this science, as a whole and not [only] in some part, is about the most honorable, the most wondrous (mirabilissimorum), and the most certain things, and for this reason it deserves to be called by us First Philosophy.127

With the remark at the beginning of his paraphrase that metaphysics is about the most certain things, Albert is merely anticipating one of the characteristics that Aristotle (Metaph. 1.2, 982a25–26) will subsequently attribute to the science of the wise. In Albert’s reading of that forthcoming passage, the certitude of metaphysics is rooted in the simplicity of what it considers, that is, being and its principles:

Most certain among the sciences, as is expressed in the third conception that we have of the wise, are those that are maximally first, and they are the ones that are about the simplest knowable [thing], in relation to which what follows in science stands by way of addition (ex additione). For, those [sciences] that are from fewer (ex paucibus) are more certain, just as arithmetic . . . is more certain than geometry…. And, in entirely the same way [as the principles of geometry are related to those of arithmetic], the principles of mobile being (esse) as mobile are related to the principles of being (esse) pure and simple. Therefore, wisdom is from fewer [principles] than every other particular science, just as arithmetic is from fewer than geometry. Furthermore, I say [being] “from fewer” is the same as being “from simpler”. Now, those [sciences] that are “from fewer” [principles] are more certain in the mode of certitude by which they ground the certitude (certificant) of other [principles], without themselves being grounded by them. Therefore, that [science] that is without qualification [and] before all [others] from thefewest [principles]—principles that add nothing to anything [prior]—is without qualification the most certain and first. And, there is need of it in the demonstrations of all, and it needs absolutely none [of the rest].128

Being as some sort of formal foundation of all (created) things is simple compared to this or that kind of being (e.g. mobile being), and its principles are those of all (created) things—complemented, of course, by the respective specific principles of such things. The understanding of this

127 Alb., Metaph. 1.1.2, Ed. Colon. 16/1, 5, Ins. 52–58.
128 Alb., Metaph. 1.2.3, Ed. Colon. 16/1, 20, Ins. 60–67, 21, Ins. 8–18; italics mark the lemma from Arist., Metaph. A.2, 982a26–28, as identified by the Cologne edition.
or that kind of being would necessarily be more complex than that of being, and its certitude would depend on that of the “simplest knowable”, whereas the certitude of the latter cannot depend on that of the former. In that sense metaphysics has the most certain subject and is for that reason itself the most certain science. For, the simplicity and primacy of being are the reason why being is most certain in itself or without qualification (simpliciter), a question which is formally different from that of how well we as knowers actually know being.\(^{129}\)

In the previous subsection on the order of causality,\(^{130}\) we have already seen Albert specifically tying the greatest certitude of metaphysics to this consideration of being (or of its main mode, substance) as a kind of first formal cause of things. But he also associates the greatest certitude to the first causes of being in general, and hence to the philosopher who deals with them, that is to say, the metaphysician:

Furthermore, we say that he is wiser as regards every science who is more certain and who is most learned as to causes in that he states those that are causes more than others…. But those are more certain causes that ground certitude (certificant) through what is more substantial…. [T]hose that ground certitude, moreover, through things that are causes of being (esse) according as it is the simple being of all things ground certitude more through what is substantial than those that ground certitude through things that are conceived with mobile matter or with quantity, because the latter are not from being (de esse) as being but are from a certain mode of being (essendi). He is most learned as to causes, then, because he assigns the causes that flow more into all things, since they flow whereas none of the others flows into them and none of the others flow without them. For, the causes of simple being (esse) are those that “substantiate” (substantificantes) being and cause the being of any being insofar as it is being, as is evident in the case of mobile body. For, it does not have being itself from the principles of motion and mutability, since its being is by nature prior to these….\(^{131}\)

Thus understood, then, certitude is a property of that which is first according to nature or causality: inasmuch as that which is ontologically at the foundation of another thing also has the power to ground our


\(^{130}\) See above, note 111, and also Alb., *Metaph.* 3.2.1, Ed. Colon. 17/1, 113, Ins. 51–56 and 74–77: “This science…is most certain because of its consideration of form, which is the principal and true whatness of a thing. For, this is the principle of substance as substance and of a being (entis) as a being…. This [science] is therefore…most certain because of its consideration of the first whatness.”

\(^{131}\) Alb., *Metaph.* 1.2.1, Ed. Colon. 17/1, 18, Ins. 48–81; italics mark the lemma from Arist., *Metaph.* A.2, 982a12–14, as identified by the Cologne edition.
understanding of that thing without itself being grounded by it, then it is in itself certain. Since metaphysics considers being as being and its principles, causes, and properties, and since in its demonstrations it appeals to the highest causes, it is therefore unequivocally most certain according to the intrinsic primacy and certitude of what it considers:

[T]he certitude of demonstration is twofold. There is a certain [certitude] that comes from the immediacy of the middle [term], and this is the certitude of the demonstrative sciences, which comes from the proximity of a middle [term] that substantially enters what it causes. The other certitude comes from the very middle [term] in itself, and such is [the certitude] that comes from the fact that it is itself first, to which no other [middle term] leads but which itself leads to other [middle terms]. This certitude is the cause of the other and is more powerful (potior) because that [other] proceeds on the supposition of [certain] definitions and assumes certain [principles], whereas this one does not. And since this is the certitude of wisdom, which proceeds through the highest causes, it will be more honorable also in terms of certitude of demonstration.132

2. Metaphysics and Certitude of the Knower
But does this mean that for Albert metaphysics is also First Philosophy if honorability is understood in terms of certitude as possessed by the knower? The correlation between both kinds of certitude is in fact far from being necessary: God, for instance, who as pure act is the most certain or knowable of things133 and who, if truly known by us, would allow us to know all created beings,134 is as a matter of fact not known by us in the most certain way.135

In general, the certitude of a philosopher is rooted in the certitude he possesses in regard to the “beginnings” or principles of his science,

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132 Alb., *Super Ethica* 6.10.535 ad 2, Ed. Colon. 14/2, 460, Ins. 58–71. I will suggest, below, that in this quoted passage the word *certitudo* as designating the first type of certitude should probably be translated with a word like “precision” or “determination” rather than with “certitude”.


135 Alb., *Super Dion. de div. nom.* 7.25, Ed. Colon. 37/1, 357, Ins. 3–7. About the First Cause as the clearest counter-example to the belief that the intrinsic certitude of things is always accompanied by certitude for us, see also Alb., *Metaph.* 12.1.3, Ed. Colon. 16/2, 551, Ins. 17–22. We can also perhaps draw a parallel with Albert’s claim that the science of demonstration is the most certain (and therefore first) part of logic because it is about the most certain kind of syllogism, that is to say demonstration; Alb., *Anal. Post.*, 1.1.1, Borgen. 1, 1b–2a. This does not entail that the conclusions drawn in that part of logic are known by us with more certitude than those drawn in, say, the science of interpretation.
whether they be incomplex (as the subject of the science and the properties of the subject) or complex (as the dignitates or per se known truths at the basis of the demonstrations).\textsuperscript{136} Now, Albert assuredly thinks that metaphysics has at its disposal a certain number of principles that are known by us with certitude. There is, first and foremost, the evidence and certitude with which the subject of the science itself, being as being, is known. Following Avicenna, Albert sees being as the very first thing that is grasped by the intellect,\textsuperscript{137} in the sense not that chronologically speaking our first self-standing concept is that of being as such but rather that any concept that we form, whatever it may be, always includes in itself an implicit understanding of being. We are absolutely unable to understand anything without at the same time implicitly understanding being, and any certitude that we have concerning our grasp of this or that kind of being, for instance the subjects of natural philosophy and mathematics, always presupposes and depends on that concerning being as such: “nothing is completely known to us unless we suppose that it is”\textsuperscript{138} The task of metaphysics is to bring to the light of the intellect being as being, mostly by distinguishing and isolating this implicit, permanent, and most certain foundation of all our simple concepts from any addition made to it, and until this is done a certain instability or incertitude will always surround the subjects of the particular sciences; one could even say that before metaphysics has accomplished its task, the particular sciences do not truly know what they know or truly demonstrate what they demonstrate.\textsuperscript{139} These sciences can be said to consider being, but only through some of the determinations and particularizing features without which a being is of course not found to exist in extramental reality, but which also prevent the particular sciences from explicitly and formally considering being as such;\textsuperscript{140} they use being (or substance), but without fully perceiving it.\textsuperscript{141} On the other hand, the primary and quasi-natural understanding of being

\textsuperscript{136} Alb., \textit{Anal. Post.} 1.1.4, Borgen. 2, 12a–14b, especially 12b: “For, when one says that one must have foreknowledge (\textit{praecognoscere}) of the principle, ‘principle’ is understood broadly (\textit{communiter}) so as to include the complex principle that is an axiom (\textit{dignitas}) and the incomplex principle that is the subject or the property (\textit{passio})...”; see also ibid., 1.3.1, 68a–71b.

\textsuperscript{137} Alb., \textit{Super Dion. de div. nom.} 5.20, Ed. Colon. 37/1, 340, Ins. 6–7; \textit{Ethica}, 1.2.6, Borgen. 7, 26a; \textit{Super I Sent.}, d. 8, a.1, Borgen. 25, 222a–b. See Avic., \textit{Liber de philosophia prima} 1.5, vol. 1: 31, ln. 102–p. 32, ln. 13.

\textsuperscript{138} Alb., \textit{Metaph.} 5.1.11, Ed. Colon. 16/1, 233, Ins. 59–60.

\textsuperscript{139} Alb., \textit{Metaph.} 6.1.1, Ed. Colon. 16/2, 301, Ins. 48–58.


\textsuperscript{141} Alb., \textit{Metaph.} 6.1.1, Ed. Colon. 16/2, 301, Ins. 48–56.
as being which the process of resolution performed by the metaphysician brings to light does not explicitly include the relation of being to all its parts and properties (passiones).  

Albert also attributes certitude to the metaphysician’s knowledge of principles that are complex and that are grasped thanks to the second operation of the intellect. For the metaphysician possesses some truths that are per se nota, that is to say that are not derived from other truths because they are evident in themselves. Some of them, which after Boethius Albert describes as propositions that “once heard, everyone approves”, are so obvious that no one understanding the terms that constitute them can fail to see their truth: those axioms or dignitates are principles of all demonstrations because, even though they do not normally enter demonstrations as premises, they are presupposed by all. Given that agreeing with the truth of such principles as “it is impossible to be and not to be at the same time” does not require one to be a metaphysician, in one sense, it seems odd to ascribe to metaphysics both their certitude and the certitude they confer to truths that are not per se nota. Nevertheless, although as per se nota they cannot be demonstrated even by metaphysics, the task of articulating their terms and defending them against those who claim not to agree with them (mainly thanks to arguments by way of reductio ad absurdum) belongs properly to metaphysics. For such principles apply to this or that kind of being, not as such, but as being. Inasmuch as they belong to metaphysics in that way, and as truths that are most certain for us and that ground the certitude of all philosophical demonstrations, their presence within the consideration of metaphysics is assuredly an important element therein of certitude of the knower. Furthermore, there are also certain principles that we might say only the metaphysician claims to know, yet which Albert expressly calls per se nota, “common conceptions of the soul”, or axioms: “incorporeal

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142 See Alb., Super Dion. de div. nom. 7.25, Ed. Colon. 37/1, 357, lns. 34–42.
143 On this second act of the intellect, see Arist., An. 3.6, 430a26–b6, and Alb., De anima 3.3.1, Ed. Colon. 7/1, 207, ln. 5–208, ln. 60.
144 Alb., Summa de mir. scient. dei 1, q. 17, Ed. Colon. 34/1, 84, lns. 49–51. For Boethius, see Quomodo substantiae in eo quod sint bonae sint cum non sint substantialia bona, 187, lns. 17–18, in Boethius, De consolatione philosophiae, Opuscula theologica, ed. Claudio Moreschini (Munich: 2005).
145 Alb., Anal. Post. 1.3.4, Borgn. 2, 76a.
146 See, for the section of this paragraph on the first type of complex per se nota, Alb., Metaph. 3.2.2, Ed. Colon. 16/1, 114, lns. 72–80, and 115, lns. 19–28; 3.3.3, 141, ln. 93–p. 143, ln. 6; 4.2.1, 173, lns. 7–43; and 4.2.2, 174, ln. 9–p. 176, ln. 45.
things are not in a place”;147 “everything that has being (esse) and that is ‘this’ receives being from one thing and [receives] that it is ‘this’ from something else”;148 “from what is wholly one (ab uno omnino) comes only what is one”;149 “the things that are the first principles of things are principles through [their] essence and not through something else”;150 and “whatever is in many things in reality (secundum esse) is multiplied in them, and the being (esse) that [such a thing] has in one it does not have in the other”.151 Such principles are seen as obviously true only by the learned, because in order for them to become certain for the knower they require a great deal of preparatory work (in terms of conceptual clarification, definition, etc.) that only the expert can perform, which is why they can be more easily misused or doubted than what is per se notum to all. The per se notum, for example, that “nothing can be made out of nothing” (ex nihilo nihil fieri) can be misinterpreted and thus become the basis of an illusory proof against the creation of being.152

Even if his views may have varied throughout his career on some of the particulars of the question, the part of metaphysics that for Albert will be most affected by incertitude of the knower will be the one that is devoted to God and separate substances in general. What God is cannot be understood by any created intellect,153 and given that he has no cause,154 it is therefore impossible to form certain demonstrations on the basis of a definition expressing the “what” (quid) and the “why” (propter quid) of God, the most powerful and certitude-yielding kind of middle term.155 The existence (quia est) of God is on the contrary accessible to

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147 Alb., De bono 1.1.7, Ed. Colon. 28, 13. ins. 41–52, which also reproduces Boethius’s presentation of the two kinds of per se nota complex principles: known to all or known to the learned.

148 Alb., Summa de mir. scient. dei 1, q. 18.1, Ed. Colon. 34/1, 87, ins. 82–85.

149 Alb., Phys. 8.2.11, Ed. Colon. 4/2, 615, ins. 15–16, where Albert follows Averroes’s commentary, as the Cologne edition indicates; see also 8.1.13, 576, ins. 44–48.

150 Alb., Metaph. 1.3.14, Ed. Colon. 16/1, 44, ins. 46–51.

151 Alb., De XV problem. 1, Ed. Colon. 17/1, 34, ins. 37–44.

152 Alb., De causis et proc. univers. 2.1.17, Ed. Colon. 17/2, 82, ins. 31–48.


155 Alb., Summa de scient. mir. dei 1, q. 17, Ed. Colon. 34/1, 84, ins. 15–28, and 85, ins. 23–26. See also Alb., De causis et proc. univers. 2.1.24, ed. Colon. 17/2, 89, ln. 38–p. 90, ln. 87.
our intellect, yet without being for us a *per se notum*; consequently, it can only have for the metaphysician the secondary certitude of something that is shown to be true not by itself but through something else. It can be demonstrated—easily, adds Albert—through effects, but since they are not proportionate to, or convertible with, him, they do not lead to a demonstration of his existence of the strictest type. Similarly, some of the demonstrations for God’s existence involve argumentation by *reductio ad impossibile*. In general, though, affirms Albert in his early commentary on the *Sentences*, few philosophers have erred as to whether there exists a God (and only one God) or not, a fact that likely means that in his opinion certitude of the knower is here relatively easily reached. But he also explicitly mentions mistakes of theirs as a sign that they do not have “certain knowledge” of (at least some) attributes known to faith other than unity: “although some of them knew his [i.e. God’s] wisdom, they said along with this that he had no science of particulars”. As regards Intelligence and a celestial soul, what they are also surpasses our understanding and in their case Albert at times even doubted that philosophers had in fact proven that they exist.

The metaphysician, then, has at his disposal at least three kinds of most certainly known principles that give him the possibility of drawing conclusions of which he is very certain, especially concerning being as being and its properties: being itself, and propositions per se known to all and to the wise. In contrast, however, Albert, for whom opinion and dialectical probability are opposed to certitude, also thinks that (1) the treatment of separate substances in Books 12 and 13 of the *Metaphysics* yields in general

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156 Alb., *Super Dion. de div. nom.* 7.25, Ed. Colon. 37/1, 356, lns. 60–64.
157 Alb., *Super Dion. myst. theol.* 2, Ed. Colon. 37/2, 466, ln. 61. On this specific question, however, see the apparently very different views held in Alb., *Summa de mir. scient. dei* 1, q. 17, Ed. Colon. 34/1, 85, lns. 38–68.
158 For the explicit distinction of both modes of certitude, see Alb., *De bono* 2.2.3, Ed. Colon. 28, 102, lns. 87–90.
159 *Summa de mir. scient. dei* 1, q. 17, Ed. Colon. 34/1, 84, lns. 75–90; see also *Super Dion. de div. nom.* 1.51, Ed. Colon. 37/1, 32, lns. 12–16; *Super I Sent.* d. 3, a. 1 ad 3, Borgen. 25, 93a; *Anal. Post.* 1.3.6, Borgen. 2, 82a–84b.
160 See Alb., *Summa de mir. scient. dei* 1, q. 17, Ed. Colon. 34/1, 84, ln. 90–p. 85, ln. 3.
161 Alb., *Super I Sent.* d. 3, a.1, Borgen. 25, 92b, especially the answer to the second objection.
162 Alb., *Super I Sent.* d. 3, a.2c, Borgen. 25, 93b.
163 Alb., *De causis et proc. univers.* 2.1.7, Ed. Colon. 17/2, 68, ln. 68–p. 69, ln. 2.
164 See Alb., *Super II Sent.* d. 3, a. 3c, Borgen. 27, 65a–b. See also below, Section 10F.
opinion rather than the full truth;\footnote{Alb., \textit{De causis et proc. univers.} 2.1.1, Ed. Colon. 17/2, 59, ln. 37–p. 60, ln. 3.} \textsuperscript{(2)} “Platonic” argumentation, which plays a significant role within the discipline when time comes to treat of separate substances, is more probable than demonstrative.\footnote{See Alb., \textit{Metaph.} 11.3.7, Ed. Colon. 16/1, 541, ln. 19–p. 542, ln. 6, where the summary of the \textit{via Platonis} as involving probable argument reminds the reader of procedures found, at least in Albert’s interpretation, in the \textit{Liber de causis}, that is to say the text with which metaphysics is completed. See also below, Sections 10B and F, 11–12A.} In short, if the metaphysician is maximally certain of the principles and (in a secondary way) of the conclusions of his demonstrations concerning being and its properties, his knowledge of separate substances—the highest causes of being as being and hence things that are most certain in themselves—is in many respects lacking in certitude.

There also appears to be, in Albert’s eyes, one formidable contender to the title of most certain science with respect to us as knowers. (Its certitude must be that of the knower since the ontological primacy and therefore intrinsic certitude of what metaphysics deals with is beyond dispute.) Indeed, Albert often writes as if mathematics, not metaphysics, is the most certain science. The things that are by nature first in the field of mathematics are also those that are right at the outset better known to us (with certitude of the knower), and for that reason it knows what comes after in a most certain way.\footnote{Alb., \textit{De anima}, 1.1.5, Ed. Colon. 7/1, 10, Ins. 59–61; \textit{De causis et proc. univers.} 2.1.7, Ed. Colon. 17/2, 69, Ins. 4–8.} \textsuperscript{168} Mathematics deals with perfectly stable and intelligible forms, while at the same time confirming its truths in the imagination,\footnote{Alb., \textit{De homine} 1.1.1, Ed. Colon. 27/2, 4, Ins. 53–64.} and this fact makes it most proportionate to the human intellect. Its conclusions are so certain for us that they are almost invariable and universally agreed upon, a situation very different from the one that prevails in the conclusions of natural philosophy or even in First Philosophy,\footnote{Alb., \textit{Metaph.} 1.2.7, Ed. Colon. 16/1, 24, Ins. 38–57. In that very specific sense, says Albert, mathematics is, along with logic, the most free (\textit{liberalis}): the intelligible form can “freely”, or without any exposure to doubt, become a principle of knowledge.} as Albert’s own discussions of the history of metaphysics would reveal to him. The certitude in the mode of knowing of mathematics is such that one could even say that it is, at least in that respect, the most powerful or even the only true science.\footnote{Alb., \textit{Super Ethica} 6.6.499c, Ed. Colon. 14/2, 428, Ins. 80–85; and \textit{Anal. Post.} 1.3.8, Borgen. 2, 88b–89a. In ibid., 1.2.18, 66b, however, Albert also states that if we define science as what demonstrates through the highest possible causes, then metaphysics is more of a science than any other.} Because of the absence of sensible matter in its definitions, mathematics produces demonstrations
“of first certitude”, or demonstrations *propter quid*, whereas natural philosophy yields demonstrations “of second certitude”, or demonstrations *quia*.

In a rather stunning passage which follows that distinction, Albert actually says that not only mathematical but even natural arguments are of greater certitude than those of metaphysics: “its [i.e. metaphysics’] proofs will be below (*citra*) mathematical and physical certitude, and above (*supra*) topical certitude.” It is true, though, that elsewhere Albert explains this middle ranking in these terms: in a way similar to dialectics and dissimilar from mathematics and natural philosophy, metaphysics proceeds from principles that are universal and common to all beings; yet in a way similar to mathematics and natural philosophy but dissimilar from dialectics, it proceeds from essential principles and real causes. So the *certitudo* that is here at stake may finally have more to do with “precision” or “specificity” than with what we have called ‘certitude’ so far.

Regardless of how this particular remark of his is to be understood, however, it remains that if mathematics is explicitly said by Albert to be the science that reaches “the ultimate of certitude” and that the explanation is made in terms of “certain for us”, then it at least seems that metaphysics is not first among all parts of philosophy as regards our certitude as knowers.

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172 Alb., *Metaph.* 2.13, Ed. Colon. 16/1, 104, Ins. 29–49. See also Averr., *In libros Metaphysicorum Aristotelis* 2.16, fol. 35K, the source of Albert’s vocabulary here; and Alb., *Anal. Post.* 2.2.11, Borgn. 2, 193a.


175 As is clearly the case in Alb., *Metaph.* 6.1.1, Ed. Colon. 16/2, 301, Ins. 36–58, where the author opposes the *certiora, magis propria*, and *magis determinata* causes and principles of music and optics to the *simpliciora* and *magis universalia* causes and principles of arithmetic and geometry, respectively. A parallel is then drawn with the relationship existing between the parts of philosophy whose subject matter is this or that kind of being, on the one hand, and metaphysics as the study of being as being, on the other hand. In that light, the sentence that precedes the above-quoted passage about the lesser “certitude” of metaphysics compared to that of physics and mathematics makes more sense: “[T]his wisdom can have neither a natural nor a mathematical mode: rather, [it has] one that is more universal than each of them…” (ibid., 2.13, 104, Ins. 81–84)

176 Alb., *Super Ethica* 6.6.499c, Ed. Colon. 14/2, 428, Ins. 80–85. It is true that the claim is made within a discussion of Aristotle’s list of the five intellectual virtues, in which wisdom is considered separately from science. However, the passage in question makes it clear that the ultimate certitude of mathematics is also understood in opposition to wisdom, among others. See also Alb., *De causis et proc. univers.* 2.1.7, Ed. Colon. 17/2, 69, Ins. 7–8: “[M]athematics, which is acquired by the intellect through the most certain demonstration.”
Many of the passages in which Albert distinguishes between the intrinsic certitude of things that are principles and causes and the certitude of the knower actually add to the description of the latter an element that seems to make it fit the certitude of the mathematician: proximity to immediate sensation. Here are two such passages:

Certitude admits of plurality. For, there is certitude without qualification and certitude with respect to us…. By certitude without qualification simply taken nothing is as certain as God and divine things…. In that way, the most certain of cognitions is the cognition of divine things face-to-face [i.e. the direct and immediate vision of God]; below it is cognition through faith; and the lowest is cognition through natural reason. For, this cognition is through what is most certain in itself. Certitude with respect to us, however, proceeds from what is more known with respect to us inasmuch as we are animals nurtured through the senses, as Augustine says. And in this way nothing prevents cognition through natural reasons from being the most certain, and after that is the cognition of faith, and least certain is that which is face-to-face.177

[T]here is certitude without qualification and certitude in a certain respect. Certitude without qualification is what is from principles through which, given certitude about them, other things are known. And in that way the science of the soul is more certain than [that] of the body, because the soul is the cause that gives “specific” being and definitional account (ratio) to the body insofar as it is an animated and natural body. And therefore [the science of the soul] is more certain, because the being of such a body is known through it. Certitude in a certain respect, however, is [certitude] in relation to sense and phantasia, and that [certitude] belongs more to the body.178

For us as “animals nurtured through the senses”, knowledge that is closely based on and verifiable in sensation is and will always naturally be experienced as very certain. If the qualified certitude of the knower—“qualified” in opposition to the more absolute certitude that real principles and causes have in themselves—is to be defined in that exact manner, namely, with the element “through the senses” added, then knowledge of God reached by natural reason (which, in a way similar to that of any kind of philosophical knowledge, has some basis in sense perception, however remote and indirect it may be in that specific case) and knowledge of the body

177 Alb., *Summa de mir. scient. dei* 1, q. 15, c. 3.2, Ed. Colon. 34/1, 79, lns. 61–85.
178 Alb., *De homine* 1.1.1 ad 4, Ed. Colon. 27/2, 4, lns. 35–44. The excerpt is an answer to the objection that the study of the human being should begin with the consideration of the body, despite Aristotle’s claim (Arist., *An* 1.1, 402a1–4) that knowledge of the soul is more certain. See also Alb., *De anima* 1.1.2, Ed. Colon. 7/1, 4, lns. 18–25; *Summa de mir. scient. dei* 2, tract. 12, Borgen. 33, 1–2; and *Anal. Post.* 1.5.1, Borgen. 2, 126b.
are respectively more certain for us than some purely spiritual encounter with God and knowledge of the soul. Now, according to that way of defining certitude of the knower, metaphysics cannot have conclusions that are the most certain of all and cannot itself be the most certain part of philosophy. We have already seen that, for Albert, mathematics, despite the abstract nature of its subject matter, relies on precise abstractions immediately based on external senses and especially the imagination, whereas what metaphysics considers is “most remote from the senses and hence it is with difficulty that they are knowable to man”, as he says in the above-quoted passage from his Metaphysica (1.2.4, p. 21, lns. 51–52).

In his commentary on Pseudo-Dionysius’s On the Celestial Hierarchy, Albert makes the same division into two kinds of certitude, but this time he applies it to knowledge of non-sensible things (intellectualia or intelligibilia) in general, thus clearly evoking metaphysics:

[K]nowledge (cognitio) can be called more suitable (congrua) or more certain in two ways: according to the condition of either the known or the knower. Now, the knowledge of intellectual things is more suitable according to the nature of the knowable [things] themselves, but less [suitable] according to the nature of us who are the knowers. Hence the Philosopher says that our intellect is related to the most manifest things of nature, that is, by nature, as is the eye of a bat to the Sun. Nevertheless, should we want to have a perfect knowledge of sensible things, we have to acquire it through intelligible things, by resolving sensible substances into the first principles of substance, which as such are not sensible.

This text seems to confirm that metaphysics cannot be “most certain for us” according to the way in which Albert has used that phrase so far. However, it also suggests to the reader’s mind an important question: if corporeal substances are more certain for us as “animals nurtured through the senses” than the non-sensible principles of substance are, then what sense does it make to say that if we want to have perfect knowledge of sensible things we have to analyze them into their non-sensible principles? If the whole science of metaphysics is about resolving the more certain for us

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179 Albert usually mentions only imagination in connection to mathematics, but see Alb., Super Ethica 6.6.499c, Ed. Colon. 14/2, 428, lns. 82–90, where he mentions both the imagination and (external) sense. This may be because the true instantiation of the triangle precisely as defined by geometry is of course to be found only in our imagination, but something that imperfectly corresponds to it and that has suggested it in the first place exists in the external, sensible world. Teaching classical geometry, for instance, must be impossible without appealing to both.

180 Alb., Super Dion. de cael. hier. 2, Ed. Colon. 36/1, 18, lns. 25–38.
into the less certain for us, it is hard to see how it could be seen in general as grounding the certitude for us of the particular sciences by “stabilizing” their subjects and principles.  

3. *Different Sources of Certitude of the Knower and the Difficulty of Metaphysics*

There would be a way out of the dilemma if sense perception, including the internal sense of imagination, were not the exclusive source of certitude for the knower, even though we would still have to answer a second question: why does Albert seem to insist on defining certitude “for us” in terms of the certitude provided by the senses? Both questions should be examined and answered in light of Albert’s effort, in interpreting Aristotle’s thought, to articulate and treat philosophical problems in a way that is in agreement with him, even though the time comes for the interpreter to add to what the Philosopher actually says. Thus, at the origin of Albert’s distinction between intrinsic certitude and certitude for us is the short explanation that Aristotle appends to his claim that the premises of a demonstration must be prior and better known than its conclusion: what is in itself better known and prior is, as is the universal, farthest from sensation, whereas the prior and better known with respect to us is, as is the singular, closest to sensation (*Anal. Post*. 1.2, 71b33–72a5). In the first paragraph of the following excerpt, Albert paraphrases and closely explains Aristotle’s words. Soon after, however, he adds to the text—perhaps in order to answer the unspoken question that if premises are less known to us, how could they possibly ground our knowledge of the conclusion?—an entirely new idea: the more universal, which as a formal principle is prior according to the order of nature and which is farthest from sense, is also more known to our intellect. At the end comes a very

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182 Similarly, at least part of the justification for beginning the study of human nature with the consideration of the soul rather than of the body (see above, note 178) is based on the fact that we can reach some form of non-sensory certitude about the soul. See Alb., *Super Dion. de cael. hier.* 2, Ed. Colon. 36/1, 18, Ins. 48–57, and Alb., *De anima* 1.2, Ed. Colon. 7/1, 4, Ins. 18–41. Analogously, if sense perception were the only source of certitude for us, it would be hard to reconcile Albert’s affirmation that philosophical knowledge of God is more certain for us than faith (see above, note 177) with statements such as the following: “[T]he saint who knows the mathematical disciplines would rather deny that a triangle has three angles equal to two right ones than deny the truth of faith”; Alb., *Super Ill Sent.* d. 23, a.17, Borgn. 28. 435a–b. See also Alb., *Super Dion. de eccl. hier.* 1, Ed. Colon. 36/2, 1, ln. 56–p. 2, ln. 17.
natural question: why define, then, the more known “to us” in reference to sense perception rather than to intellectual knowledge?

Some things are said to be prior to and more known than others in two ways. . . . For, what is without qualification (simpliciter) and by nature first or prior and what is prior for us (quoad nos) are not the same, nor are what is more known without qualification and by nature the same as what is more known for us or what is more known to us. I call . . . what is proximate to sensation prior for us or to us, but what is farther (longius) or more remote (longinquiora) from sensation [I call] prior and more known without qualification and by nature. An example of this is that universals are more remote (longiora) from sensation; the more universal they are, the more distant from sensation they are; and those that are maximally universal are maximally remote from sensation. Singulars, however, are proximate to sensible reception. . . . [27] And, that which is universal becomes a particular, divided in reality (secundum esse), through individuation. . . . And this is called the way of composition, according to which the universal, with respect to that which it is (id quod est), is the formal principle of the particular. . . . And in this way what is prior by nature is the universal and what is posterior by nature is the particular. . . . In the way of resolution, however, what is last is made first, and, conversely, what is first becomes last. For there is a resolution of the composite into the simple, of the posterior into the prior, of what is caused into the cause. . . . And in this way, therefore, what is prior and more known to us differs from what is prior and more known by nature.

And, the [things] that are prior by nature are said [to be] more known with respect to intellect, because the way of resolution is the way of the intellect that abstracts, which proceeds up to the first nature that formally founds the nature [of things] (primam naturam formaliter naturantem) [and] that is also the principle of knowing that whose nature it founds. . . . And singulars are called “first for us” because they are proximate to sensible judgment. . . .

[b/] As to what is said [to be] “for us” (quoad nos), Aristotle in the seventh [book] of the Ethics debates whether “for us” is said in relation to intellect, since a human being as human being is only an intellect, or whether “for us” is said in relation to sensation, which is common to us and the brute [animals]. And he concludes that “for us” is said in relation to sensible perception (sensibilem acceptionem), because “for us” indicates that which is distinguished (discretum) in sensation and what stands apart from that which is truly by nature [i.e. the universal]. And for this reason

183 Albert is thinking about the discussion surrounding Aristotle’s apparently objectionable view (Eth. Nic. 7.15, 1154b15–31) that man cannot experience simple or purely spiritual pleasures (delectationes). One way of solving this problem is by distinguishing man considered as intellect or as endowed with a body, the latter consideration being perhaps that of Aristotle. See Alb., Super Ethica 7.16.688c, Éd. Colon. 14/2, 588, Ins. 1–33, and Ethica 7.2.6, Borgen. 7, 512a–513b.
most [people] judge [things] according to sense. Also, for this reason what is prior for us is opposed in [our] mode of knowing to what is more known and prior by nature and for intellect (*quoad naturam et intellectum*). And this is the understanding of Aristotle.\(^{184}\)

One can easily see, here, the applicability to the case of metaphysics, even though the word “certitude” is not explicitly used by Albert: the primary form of all created things, being as being, that is to say, the subject to which the science of metaphysics ascends by way of resolution and separation, is not only prior by nature but it is also better known by the intellect than the more composite subject of mathematics or of any other part of philosophy, and this is why the science of being as being is truly for us a principle of knowing, say, quantified being or mobile being. Notice, however, that Albert’s point in the above-quoted passage seems to concern uniquely the resolution of the things that surround us into their primary formal foundation, not the resolution of said things into their primary extrinsic causes, whether they be efficient, final, or even exemplary (this is another indication, perhaps, that the certitude of the knower reached by metaphysics in the treatment of being as being and its properties is not to be ascribed to the metaphysician’s knowledge of God or the highest causes of being). One wishes that Albert were more explicit on this point, but it may very well be that for him sense perception, which is always for us at the origin of intellectual knowledge,\(^{185}\) puts us in contact with real instantiations of being which the intellect then spontaneously and with the greatest certitude grasps as beings and which metaphysics by a process of abstraction and separation from matter can explicitly and scientifically resolve into their primary formal cause; our senses, however, do not perceive any instantiation of the divine or God himself, whose existence the intellect can only conclude to on the basis of its consideration of the intrinsic dependency of created being, and whose “nature” it must

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\(^{185}\) Alb., *Quaest. super de animal*. 11.1, ob and ad 3, Ed. Colon. 12, 218, Ins. 25–28, 59–62. The fact that for human beings intellectual knowledge always presupposes sensation must not be misinterpreted. For Albert, the senses present the intellect with some mixed, materialized version of universal forms, but it is the intellect that abstracts and then “sees” the universals themselves thanks to its own light, not to that of the senses, which latter cause intellection only *per accidens*. See, for example, what Albert (with the help of the Greek commentators on the *Nicomachean Ethics*) says about induction in *Ethica* 6.2.18, Borgen. 7, 433b–434a.
attempt to “know” by predicating of the First Cause being and its properties, using strategies such as analogy and negation.\textsuperscript{186}

For Albert, then, the intellectual certitude of the knower obtained by metaphysics in the direct treatment of its subject matter (being as being) is greater than that of any other part of philosophy, whereas the mathematician, who unlike the metaphysician relies on sense and imagination from the beginning to the very end of his scientific study of a subject matter that is less universal than being as such, is said to be more certain of his conclusions than the metaphysician if certitude for us is understood in terms of proximity to sense perception. Out of a desire to follow the example of Aristotle, who in the Posterior Analytics and in Nicomachean Ethics\textsuperscript{7} chose to focus on the human being as a material being endowed with sensation rather than as intellectual, Albert himself usually employs the phrase “certitude for us” (\textit{quoad nos}) to refer to the sensual certitude of the knower—which in no way implies his refusal to acknowledge the intellectual certitude of the knower—and even at times to use the phrase “certitude for us” differently from his master:

Being (\textit{ens}) cannot have a definition or a description…. because whatever it would be made known by would be a being (\textit{ens}) and would be less known, both without qualification (\textit{simpliciter}) and for us (\textit{quoad nos}), than being (\textit{ens}) itself. This is clear given that to us nothing is completely known unless we suppose that it is, and in this way being (\textit{ens}) is more known for us than everything by which it could be made known. That [being] is more known without qualification, moreover, is proved by the fact that it is the simplest and first.\textsuperscript{187}

Nevertheless, if both metaphysics and mathematics are the most certain science for us, albeit in different ways, how does one explain what any cursory review of the history of each discipline tells us, namely that much of the concrete work accomplished by the average metaphysician is surrounded by doubts and that he draws debatable or even erroneous conclusions—especially about separate substances, but even about being and its properties—more often than a mathematician typically would about what he deals with? Is it that sensory certitude is greater than intellectual

\textsuperscript{186} Alb., \textit{De causis et proc. univers.} 1.3.6, Ed. Colon. 17/2, 41, ln. 28–p. 42, ln. 30. For a partly similar solution to a problem analogous to that addressed in the second half of the last paragraph, see Alb., \textit{Metaph.} 4.4.4, Ed. Colon. 16/1, 205, lns. 10–30.

\textsuperscript{187} Alb., \textit{Metaph.} 5.1.11, Ed. Colon. 16/1, 233, lns. 55–63.
certitude?  

Aristotle may indeed have been right, after all, in choosing to define the more known to us in reference to sensation rather than to intellec­tion. But the reason is that reaching certitude immediately through sensation requires fewer steps and conditions, and hence that we are naturally more inclined to appeal to the judgment of the sense, whereas the scientific and formal treatment of the implicit intuition of being requires, in order to reach the intellectual certitude of the knower that will truly establish the secondary certitude of all other sciences, a long process of resolution into the most intelligible form and of separation from matter. In fact, our natural tendency always to rely on sensation and imagination in all matters, including in non-sensible or intellectual ones, provides, along with bad customs and moral habits, formidable obstacles to the metaphysician’s reaching his goals:

There is another impediment to the contemplation of truth (*theoriae veritatis*) [that comes] from the very mode of our birth (*ex ipso modo nativitatis*) [i.e. from our very nature]. For, even though man as man is only intellect,

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188 The question of which of the two types of certitude of the knower, once reached, is greater, is difficult, supposing that a comparison of that sort between such different things makes any sense. Albert (*Anal. Post.* 1.5.2, Borgia 2, 132b) does say that “the intellect is more noble and certain than the sense, and the intelligible is more noble and certain than the sensible”, but passages of that kind seem to be mainly about intrinsic certitude. Assur­edly, Albert thinks that no mode brings so much certitude on its own that the knower, considered as a composite whole rather than as either an intellect or an animal “nurtured through the senses”, becomes incapable of being even more certain. See the following, for example: “Something is said to be better known in two ways: 1) either through many ways of knowing—and in this way the other things that we know through sense, imagina­tion, and intellect we know better than [we know] God, who is in some way known by us through intellect alone; or 2) because [what is known] is a principle of knowing other things, just as it is said in the first [book] of *On the Soul* that knowledge of the soul is more certain to us than knowledge of the body; for, [the soul] is the principle of it [i.e. the body], even though we know the body in more ways. . . .”; Alb., *Super Dion. de div. nom.* 7.25 ad 7, Ed. Colon. 37/1, 357, Ins. 45–53. At least according to this way of putting the problem, it would seem that, for Albert, mathematics, which appeals to both the imagination and the intellect, is more certain for us than metaphysics. But then, would that mean that natural philosophy, which appeals to sense, imagination, and the intellect, is the most certain for us of all three? See Alb., *De IV coaeq.* 4.38.1, Borgia 34, 551, in which Albert presents such a classification of the three disciplines—in terms of “ease”, though not “certitude”—based on the varying number of the aforesaid three modes of knowing. This kind of problem indicates, perhaps, that a reflection on certitude of the knower that is too cut off from that of the intrinsic certitude of the things known rapidly leads to a cul-de-sac. For a solution to the problem raised by passages like that from *De IV coaequaevaeis*, see Alb., *Super Ethica* 6.5, 490, Ed. Colon. 14/2, 420, Ins. 7–33, where he distinguishes carefully the easy access to information about a given subject from its intrinsic knowability. It suggests that we may more easily get access to natural than to mathematical things, but their lack of intrinsic intelligibility prevents us from saying that in general we know natural things with more certitude.
the intellect in man is in reality (secundum esse) dragged down by imagination, sense, and the other corporeal powers that do not allow him to contemplate purely the truth (contemplari theoriam veritati). For, [in the case of] some, if one does not demonstrate in a mathematical way what one says, they will not agree to accept what one says. They are the ones in whom the power of imagination prevails over the intellect; and they believe nothing but what can be imagined. And hence outside of a world similar to this world, they imagine a world, place and time [that extend] ad infinitum; they do not admit that there are intellectual substances, which are without a here and a now; they deny that eternity is something—and [other things] of that kind, which are grasped by the intellect without its receiving them from the imagination. [In the case of] others, for whom the intellect has been entirely bent on (reflexus est) sense, they do not accept something unless it has been demonstrated by way of example through sense. Those, moreover, who have been used to the fictions of laws [i.e. the mythological elements sometimes present in the legislation of cities of Ancient Greece] think it fit to have a poet brought in to them as a witness who expresses such things poetically. But those who have been accustomed to philosophical [matters] want everything they hear to be in accord with the certitude either of what is per se known or of what is demonstrated on its basis. For others who have been accustomed to [more] mundane demands, however, philosophical certitude is a cause for lament and despondency, either because, for lack of study, they cannot embrace such language, being ignorant of the power of syllogistic combination, or because of a natural micrologia—or lack of reason or sagacity. . . .

In contracts, the value of a thing is not always appreciated, but rather the wish of the seller and buyer. . . . The cause of conflicts is often more in the desire of the seller or buyer than in the thing [sold] itself. And thus it is in the adoption of propositions concerning the principles of the contemplation of truth, as is evident from what has been presented. This is maximally the case in First Wisdom, however, in which . . . there are many things that all men share in common. For, men share more in common concerning the first things than concerning those that come after, and error concerning them [i.e. the former] is a cause of error concerning those that come after. A sign thereof is (1) that all men attempt to say some things concerning the principle of the totality of things and concerning the emergence of things into being (exitum rerum in esse); (2) that they invent many things as causes; and (3) that few reach the truth in these [matters].189

So even if in theory metaphysics is First Philosophy in terms of intellectual certitude of the knower (at least as regards being as being and its properties), it may very well be a certitude that few of all those who throughout

189 Alb., Metaph. 2.12, Ed. Colon. 171/1, 103, lns. 37–84; italics mark the lemmata from Arist., Metaph. 2.3, 995a6–10, as identified by the Cologne edition. About other impediments, see also Alb., Metaph. 2.11, 102, ln. 33–p. 103, ln. 33.
history have been called “metaphysicians” actually obtain or fully obtain, in great part because of how difficult it is for us not to let our judgment in purely intellectual matters be measured by the imagination or the senses. The things that metaphysics deals with, after all, seem to be in themselves more suitable to a divine or separate intellect, rather than to composite beings, who painstakingly and imperfectly acquire knowledge of such things after a process of separation from time and the “continuous”. The challenge concerns especially but not uniquely knowledge of God and of the highest causes of being in general: the intellect of the metaphysician may have in itself the power to see the universal form of being and its properties with the greatest certitude, but for that to happen they must be, through abstraction and separation from matter and particularizing features, present to the intellect in their original simplicity and purity, and therein lies a difficulty for the metaphysician as an animal “nurtured through the senses”.

Concerning the order of honorability in terms of certitude, then, our somewhat long consideration leads us to the following conclusions: (1) metaphysics is clearly first if we think of certitude without qualification

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190 Alb., Metaph. 1.2.1, Ed. Colon. 16/1, 18, Ins. 19–47; and 1.2.8, 25, Ln. 4–p. 26, Ln. 17.
191 That is to say the simplicity and purity they originally had as universals ante rem. See below, Section 7, and Alb., De V univ. 2-3, Ed. Colon. 1/1A, 244–b.
192 Analogous to the distinction between the human being as intellect and as animal endowed with sensation, see the way Albert in his late Summa theologiae adapts Aristotle’s oft-repeated saying about our intellect’s being, in metaphysical matters, like the eyes of a bat in front of the sun: the eye of the bat is unable to look at the sun, not as eye (since, thinks Albert, the eye of a golden eagle [herodius] can in fact look at the sun and find delight in it), but inasmuch as it is the eye of a bat; Alb., Summa de mir. scient. dei 1, prol., Ed. Colon. 34/1, 3, Ins. 29–47. See also Alb., Metaph. 5.2.9, Ed. Colon. 16/1, 246, Ins. 62–67; De animal. 1.1.2.19, Ed. Stadler, 1: 8; ibid., 23.7, 2: 1433. For the identification of herodius as the golden eagle, see Albertus Magnus on Animals. A Medieval Summa Zoologica, ed. and trans. Irven M. Resnick and Kenneth F. Kitchell (Baltimore, Md.: 1999), 1547, n. 7. It is also interesting to see that elsewhere (Alb., Super Dion. de cael. hier. 1, Ed. Colon. 36/1, 7, Ln. 78–p. 79, Ln. 2), Albert proposes a more optimistic version of Aristotle’s comparison. In relation to divine things, and to God in particular, the unaided human mind of the philosopher is not like the eye of the bat or of the golden eagle in relation to the sun, but rather like the eye of man, which can look at the sun but with “trembling” or difficulty. “[I]n the same way, the natural mental vision of those who are preoccupied (dettintur) by earthly affections and corporeal images is completely driven back (retunduntur) by divine brightness. But if it goes away from them into intellectual contemplation, it is made immaterial, although very much ‘trembling’ (adeo tremens), because through the principles of reason it looks at divine things as if from afar (velut a longinquo)....” Even though not all the things that metaphysics considers (divina) are better known to the intellect, as we have seen, it remains that for Albert our intellect qua intellect has a greater connaturality with them as a group than with the things that physics and mathematics deal with, to which it is closer only qua attached to the body. See Alb., De intellig. et intellig. 2.1.6, Borgen. 9, 513a.
or the intrinsic certitude of the thing known, and more often than not this is the type of certitude that Albert himself has in mind when explicitly making it a reason to call that discipline First Philosophy; (2) metaphysics is not necessarily first according to all types of certitude; for instance, it comes after mathematics if the measure is certitude for us as animals “nurtured through the senses”, which is what Albert, following the example of Aristotle, usually means by “certitude for us”; (3) if on the other hand we think of a more purely intellectual certitude of the knower, the metaphysician is most certain in at least some of his claims, in particular those that concern more closely being as being; and (4) in the concrete history of the discipline, this very certain metaphysician may be rarer than we would like to think.

Regardless of how the general question as to the certitude of metaphysics is answered, however, it should be noted that not only do the nobility and wonder of what a science considers appear to be for Albert a necessary condition for the title of First Philosophy according to the order of honorability, but also, in general, they outweigh the certitude we have regarding our conclusions about them. Indeed, if we have to choose between dealing with a more noble object that we do not understand well and a better and more complete knowledge of some less important kind of thing, priority is to be given to the former:

[T]here are certain ingenerable and incorruptible natural substances that are animated, as some teach. Some have even said that they are animals and that they are divine substances such as celestial essences. But our judgment and our talk about divine substances is sparing and abbreviated, because few of the per se accidents of that [kind of] substance are very evident to us. We have more ability to speak about the animals and the trees that are among us, since knowing them is comparatively easy because of their proximity to us. One who wants to speak about celestial substances, however, will speak with effort and with difficulty... because they are distant from us and because they are most noble. For, we get hold of (comprehendimus) but very little knowledge of the celestial substances because of the magnitude of their great nobility. What we get hold of is their quantity and the quantity of their movement. But we do not perfectly comprehend their powers and natures; rather, we make some conjecture about them using their effects—and that is to comprehend little about them.... [B]ut the love of the knowledge of the celestial [substances] makes us strive and rouses our

193 Albert (Metaph. 6.1.3, Ed. Colon. 16/2, 305, lns. 50–51) seems to imply this when paraphrasing Arist., Metaph. E.1, 1026a21–22: “the most honorable science must be about the most honorable subject-matter”.
zeal \((\textit{studium})\) to comprehend that very little that can be perceived about them. For he who loves a certain thing, when he loves it much, is troubled and [becomes] zealous to get hold of the least part, however small, of what he loves. For, this is proper to one who loves. And the comprehension of a small part is valued more by the one who loves than the comprehension of other great and numerous parts that are not loved as much by him.\(^{194}\)

In general, then, the order of honorability—just like the previous orders of nature and causality—is clearly a reason for Albert to think, as did Aristotle before him, that metaphysics is truly First Philosophy: the good philosopher loves and wants to understand more than anything else the things with which metaphysics deals, however little he may actually in the end understand some of them. But the consideration of this last kind of priority also shows why, if the First Cause of being revealed itself through some supernatural and extra-philosophical mode,\(^{195}\) there would be for Albert a new and higher wisdom that would go beyond what philosophy, even First Philosophy, has to offer mankind. At the same time, too, it explains his eagerness to see as integral parts of metaphysics itself elements coming from non-Aristotelian sources that were doubtlessly more prolix than the Stagirite was on the question of God and first causes in general. The next two sections will shed light on some of those other sources.

4. PLATO AND PLATONIC/NEOPATONIC SOURCES IN ALBERT

\textit{Henryk Anzulewicz}

Plato and the Platonic/Neoplatonic sources, especially the \textit{corpus Dionysiacum} and the \textit{Liber de causis}, play a key role in the work and thought of Albert the Great. In the past, scholars have tended to portray Albert merely as one of the first and most significant recipients and interpreters of the “new” Aristotle in the Latin West in the 13th century, with the result that they inevitably underestimated the significance and function of Platonic and Neoplatonic doctrines and sources in his work. Recent scholarship seeks to correct this lacuna by stressing that the Platonic and Neoplatonic doctrines found in Albert’s work do not form a mere residue of these traditions integrated by Albert under an epistemological framework


\(^{195}\) Alb., \textit{Summa de mir. scient. dei} 1. q. 4, Ed. Colon. 34/1, 15, lns. 41–50.
determined by Aristotle, and harmonized and amalgamated with Aristotle’s philosophical positions. Thus, the recent view is that Plato’s philosophy and Neoplatonic sources play a hermeneutically and systematically foundational role in Albert’s work and thought.196

The Universal Doctor assimilates the Platonic and Neoplatonic traditions, first, because he sees them as complementary with Aristotle’s philosophy.197 Second, Albert incorporates these traditions because their hermeneutic framework and their characteristic schema of emanation and return correspond to his own conception of the entire reality of being. For it is in Plato and the Neoplatonists, especially in Pseudo-Dionysius, that Albert finds a model of thought that is capable of explicating philosophically his view of God and the world that is inspired by Scripture and Christianity. Elsewhere one can find reconstructed this tripartite structure of emanation and return on the basis of Albert’s writings, using Albert’s terminology of exitus, perfectio, and reductio.198 This hermeneutic structure allows Albert to comprehend reality in its totality, that is, with its

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197 See below, notes 199–202.

divine origin and its procession from it, in its existence and self-realization in time, space, and matter, and finally its return to the divine origin—something that Aristotelian philosophy does not accomplish. Moreover, it allows Albert to explain reality philosophically—primarily drawing on Aristotle but also incorporating other suitable philosophical traditions and empirical sciences—in harmony with the Scripture and Christian belief.

A. Plato

Albert considers himself to be closest to the philosophical tradition of Aristotle and the Peripatetics, yet he stresses that in philosophy you cannot avoid Plato. Albert considers Plato’s philosophy not only an important and frequent point of reference in his own thought, but also, in addition to Aristotle’s philosophy, a fundamental requirement for acquiring philosophical competence in general. Albert presents this view clearly in his commentary on the *Metaphysics*, and he further highlights it by adding that Plato’s doctrine shall continue to have the validity that it has, until perhaps someone else shall explain it better. The two mentioned passages from Albert’s commentary on the *Metaphysics* illustrate in an exemplary way his special relation to the Platonic heritage and the high value he attributes to it. They explain why Albert considered some of Plato’s concepts in metaphysics and natural philosophy—which at first glance seemed philosophically untenable—intuitively correct yet underdeveloped, since they lacked a precise terminology and thus had a metaphorical character. Examples include Plato’s conception of the *merita materiae* and of the origin, separation, and immortality of the human soul. Albert interpreted the former doctrine as equivalent to the theory of the *inchoatio formarum* that he adopted and developed further. He critically considered the latter doctrine, however, as either false, or justifiable only as a

201 For another instance, see below, Section 108.
202 Alb., *De nat. et orig. an.* 1.2, Ed. Colon. 12, 5, Ins. 45–58: “Nec est differentia inter Platonem et Aristotelem in re aliqua, sed tantum in modo, quoniam Aristoteles probat, quod omnes formae naturales sint ab intellectu conferente virtutem formativam, qua ad formam formantem educuntur de materia, eo quod in ipsa sint omnes per incohationem. Sed Plato et Pythagoras idem quidem dicere intendebant, sed nescierunt exprimere materiae potentiam, quae est formae incohatio. Et ideo dixerunt a datore primo dari formas et non esse in materia, sed tamen materiam mereri formas, meritum materiae vocantem id quod Aristoteles vocavit formae incohatioem sive potentiam sive privationem.” German trans.: Albert the Great, *Liber de natura et origine animae*/Über die Natur und den Ursprung der Seele, trans. Henryk Anzulewicz, (Herders Bibliothek der Philosophie
metaphor meant to represent the undeveloped, real terminology.\textsuperscript{203} Even though on certain points Albert criticizes, rejects, and corrects many of Plato’s doctrines, Albert’s high regard for Plato is all the more impressive considering that it is based on a primarily indirect knowledge of Plato’s works and his philosophical system.\textsuperscript{204} Except for the part of the \textit{Timaeus} translated into Latin by Calcidius (17A–53C), Albert was dependent on secondary tradition and could only acquire a limited understanding of the true contents of Plato’s works.\textsuperscript{205} The main source for Albert’s repeated, at times sharp critique of Plato, which targeted selected points of Plato’s doctrine—for instance, his theory of Ideas—was Aristotle’s confrontation with his teacher (esp. Metaph. 1.9, 990a34–992a11).\textsuperscript{206} Nevertheless, Albert does not recognize an unbridgeable gap between Plato (and the Platonic tradition) and Aristotle (and his followers). While Albert prefers Aristotle and his followers when it comes to the scientific explanation of reality, hermeneutically he favors Plato and elements of Neoplatonic systems.

Since Albert demonstrates a historical interest in all of the philosophically important questions, he constantly strives to understand Plato’s positions and to judge their validity critically. As indicated in the previous section, Albert’s own conception of metaphysics, which follows both Aristotle’s metaphysics and the Neoplatonic \textit{Liber de causis}, is the result of a fruitful combination of these two great traditions.\textsuperscript{207} According to

\textsuperscript{203} Alb., \textit{De anima} 3.2.10, Ed. Colon. 7/1, 191, Ins. 47–52.

\textsuperscript{204} See Leopold Gaul, \textit{Alb.}, \textit{De anima} 3.2.10, Ed. Colon. 7/1, 191, Ins. 47–52.


Albert, Plato represents the second most important school of philosophy—besides Aristotle—in Greek antiquity. In his view, Plato is the most significant representative of the Stoa (*princeps Stoicorum*). Plato’s doctrines (including his errors) have acquired an obvious historical and systematic relevance or are at least worthy of discussion because they are foundational and form the seeds of Aristotelian philosophy. Moreover, they are relevant because of their evolution in (what we call) Neoplatonism and their adaptation in Christianity. This explains why Albert regarded the philosophy of Plato and the Platonists (which he criticized often and at times vehemently on many points) as part of the very fabric of philosophy in general and, therefore, also of his own philosophical system.

B. Platonism and Neoplatonism

For Albert, the Platonic/Neoplatonic tradition is linked naturally to Plato. In fact, this literary tradition comprises texts from different cultural and linguistic realms: pagan or monotheist, and Greek, Latin, Arabic, or Hebrew. The most influential among the sources, which inspired and decisively influenced Albert’s conception of metaphysics and its basis in ontology, are without a doubt Pseudo-Dionysius’s works, from the side of the Greek tradition, and the *Liber de causis*, authored in the Islamic cultural realm. Since Albert’s relation to Arabic sources is discussed separately below, we shall here confine ourselves to a few remarks regarding his Platonic/Neoplatonic sources from the side of the Graeco-Latin tradition.

Since Albert does not draw a clear distinction between Platonists and Neoplatonists, he counts the authors he integrates, such as Apuleius of Madauros, Macrobius, Calcidius, Augustine, Pseudo-Dionysius, and...
Boethius, among Platonists like Nemesius of Emesa. Studies on Albert have generally focused more on the extension of his notion of Platonici, and on the presence and doctrinal significance of Neoplatonic sources in his work, than on Plato’s philosophy. But the real significance of Platonic/Neoplatonic philosophy in Albert, as suggested above, comes from its providing him with an ontotheological hermeneutics or model of thought. According to the boldest form of this reconstruction, Albert should be understood, not as integrating the Platonic and Neoplatonic tradition into a primarily Aristotelian philosophy, but rather as using Aristotelian philosophy to explicate an ontotheological structure that is essentially Platonic/Neoplatonic. This Platonic/Neoplatonic structure or model comprises the entire reality of being, with its transcendent first principle, with the world, proceeding from the divine, in its realization in time, space, and matter, and in its return to its transcendent origin as its goal. When Albert explicates individual segments of this structure, and especially when he seeks to cognize reality on the level of contingency (that is, in time, space, and matter), he gives preference to an Aristotelian philosophy of nature. In principle, however, Albert is open to all scientific traditions and he uses their insights if they fulfill the conditions of his conception of rationality and conformity with the Christian faith.


213 For a demonstration of the hermeneutic significance of Platonic and Neoplatonic philosophy in Albert’s works and his thought, see Henryk Anzulewicz, “Die Denkstruktur des Albertus Magnus”; Anzulewicz, “Pseudo-Dionysius Areopagita und das Strukturprinzip des Denkens von Albert dem Grossen.”
Now, if Plato and the different Platonic/Neoplatonic sources provided Albert with the worldview that he used as the metaphysical groundwork for his Christian faith, it was nonetheless his encounter with Aristotle (through the Arabic Peripatetic tradition) that furnished him with the necessary categories for expressing and analyzing that worldview in precise logical and metaphysical terms. In order to reach a more complete understanding of the interplay in Albert between Platonism and Aristotelianism, then, we now turn to an examination of Albert’s use of Avicenna and the Islamic philosophical tradition, which were the lens through which Albert read Aristotle.

5. ALBERT’S USE OF AVICENNA AND ISLAMIC PHILOSOPHY

Amos Bertolacci

Albert’s paraphrase on the *Metaphysics*, written immediately after his preaching of a crusade in the German speaking countries (1263–64) by order of Pope Urban IV, bears no sign of animosity against Islam. On the contrary, as in the case of all of Albert’s Aristotelian paraphrases, as well as his previous and later theological works, the *Metaphysica* contains frequent references to a wide array of Muslim philosophers and astronomers, foremost among whom are the authors of the two major Arabic treatments of metaphysics, namely Avicenna (Ibn-Sīnā, d. 1037) and Averroes (Ibn-Ruṣd, d. 1198). Although other works of Avicenna and Averroes are also quoted in the *Metaphysica*, it mainly relies on the *Ilāhiyyāt* ([Science of] Divine Things) of Avicenna’s *Kitāb al-Shifā’* (Book of the Cure)—a

very radical and influential reworking of the *Metaphysics*—and on Averroes’s *Tafsīr ma ba’d al-ṭabi’a* (*Long Commentary on the Metaphysics*)—the most thorough and detailed exegesis of this work that has survived. Albert knew these works by means of their Latin translations (*Liber de Philosophia prima sive scientia divina*, ca. 1150–75; *Commentarius in Metaphysicam*, ca. 1220–24), with which he became acquainted during his teaching in Paris (ca. 1240–48), and to which he keeps referring repeatedly in his subsequent philosophical and theological works. Avicenna and Averroes are not only the Arab philosophers most frequently quoted by Albert in the *Metaphysica*, but also, compared to the many Greek, Latin, and Hebrew authors mentioned here and there, they are, after Aristotle, the authorities to whom Albert most often refers. Since they are cited not only by name, but also occasionally in an explicitly indeterminate way (“aliqui”, “nonnulli”, etc.), and often—what is most significant—silently, they represent the two real “sources”, together with the *Metaphysics*, of the paraphrase.

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217 If we consider that the only quotation of Ibn-Bājja in the *Metaphysica* is taken from Averroes (*Long Commentary on the De anima*); that Albert regards al-Ghazālī as a follower of Avicenna, frequently quoting him together with Avicenna, and occasionally ascribing to him alone doctrines of Avicenna; that al-Fārābī is mentioned only once, together with Avicenna, with regard to a doctrine of this latter; and that al-Bīrūnī and Thābit ibn Qurra are quoted only once about astronomical matters; we realize that Avicenna and Averroes are the main Arabic philosophical sources of the paraphrase. The *Liber de causis* (the object of an independent paraphrase by Albert) exerts a less conspicuous influence on Albert’s interpretation of the *Metaphysics*.

218 Although the explicit quotations of Avicenna and Averroes are as numerous as those of Boethius (*Boetius*), their implicit quotations (only a few of which are recorded in the *Auctores a nobis allegati* of the Cologne edition’s indices) are decidedly more frequent. At least two quotations of Boethius recorded in the *Auctores ab Alberto ipso allegati* do not correspond to any explicit attribution by Albert: *In Categorias* 1 (pl 64: 184D); *In Isagogen*, editio 2, 4.17 (csel 48: 280, ln. 14); see Alb., *Metaph.*, Ed. Colon. 16/2, 603.

In the *Ilāhiyyāt*, Avicenna effects a thorough recasting of the epistemology and content of the *Metaphysics*, with the aim of replacing Aristotle's work with an original elaboration of metaphysics that provides a rigorous and coherent version of this science. This reworking affects all of the main aspects of the “scientific” profile of metaphysics (subject matter, structure, method, relationship with other sciences), and is performed by arranging in a different framework a selection of Aristotle's metaphysical doctrines, to which are added Neoplatonic theories (regarded as Aristotelian), the views of the Peripatetic commentators, and Avicenna’s own ideas. Insofar as it is an independent, comprehensive treatise of metaphysics in which the “raw” material of the *Metaphysics* is refined, expanded, and rebuilt upon the Aristotelian epistemology of the *Posterior Analytics*, the *Ilāhiyyāt* can be regarded as a full-fledged original synthesis initiating the “second beginning” of Aristotelian metaphysics in Western philosophy.220 The *Tafsīr* is a work both stylistically and doctrinally different from the *Ilāhiyyāt*. In it Averroes provides his most comprehensive and detailed exegesis of the *Metaphysics*, much more faithful to Aristotle's text than the interpretation offered in the *Epitome*, and much more extensive and articulated than the account of the *Middle Commentary*. In this respect, the *Tafsīr* represents the first extant exhaustive (though not complete) exegesis of Aristotle’s work in the Peripatetic tradition.221 On the methodological side, it adopts the exegetical technique of the ancient Greek tradition, namely, the literal commentary of Alexander of Aphrodisias and, to a lesser extent, the paraphrase of Themistius, two authors whom Averroes abundantly quotes in his commentary on *Metaphysics* Lam. In their footsteps, Averroes provides a continuous, line-by-line explanation of the text of the *Metaphysics*, with frequent references to the other Aristotelian works, according to the model of “holistic” interpretation of the *Metaphysics* within the *corpus*. On the doctrinal side, the goal is to preserve the original pattern and content of the *Metaphysics* against the modifications

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221 All of the previous commentaries on the *Metaphysics*, both Greek and Arabic, are extant only partially; see Bertolacci, *The Reception*, 136–146.
and—in Averroes’s eyes—“corruptions” introduced by modern philosophers, especially Avicenna. Albert’s attitude towards these two paradigmatic and antithetic interpretations of the *Metaphysics* is interesting in many respects. First, historically, it exemplifies the crucial phase of transmission of Arabic metaphysics into Latin, insofar as it documents the process of joint reception of these two fundamental accounts of the *Metaphysics* in one of the earliest, most extensive, and most influential Latin accounts of Aristotle’s work. Albert’s paraphrase is unique in this respect, since it is the first known example of interpretation of the *Metaphysics* in Latin that relies extensively on both Avicenna’s and Averroes’s works on the subject. Before Albert, the lines of transmission of the *Ilāhiyyāt* and the *Tafsīr* remain separate: the Latin reception of Avicenna’s metaphysics is witnessed either by theological works or by treatises on specific metaphysical or epistemological topics, whereas the exegesis of Aristotle’s *Metaphysics* is based almost exclusively on Averroes’s model, with a decided neglect of Avicenna’s contribution. With Albert, these two lines of transmission start to communicate and interact with one another. Albeit quantitatively different (the use of Avicenna is less extensive than that of Averroes), the recourse to Avicenna and Averroes is qualitatively analogous insofar as Albert accords to both sources an equally important, although distinct, function: Averroes helps to explain the text, Avicenna contributes to its doctrinal enrichment. Thus, the amount of space and degree of attention that Albert devotes to Avicenna and Averroes in the paraphrase is similar to the one accorded to Aristotle: he reports the *Ilāhiyyāt* and the *Tafsīr* comprehensively, signaling the cases in which the content of these two works is, for some reason, noteworthy. Due to the similarity of the exegetical technique that Albert applies to the texts of Aristotle, Avicenna, and Averroes, it is not far-fetched to view his paraphrase not only as an account of the *Metaphysics*, but also, concomitantly, as a kind of “super-commentary”, albeit *in nuce*, of the *Ilāhiyyāt* and the *Tafsīr*.

The joint dependence on the *Ilāhiyyāt* and the *Tafsīr* is mirrored—and this is the second element of interest—in the style of Albert’s paraphrase of the *Metaphysics*, as well as of his other Aristotelian works. Among the

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222 Bibliographical references to the partial translations and studies regarding Averroes’s *Tafsīr* can be found in Philipp H. Rosemann, “Averroes: A Catalogue of Editions and scholarly Writings from 1821 Onwards,” *Bulletin de Philosophie Médiévale* 30 (1988), 153–221, and, for the following years, in the bibliographical database of the Thomas-Institut of the University of Cologne.
different kinds of exegesis applied to Aristotle’s works in history (Alexander of Aphrodisias’s literal commentaries, Themistius’s paraphrases, Nicholas of Damascus’s abridgements, etc.), Albert’s Aristotelian works represent a case on their own. They can be defined as “paraphrases with digressions”, since they consist of a series of chapters that clarify, by way of paraphrase, the meaning of the text of Aristotle that is being commented upon, intermingled with frequent autonomous chapters (or even whole books) in which Aristotle’s doctrines, previously paraphrased, are accounted for anew, according to a different and more thorough way of explanation, are confronted with possible objections, or are clarified by means of the interpretations provided by the commentators. This stylistic peculiarity of Albert’s paraphrases is related to Avicenna and Averroes in two respects. Formally, it stems from Avicenna’s reworking of Aristotle’s writings and from their exegesis by Averroes: in an Avicennian vein, Albert replaces the text commented upon by his own rephrasing of it; in the footsteps of Averroes, he introduces frequent doctrinal parentheticals into the continuous, systematic, and detailed interpretation of Aristotle’s text. From the point of view of content, in the *Metaphysica*, as well as in the other Aristotelian works, this double register of paraphrases and digressions serves to incorporate the contributions of Avicenna and Averroes. Thus, Albert mainly quotes Averroes’s literal exegesis of the *Metaphysics* in sections of explicative paraphrase, whereas he prefers to cite Avicenna’s doctrinal developments in the digressions. In this way, the contributions of Avicenna and Averroes are kept separate within two different structural levels of the paraphrase, but are also allowed to interact and to balance each other in the architecture of the work as a whole. In

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223 Scholars tend to define the style of Albert’s Aristotelian works simply as “paraphrase”, disregarding the essential role played by digressions.

224 The paraphrastic component of the style of Albert’s Aristotelian works is frequently related by scholars to Avicenna’s *Shifā’*. The impact of Averroes’s long commentaries on Albert’s digressions is less underscored. Albeit inspired, in different respects, by Avicenna’s and Averroes’s formats, Albert’s style remains, however, original. His paraphrases are not a radical reworking of Aristotle’s text as in Avicenna’s *Shifā’*, since they follow rigorously the order of Aristotle’s texts (the term “paraphrase” can be applied to Avicenna’s and Albert’s styles only in different senses). Nor are the digressions merely scattered randomly in the exegesis as in Averroes’s long commentaries; they rather constitute a constant and distinct second structural element of Albert’s paraphrases. In this respect, Albert’s originality stems from its close interaction with the formats of his sources: in his works, the paraphrases modeled on Avicenna assume the running character of Averroes’s exegesis, whereas the digressions inspired by Averroes become structurally independent from the explanation of the text, thus mirroring Avicenna’s way of replacing Aristotle’s text with doctrinal developments that are related to, but independent from, the *littera* of Aristotle.
the case of the *Metaphysica*, the *Tafsīr* represents—to use a metaphor—the “basis” of Albert’s paraphrase, whereas the *Ilāhiyyāt* constitutes its “height” and the *trait d’union* connecting the exegesis of Aristotle’s work with the Neoplatonic speculation of the *Liber de causis*, commented upon by Albert after the *Metaphysics* and regarded by him as an Aristotelian work (albeit not strictly speaking as a work by Aristotle). In other words, the articulated format of Albert’s paraphrase—itself a kind of synthesis of the exegetical styles adopted by Avicenna and Averroes—allows a use of sources in which the borrowings from Avicenna and Averroes are, at the same time, structurally distinct from, and functionally complementary to, one another.

Third, from the point of view of doctrine, Albert’s attitude toward his two sources is not only receptive, but also critical: in many cases, he rejects particular theories advanced by either Avicenna or Averroes. This critical attitude is already indicative of originality. More interestingly in this regard, the joint reliance on Averroes and Avicenna implies and underscores the presence in Albert’s paraphrase of an elaborate theoretical apparatus by means of which he accounts for and solves the conflict between the metaphysics of these two authors. For Averroes frequently and harshly criticizes Avicenna in the *Tafsīr*, the commentary in which Averroes’s polemic against Avicenna is most recurrent and intensive. On the issues about which Avicenna’s and Averroes’s standpoints prove to be incompatible, Albert adopts a harmonizing strategy, striving to focus on similarities and to sweep away differences. This strategy consists in “hiding”, as much as possible, the dissent: thus, in no place in his *Metaphysics* paraphrase does Albert signal explicitly a disagreement between Avicenna and Averroes. In particular, Albert performs this concealment

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225 In the only place in which Albert explicitly quotes Avicenna while reporting a criticism of Averroes against him (Alb., *Metaph.* 4.1.5, Ed. Colon. 161, 166, ln. 74; and 167, Ins. 15, 39, 66), Averroes himself is not named; and vice versa, in the only place in which Albert explicitly quotes Averroes while reporting his criticism of Avicenna (ibid., 11.1.8, 470, ln. 33), Avicenna himself is not named. In this regard, the *Metaphysica* represents a special case: it is the only Aristotelian paraphrase in which Albert, despite using the corresponding long commentary of Averroes, does not reproduce explicitly any of the criticisms of Avicenna that he finds there (see, on the contrary, the paraphrase on *Phys.* 1.3.18, and 2.110; the paraphrase on the *De caelo* 2.3.5, 2.3.8, 3.2.1, and 3.2.8; the *De causis propr. elem.* 1.2.13; and the paraphrase on the *De anima* 2.3.7, 2.3.33). Since the *Metaphysica* is later than all the aforementioned works, this peculiarity might indicate a sort of evolution of Albert’s attitude towards Averroes’s criticisms of Avicenna. In the last “Aristotelian” paraphrase, on the *Liber de causis*, Albert reports two criticisms of Avicenna by Averroes; see Alb., *De causis et proc. univers.* 1.4.7 and 2.1.12.
of dissent in two main ways. On the one hand, he omits many of Averroes's criticisms of Avicenna contained in the *Tafsīr*. On the other hand, he reports the remaining criticisms in a modified way: either he presents them as regarding unidentified authors (*quidam, alii*) rather than Avicenna; or he rejects not only the doctrines of Avicenna criticized by Averroes (once again, ascribed to *quidam*), but also the doctrines on account of which Averroes moves the criticisms (ascribed to *quidam alii*); or, finally, he alters the content of these criticisms and shows that they miss the point.

This conciliatory approach is best exemplified by three fundamental doctrines, taken from the three main areas of metaphysics: the doctrine of the subject matter of this discipline within the epistemological part of metaphysics; the doctrine of the primary and most universal concepts (the so-called "transcendentals") in ontology; and the doctrine of the animation of heavens in philosophical theology. Whereas Avicenna and Averroes disagree on each of these three issues, Albert strives to determine a
consensus between them. Accomplishing this consensus is laborious. On
the first issue, Avicenna’s decidedly ontological view (“being qua being” is
the subject matter of metaphysics) conflicts with Averroes’s criticism of
Avicenna’s thesis that metaphysics proves God’s existence and hence does
not have God as subject matter, and with Averroes’s emphasis on phys­
ics as the science deputed to prove God’s existence, and on immaterial,
divine beings as the subject matter of metaphysics.230 Contrary to what
he does in previous paraphrases,231 Albert makes no reference to Aver­
roes’s criticism; instead, he ascribes to all of the Peripatetics “who speak
the truth” a common view according to which “being” is the subject mat­
ter of metaphysics.232 In other works of Albert, the agreement between
Avicenna’s “ontological” view and Averroes’s “theological” perspective is
reached in a different way: by appealing with Averroes to a plurality of
senses of the “subject” of a science in general, and of metaphysics in par­
ticular, according to which both “being” and God can be viewed as the
subject of metaphysics in different regards.233 Instead, in the Metaphysica,
Albert follows Avicenna in characterizing the universal “being qua being”
that functions as the subject matter of metaphysics as a type of being
that is more common than, and therefore prior to, the mathematical and
physical being.234 Then he calls it esse simplex or esse simpliciter, adopting

230 On this topic, and on Averroes’s adoption of a more “Avicennian” perspective in
his Long Commentary on the Posterior Analytics (unknown to Albert), see Amos Bertolacci,
“Avicenna and Averroes on the Proof of God’s Existence and the Subject-Matter of Meta­
standpoint on the issue of whether physics or metaphysics proves God’s existence, see
the account by David Tewtten, “Albert the Great on Whether Natural Philosophy Proves
God’s Existence.”
233 See Alb., Ethica, prologus, n. 4, sol., Ed. Colon. 14/1, 3, Ins. 54–80; Alb., Peri herme­
neias 1.1, Borgen. 1, 374a; Alb., Summa de mir. scient. dei 1, 3, 3.1, Ed. Colon. 34/1, 10, Ins.
65–89, quoted above, note 53. Albert’s criticism of quidam Latinorum logice persuasi, in
Alb., Metaph. 1.1.2, Ed. Colon. 16/1, 5, Ins. 34–58, for propounding a similarly pluralistic
consideration of the subject matter of metaphysics sounds as if it is an implicit rejection,
in metaphysics and theoretical philosophy, of the interpretative device that Albert him­
self adopts in ethics, logic, and theology (“sed ego tales logicas convenientias in scientiis
de rebus abhorreo, eo quod ad multos deductum errores,” ibid., 5, Ins. 47–49, emphasis
added).
234 Alb., Metaph. 1.1.1, Ed. Colon. 16/1, 2, Ins. 16–18: “Haec autem speculatio est rerum
altissimarum… quae sunt esse simplicis differentiae et passiones praeter conceptionem
cum continuo et tempore”; ibid., 3, Ins. 1–2: “Esse enim, quod haec scientia considerat, non
accipitur contractum ad hoc vel illud.” For Avicenna’s consideration of the universal “being
qua being” as higher than, and prior to, mathematical and physical being, see Amos Ber­
tolacci, The Reception, 125–126.
the terminology employed by Averroes (huwūyya muṭlaqa) to characterize the “being qua being” in the paraphrase on Metaph. E.1.235 And, finally, he interprets it as a divine and absolutely simple reality, along the lines of the fourth proposition of the Liber de causis.236

On the issue of transcendals, the targets of Averroes’s criticism are Avicenna’s famous distinction of essence and existence and his conception of unity: in particular, Averroes rebukes the status of non-essential features that Avicenna ascribes to existence and unity, and his supposed confusion between transcendental and numerical unity, leading to the idea that unity is a quantitative accident of essence.237 Also in this case Albert seeks an all-encompassing perspective through which both positions can be reconciled. First, he rephrases Averroes’s criticism so as to direct it against the mutual relationship of existence and unity (a point against which Averroes’s criticism is toothless, since Avicenna and Averroes substantially agree with Aristotle on the real identity and conceptual distinction of “being” and “one”), rather than against the distinction of essence, on the one hand, and existence and unity, on the other (the non-Aristotelian aspect of Avicenna’s account).238 Second, he silently reports Avicenna’s doctrine of unity by introducing into it Averroes’s distinction of transcendental unity from numerical unity.239 Finally, he personally proposes a theory according to which existence and unity are joint effects of the essence: in virtue of the peculiar relationship, at once of distinction and connection, which holds between cause and effect, this theory

235 See Averr., Tafsīr E.1, 699, ln. 12; 700, ln. 5; 701, Ins. 3, 5, and 12 (Averr., In libros Metaphysicorum Aristotelis fol. 144F–H), with Alb., Metaph. 1.1.1, Ed. Colon. 16/1, 2, Ins. 17, 39, 68, 8a, and 91. For ens simpliciter and the many senses of divina, including the background in Averroes, see above, notes 14, 21, 38, and 40.


237 See Averr., Tafsīr G.3, 315, Ins. 3–9 (Averr., In libros Metaphysicorum Aristotelis fol. 67G); Tafsīr D.14, 557, 16–9 (omitted in Latin); Tafsīr I.5, 1267, ln. 15–p. 1268, ln. 3 (Averr., In libros Metaphysicorum Aristotelis fol. 253B); Tafsīr I.8, 1279, ln. 12–p. 1280, ln. 11 (Averr., In libros Metaphysicorum Aristotelis fol. 257E–G); Tafsīr I.8, 1282, Ins. 8–12 (Averr., In libros Metaphysicorum Aristotelis fol. 257K).


somehow mediates between Avicenna’s view of the separation of essence and existence (and unity), on the one hand, and Averroes’s endorsement of their identity on the other.240

Finally, on the issue of the animation of heavens, Avicenna’s position of two movers for each heavenly sphere (the celestial imaginative soul as proximate mover, and the celestial Intelligence as remote mover) is opposed by Averroes in favor of the theory of a single mover, that is, the celestial soul having only intellection and being therefore identical to the celestial Intelligence. In this case, Albert is able to extricate a common position only by dismissing part of the doctrine of one of his two sources; thus, he expressly rejects Avicenna’s doctrine that the souls of the celestial spheres have imagination,241 and his distinction of a proximate and a remote mover of the spheres,242 and endorses, at least in the Metaphysica, a revised version of Averroes’s standpoint.243 Despite their divergences on particular aspects of the doctrine at hand—about the faculties that the celestial souls possess, and the identity or otherness of celestial souls and celestial Intelligences—Albert insistently stresses the existence of a common philosophical view shared by Avicenna, Averroes, and virtually all philosophers: Aristotle, Plato, and all their followers, Albert says, assume the existence of celestial souls, however conceived, deputed to move the heavenly spheres.244

240 See, for example, Alb., Metaph. 4.1.4, Ed. Colon. 16/1, 166, Ins. 1–15.
241 Alb., Metaph. 11.3.4, Ed. Colon. 16/2.
242 Alb., Metaph. 11.3.5, Ed. Colon. 16/2.
243 In Albert’s paraphrase of the Liber de causis, the second aspect of the criticism of Avicenna is abandoned (on account of the distinction that the Liber posits between intelligentia and anima nobilis, analogous to Avicenna’s distinction of proximate and remote mover), whereas the first criticism is maintained. On the evolution of Albert’s standpoint on this issue, see Twetten, “Albert the Great, Double Truth, and Celestial Causality.”
244 Alb., Metaph. 11.2.10, Ed. Colon. 16/2, 495, Ins. 4–7, 48–55, 66–69, 76–79, 81–82 (emphasis added): “[O]mnis Peripatetici dixerunt orbes caelorum animas habere, sed quidam dixerunt animas has intellectu et imaginatione et desiderio sive appetitu distinguere. . . . Et haec posito antiqua est multorum et magnorum; et hanc Avicenna sequi videtur; fuit autem haec etiam Platonis, ut videtur in dictis sui. Alii autem de his qui posterioribus fuerunt, dixerunt, quod caelestes quidem circuli habent animas, sed praeter animas sunt intelligentiae separatae operativae, praesidentes eis. . . . Hanc autem opinionem elegit sequi Algazel et quidam alii de sapientibus Arabum. Et hoc quod hic intendimus accipere, est, quod etiam isti consentiant in hoc quod caeli sunt animati. . . . Quidam autem praecipui Peripateticorum media inter hos via inierunt et caelos quidem animas habere dixerunt et intelligentias ab ipsis animabus separatas non posuerunt, sed ipsas animas de virtutibus animae nihil habere dixerunt nisi agentem universali intellectum et desiderium sive appetitum. . . . isti consentiunt in hoc cum aliis, quod caeli habent animas.”
In general, Albert achieves the consensus between Avicenna and Aver­roes in a subtle way, by means of an interpretation capable of showing that their positions, prima facie mutually incongruent, either do in fact coincide, or represent complementary aspects of the discussed issues, or share the same fundamental elements. This strategy—openly avowed in other Aristotelian paraphrases—245—is tacitly pursued in the Metaphysica. Thus, Albert’s dependence on Avicenna and Averroès, together with the antagonism between these authors on many key metaphysical issues, entails a considerable amount of philosophical depth and doctrinal elaboration in Albert’s paraphrase. Far from preventing originality, or being the product of a naive syncretism,246 his endorsement of Arabic metaphysics implies a remarkable degree of creativeness and innovation.

Given this preliminary examination of Albert’s conception of metaphys­ics and its relationship with theology, as well as his use of the Platonic and Arabic sources available to him, let us now turn to the content of Albert’s metaphysics properly speaking. Each of the following sections examines a central element of Albert’s metaphysical thought: his understanding of the transcendentals in general, universals, being and essence, substance, and causality and the first causes.

6. Albert’s Doctrine on the Transcendentals

Jan A. Aertsen

A. Introduction: Transcendentals and Categories

The medieval doctrine of the transcendentals presupposes a recognition of the limits of the order of the categories. In his logical paraphrases, Albert the Great more than once discusses the scope of Aristotle’s teach­ing of the ten predicaments or most general genera. In his paraphrase of the Categories, he argues that all predicables must be reduced to or resolved into these highest genera. But he observes that this reduction

245 See, for example, De causis propr. elem. 1.2.13, Ed. Colon. 5/2, 86, Ins. 53–54: “It seems to me that one should agree in some respect with both [Avicenna and Averroès]”; De anima 2.3.7, Ed. Colon. 7/1, 109, Ins. 46–47.

only applies to universals predicated of subjects, and he next shows the limits of the categorical order in two respects. First, there is something that is not in any of the genera, but is before them (*ante haec*), namely God, who surpasses all things (*excedens omnia*) and who is *causa prima*, the cause of all.\(^{247}\) Moreover, some things are not reducible to one determinate genus, but are in all of them, like *ens, unum, res*, and *aliquid*. They are not called “genera”, but *transcendentia*, as Albert elsewhere states,\(^{248}\) since they transcend the genera given their commonness\(^{249}\) (they are not *universalia*, but *communia*). They are not genera but principles predicated of the genera according to prior and posterior (*per prius et posterius*), that is, according to analogy.

Both God and the transcendentals exceed the boundaries of the categorical order, although in different ways: God, because he is not in any genus; the transcendentals, because they are common to the categories. The implication of Albert’s account is that God is not included in the notion of “transcendental”; he is rather “transcendent”, *excedens omnia*. He interprets the relation of what is transcendent to the transcendentals as a causal relation: God extends to everything by his causality.

In his *Super Porphyrium De quinque universalibus*, Albert raises an objection against the idea that substance is a *genus generalissimum*: a most general genus is not related to something higher; yet there is something higher than and prior to substance, namely “being” (*ens*), for every substance is a being, but not every being is a substance. What applies to “being” similarly holds for every determination that transcends the genera (*genera transit*), such as *res, unum*, and *aliquid*.\(^{250}\) In his reply, Albert explains that neither “being” nor any other transcendental term is predicated of substance through a *praedicatio generis*, because it is not predicated according to one meaning (*ratio*), that is, in a univocal way; it is rather said “according to prior and posterior” (*per prius et posterius*). In support of this view, Albert cites Avicenna, al-Fārābī, al-Ġhazālī, and *omnes Arabes*\(^{251}\).

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247 Alb., *De praedic. 1.7*, Borgen. 1, 164a.
249 Alb., *De praedic. 1.7*, Borgen. 1, 164a.
250 Alb., *De V univ. 4.3*, Ed. Colon. 1/1a, 64, Ins. 32–37. Albert traces these three transcendentals back to Avicenna. See Alb., *Peri hermeneias 1.2*, Borgen. 1, 395b.
251 Alb., *De V univ. 4.3*, Ed. Colon. 1/1a, 64, Ins. 39–45.
B. Commentary on the Sentences: The “Philosopher” versus the “Sancti”

Albert was conscious of the fact that different traditions of thought influenced the genesis of the doctrine on transcendentals. A remarkable text in his Commentary on the Sentences (completed 1246–49), which presents an analysis of the order between the transcendentals ens, unum, verum, and bonum, is an interesting witness on this point.252

The text begins with a reference to the view of the philosophus that “‘being’ and ‘one’ are before everything”. This statement refers to Aristotle’s exposition of the convertibility of being and one in Book 4 of the Metaphysics, which is the main historical source for the doctrine of the transcendentals. It is striking, however, that Albert immediately emphasizes the limitations of the Aristotelian view by claiming that “the philosopher does not hold that ‘true’ and ‘good’ are dispositions concomitant (generaliter concomitantes) with every being”.253

Albert also indicates the reason why Aristotle does not arrive upon the transcendentality of truth and goodness: “[T]he Philosopher does not consider being insofar as it flows from the first, one, wise and good being” (ibid.). He rather considers being “insofar as the intellect terminates in it by resolving (resolvens) the posterior into the prior and the composed into the simple”. Aristotle did not make a determination regarding the true and the good in this way (in relation to the First Cause), continues Albert, but considered the good insofar as it is the end of motion. In short, the Philosopher did not see the good as a general disposition of being, but as something belonging to the domain of physics.

On Albert’s reading, typical of Aristotle’s approach is his use of the method of resolutio, the reduction of things by the intellect to a first concept, an analysis that comes to an end in “being”. Albert ascribes to “the Philosopher” a view that is, in fact, proper to Avicenna: the doctrine of the primary notions of the intellect. The phrase “dispositions concomitant with every being” also points in that direction. The Arab philosopher, in his Metaphysics (1.5), lists “being” and “thing” among the “firsts”; not, however, “true” and “good”. Albert’s account reflects this fact.

Over against the Philosopher, Albert locates the sancti, who considered being insofar as it has “flowed” (fluit) from the first, true, and good being. The “saints” held that “being”, “one”, “true”, and “good” are the first determinations (prima) and are in every thing. It is to their view, which leads to a “theological” foundation of the transcendentals, that Albert subscribes in his Sentences.254

How is the opposition of philosophi, the non-Christian thinkers, and the sancti, which is often found in Albert’s works, to be understood in the present case? Marie-Dominique Chenu interpreted Albert’s account of the transcendentals as an example of the notion of “Christian philosophy” that was introduced by Étienne Gilson as the characteristic of medieval thought. Under the influence of the idea of creation, Christian thinkers transformed the deep structure of metaphysics.255 But this interpretation cannot be accepted without qualifications.

It is not the idea of transcendentality as such that is denied by “the Philosopher”, but the transcendental character of the true and the good. Yet in a later work, Albert acknowledges that Aristotle was one of the few who hold the transcendentality of the good. He observes that, with the exception of Aristotle (in the first book of the Ethics, in which he criticizes Plato’s Idea of the Good), the philosophi rarely speak about the good that “runs through all genera” (circuit omnia genera).256 What we may conclude from Albert’s opposition of the philosophus and the sancti in the Commentary on the Sentences is that it shows his awareness that different traditions of thought influenced the development of the doctrine of the transcendentals: an Aristotelian-Avicennian reduction to primary concepts and a Christian-Neoplatonic reduction to the first cause. Who counts among the sancti? In his early work, De bono, Albert lists Augustine, Bernard of Clairvaux, and (Pseudo-)Dionysius the Areopagite.257 It seems plausible that, when speaking of the opposition between the philosophus and the sancti, he particularly has Dionysius in mind.

256 Alb., Super Dion. de div. nom. 4.6 ad 2, Ed. Colon., 37/1, 116, Ins. 72–73; see also 4.3 ad 2, 114, Ins. 75–78, where he contrasts this with the good “in a genus”, such as an end of physical motion.
257 Alb., De bono 1.2.40, Ed. Colon. 28, 22; ibid., 2.45, 25.
C. The Dionysian Tradition and the Doctrine of the Transcendentals

Albert commented on the complete *corpus Dionysiacaum* (ca. 1248–50). Several aspects of his paraphrase of *De divinis nominibus* are instructive for the further development of the doctrine of the transcendentals. His most extensive treatment of the doctrine is to be found in this work.

1. The Primacy of the Good

One of Albert’s main concerns in his question-commentary is the Dionysian order of the divine names. According to the Areopagite, “good” is the primary name, prior even to “being”, since goodness is the real source of God’s productive power. For that reason he first deals with “the good” (c. 4), and then with “being” (c. 5). In several chapters of his paraphrase, Albert questions this order; his objections are based on the order of the transcendental names, in which, rather than “good”, “being” is first. Albert’s *dubium* reads: Is it correct that “being” is discussed after the “good”?258

The doubt does not seem unreasonable, for one must deal with first things first. But “being” is the first conception of the intellect, and it is also ontologically prior to the good, for according to the fourth proposition from the *Liber de causis*, “the first of created things is being (esse)”. Albert also refers to another proposition of the *De causis*, which claims that being alone is through creation (creatio), while the good and all other determinations come to be “by being informed” (per informationem), that is, through an addition to being.259 The good, therefore, presupposes being.

Albert attempts to justify Dionysius’s position of the primacy of the good by introducing a third moment into the relation between the transcendentals “being” and “the good”. There exists between them (1) a real identity, and (2) a conceptual difference in the sense that the good adds something in concept to “being”, the latter of which is, thus, prior to “the good”. Albert’s innovation consists in a further differentiation (3) that is related to causality. When the good and being are considered in the cause in act, the good is prior, because goodness is the immediate reason of the action of the first cause.260

258 For this *dubium*, see Alb., *Super Dion. de div. nom.* 3.2, Ed. Colon. 37/1, 101; ibid., 4.2, 113; 5.2, 303; 13.28, 448–449.

259 In addition to Section 12A below, see Alb., *Super Dion. de div. nom.* 4.4, Ed. Colon. 37/1, 115, Ins. 29–34. See also ibid., 3.2, 101, Ins. 39–41; 5.20, 314 (translated below, note 578), and *Liber de causis* 17 (18), ed. Richard C. Taylor, in Alb., *De causis et proc. univer.*., Ed. Colon. 17/2, 151.

Albert advances two general considerations for the firstness of the good. One is Dionysius’s view that the causality of the good is more universal than that of being. The causality of the good extends to being as well as to non-being, and that of being only to that which is. By the good, that which does not exist is called into being. Albert points to an etymology that he ascribes to the Commentator (in this case, on De divinis nominibus: Maximus Confessor), according to which bonum is derived from the Greek verb boo, boas, that is, “I call”. God is aptly named “good” because he calls everything into being from nothing. The other consideration for the primacy of the good is based on the Aristotelian doctrine of the causes. “The good” signifies the end, and the end is the cause of causes because it is the cause of the causality of the efficient, formal, and material causes. Therefore “the good” is prior to “being”. This causal perspective, for Albert, determines Dionysius’s order of the divine names. From this viewpoint, “good” is the primary name, and, hence, the Areopagite first deals with the good. His intention is to explain the names attributed to God on the basis of what proceeds from him. In this way, Albert in effect connects the Platonic/Dionysian tradition with the doctrine of the transcendentals.

2. Albert’s Account of the Transcendentals
In his paraphrase, Albert twice offers a systematization of the transcendentals. The first is in Chapter 4, in the context of the question, “How is ‘good’ related to ‘being’?” The second account is in the fifth chapter, where he discusses the question whether “being” (ens or esse) is “the first” (primum) among all things. He advances several arguments suggesting that this is not the case: “one”, “true”, and “good” are not posterior to “being”, but convertible with it.

In his reply, Albert first establishes that “being” is prior to all other things according to nature and to reason. It is the first conception of the intellect and “that in which the analyzing intellect (intellectus resolvens) comes to a stand”, when it resolves a thing to its most universal predicate.

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263 Alb., Super Dion. de div. nom. 3.2, Ed. Colon, 102, Ins. 26–30. See also ibid., 4.3, 114.
Furthermore, “being” alone is produced by creation and does not presuppose something else. But how are the other transcendentals related to “being”? Albert seeks an answer by distinguishing three possible types of convertibility: the first (a) is according to the supposit (suppositum), the nature (naturam), and the mode (modum). This type of convertibility obtains for synonyms—Albert gives the example of *mucro* and *ensis*, two Latin terms for “sword”. It is tacitly assumed that this type of convertibility cannot be applied to transcendentals, since transcendental terms are marked by difference as well as by identity. The second type of convertibility (b) is according to the supposit, but not according to the nature. This type obtains for the convertibility of “being” with “true” and “good”. “Good” and “true” are predicated of everything of which “being” is predicated, and conversely. But they add a positive mode to “being”, namely, a relation; for, “being” is called “created” only in relation to the uncreated being of which it is a likeness. “True” adds to it a relation to an idea, insofar as it is the principle of knowing; “good” adds a relation to an end. Thus, they add a nature to “being”, and are thus posterior to, and not convertible with, “being” according to their natures. The third type (c) is according to the supposit and to the nature, but not according to the mode. This type obtains for the convertibility of “being” with “one”. “One” adds to “being” the notion of “indivision”. What is added is not a nature, but a mode that consists in a negation. The order of “being” to “one” is based on the twofold act of the form. In the first act, the form gives being (*dat esse*), whereby it brings it about that something is a “being” (*ens*). In the second act, the form determines (*terminat*) the potentiality of matter, whereby it brings it about that something is undivided, that is, “one”. “Being”, then, is prior to “one” because the bestowal of being is the principal act of the form and precedes the determining function. This account of the twofold act of the form as the ontological foundation for the relationship between “being” and “one” is an original feature of Albert’s doctrine.

A noteworthy aspect of this account is the imbalance between the foundations of the convertibility of “being” with “one”, on the one hand, and that of “being” with “true” and “good”, on the other. The former is ontological, based on the dual act of the form, while the latter is theological, based on the creative causality of the first being. Albert’s systematization

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266 Alb., *Super Dion. de div. nom.* 5.20 ad 1, Ed. Colon. 37/1, 314, Ins. 17–29.
shows a central problem of the medieval doctrine, namely, that of the addition to “being”: how is such an addition possible? He argues that the “true” and “good” add a “nature”: but he does not make clear how such a real addition to “being” is compatible with the transcendental commonness of the “true” and the “good”.

D. Aristotle’s Metaphysics and the Transcendentals

Albert’s *Metaphysica* (ca. 1264) reveals how important a role the transcendentals play in his understanding of First Philosophy. In the first treatise of this paraphrase, he introduces a “digression” in order to explain what “the proper subject” (*primum subiectum*) of this science is. A preliminary account, he observes, is necessary because of the diversity of opinions among the philosophers.268 Albert lists three different positions on this issue. Some philosophers claimed that the first causes are the proper subject of metaphysics, because science is the knowledge of the causes, and First Philosophy traces reality back to first or ultimate causes. Others held that God and divine things (*deus et divina*) are the subject. Both groups of philosophers agreed that “being” (*ens*) is not a suitable candidate.269

In the manner of a disputation, Albert advances arguments for and against the three views, and concludes that only being as being (*ens inquantum ens*) can be the subject. He provides an interesting reason for the ontological conception of metaphysics. This science is called “first” philosophy, since it deals with something that is first. The question is, thus, why and in what sense “being” is the first and not, as one would expect, God or the first causes. Albert’s argument for the primacy of being is ontological: *ens* is the first foundation (*primum fundamentum*) of all things and is itself not founded on something prior.270

In his reply to the objection that “being” cannot be the subject of metaphysics because a science of being would make the other sciences superfluous, Albert emphasizes that when the *prima* and *transcendentia* are known, it does not follow for that reason that a particular science is also known.271 The phrase he is using here summarizes the outcome of his disputation in a striking way. Metaphysical knowledge is concerned with the “firsts” and “transcendentals”. This specification of the “firsts” furnishes a

clear insight into Albert’s understanding of First Philosophy. He was the first to connect the doctrine of the transcendentals with the ontological interpretation of Aristotle’s *Metaphysics*. His paraphrase illustrates the medieval transformation of the conception of metaphysics: as the science of being, it acquires a transcendental character.

7. ALBERT AND THE *TRIPLEX UNIVERSALE*

*Timothy Noone*

Albert treats the problem of universals extensively in at least four different texts: *Physica* 1, tr. 1, c. 6; *Super Porphyrium de quinque universalibus*, tr. 1, c. 3.; *De intellectu et intelligibili* 1, tr. 2, c. 1–2; and his *Metaphysica* 5, tr. 6, c. 5–7. The texts listed are given in their probable chronological order and dated approximately 1250, 1254, 1258, and 1265 respectively. Though in all of the texts we find a core conception that remains the same, there are significant differences in the manner of presentation and in points of emphasis and detail. While, methodologically speaking, the treatment of universals that is *ex professo* metaphysical and proper to a full account of universals is the last, detailed treatments of particular issues are found uniquely in some of the other texts. Hence, the procedure followed here will be to present, to the extent possible, a synthetic picture of the doctrine, drawing upon whichever texts help to fill in necessary details or provide essential clarifications. No attempt will be made to analyze the changes in emphasis and approach in detail, though a more particular study of this sort would be worthwhile to gauge the extent to which, if at all, Albert’s treatment of universals underwent development and, if so, why.272

An important part of the background to all medieval realists’ discussions of universals is to be found in the texts of Avicenna that were often

read along with Aristotelian texts in medieval university and school curricula. Typical of the kind of texts that inspired and provoked further discussion and refinements are the following, taken, in the first two cases, from Avicenna’s *Logica* and, in the final case, from his *Liber de philosophia prima*:

**Text 1:** The essences of things, moreover, are either in the things themselves or in the intellect. That is why they have three aspects: one aspect of the essence is that according to which it is not related to some third entity or to something that follows upon it inasmuch as it is such; a second aspect is what it has in these singulars [around us]; and a third aspect is what it has inasmuch as it is in the intellect.273

**Text 2:** [A]nimal in itself is a certain thing and is the same whether it is an object of sense or understood in the soul. In itself, however, it is neither universal nor singular. For if it were in itself universal in such a way that animality as such (*ex hoc quod est animalitas*) is universal, then it would necessarily be the case that no animal is singular, but rather every animal would be universal. If, however, animal as such were singular, it would be impossible for there to be more than one, singular animal, namely, the very one to which animality belonged as such, and it would be impossible for any other singular item to be animal. Animal in itself, moreover, is a certain object understood in the mind…and, in accord with this, what is understood to be animal is animal only. If, however, in addition to this, animal is understood to be universal or singular or something else, now something else over and above animal is understood which befalls animality.274

**Text 3:** But animal as common and animal as individual, and animal as potentially common or proper, and animal as in these sensible things or understood in the soul—each is animal and something else, which merely considered in itself is not animal. It is obvious, moreover, that when there is animal and something else that is not animal, animal is then a part, as it were, in this [whole], and similarly in the case of man. Animal, however, can be considered per se, although it exists with something else besides itself, for its essence exists with something else besides itself. Therefore, its essence belongs to it [alone] per se, but being together with something else is itself something that befalls the essence, or something that accompanies its nature, just as [we find in] *this* animality or *this* humanity. Accordingly, this consideration is prior in being both to the animal that is individual on account of its accidents and to the universal that is in these sensible things and is intelligible, just as the simple is prior to the composite and the part is prior to the whole. Out of this being (*esse*) is neither genus nor species nor

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individual nor one nor many, but [rather] out of this being (esse) is animal alone and man alone.275

The first text lets us know that the nature is somehow not identical to the concrete things embodying the nature or to the thought that thinks of the nature or the things having that nature in the world. This text speaks of three aspects (respectus) but the final text’s terminology of consideration (consideratio) will be the more popular in later medieval Latin philosophy; still the three ways the nature may be taken is a recurrent theme. The second text, however, is more important than the first, for it presents the argument for so seemingly complicated a view of individual things and their natures. The problem lies in the nature’s possessing incompatible properties as it is found or instantiated in the concrete things outside of thought versus as inside of thought—although it is combined with the same eidetic content in both cases. If, to take Avicenna’s own example, we allow that the whole of the animalic nature is just a given animal, then anything else in the world putatively animal would actually have to be non-animal, since it is not identical to the individual animal with which we began. Alternatively, if we try to argue that animal is simply and solely a thought-content, and given that everything in the mind is universal, then no individual animals would or could exist, contrary to the facts. So it looks as if our ontology must distinguish between the nature as such and both the occurrence of the nature of the world and the occurrence of the nature in thought. Hence there are three different ways in which universals exist. This is what the third text articulates with its argument about the nature having a “being” that is not identical to the things or the thoughts that “befall” or accrue to it.276

We should not be surprised or find it unusual, then, that Albert, as so many of those in the tradition of Scholastic “realism”, distinguishes three considerations or ways in which a universal is found. What makes Albert’s treatment terminologically distinctive is that he usually mentions the threefold consideration of the universal in connection with another set of

terms coming from what he deems to be the Platonic tradition: the universal prior to the thing in the world (universale ante rem); the universal as found in the thing in the world (universale in re); and the universal following upon the thing in the world (universale post rem). To these, Albert adds a fourth in his *Metaphysica* because of a difficulty or complexity that we shall consider shortly, and this is the universal in its very universality (universale in ratione universalitatis).

In the *Metaphysica*, Albert neatly subdivides the universal *ante rem* into two types. There is the universal that is in the mind of the primary intelligence, or God (sometimes also called the Primary Agent Intellect) and is what flows or cascades down through the other Intelligences to the sensible universe. Though the universal precisely as found in the first Intelligence is its Form and Life, it has, Albert tells us, a “special being, the being of an intellectual cause in the way that the light (*lumen*) of its intellect is the Form of the things that flow out of it through ItsSelf as universally acting Intellect, causing the existences of things”. This, as we shall see, is the starting place and origin of all universals and universality, for the very good reason that it is the origin of all intelligibility and, in the Albertan scheme of epistemology and psychology, intelligibility, and universality are concomitant. But there is also another sense of the universal *ante rem*, the universal as prior, not in time, but by nature and formula to the individual and, as considered in itself, apart from any reference to the individuals in which it occurs concretely. The universal in this sense is


279 In a chapter entitled “Quod nihil intelligitur nisi universale,” in Alb., *De intell. et intellig.* 1.2.1, Borgn. 9, 491a, Albert writes: “Nobis autem consentiendum videtur primam sententiam, quod vide licet solum intelligibile sit universale et nullum particulare omnino, quia sic tradit concorditer tota secta Peripatetico rum….”.

280 Alb., *Metaph.* 5.6.5, Ed. Colon. 16/i, 285, Ins. 78–86: “In another way, they [i.e. the Stoics and the Peripatetics] speak of the universal as prior to a thing [in reality] (*ante rem*), not in time, but in substance and in notion (*ratione*), and this is the form taken as a formal cause [and] as constituting the being (*esse*) of the thing. For, the act and proper effect of such form is being in every ‘that which is’. Since, however, this [universal] is indifferent
the formal cause that constitutes the being of the thing. But because, con-
sidered in itself, it is undivided and is indifferent in relation to the many
instances, actual or potential, in which it could occur, this form is rightly
called a universal as having a certain character of universality.

Clearly, the second of the senses of *universale ante rem* is closer than
the first to the received meaning of Avicenna, who does not appeal to the
divine emanation (or even a separate agent intellect) in connection with
explaining the ontological status of universals. But, in Albert’s doctrine,
matters are going to be more complicated than in that of Avicenna, as we
shall see when we get to the final sense of “universal” in the text of the
*Metaphysica*.

The universal *in re* is the universal as instantiated in the particular items
in the world and considered as such. Its status as universal does not by
any means require actually many instances, but only one. In fact, for this
second sense of universality, the instances can be merely potential, as in
the potentiality of matter or of a subject to receive a given form. What
makes a universal *in re* such is that it is capable of being communicated
to any number of others through the form that is, actually or potentially,
in any given instance. The *universale post rem*, by contrast, is the concept
or the nature as received into the intellect, a reception that is the result of
a process of experience, memory, and abstraction (lns. 93–96).

To these three types of universals, Albert adds a fourth, for the first time
in our four texts on universals, though elements of what he introduces
here are seen elsewhere. What he wants to do is to make a distinction
between what the universal is in terms of its content (the second of the
senses *ante rem*) versus its universality or communicability and common-
ness in relation to actual or potential supposita. In itself, he explains, *that
which is* universal (*id quod est ipsum universale*) is neither (numerically)
one nor many, but rather it is just this content. But its universality, the
fourth sense—which is more properly called its “university”—stems from
its relation (*respectus*) to whatever receives it as a supposit, to which it
is related as though “unifying” it or them: it is related to one or many as
though it were “one verse” in the being of all. Albert thinks this universal-
ity or ability to be reproduced in many (*propagabilis in multa*) is what is

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282 Alb., *Metaph.* 5.6.5, Ed. Colon, 16/1, 286, lns. 18–21.
quite distinctive about a form or nature so understood, and this is neither identical to the second sense of universal *ante rem*, where it is just considered in itself as indivisible, nor identical to the *universale in re*, where it is received in an actual or potential thing and is subject to the conditions of the individual.

Now, before beginning to consider interesting objections that Albert raises against his own theory, it is essential to realize that for him the process of passing from the universal *ante rem*, to the universal *in re*, to the universal *post rem* is a kind of return to the first state of *ante rem*. Why? Because the human agent intellect, through its abstraction, restores the form to its priority and separation from matter, a condition that is the analogue to its highest realization in the Divine Intelligence. This is a clearer and more straightforward teaching for Albert than it would be for, say, Aquinas or Scotus, neither of whom would so identify the nature of a sensible thing with its substantial form. For his part, Albert insists that the total being of the nature of the physical thing is its form:

Nor should it be thought unfitting that the form is called the total being of a thing (*totum esse rei*). For, matter is no part of the being of a thing (*nihil est de esse rei*) and is not the aim of nature; indeed, were it possible for form to be in operation without it, [form] would never be brought into matter. But because this is not possible, matter is required, not for the being [of a thing], but for the determination of its being (*ad...esse ipsius determinationem*). Considered in this last way [i.e. as the total being of a thing], therefore, the form is predicated of the thing of which it is the form, and in this way, as separated by the intellect, it is universal in the intellect. And therefore the aptitude of its communicability (*aptitudo suae communicabilitatis*) is brought into act in the intellect that separates it [i.e. the universal] from the [things that] individuate [it].

Problems with, and ambiguities within, Albert’s theory are fairly evident. To take just one of the ambiguities, Albert sometimes speaks as if the communicability in which the universality of a nature is realized is found in its form realized in multiple instances outside the soul. But, at other times, as we see in the text quoted immediately above, he seems to think

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283 Alb., *De intell. et intellig.* 1.2.2, Borgn. 9, 493b. See Albert’s earlier discussion of the single instance substances such as the sun and the moon, ibid., 493ab: “formae enim substantiales talium communicabiles sunt et quod non communicantur actu, contingit /b/ ex hoc quod tota materia cui illa forma communicabilis est, jam continetur sub forma...”.

284 See, e.g. in addition to the text presented in note 281 above, a passage prior to the one just quoted: “Per hanc igitur aptitudinem [communicabilitatis] universale est in re extra, sed secundum actum existendi in multis non est nisi in intellectu” (Alb., *De intell.*
that the universality in the sense of a communicability of a nature gets fully actualized in the activities of abstraction and predication that occur only within the intellect.

Albert himself raises objections against his own theory and some of these anticipate later discussions both within and without the realist tradition of medieval philosophy. One objection comes from a neo-Aristotelian approach: one might say that, since the aptitude for communicability is only actualized in the mind, the only place that the universal exists is in the intellect, just as the Peripatetics hold.\textsuperscript{285} Albert’s answer is a curious anticipation of something which Scotus, too, would later hold, namely, that the reality of the nature has its own being and unity, one compatible with—though not determined to—numerical unity. He tells us that a universal has the reality of a cause as an essence and that it is one essence but not numerically one; rather, it is one in a way that allows for numerical multitude:

\begin{quote}
And [the universal] has the being (esse) of a cause and of an essence, as we have said, although it has being only in a particular nature. And, in this way it is one essence, not, certainly, by oneness in number . . . but by oneness of being and of the essence in itself and of form. This oneness of a multitude is not incompatible with communicability with respect to aptitude. And, in this way it is called one in many and of many.\textsuperscript{286}
\end{quote}

In the paraphrase \textit{Super Porphyrium de quinque universalibus}, Albert faces a row of three objections that will become classic in 14th-century discussions of realism and conceptualism: (1) every thing that is, is because it is numerically one, and, hence, no universal can be since it cannot be something numerically one; (2) anything outside the soul is independent in its being, and, thus, an individual substance (hoc aliquid), but no universal, is such; and (3) everything in an individual is itself individual, but no universal can be individual, and, hence, no universal can occur within extra-mental reality. To (1) Albert replies that the principle “everything that is, is because it is numerically one” requires careful interpretation. If it refers to the things that are complete wholes in nature and complete individuals, it is true in this sense, but then it does not rule out universals that

\begin{itemize}
\item \textit{et intellig.} 1.2.2, Borgn. 9, 493b). But note that “universale” and “communicabile” are analogous terms, in Albert.
\item \textsuperscript{285} Alb., \textit{De intell. et intellig.} 1.2.3, Borgn. 9, 494a.
\item \textsuperscript{286} Alb., \textit{De intell. et intellig.} 1.2.3, Borgn. 9, 494a.
\end{itemize}
function as principles of things and not as complete wholes constituted concretely in nature. In replying to (2), Albert advances a distinction between having being in its own right and being a concrete substance; a nature has being in its own right but does not exist as concrete substance (Ins. 25–34). Against (3), Albert argues once again in a way that will be repeated through the centuries: not everything in the individual is itself individual if it is the principle of an individual. As a principle, it is a “sortal feature”, a quale quid, and not a concrete subject, a hoc aliquid (Ins. 45–51).

In general, we can say that Albert’s discussion of the problem was both influential, as de Libera has pointed out, and systematically an advance towards the debates to come. Scotus certainly must have been acquainted with elements of Albert’s discussion, especially when one considers that Albert’s paraphrase of Porphyry is regularly used by Scotus in his own Quaestiones super librum Porphyrii. So, too, by Albert’s emphasizing, especially in the De intellectu et intelligibili, the conceptualist approach as current among Aristotelian thinkers, Albert probably provided much material for those who would advance theories in a conceptualist direction. Albert’s own views, however, remain firmly realist. For him, the indifference of the universal to its instances and especially its aptitude for recurrence are the grounds for the univocity of predication, the solution to logical puzzles such as “man is an animal” when no man exists, and ultimately the basis for science. Science, too, finds its ultimate source of justification insofar as it is perpetual and eternal in the aptitude of the form and the essence:

From these points, we should understand that, even though upon the destruction of primary substances naught else would remain, science is nevertheless of things that are perpetual and is itself perpetual and incorruptible inasmuch as it is grounded on nothing other than the aptitude of communicability in form and essence, and on the properties and differentiae [of form and essence]. This is perpetual and incorruptible, whether or not particulars exist.

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288 De Libera, La querelle des universaux, 245–257.
289 Alb., De intell. et intellig. 1.2.3, Borgn. 9. 494b.
290 Alb., De intell. et intellig. 1.2.3, Borgn. 9. 495a.
Albert assigns different meanings to esse throughout his writings, a fact that should not trouble a metaphysician who accepts the Aristotelian maxim that "being is said in many senses". As a result, we find the relation between esse and what receives it interpreted in a variety of ways. Albert develops the distinctions in his doctrine on esse over time, although a fundamental continuity in his teaching can be discovered. For the most part, Albert follows Boethius and understands esse as nature or form, not merely in the abstract, but in existing things, particularly when opposed to quod est understood as suppositum or individual substance. Indeed, as for Aristotle (to einai), esse in Albert can simply refer to the essence or what a definition signifies. At other times, Albert takes esse to signify existence. In this sense, esse is often used in contrast to essence to indicate whatever it is in existing things that makes them exist: what makes true the fact that a concrete substance exists. Under the influence of Avicenna, Albert reaches an understanding of esse in the sense of existence as an "accident" in created substances. He also offers, as we shall see, an interpretation of the pair quod est and esse in terms of supposit and existence (rather than as "supposit and essence", his default understanding).

In light of this last development, it is tempting to understand Albert’s many references throughout his works to esse as act to mean the act of existing. Already in his early works, esse designates for Albert the act of the essence (actus essentiae). However, Albert links esse as actus essentiae in the first place to essence (as the term indicates): esse signifies the actual presence of essence in substances in the world. Here the relation between

\[\text{References}\]


292 Roland-Gosselin, *Le 'De Ente et Essentia' de S. Thomas d'Aquin*, 174; Georg Wieland, *Untersuchungen zum Seinsbegriff im Metaphysikkomentar Alberts des Grossen*, (Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters NF) 7 (Münster: 1972), 80; see also ibid., 103.


294 Again, see esp. Ducharme, "Esse chez saint Albert le Grand," 212–216.

esse and essentia is compared to that of lucere and lux. In this sense, esse comes to be understood after 1250 as the effect of the essence within its concrete subject. Although the notion of esse as actus essentiae implies a distinction between essentia and esse, this is neither a real distinction, nor in itself the doctrine of actus essendi as act, as we shall see.

It is also the case that esse in the sense of existence is interpreted by Albert as act, specifically the act of the essence by which a substance exists. The development in the later works of esse as actus essendi as distinct from esse as actus essentiae has not been as well appreciated by scholars. Although the language is similar, we must resist the temptation of identifying Albert’s twofold sense of esse as act with Aquinas’s actus essentiae or essendi. Albert develops his own distinctive doctrine of esse, quite different from that of his student. Without doubt Albert reaches an interpretation of the pair quod est and esse in terms of supposit and existence, which are really distinct from each other. Accordingly, some scholars have discovered in Albert a real distinction between essentia and esse as its act of existing, or have proposed that Aquinas learns this distinction from him. The textual evidence indicates, however, that this distinction in Albert is purely conceptual. With it, he merely introduces his reader to a different sense of esse within the context of the fundamentally Boethian distinction between suppositum and esse or nature. For Albert, the key player in the doctrine of being remains esse as essence. It is true that to be is to be actually, but to be is also, and as a result, at least in creatures, to be something.


The following three subsections consider in detail the following senses of esse found in Albert: (A) esse as form or essence; (B) esse as existence; and (C) esse as act. A fourth and final subsection (D) summarizes the relation between essence and esse in Albert.

A. Esse as Form or Essence

In his early writings, Albert appeals to the distinction between quod est and esse (or quo est) in order to explain the composition of spiritual substances devoid of matter, particularly that of angels and of the human soul. Spiritual substances are not composed of matter and form, insists Albert, yet neither are they simple. Instead, Albert falls back upon a composition common to all creatures: between quod est and esse, which, inspired by Boethius, he interprets as suppositum and nature. Here is how Albert puts the matter in his earliest serious philosophical work:

\[\text{quod est} \text{ is the form of the whole, but quod est names the whole itself of which [the former] is a part. And, this composition exists in things that are incorruptible and ingenerable, in which the form of the whole does not differ from the form of matter, since [such a thing] has no matter. And [the indistinction of quod est from matter] is especially true in spiritual substances, in which no composition is admissible except between supposit and the nature of that which is the supposit.}\]

Under this reading of Boethius, then, quod est refers to the individual concrete subject, while esse or quo est is equivalent to the forma totius of material substances. In material substances, which are composed of matter and form, Albert distinguishes between the form that determines matter and that is a part of the composite (forma partis), and the “form” of the composite as a whole (forma totius), which is predicated of the composite. Thus, for a human being, the human soul is the forma partis and the form “human” (homo) is the forma totius. Notice that, as Albert sometimes explains, the forma totius is not properly an abstract

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According to Manser, Albert became aware of the real distinction relatively early (before 1246), thus supporting Mandonnet's thesis.

299 On the composition of angels, see Alb., De IV coaeq. 4.20.1, Borgn. 34, 459a. On the composition of the human soul, see Alb., Super I Sent. d. 8, a. 25, Borgn. 25. 257b.

300 Alb., De IV coaeq. 1.2.5, Borgn. 34, 334a. See Boethius, De sancta trinitate 2, 167, In. 50–p. 170, ln. 101, in boethius, De consolatione philosophiae, Opuscula theologica.

301 See also Alb., De IV coaeq. 4.21.1, p. 463b; Super I Sent. d. 2, a. 20; and d. 23, a. 4.

302 Alb., De IV coaeq. 4.20.1, Borgn. 34, p. 460b; and 1.2.5, 334a; Metaph. 7.1.1, Ed. Colon. 16/2, 316, ln. 37. See also Alb., Super III Sent. d. 2, a. 5.
form, such as “humanity”; but a form that is predicatable of the concrete subject as a whole, and in virtue of which that subject is placed under a genus or species. The primary composition of material substances as such is that between matter and form; a distinction can also be made, however, between the individual subject and its nature, that is, between quod est and esse. In this context, esse is identified with the forma totius of the individual concrete subject.

In his early writings Albert is quite dependent on Boethius as interpreted by his 13th-century predecessors; but after 1246, Albert’s doctrine on esse begins to take on a new shape under the influence of Avicenna. In his Super Sententiarum (1246–49), Albert introduces, on the one hand, the idea of possibility into his discussion of the composition of spiritual substances. Albert characterizes the quod est or suppositum in spiritual substances as what is possible (possibile), under divine causality, as opposed to what is in potency (potentia). Under this reading, quod est is understood as a possible concrete subject and as what accounts for the limitation and determination of a form or nature—which latter, considered in itself, is common—in spiritual substances that are devoid of matter. In this sense, Albert attributes the Boethian distinction of quod est and esse to Avicenna as well.

On the other hand, whereas quod est is associated with possibility, esse or essence is associated with act. As we shall see, the distinction between essence and its act, which Albert can refer to simply as esse, is not meant as a substitute for that of suppositum and nature; on the contrary, it is a

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303 Alb., De V univ. 2.8, Ed. Colon. 1/1a, 37, Ins. 51–55.
304 Alb., De IV coaeq. 4.21.1, Borgen. 34, 464a; De V univ. 2.8, Ed. Colon. 1/1a, 37, Ins. 65–67.
305 Albert can also substitute “potentia” for “possibilitas”; “potency” in this sense refers, not to something literally preexisting in some way, but to the relation of “that which is” to the cause that constitutes it in being: “Id autem quod est’ permixtum est potentiae et privazioni secundum illud ‘quod est’. Potentiae dico, quia ipsum est in potentia ad causam constituentem”; Alb., De causis et proc. univ. 2.2.14, Ed. Colon. 17/2, 107, Ins. 36–39; see also ibid. 1.4.2, 44, Ins. 39–43 (quoted below, note 316) and 2.1.18, 82, Ins. 53–71, quoted below, note 362; Alb., Super I Sent. d. 8, a. 15, Borgen. 25, 242a.
307 See Alb., Super I Sent. d. 8, a. 22 ad 1, 251b–252a.
further development of this primary composition in creatures, as is clear already in the important Distinction 8 of Book 1 of the Sentences commentary. We shall return to this point, but it would serve well to quote the passage here:

Essence is said abstractly [to be] formally simple and what makes [something] be (esse), and not to be this or that by being specified and contracted into a part. For, just as “deity” expresses “deus” [i.e. “God”] formally, so “essence” (essentia) expresses “esse” indistinctly. And, so Anselm says in the Monologion that just as light (lux), to illumine (lucere), and “[a thing] illuminating” (lucens) differ, so essence, “to be” (esse), and “[a thing] being” (ens) differ. And in this way essence is that by which a thing is formally, and esse is its act, which it has in “that which is” (eo quod est); but “that which is” is the concrete being (ens) itself.308

B. Esse as Existence

Although esse usually signifies essence and the act of the essence, it is also used by Albert to signify “existence”, that is, that by which things are versus that by which they are what they are. In the Super Sententiarum, once again following Avicenna, Albert identifies esse in the sense of existence as an “accident” of creatures. He responds affirmatively to the question of whether esse is proper only to God, whereas to other things it accrues accidentally (accidat). The objection maintains that there is nothing to which esse accrues accidentally, and therefore its non-accidentality is not proper to God. Albert replies that esse belongs properly only to God, whereas created esse can be called an “accident”, though not in the proper sense of the word. 309 “Accident” here, explains Albert, refers to the fact that creatures are contingent in relation, not to an intrinsic, but to an extrinsic cause; that is to say, they were once in potency and could not be or exist without being brought into existence by the power of an efficient cause. In short, insofar as the esse of creatures depends on an external cause, and can be or not be, it is contingent or an “accident”.

308 Alb., Super I Sent. d. 8, a. 5, Borgen. 25, 227b. It appears that in some cases, as here, id quod est is the whole that includes conceptual content (through esse broadly construed), as distinct from quod est, which normally is understood as lacking conceptual content and esse, and as receiving esse; see also Quaest. de quiditate et esse, Ed. Colon. 25/2, 271, Ins. 8–10, quoted below, note 332; see also “this which it is” in De causis et proc. univers. 1.1.8, Ed Colon. 17/2, 16, Ins. 69–80, quoted below, note 320 (where esse, however, is existential). Elsewhere “id quod est” appears to be synonymous with “quod est”; see, e.g. Alb., Summa de mir. scient. dei 2, q. 3, m. 3, a. 2, quaest. 1 ad sc 2, Borgen. 32, 35b–36a, quoted below, note 324.

309 Alb., Super I Sent. d. 8, a. 15, Borgen. 25, 242ab.
What is significant about this passage in terms of the development of Albert’s notion of esse is that esse is used to express not only that things are, but that they exist as, opposed to not existing, thanks to an external agent. Existence is said to be an accident in creatures in the sense that it comes from another; that is, it is not something that a thing has from itself. Albert conceives existence as the result or effect of the efficient causality of an external agent. Esse as existence is that in which creation results. A creature cannot exist because of itself: as Albert puts it, its essence cannot be what it is unless it is created ex nihilo. And so, what accounts for the fact that things are or exist is not some intrinsic principle other than their essence, but rather it is their essence that exists under creative efficient causality. Esse in the sense of existence is not understood by Albert as an ontological constituent or component other than the essence by which things exist.

Although we begin to see a distinction between essence as possible and essence as existing thanks to an external cause, Albert in the Sentences commentary has yet to offer an interpretation of quod est versus esse that highlights what has essence versus existence, or to make a connection between esse as existence and esse as act. He will do so in his later writings. Still, it is already clear that he is heading in that direction. In the De quattuor coaequaevis, Albert considers the question of whether prime matter exists (an materia sit?). In response to the objection there that matter as such lacks esse, since “form gives esse” and prime matter lacks form, Albert remarks that matter has, not esse simpliciter, but rather esse secundum quid, which is the “being of a subject and of a potency” (esse subjecti et potentiae) and which matter has a seipsa. Thus, Albert conceives of possibility as something a thing has from itself, as a kind of being.

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310 On the relation between existence and efficient causality, see Ducharme, "Esse chez saint Albert le Grand," 212–16; see also Wieland, Untersuchungen zum Seinsbegriff im Metaphysikkomentar, 108–109.
311 Alb., Super II Sent. d. 1, a. 1, Borgn. 27, 9a: "[C]ratio potius respicit esse quam ordinem simplicitatis."
312 Alb., Super I Sent. d. 46, a. 13, Borgn. 26, 448a: "[S]ecundum ordinem naturae non potest essentia in ratione essentiae esse nisi creata de nihilo."
313 See Alb., Super I Sent. d. 46, a. 13, quoted in the previous note; and De V univ. 2.8, Ed. Colon. 1/1a, 38, Ins. 15–18: "Et ideo dicit Avicenna in primo libro logicae suea quod esse et ens accidit ei quod est. Verum enim est hominem esse animal, sive aliquod animal sit, sive non sit, et accidit ei esse vel non esse."
314 Alb., De IV coaeq. 1.2.1 ad 1, Borgn. 34, 329b: "dicentes ad primum quod forma dat esse: materia autem habet esse subjecti et potentiae: et hoc habet a seipsa, et hoc non est esse simplicer sed secundum quid".
In the *Super Sententiarum*, as we have seen, Albert extends the notion of possibility to the *suppositum* of spiritual substances. The *suppositum* is identified with possibility and is said to exercise a similar function as does matter in material substances by determining or limiting essence, which in itself is common.\footnote{Alb., *Super II Sent.* d. 2, a. 2, Borgen. 27, 48ab, quoted above, note 306.} Albert adds that what is possible is said to be possible *in se* and that it depends *ex causa prima* in order to be. But observe that if the “being of a potency” (*esse potentiae*) is *esse secundum quid*, which a thing has in virtue of itself, then *esse in actu* must be *esse simpliciter*, which a thing has in virtue of an efficient cause. The *esse* that a thing has in virtue of the efficient causality of an external agent is *esse* in the sense of existence. And so, *esse* in the sense of existence is *esse in actu*.

We find this line of thinking fulfilled in the *De causis et processu universitatis*. There Albert takes further the idea of possibility as something that a thing has in virtue of itself.\footnote{Alb., *De causis et proc. univers.* 1.4.2, Ed. Colon. 17/2, 44, Ins. 39–43: “Quae possibilitas rei est ex seipsa. . . omne id quod de nihilo est, nihil est ex seipso et ex seipso non habet nisi ad esse possibilitatem.”} But with respect to “that which it is”, which belongs to a thing of itself, a thing has no cause.\footnote{Alb., *De causis et proc. univers.* 1.4.5, Ed. Colon. 17/2, 48, Ins. 51–58 (continued below, note 600): “Quod autem proximum ab illo [primo fonte et intellectu] est, constat, quod ex nihilo est. Secundum enim ‘id quod est’ nullum habet suae essentiae principium. Si enim tale principium haberet, a seipso haberet. Quod omnino absurdum est. Sui autem esse principium habet id quod ante ipsum est. Primum ergo lumen occumbit in ipso per hoc quod alius est in ipso esse et ‘quod est’. Et hoc quidem intelligentia est. Intelligentia autem de se agens est.” See also ibid. 1.1.10, 19, Ins. 42–43; see also ibid., 1.1.8, 16, Ins. 70–72, 95–97, Ins. 1, 10–11.} This is not to say that a possible being causes itself.\footnote{Albert considers self-causation absurd; see Alb., *De causis et proc. univers.* 1.1.10, Ed. Colon. 17/2, 19, Ins. 31–50; 1.4.5, 48, Ins. 45–58 (and the previous note); see also ibid., 1.1.8, 17, Ins. 1–9.} Rather, it is only when possibility is actualized that an efficient cause can be sought.\footnote{Alb., *De causis et proc. univers.* 1.1.11, Ed. Colon. 17/2, 24, Ins. 38–41: “Licet enim forma secundum ‘id quod est’ causam non habeat, tamen secundum esse in effectu causam habet efficientem.”} Thus, form provides essential determination to an individual *quod est* in virtue of itself alone, but it provides essential determination actually in virtue of the efficient causality of another.

Accordingly, Albert in his *De causis* develops the distinction that is familiar from his earliest works between *quod est* and *esse*: now it is applied to all creatures, with *esse* taken in an existential sense. In order
to establish the distinction between supposit and existence, Albert presents us with an Avicennian argument from the existential neutrality of essences taken in themselves. In fact, in Chapter 8 of *De causis* 1.1, Albert draws upon al-Ġhazālī’s summary of Avicenna, of which Chapter 10 is nothing but a paraphrase. As before, Albert regards *esse* as an accident in created substances; he further observes that it is this fact that allows us to pose the question whether a thing is, and that the answer is found in *esse*. It follows that if a thing has *quod est* of itself, it has *esse* in act from another. Here is Albert’s argument for the distinction of *quod est* and *esse* in all things but one:

Everything that is from another has *esse* as distinct (*aliud*) from “this which it is” (*hoc quod est*). For, that an animal is animal, and a human, human—this is “this which it is”—it does not, we are certain, have from another. For, this is equally the case whether a human actually exists or not. But that [a human] has existence in act (*esse in effectu*) belongs to it not of itself, but rather from the principle of *esse*, from which flows *esse* into everything that exists in act. Therefore, “this which it is” has *esse* from another as well as “that which is” (*id quod est*). And so, *esse* in this way “happens” (*accidit*) to it, because it belongs to it from another. And for this reason, it is possible in this case to ask “whether it is or is not”. And, the question is answerable through the cause of “that which is” in being (*esse*). But in the case of the first principle, because it does not have *esse* from another, *esse* is per se, and the question “does it exist?” has no place. And, if it is asked, it is [asked] only verbally, and it cannot be answered. For, “this which it is” and its *esse* are one…. /17/ Consequently, *esse* is not “this which it is”. And, this is what Boethius says in the *De hebdomadibus*: “‘Quod est’ can have something besides ‘that which it is’ (‘id quod ipsum est’). But *esse* has nothing admixed with it.”… Hence, he holds that [the first] “is the font of all *esse*” and that all *esse* is from it. For, *esse*, as we have said, which is the act of “that which is”, is brought back to something, from which it flows, other than “that which is”.

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320 Alb., *De causis et proc. univers.* 1.1.8, Ed Colon. 17/2, 16, Ins. 69–85, 95; 17, Ins. 1–3, 11–15, 23–26: “Omne enim quod ex alio est, aliud habet esse et ‘hoc quod est’. Quod enim animal sit animal vel homo homo, hoc est ‘hoc quod est’, pro certo non habet ex alio. Hoc enim aequaliter est homine existente et homine non existente secundum actum. Quod autem esse habeat in effectu, ex se non est sibi, sed potius ex principio esse, ex quo fluit esse in omne quod est in effectu. Hoc igitur quod est, ab alio habet esse et ‘id quod est’. Et sic esse hoc modo accidit ei, quia ab alio sibi est. Et ideo in ipso quaeri potest, an est, an non est. Et quaestio determinabilis est per causam eius quod est in esse. In primo autem principio prouter hoc quod esse non habet ab alio, esse per se est, et quaestio, an est, locum nullum habet. Et si quaeratur, secundum solam dictionem est et determinari non potest, ‘Hoc’ enim ‘quod ipsum est’ et esse suum unum est…. Patet ergo, /17/ quod omne quod est, ‘id quod est’ habet a seipso. Esse autem suum in effectu, si ex nihilo est, a seipso habere non potest…. Et per consequens esse non est ‘hoc quod est’. Et hoc est quod
The first part of the *Summa theologiae* presents us with the same doctrine. The *esse* or existence of creatures does not depend on “what they are”, since of themselves they are nothing—they do not exist; thus, *esse* comes to creatures as an accident, caused by another. Albert writes:

And, in this way *esse* happens (*accidit*) to these things that are and that are created; because it does not belong to them according to “that which they are”, but according to the fact that they depend on another. For, according to “that which they are”, as has been said, they are both nothing and are out of nothing.\(^{321}\)

Albert once again remarks that only of the creature is it possible to give a causal answer as to whether it is or exists, and that the answer is found in *esse*.\(^{322}\)

The second part of the *Summa* likewise contains passages that accord with this existential use of *esse*. At the outset of a long and important discussion in Question 3, for example, we read:

A second kind of composition [occurs] when two or more things come together to constitute one thing in such a way that one of these [stands] as that to which belongs act and being (*esse*), and the other [stands] as that by which *esse* is in the former, whether efficiently or formally or in both ways. And this is called a composition of *quo est* and *quod est* (“that by which it is” and “that which is”). For, *quod est* is not of itself in the act of being (*in actu essendi*), but it depends on another “by which” it receives *esse*, efficiently or formally or in both ways…. For, as Avicenna says, *quod est* according to itself is nothing and is *ex nihilo*, but *esse* belongs to it from that by which it is, efficiently or formally or in both ways.\(^{323}\)

Similarly, Albert agrees with the argument of a *sed contra* as follows:

[What is] “made”, which with respect to “that which is” (*id quod est*), receives being (*esse*), cannot be in every way the same as the *esse* that it receives. For, as Avicenna says, with respect to “that which is”, it is nothing and is

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\(^{321}\) Alb., *Summa de mir. scient. dei* 1, q. 19.3 ad 1, ed. Colon. 34/1, 95, lns. 52–56; see also ibid., ad 2, lns. 61–70: “cum dicitur ‘homo est animal’, praedicatio est per se et in quid; similiter cum dicitur ‘animal est substantia’. Cum autem dicitur ‘animal est substantia’ et essentia nec est per se nec in quid, et dicitur Avicenna et Algazel. … Et ex hoc sequitur, quod esse accidit omni ei quod est creatum. …”. See also the argumentation in ibid., ob 2, 94, ln. 69–p. 95, ln. 13, which Albert accepts as his own in the response.

\(^{322}\) Alb., *Summa de mir. scient. dei* 1, q. 19.3 ad 1, Ed. Colon. 34/1, 95, ad 1, lns. 57–60.

\(^{323}\) Alb., *Summa de mir. scient. dei* 2, q. 3, m. 3, a. 2 [introduction], Borgen. 32, 29b.
ex nihilo. For, of itself it has no esse, but it receives its whole esse from the cause which in all things makes it that they must be. And for this reason, as Avicenna says, there is diversity between “what is” (quod est) and esse because [such a thing] is composed of quod est and esse. Thus also, in a point, quod est and esse differ. For, in itself it is “that which is” (id quod est); esse belongs to it because of its dependence on a cause that is the font of esse and that in all things makes it that they must be. And, this was the wisdom of Plato, which Dionysius confirms in the Divine Names; because everything that has esse participatively has the esse in which it participates, not from itself, but from the essence in which it participates, that is, from the cause that simply speaking and according to itself is that essence.324

At the same time, in the heart of the same discussion, where Albert expressly raises and at length addresses the question whether all creatures are composites of quod est and quo est, and where he formally distinguishes the main senses of these terms, he seems to treat quo est as the explanation of form rather than of esse. Accordingly, some interpreters have regarded Book 2 of the Summa as a reversal and as a return to a pre-Avicennian, Boethian essentialism,325 or have taken such texts to confirm that Albert lacks a notion of esse as existence in the sense of act or perfection.326 After having treated quo est in the sense of an extrinsic efficient cause, Albert speaks as follows of quo est as an intrinsic principle:

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\text{[Q]uo est has a likeness to form—although quod est is not, in general, matter, nor is quo est, in general, form; because the reception by which quod est receives [quo est] is the reception, not of matter, but of the first subject and the “first formable” in each genus, as has been said. And, this reception, as Avicenna says in Philosophy 1 [sic; First Philosophy?] is not the reception of matter; because through what is received, something is not determined to esse simply speaking, as matter is determined and perfected by form to esse simply speaking. But it is a reception by which what is indistinct (confusum)}\]

\[324\text{ Alb., Summa de mir. scient. dei 2, q. 3, m. 3, a. 2, quaest. 1 ad sc 2, Borgen. 32, 35b–36a. See also ibid. q. 72, m. 2c, Borgen. 33, 36b.}
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\[325\text{ Roland-Gosselin, Le ’De Ente et Essentia’ de S. Thomas d’Aquin, 180–84; Louis de Raeymaeker, “Albert le Grand philosophe: Les lignes fondamentales de son système méta-
causis.}
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de Creaturis and Scripta Super Sententias,” in Albert the Great: Commemorative Essays, ed.
Kovach and Shahan, 65–95, at 88 note 44, and 89, 92; see also Sweeney, “Esse Primum
Creatum in Albert the Great’s Liber de Causis et Processu Universitatis,” 599–646.}
\]
receives the act of a differentia determining it to distinct \textit{esse} in a genus, species, or individual.\footnote{Alb., \textit{Summa de mir. scient. dei} 2, q. 3, m. 3, a. 2, quaest. 2c, Borgen. 32, 37a.}

Despite what this text suggests by itself—and however we decide to understand the composition of this late book—we can see, by comparing it to other passages in the same context, such as those quoted, as well as to others from previous works of Albert where \textit{esse} as essence and \textit{esse} as existence are similarly blended, that this text constitutes no radical reversal of doctrine. Given space constraints, perhaps the best way to show how Albert brings these notions together is by considering his discussions of \textit{esse} as act.

C. \textit{Esse as Act}

1. \textit{Esse as Actus essentiae}

Albert’s notion of \textit{esse} as act is present throughout his works, from as early as the \textit{De quattuor coaequaevis} (ca. 1242), as Ducharme has recognized.\footnote{Ducharme, “Esse chez saint Albert le Grand,” 228.}

In the \textit{De quiditate et esse} (ca. 1248), Albert attributes \textit{esse} as \textit{actus essentiae} to Aristotle’s \textit{Metaphysics}.\footnote{Alb., \textit{Quaest. de quiditate et esse}, Ed. Colon. 25/2, 271, lns. 10–11.} That this notion is linked primarily with essence rather than with existence is especially clear in the early works. As a result, Albert in \textit{Super Sententiarum} 1 can use “essence” and “the act of essence” interchangeably to refer to \textit{esse} as opposed to \textit{quod est}.\footnote{Alb., \textit{Super I Sent.} d. 8, a. 3, Borgen. 25, 224b–225a: “Haec enim tria [quod est et esse et aliquld esse] secundum Boetium different: quia \textit{quod est}, est id quod res est vere, et sup­postum: \textit{esse} autem est essentia eijus vel actus essentiae: \textit{aliquld} autem \textit{esse} est per aliquld /225/ trahens ipsum ad partem vel speciem…”} In the following, particularly helpful passage, he explicitly links “esse” in the \textit{quod est-quo est} composite with (1) essence as actualized in the \textit{quod est} (of the human soul), with (2) the “\textit{forma totius}”, which expresses the “whole \textit{esse}” in a “formal” way, and with (3) the \textit{esse} of a species:

The Doctors say that [the soul] is composed of \textit{quod est} and \textit{quo est}; and then that \textit{quod est} differs from matter, just as a supposit differs from the potency for the form of which it is the supposit. For, (1) “that which is” (\textit{id quod est}) is the “this something” (\textit{hoc aliquld}) that is predicable of that which is. (2) \textit{Quo est} is not found used (\textit{positum}) by the author, but Boethius uses “esse”; and this is essence according to the act that it has in “that which is”, namely, in the “this something”, or in that supposit. Hence, in such things, the individuation of being (\textit{esse}) itself is from the properties that

\footnote{Alb., \textit{Summa de mir. scient. dei} 2, q. 3, m. 3, a. 2, quaest. 2c, Borgen. 32, 37a.}
follow upon “that which is” according as it is “this something” that directs the understanding to the “here and now”. I say that the soul is composed of these [two], and an angel similarly. Hence, *quo est* differs from form, because form is separable, and it is the “form of the part”, which [part] is matter. But *quo est* or *esse* is not separated from “that which is”. And, it is the “form of the whole”, which expresses the “whole being” (*totum esse*) of “that which is” through the mode of “formal being” (*per modum esse formalis*). And, it is like the *esse* of the species in this individual, according to the statement of Boethius that a species is the “whole being” of [its] individuals...331

The *De quiditate* again links *esse* to essence, yet here we see Albert introduce a clear distinction between the two, using semantic terminology: “essence” “considered abstractly” is only potentially the perfection of a thing, whereas signified concretely it can be predicated of an actual thing over which it is diffused as its act and perfection, namely, as the act of the essence, or *esse*. Albert opens the work, then, with the following account of essence as a formal cause of its effect:

Essence is that by which a thing is “that which it is” (*id quod est*). Humanity, for example, is the essence of a human, and, in short, each formal cause is the essence of its effect. But being (*esse*) is the act of the essence, as the Philosopher says in the *Metaphysics*. Notice in what way it is its act. For, there is no doubt that what “essence” expresses it expresses abstractly. Considered thus, it is only potentially the perfection of something. But it is possible that it be actually diffused over that of which it is the perfection. And, that diffusion is called the “act” of this [thing] by reason of the fact that then it is actually a perfection. Humanity, for example, considered in the abstract, is not the actual perfection of something. But should we consider it in conjunction with that of which it is the perfection, then it will be the perfection of something... and will be expressed as “human”. Hence, “human” and “humanity” express the same thing, but “humanity” in the abstract, “human” in diffusion over that which it perfects, namely, in the concrete. For this reason, it happens that “humanity” cannot be predicated of that of which it is the perfection, but “human” is most truly predicated. Just as humanity and human stand to each other, moreover, so do essence and *esse* or *ens* (which is better), intelligence and intellect, whiteness and white. And thus you will discover [is the case] in all things: the abstract will always have the character (*ratio*) of essence, and the concrete, the character of act.332

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331 Alb., *Super I Sent.* d. 3, a. 33c, Borgen. 25, 138b.
332 Alb., *Quaest. de quiditate et esse*, Ed. Colon. 25/2, 271, Ins. 8–32. See also ibid., 272, Ins. 44–47: some speak improperly of act as essence, whereas the act is the diffusion of essence.
Esse as act, then, is here the essence, not as considered abstractly, but as it perfects an individual quod est.333 Albert frequently uses light as an example of the diffusion, paralleling the relation of essentia, esse, and ens with that of lux, lucere, and lucens.334 Just as illuminating or lucere is the act of light, so esse is the act of essence. Only in the Aristotelian paraphrases, however, does he draw out what is contained in principle in the De quiditate's reference to the “effect” of formal causality: esse as act is an effect of essence in the individual supposit. This conclusion gives a new sense to the light metaphor, as we see in the Physica:

I say that [form] is properly speaking in itself essence, because its act and effect and proper operation in matter is the actual being (esse) of the composite, which flows from the essence—which is the form of the thing—just as light (lumen) flows from a light source (lux).335

This conclusion also gives a new sense to the principle, found in Albert’s early works: “form gives esse” to a thing.336 In the De anima, for example, Albert uses the principle while drawing a parallel between the relationship of soul to life and that of essence to esse (“to live is ‘to be’ for living things”). The soul as form gives esse to the body through life, just as esse in general is the act of essence within an individual quod est.337 Linked with essence in this manner, esse is understood as the essential determination effected by essence of an individual quod est.

2. Esse as Actus essendi
The conception of esse as act comes to be linked, however, not only with essence but also with existence. The earliest instances appear to belong to the logical paraphrases, where Albert makes full use of Avicenna’s doctrine on essence considered in itself, which is neither in individuals nor

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333 See Alb., Phys. 2.2.2, Ed. Colon. 4/1, 99, Ins. 59–61: “[D]ifferunt essentia absolute accepta et esse, quod est ex diffusione formae in formato…”. For the diffusion of esse, see also Alb., Metaph. 1.4.2, Ed. Colon. 16/1, 48, Ins. 84–87, quoted above, note 316.

334 Alb., Super I Sent. d. 8, a. 5, Borgn. 25, 227b, quoted above, note 308.

335 Alb., Phys. 2.2.2, Ed. Colon. 4/1, 98, In. 79–p. 99, In. 4. For esse as effect, see also, e.g. Alb., Metaph. 5.6.5, Ed. Colon. 16/1, 285, Ins. 80–83, quoted above, note 280.

336 See Alb., De IV caeq. 1.2.1 ad 1, Borgn. 34, 320b, quoted above, note 314.

337 Alb., De anima 2.1.6, Ed. Colon. 7/1, 74, Ins. 1–3, 21–24: “Et ideo vivere viventibus est esse, quia, cum anima ut forma det esse ei cuius est anima, non dat ei nisi per vitam… Est enim actus animae vita continuus et esse dans corpori vivo; sicut enim esse generaliter est actus essentiae in eo quod vere et secundum actum est, ita vivere est actus animae in eo quod animatum est.” This parallelism is, of course, the major contribution of Geiger, “La vie, acte essentiel de l’âme,” esp. 56–110. However, it cannot be defended based on this De anima text alone, but requires texts such as Phys. 2.2.2, Ed. Colon. 4/1, 98, In. 79–p. 99, In. 4, such as can also be found in the late Aristotelian paraphrases.
in the intellect. Accordingly, Albert contrasts essence with “esse actu” in the sense of existence; he characterizes existing beings with such formulae as ens actu, ens actu existens; and he refers to esse in this sense, not as actus essentiae, but as actus essendi or actus entis, “a thing’s esse by which it is in act”, the act that constitutes everything that is (quod est) in esse; “the esse that is asked about in ‘does it exist?’”, quoting the Latin al-Ghazâli; or, most fully, “that by which each thing is said ‘to be’ when the question is asked about it, ‘does it exist?’”. We are fortunate to have one passage in which Albert makes explicit the distinction between the two senses of esse here in question: “[E]sse can be taken either according as it is the act of an existing thing (actus existentis)… or according as it is the act of the essence or of the cause of the being (essendi) of each thing…”.

In the Metaphysics paraphrase, Albert follows Aristotle in distinguishing as a fourth sense of being ens in potentia as opposed to ens in actu. A being in potency is said to be a being according to a certain mode, but a being in act is said to be a being simpliciter. And, when something is said to be a being simpliciter, what is signified is a substance that actually exists (in actu existens). Given this notion of being as existence in act, Albert combines it with the notion of being as essence and rethinks the metaphysical formulae that we have seen. Esse, for example, is still the diffusion of form, but it is now said to be in that which actually exists, so
that form is the quiddity or “what has been the esse” (cf. “quid erat esse”) of a thing that has the act of being (actus essendi):

I speak of esse as the property of form rather than as the effect, since being (esse) is nothing but the diffusion of form in that which is actually existing (eo quod est actu existens), . . . [B]eing (esse) that is the property of form, which on account of this property is called “the what it was to be” (quid erat esse), is a diffusion of form in that which participates in the act of being (actus essendi). Therefore, esse extends into the powers of “that which is” (eius quod est) so that it perfects them; and thus it proceeds by spreading itself as light (lumen) proceeds from what illuminates (lucente).346

Here, as Albert subsequently makes explicit, “form” can refer, not only to the forma partis, but also to the forma totius that is responsible for the esse or specification of an individual quod est.347 At the same time, he links the notion of esse as act with the dictum “form gives being to matter”:

[F]orm is not the cause of why matter is a substance or of why matter is matter. Form is the cause of why matter is or comes to be in act, because form gives being in act (esse in actu) to matter, and it does not give it being in act inasmuch as it is this form or that, but inasmuch as it is form. . . . And, because form is the cause of matter’s actually being (causa actu esse materia), and matter cannot be in reality unless it actually is, for that reason form is the cause why matter is. . . .348

Albert continues his rethinking of formulae in his paraphrase of the De causis. We have already read the lengthy Avicennian passage from Book 1 where the quod est-esse composition is understood as supposit and esse in act (in effectu, with the Latinized Arabic).349 One may object that, though Book 1 is admittedly personal, these passages are highly paraphrastic of al-Ġhazālī. In response, one should appeal to Book 2 where Albert adopts the same argumentation and blends it with a personal vocabulary.350 There he also rehearses familiar doctrines, having identified being as the act of existing: to live is “to be” for living things; “to be” is the first thing

346 Alb., Metaph. 1.4.2, Ed. Colon. 16/1, 48, ln. 84–p. 49, ln. 7.
348 Alb., Metaph. 5.2.4, Ed. Colon. 16/1, 239, ln. 98–p. 240, ln. 10.
349 Alb., De causis et proc. univers. 1.1.8, Ed Colon. 17/2, 16, Ins. 69–80; 17, Ins. 1–3, 23–26, quoted above, note 320. For this composition, see also ibid., 1.1.10, 19, Ins. 31–36.
350 See esp. Alb., De causis et proc. univers. 2.1.17, Ed. Colon. 17/2, 81, Ins. 59–72 in the following note; also ibid., 2.1.13, 75, Ins. 56–66. For similarly personal passages in Book 1, see ibid., 1.4.5, 48, Ins. 51–57 (quoted above, note 317); 1.4.8, 55, Ins. 89–p. 56, ln. 1.
created; “to be” is a simple concept, into which all others are resolved, and so on.351

3. The Dilemma with Esse as Act
We are now in a position to understand how it is that the same composition of *quod est* and *esse as actus essendi* turns up among the existential passages352 already quoted from *Summa theologiae* 2.353 Still, in that book,

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351 See esp. Alb., *De causis et proc. univers.* 2.1.17, Ed. Colon. 17/2, 81, lns. 19–52, 59–72 (lemmata from *Liber de causis* 4, as per the Cologne edition): “*Esse enim simplex* mentis conceptus est ad nihil formatus vel determinatus, quo quaelibet res esse dicitur, cum de ipsa quaeritur per quaestionem, an sit. Propter quod in superioribus libri praecedentis ostensum est, quod quaecumque primum dicitur, quod non nisi per causam primam determinari potest. *Esse enim*, quod dicto modo *simplex* conceptus est et informis et in quo sicut in ultimo stat resolutionis, non nisi causae praeceps creatum esse potest. Hoc enim non educitur ex aliquo, in quo formalis incohatio sit ipsis, sicut vivere educitur ex esse et sentire ex vivere et ratione ex sensibilia. Omne enim ratione sensibilia est et omne sensibile vivens, et omne vivens ens, sed non convertitur. Et quia esse virtutem suam influit super omnia sequentia, propter hoc sicut esse actus est entium, ita ‘vivere viventibus esse est esse, et sentire est esse sentientibus, et ratiocinari est esse rationalibus’, ut dicit Aristoteles. Et hanc virtutem, quod sic licet quodlibet istorum sit esse eorum quorum est, sequentia non possunt habere nisi a primo, quod est esse. Quodlibet enim sequentum cum supponat in intellectu suo praecedens se, non ex nihilo, sed ex aliquo producitur, in quo est incohatio sui esse. Nihil ergo sequentium potest fieri per creationem. Sequens enim se habet ad praecedens ut informans ipsum et determinans. Procesius enim alius istorum non per creationem, sed per informationem est. Relinquit igitur igitur, quod *esse sit primum et creatum et quod alia causata non creata sint et quod nullum causatorum prier esse posset quam esse. Esse autem vocatur non ens vel entitas. Processus enim *simplex* primus a causa prima procedit ut actus in esse constituentes omne quod est. Quia igitur esse processum illum nominat ut actum entis, propter hoc creatum primum potitus est esse quam ens vel entitas. Et sicconcretum habituidinibus est. Habet enim habitudinem ad nihil, ex quo est, et habitudinem ad potentiam primum, in qua fuit, antequam esset, secundum intellectum. Non enim secundum seuipsum est, sed a potentia et virtute primi. Secundum autem seuipsum nihil est. Propter quod esse suum non est purum in fine puritatis et simplicitatis, sicut est esse primum. Propter quod quidam antiquorum dixerunt, quod esse est proprium primo. Nullum enim sequentium habet esse purum.”

352 Alb., *Summa de mir. scient. dei* 2, q. 3, m. 3, a. 2, Borgn. 32, 29b, quoted above, note 323. See also to the other passages cited in note 321, and quoted in note 324, *esse as act* in *Summa de mir. scient. dei* 1, q. 19.3 ob 2, Ed. Colon. 34/1, 94, lns. 69–88; and ibid., q. 15, c. 2, a. 1, pt. 2 ad 11, 64, lns. 1–14: “[O]peratio dupliciter dicitur . . . Dicitur etiam operatio actus essentiialis, quo est id quod est, qui actus est esse, quia, ut probat Avicenna in prima philosophia sua, esse omnis creati est fieri continue a causa ipsius esse. Hac operatione nihil existentium deestuitur, et praeponit sibi virtutem haec operatio in eo quo est. ‘Quo est’ enim dicitur, secundum quod simpliciter formale est, virtus autem, secundum quod convertitur in principium agendi actum substantialem.”

353 It is worth noting also that Albert here introduces the notion of *esse as actus essendi* together with "*quo est*" in the sense of efficient cause, which latter notion has played a role
as we saw, it appears inconsistent for Albert to describe the *quod est-esse* composition in terms of *esse* understood now as existential, now as essential. In fact, we find the same inconsistency in the *De causis* paraphrase, where he mingles the two understandings in the same passage, and he speaks first of the "*esse* for this, [namely] that something be", then of the *esse* that is a "determination of nature" in the supposit.

Albert does not expressly address the dilemma, but the solution is hinted at in his words and appears to be required by his ontological commitments. Albert understands *esse* as *actus essendi* to be the first formal feature of actual things, the first feature of their essence within an actual *quod est* (as opposed to their essence considered in itself). It is significant that in the *De causis* paraphrase he links *esse* as act of existing with *esse simplex*, which is the first thing that anything has (therefore the *primum creatum*), as well as with the *esse* into which all other notions are resolvable. Esse as act of existing, then, is a determination or formality, prior to all other "formal causes", such as to those in the

in Albert’s arrival at the former; Alb., *Summa de mir. scient. dei* 2, q. 3, m. 3, a. 2, Borgn. 32, 29b (n. 323).

See, e.g., Alb., *De causis et proc. univers.* 1.4.5, Ed. Colon. 17/2, 49, Ins. 37–54. Similarly, Albert parallels the *esse* by which every "that which is" essentially is with the *esse* of the soul by which it is soul: ibid., 2.1.14, 77, Ins. 21–30, 38–54, 82–92. In fact, we also saw this mingling of understandings in the passages from the *Metaphysica* recently quoted in notes 346 and 348.

See esp. Alb., *De causis et proc. univers.* 2.1.17, Ed. Colon. 17/2, 81, Ins. 19–52, 59–72, quoted above, note 351; for "*simplex esse*", see also above, notes 21 and 74–75. In the *Metaphysica*, *esse simplex* is identified with the *act existing* in the *prima essentia*; Alb., *Metaph.* 1.1.1, Ed. Colon. 16/1, 2, Ins. 67–70, translated above, note 75.

For "*ens in actu*" or "*esse ut actus*" as determinations rather than modes of substance, see Alb., *Metaph.* 5.2.12, Ed. Colon. 16/1, 250, Ins. 45–61 (above, n. 345); and *De causis et proc. univers.* 2.2.18, Ed. Colon. 17/2, 111, Ins. 11–16, 37–40; but see also *Metaph.* 8.1.6, 397, Ins. 1–8.

*Quo est* in the sense of *esse* as an "essential" act is called "formal" in Alb., *Summa de mir. scient. dei* 1, ibid. q. 15, c. 2, a. 1, pt. 2 ad 11, 64, Ins. 1–14, quoted above, note 352. For *esse* in the sense of *actus essendi* as that by which formally "there is *esse* in" a thing, or by which formally a thing receives *esse*, see *Summa de mir. scient. dei* 2, q. 3, m. 3, a. 2, Borgn. 32, 29b, quoted above, note 323. Since "*esse*" is an abstract term, as is *"essentia*", it can likewise be said to express the feature of a thing formally; see Alb., *Super I Sent.* d. 8, a. 5, Borgn. 25, 227b, quoted above, note 308. For "mode of formal being", see also ibid., d. 3, a. 33, 138b, quoted above, note 331.

See Alb., *De causis et proc. univers.* 2.1.4, Ed. Colon. 17/2, 64, Ins. 78–83: "Et hoc modo est in formalibus causis, sicut est in *esse*, vivere et intelligere. Esse enim causat non causante eo quod est vivere. Vivere autem non causat nisi causante eo quod est esse. Esse enim substantificat vivere, et vivere format esse. Et sic ad invicem se habent vivere et sentire, et sentire et intelligere."
series that “pertains to the ‘esse of nature’ simply taken”: “being (ens), true, good”; or to those in the series of determinations that “pertain to the ‘esse of nature’ in the form of a genus or species”, such as “to be, to live, to understand”.\textsuperscript{360} It is, nevertheless, a “first among equals”, “on par”, so to speak, with the other forms\textsuperscript{361} or essences\textsuperscript{362} within existing substances: it is the first of the features that constitute a thing’s essence.\textsuperscript{363}

We should think of esse as act as the first form within existing essences. Think of \textit{essentia} as literally esse-ness. It does not exist of itself, as Avicenna points out, but when it exists in an individual \textit{quod est} or supposit, we have the \textit{actus essentiae}. The first form in this \textit{actus essentiae} is \textit{esse simpliciter}, the \textit{actus essendi}. Some early texts help us at least to see the direction of Albert’s thought. “Essence”, as we have read, “expresses ‘esse’ indistinctly” and is “what makes [something] be (esse)”, “that by which a thing is formally”.\textsuperscript{364} In a Trinitarian discussion of his \textit{Sentences} commentary, he explains “essence” systematically, with the “Philosophers”, linking it etymologically both to esse and to esse as act, as follows: “\textit{Essentia} is that

\begin{footnotesize}

\textsuperscript{361} See Alb., \textit{De causis et proc. univers.} 2.1.15, Ed. Colon. 17/2, 79, Ins. 11–17.

\textsuperscript{362} See esp. Alb., \textit{De causis et proc. univers.} 2.1.18, Ed. Colon. 17/2, 82, Ins. 53–71: “Quamvis enim esse creatum simplex conceptus mentis sit et, in quantum creatum est, secundum sit a primo essentialiter distans ab illo, tamen, ut dictum est, concretum habitudinibus est et ad nihil, exquo est, et ad potentiam primiti, in qua fuit, antequam esset. Sed istae habitudines non faciunt in ipso compositionem essentiale. Non enim sunt diversae essentiae componentes, sed unius et eiusdem habitudines ad diversa, quae magnis in ratione sunt quam in natura. Primum enim principium inter omnia magis multiplex est in habitudinibus relationum, quae proveniunt ex multorum comparatione ad ipsum. Sed tamen, quia istae habitudines non fundantur in ipso, sed in aliis, nullam suae simplicitatis faciunt diminutionem. Sed hoc verum est, quod habitudines esse creati in ipso esse creato fundantur. Et ideo, licet essentiale non inducant compositionem, faciunt tamen simplicitatis aliquam diminutionem. Esse igitur simplex est non in fine simplicitatis . . . .”

\textsuperscript{363} See Alb., \textit{De causis et proc. univers.} 2.1.17, Ed. Colon. 17/2, 81, Ins. 79–82: “Cum enim dicitur, quod primum [sic] et principium processus ipsius esse nihil supponit ante se, intelligitur, quod nihil sui supponit ante se, hoc est, de essentiantibus et intrinsece constitutibus ipsum.”

\textsuperscript{364} Alb., \textit{Super I Sent.} d. 8, a. 5, Borgen. 25, 227b, quoted above, note 308.
\end{footnotesize}
by which esse is, and that whose act is esse, as Boethius and Tully say.”365 This notion fits with Albert’s understanding there of an intrinsic formal cause: it is “what ‘gives’ being (esse), and it is an existing part (existens pars) of that to which it gives [being]”.366 In a parallel way, in distinguishing in the De homine a second sense of “act” different from form (different, for example, from the actuality that is soul), Albert had already linked act to form and to esse:

Act is also said to be that which is “acted upon” (actum est) by form in matter and in the composite—and this is esse…. At the same time, [this] second way is intimated in the words of the Philosopher where he says “form is that according to which this something is (est)”367.

What is new after 1250 is Albert’s isolation of the first formal determination or “form” as esse in the narrow sense, not of the actus essentiae in general, such as the “human” in Socrates, but of the actus essendi, the act of existing in Socrates, without which there is nothing else in him.

On Albert’s terms, then, the aforementioned dilemma turns out to be a false one. The inconsistency seen in his moving, without notice, between esse as act of essence and esse as act of existence arises from our importing categories from subsequent thinkers back into Albert in order to understand him: specifically our divorce of the “essential” and “existential” orders. Albert does not radically differentiate esse as the act of existing from esse as the essence existing in concrete existing substances (as opposed to essence as considered in itself), even though his identification of actus essendi appears to lie in the background of such subsequent radical differentiation. Instead, esse as the act of existing is, for Albert, the first form in the “esse-ness” of an existing quod est. Thus, form gives esse to an individual quod est in the sense of both essence and existence. Esse is both the act of the essence in individual substances and the act of existing. And so, it appears that we should say that the act of existing is a formal part of the essence of existing substances.368

365 Alb., Super I Sent. d. 8, a. 15, Borgen. 25, 242a.
366 Alb., Super I Sent. d. 20, a. 1c, Borgen. 25, 546a.
367 Alb., De homine, Ed. Colon. 27/2, 34, Ins. 43–45 [ad 11]; italics added.
368 Again, see existential esse described as an “essential act” and as a “formal” quo est in Alb., Summa de mir. scient. dei 1, q. 15, c. 2, a. 1, pt. 2 ad 11, 64, Ins. 1–14, quoted above, note 352.
D. The Distinction between Essence and Esse

Care must be taken, as we have seen, in determining the precise meaning of esse in a given context. But we shall find that the immediate context in Albert for the distinction between essence and its act, esse, is always an Avicennian understanding of essence considered in itself, prior to existing in individuals or in the mind. At the same time, the background is always the Boethian distinction between suppositum and nature, which remains for Albert the primary real composition in created substances as such. Esse as actus essentiae designates essence in a concrete thing that exists. Esse as actus essendi designates the form of existence in the essence of a concrete thing that exists, by which form it exists: what makes true the fact that a concrete thing exists. Given the sharp distinctions, in Albert’s mature thought, between “essence in itself”, “essence as actually existing”, or “esse as act of the essence”, and “esse as the act of being”, it may at first appear that he has introduced extramental or real distinctions. After all, nothing could be clearer in Albert’s ontology than that esse and quod est in created substances are really distinct, unlike in God, where they are only conceptually distinct.369 It follows that if esse in the quod est-esse pair is narrowed and identified with the actus essentiae or with the actus essendi, we do indeed have a real distinction and a real composition in this pair. Thus, we can ascribe to Albert a real composition in all creatures of quod est and essence or of quod est and existence.

Nonetheless, in neither of these two senses is esse ever conceived as something ontologically other than essence or as one constituent of a being contrasted with essence as another constituent. (1) “Esse as act of essence”, when opposed to “essence considered in itself”, simply designates, as we have seen, the actual presence of essence within a concrete existing substance. The distinction is between two senses of essence, in which the former, “essence considered in itself”, is not conceived as a constituent of a concrete quod est, and hence is not distinct in extramental reality from the quod est that is in reality.370 And, as to (2) “esse as act

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369 See esp. Alb., Super Dion. de div. nom. 5.22 sol., Ed. Colon. 37/1, 315, lns. 46–52; Summa de mir. scient. dei 1, q. 39, c. 2, a. 1, pt. 2, Ed. Colon. 34/1, 300, ln. 85–p. 301, ln. 3; ibid., q. 44, c. 2 ad 5, 350, lns. 56–58. Appropriately, even here there is an issue, since Albert’s last work groups this doctrine among conceptual, not real “compositions”; Summa de mir. scient. dei 2, q. 3, m. 3, a. 2 [introduction], Borgn. 32, 29ab. Here there may be a slip of someone’s pen, perhaps Albert’s.

370 See Alb., Metaph. 8.1.6, Ed. Colon. 16/2, 398, lns. 19–20: “[I]dem est esse, quod est actus essendis formae, et forma ipsa, quando non separata accipitur.”
of existence”, Albert conceives of it, as we have seen, as the first formal component within the essence of an existing substance by which it exists. *Esse* in this sense is accidental and extrinsic to “essence considered in itself” since, again, essence thus considered lacks existence insofar as it is not the constituent of an actual substance. But it is extrinsic to essence within an existing human only in the sense that it does not come from “essence considered itself”. Instead, for Albert, “esse as act of existence” is the first formal perfection without which an existing human would have no other formal perfections, such as good, true, animal, intellectual, and so on. As such, we could say that it is the most essential feature of any existing essence, although it is the least determinative feature. Just as human is only conceptually distinct from animal within an existing human’s essence, so existing is for Albert only conceptually distinct from the existing human.

In short, Albert holds *esse* to be a form and to be not ontologically other than essence in things. In that sense, we may say, he is an “essentialist” about existence (though it is an accident relative to essence considered in itself). Essence is the only ontological constituent found in all created beings apart from the *suppositum* and its accidents. Existence is a feature of the essence or *esse* in things that are. But there is a real distinction in creatures between *esse* and that which they are, between *quod est* and *quo est*; *esse* in this distinction comprises both essence and existence. Certainly, for Albert, *to be* (*esse*), simply speaking, is to be *actually*, but it also always involves being *something* actually. This is why Albert writes: “If we call him [i.e. God] ‘a being’ (*ens*), two [things] are signified, namely, essence and what has essence (*habens essentiam*).”371 The conceptual distinction between essence and *esse* as existence, we may say, is but a further development on Albert’s part within the primary real composition in creatures of supposit and essence or *esse*. It is to this real distinction that Albert refers at the end of his career, even when distinguishing essence from its act or *esse*. The text can be read accurately and meaningfully once one has in mind Albert’s many senses of *esse*:

And so, we happily concede that “the composed” follows upon “the created”; for, in no creature is it true that “the created”, with respect to “that which is”

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371 Alb., *Super Dion. de div. nom.* 1.50, Ed. Colon. 37/2, 32, Ins. 49–51; see also *Metaph.* 7.1.2, Ed. Colon. 16/1, 317, Ins. 69–70. This is not to say that *ens* does not signify “esse as the act of essence”, or even “esse as the act of essence”, since these are part of what it means to be a complete *ens* (and part of what it means to be an essence in existing things); see esp. Alb., *Metaph.* 5.2.12, 250, Ins. 45–61, quoted above, note 345.
(id quod est), is its essence “by which it is”. Only in the first principle is this true; and for this reason only it is simple, and only in it is quod est the same as quo est. This is not the case in other things. For, in those, quod est is the subject of being (esse). And, because this subject is, as it were, a foundation in which esse is founded, and essence is that whose act is esse, and esse is the act of the essence in “that which is”, [so] also these establish a diversity among themselves.\footnote{Alb., Summa de mir. scient. dei 2, q. 3, m. 3, a. 2 ad sc 2, Borgn. 32, 34b–35a.}

9. ALBERT’S DOCTRINE ON SUBSTANCE

Isabelle Moulin

Substance is one of the most fundamental but also most complex notions in medieval philosophy insofar as it involves different historical traditions, with their various approaches, definitions, and translations from one language to another, and insofar as it stands at the crossroads of various parts of philosophy—logic, natural philosophy, metaphysics, and so on—and has a profound relation to theology, especially in such doctrines as the Trinity and transubstantiation. The complexity of the doctrine is amplified in the case of an author such as Albert the Great, who borrows from many diverse traditions. It would be impossible to settle the whole matter of substance within the present confines. Here we shall focus upon the second tractate of Albert’s paraphrase on the Categories, which provides easy access into Albert’s theory of substance as the first Aristotelian category of being. An extended treatment would have to examine in detail and by way of contrast the discussions in the Metaphysica, especially in Books 7 and 8, in the paraphrase of the De causis, in the Dionysian commentaries, as well as in the monumental early and late theological syntheses.

Let us begin, instead, however, with the brief but insightful presentation of the definition of “substance” that forms the second topic, after essence, in Albert’s question from late in his Parisian regency, the De quiditate et esse. Of special interest is Albert’s identification of the precise notion of substance as opposed to subject and matter. “Substance”, he says, according to the intention of the name, is “what substands (substat) as such”, and in this way Aristotle considers it in his Predicaments.\footnote{Alb., Quaest. de quiditate et esse, Ed. Colon. 25/2, 271, Ins. 33–49.} Albert adds “as such”, he explains, since prime matter is not actually necessary for the constitution of substance. Rather, what is essentially called substance is “what is composed of what essentially perfects and what is essentially
perfectible”. He puts it this way to cover both corporeal and spiritual composites, only the former of which are composed of matter and form. And he adds “essentially” (twice) since accidents, even if they bring perfection, “constitute” (faciunt), with what they perfect, not substance, but the subject. For, “subject”, by contrast, is defined by Isaac Israeli as “a being in itself complete”, as if to substance were added the notion: providing the “occasion” for another to exist in it; namely, for an accident to exist in it.374 What is “subjected” to accidents is “thrown underneath” (subtus iactum) “after (post) the perfection”, as it were.

Albert’s brief ex professo exposition of substance refers us to none other than Aristotle’s Categories, so we do well to follow him. In paraphrasing Categories 5 a few years later on the definition and properties of substance, Albert prefaces his account with an incisive introductory chapter, at the outset of Tractate 2, of three modes of substance. Such digressionary introductions are a commonplace in Albert’s paraphrases. As usual, Albert goes on to follow Aristotle’s text quite closely, introducing remarks he thinks necessary in order to resolve difficulties of the text. Accordingly, Tractate 1 had treated the fundamental distinctions between homonyms, synonyms, and paronyms, and the quadripartite division of “beings” in terms of universal versus particular accident, and universal versus particular substance. By contrast, this opening digressive chapter appears to transform to some degree the global meaning of Aristotle’s theory of substance. The first consideration of substance, begins Albert by way of summary, is as the first and principal part of being (ens): as what is truly in itself and is the cause of existing (causa existendi) for all other things.375 This formula certainly invokes Aristotle’s Metaphysics and can be given an Aristotelian sense, but it also invites one to think how Aristotle’s work, in Albert’s eyes, achieves its unity through primary substance understood as a first efficient and final cause. The second consideration is as first predicatable, to which are resolved all predicates of its order, whereas the third consideration is as first subject, to which all predicables are reduced as to their subject (lns. 14–18). Albert later confirms that the first mode belongs to metaphysics, whereas the Categories treats of the last two, and

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especially of the third, which is the proper sense of “primary substance” there.\textsuperscript{376}

Albert goes on to expand on the three modes. According to the first, substance is a being that exists per se (\textit{ens per se existens}), not in another, nor by having from another the cause of its existence.\textsuperscript{377} He proceeds to describe substance in this first sense using characteristics that increasingly appear to belong only to the divine substance: it is invariable and incorruptible essence, which is the cause of existing for all other things, the simple act of the first cause, through which subsist all things that are per se (lns. 21–23). Yet, he then characterizes this act as caused: the first cause produces it according to the similitude of its substance; it is “per se” as not being through another \textit{which is caused}, but rather as the first thing caused in the mode of existing (lns. 23–26). This is the “substance” or “essence taken simply” (\textit{substantia simplex et essentia})\textsuperscript{378} of the \textit{Liber de causis}.\textsuperscript{379} Compare the account in Albert’s \textit{Metaphysica} 7:

There is, moreover, another mode of understanding this same matter, so that by “simple substance” is named that nature that is the “what” and the being (\textit{esse}) of primary substance, which makes primary substance be what it is. For, this, if it is taken as in the truth of its own essence, involves no differentia of place or time…. And in this way forms that are the “what” of existing things, when they are taken in their simple nature, are everywhere and always [in contrast to the way God is everywhere and always]. And, in this way, they are prior to time and place; and time and place accrue to them when they are the being (\textit{esse}) of existing things. And because, taken thus, they are prior to time and place, they are consequently prior to any accident…. But the intelligibility (\textit{ratio}) of substance [in this sense] has nothing

\textsuperscript{376} Alb., \textit{De praedic.} 2.1–2, ed. Gremper, 180, lns. 95–96 and 3–6; see also 2.1, 178, lns. 33–34 (quoted below, n. 381).
\textsuperscript{377} Alb., \textit{De praedic.} 2.1, ed. Gremper, 177, lns. 19–22.
\textsuperscript{378} In his theological exposition of the two natures of Christ, Boethius translates \textit{ousia} as \textit{essentia}, \textit{ousiôsis} as \textit{subsistentia}, and \textit{hupostasis} as \textit{substantia}. As Cyrille Michon and Alain de Libera put it: “\textit{Ousia} or essence is what it is; \textit{ousiôsis} or subsistence is what is not in any subject; \textit{hupostasis} or substance is what is subjected to others that are not subsistences”; Thomas Aquinas and Dietrich of Freiberg, \textit{L’être et l’essence}, 16; see also Boethius, \textit{Contra Eutychen et Nestorium} 3, 214f., in Boethius, \textit{De consolatione philosophiae}, \textit{Opuscula theologica}. In his translation of the \textit{Categories}, however, Boethius translates \textit{ousia} as \textit{substantia}. The unification of the two translations leads to the characterization of primary substance in terms of subsistence and of secondary substance in terms of essence.
\textsuperscript{379} For \textit{simplex substantia}, see Alb., \textit{De causis et proc. univers.} 2.2.45, Ed. Colon. 17/2, 138, lns. 44–51, and \textit{Liber de causis} 14 (15), ed. R. Taylor, ibid., 138, ln. 74; Alb., \textit{De causis et proc. univers.} 2.5.7, 174–175 and \textit{Liber de causis} 25 (26), 174, lns. 70–79; Alb., \textit{De causis et proc. univers.} 2.5.13, 15–16, 179–181. \textit{Simplex essentia} is identified with the “universal in re” of Plato at ibid., 2.2.22, 116, lns. 44–48.
extraneous in it, and for this reason, it is necessary that the intelligibility of substance is in the intelligibility of each accident [but not vice versa].”  

Substance in this sense, continues Albert’s De praedicamentis, according as it stands apart in its procession from the first cause, takes on properties that are not found in it according as it is predicable of the first cause. The discussion of such substance, unlike other senses, belongs to metaphysics:

And this substance receives composition, materiality, variability, potentiality, and particularity according to its procession and remoteness from the first cause; none of which it has according as it is in the first cause and according as it is from it. And, thus substance is treated where sensible substance is traced back (reducitur ad) to non-sensible substance, and non-sensible substance back to intellectual substance, and intellectual substance back to divine substance. The treatment of substance of this kind pertains to the first philosopher.

The second mode of substance, by contrast, clearly belongs to logic (ln. 42). It consists in the “first common predicatable to which every predicatable that is substance is traced back (ad . . . reducitur).” According to this second mode, substance is the first genus, the head of a series of ordered predicables in the same category, beginning with subordinate genera and species, and progressively descending to the most “specific species” and to individuals. Albert, appealing with the commentary tradition to Porphyry to introduce the Categories, presents a “coordination” of genera, intermediate genera, species, and individuals that follows the global pattern of Chapter 2 of the Isagoge. Since nothing is predicated of another, argues

380 Alb., Metaph. 7.1.3, Ed. Colon. 16/2, 319, Ins. 36–64; italics mark the lemma from Arist., Metaph. Z.1, 1028a34–36, as identified by the Cologne edition.
381 Alb., De praedic. 2.1, ed. Gremper, 178, Ins. 28–34.
382 Alb., De praedic. 2.1, ed. Gremper, 178, Ins. 35–36. Boethius in his translation of the Categories always uses substantia for the Greek ousia, and Albert accordingly speaks about substance in this second mode, and not essence. For the progressive use of essentia for secondary substances and substantia for primary substances, based on different translations of ousia in Boethius’s Contra Eutychen, see Thomas Aquinas and Dietrich of Freiberg, L'être et l'essence: Le vocabulaire médiéval de l'ontologie; deux traités De ente et essentia de Thomas d'Aquin et Dietrich de Freiberg, ed. Alain de Libera and Cyrille Michon (Paris: 1996), 15. The translation of ousia as substantia in the Categories clearly helped Albert, who rightly distinguishes the primary substance as the subject of the secondary substance. See below, note 389.
383 Alb., De praedic. 2.1, ed. Gremper, 178, Ins. 43–46.
384 For the second mode of substance, Albert relies on Porphyry’s Isagoge: substance is the highest genus, the most general genus, since there is nothing prior to it. Porphyry, Isagoge 2.7, in Categoriarum supplementa: Porphyrii Isagoge translatio Boethii et anonymi
Albert, unless it is the whole itself or the “form of the whole” (*forma totius*), and since the first subject of all predication (the individual) is a composite, therefore the first predicate (substance in this second sense) is also a “composite” and the “form of the whole” (insofar as that can be designated in the first predicate).\(^{385}\) In this way, he relates this second sense to the logic precisely of predication. It is the general category of *Categories* 5, which is “formable” by differentiae into subordinate genera and species. To the question, of what is it composed? Albert answers: it is conceptually composed of “a being” plus “per se”.\(^{386}\) He links the “per se” to “that which is” per se and is “this”. A second argument that substance is composite is derived from the fact that otherwise it would not be what exists in and through itself (*in se et per se existens*).\(^{387}\) But it is through the “form of the whole” or the “being of the whole” (*esse totius*) that it is a composite, which form and being are substance in the first sense of the term. This form, which gives the composite its formal *ratio*, emanates, as we shall see again in Section 12A below, from the divine Being and flows into all other substances.

The third mode of substance, says Albert—as similarly in the *De quidditate et esse*—is named from “the act of substanding” (*ab actu substandi*): in this way substance is what per se “substands” and gives to all else its ability to “substand”.\(^{388}\) In this sense, individual substance is the sole substance. This is not predicated, but from it is derived the “subjectability” of whatever is subjected. Thus, this third mode corresponds to the Aristotelian “primary substance”, that is, to the individual.\(^{389}\) It could appear at first that Albert interprets primary substance in terms of *substratum*, whereas Aristotle does not always relate individual substance to the

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385 Alb., *De praedic.* 2.1, ed. Gremper, 178, lns. 37–41. For “form of the whole” and, in general, its composition with the individual *quod est* in creatures, see Section 8A and C.


388 Alb., *De praedic.* 2.1, ed. Gremper, 179, lns. 70–74.

389 Arist., *Cat.* 2, 1b3–5, ed. Barnes, 1.4: “Some are neither in a subject nor said of a subject, for example, the individual man or the individual horse.”
substratum that receives many accidents. Yet, as in the De quiditate, Albert distinguishes between “substan- ding” and “subjecting”, though he does not here explicate the difference.

In Metaphysica 7, Albert identifies and discusses numerous senses and divisions of substance, not merely these three. So also in De praedicamentis 2.1, he adds that some things are called “substances”, not because they receive or partake of the notion of substance, but because they are principles essentially constituting substances: matter and form. They are “reduced to” substance according to the axiom “nothing makes substance through its essence except substance”. Albert adds, as in the De quiditate, that the proper principles of substance include, not matter, but (1) something proportionate to matter as “formable”: “that which is a what” (id quod est quid); together with (2) a second principle that has a proportion to form, which limits, distinguishes, and determines something in being (determinare ad esse), as say al-Fārābī and Avicenna: what gives being (dans esse). Even spiritual substances, as we saw Albert hold in the previous section, are composed of quod est and esse: supposit and essence.

After presenting the three modes of substance, Albert offers a summary that clarifies their differences. Substance according to its first intention is the essence: as such it is simple and is neither a genus, species, or individual. Substance in the second mode, instead, is composite and a primary genus. In this sense, substance is “formable” by subsequent differentiae and determinable to the being of species or individual—the species being more “substance” than the genus as proximate to primary substance. This is Aristotle’s secondary substance in the broadest sense, which is predicatable of a subject, the topic of Albert’s subsequent Chapter 3. Substance in the third sense is determined by matter, surface, and place to being this or that singular. This sense corresponds to Aristotle’s

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390 The notion of hupokeimenon, which is fundamental in the Aristotelian fourfold division of the Categories, is quite ambiguous in Aristotle, who never clearly defines this term. It can be matter underlying form (Arist., Metaph. A.3, 983a30), substratum (matter plus form) underlying accidents (that is, Metaph. 1037b16), or the logical subject of attributes (Arist., Cat. 3, ibid). See Liddell-Scott-Jones, Greek-English Dictionary, hupokeimai, II, 8. The notion of hupokeimenon illustrates how logic and ontology are mixed in Aristotle, since the same notion stands both as the logical subject of attribution and as the ontological substrate for material qualities.  
391 Alb., De praedic. 2.1, ed. Gremper, 179, lns. 62–69.  
392 Alb., De praedic. 2.1, ed. Gremper, 180, lns. 88–93.  
393 Alb., De praedic. 2.1, ed. Gremper, 179, ln. 78–p. 180, ln. 87.  
395 Alb., De praedic. 2.1, ed. Gremper, 180, lns. 82–83.
primary substance, the *hoc aliiquid* (ln. 87), the topic of Albert’s immediately next Chapter 2. By contrast, secondary substance is, not a *hoc aliiquid* (“this something” or “some this”: *tode ti*), but a *quale quid* (something of a kind; *poion ti*), composed of a *quale* or “formal” part, and a formidable *quid*, a quasi-material part (lns. 84–87). But substance in the primary sense, or essence simply taken, is neither “something of a kind” or “some this”. Thus, this sense appears to signify precisely the formal element in the genus of substance, which forms “that which is” or *quod est*, which is itself, as *essentia simplex*, neither universal nor particular, which is, in a sense, *ante rem* (prior to “that which is”), and which emanates from the divine through superior causes.

Before reviewing Albert’s accomplishment, we would do well to bear in mind one other use of “substance”: as a divine predicate. Let us use Albert’s late discussion in his *De causis* 1.3.6, which presents in a summary way a constant teaching. Albert writes:

Since in what has gone before it has already been proved that the first principle is not in the genus of substance or in the genera of accidents, yet whatever we have said towards designating the first has its significata in the genus of substance or in the genera of accidents, it is agreed that nothing according to the notion (*ratio*) that belongs to names can be predicated affirmatively of the First, since it surpasses the mode that belongs to all of these. Therefore, [the First] is not definable by any name. And, if it is called substance, this is said because it is beyond all substances and is beyond every notion of substance. Similarly, if it is called “a being,” by that concept, it is not called “a being” in the way that “universal being” (*universal ens*) is called “a being.” For, this is contracted in every “that which is” (*in omni eo quod est*) and it is determined and has no being (*esse*) outside it in act [but only in potency]—none of which [properties] belong to the first principle. Similarly, if it is called “one,” it is not the sort of one as “the one that is the unity that makes a thing undivided in itself and divided from others.” This unity is the proper terminus of a thing and something of its being (*esse*), which does not belong to the first. In a similar way, [the First is not named properly] if it is called “a thing”—which is said to be either a being verified [in nature] (*ens ratum*) or [a being] opined based on reality—given that such verificatio (*ratitudo*) is related either (1) to the principles that constitute a thing and comprise its very being (*esse*), or (2) to the consideration of the soul that receives [principles] through abstraction from such a thing. And, this [characteristic] also cannot belong to the first principle.396

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396 Alb., *De causis et proc. univers.* 1.3.6, Ed. Colon. 17/2, 41, Ins. 28–52 (citing Arist., *Metaph.* media trans.).
Thus, “substance”, no less than “being”, “one”, or “thing”, must be, according to the proper notion that belongs to names of effects, denied of God. At the same time, as Albert proceeds to acknowledge, all of these can be predicated of God insofar as they are in him as through a cause and exemplar (Ins. 53–74). The cause of substance, he explains, cannot but be substance, any less than the cause of wisdom is wisdom and of goodness, goodness. All of these are denied according to the sense of the name that falls into our intellect, although according to the nature of the thing itself, they are in God in a prior and incomparably more perfect way than they are in effects. And so, “substance” is predicated of God and creatures in a non-univocal way. Each form that is found in God as in an artisan, where each exists as in something absolutely simple and as united to every other form found there, becomes distinct in ratio from each other such form only as it proceeds, as does light, from the first cause.397

Albert says something similar of “substance” in the *Metaphysica*. Insofar as the first substance is named from effects, through which alone it is known, it is named by negation better than affirmation: “just as if I say that it is a substance, I would immediately say that it is not a substance because it is not in one genus with substance or anything else, and I would add that it is eminent beyond all substance, and it is the cause of all substance.”398 But certain names belong to the first cause in a prior way to the way they belong to others:

There are names, however, by which [the first substance] is named that name absolutely and per se the nobility and the goodness of the nature in each thing, as do: to be, to live, to understand, to be a substance, and wisdom, virtue, goodness, act, to be a mover, etc. For, all of these exist first (per prius) in [the first substance], and secondarily in others. And, in the way that they exist in others, they fall into secondary intellects, and in that way they are diminished from the nobility of the primary simplicity. Therefore, in that way they are not attributed to the first substance except through negation, eminence, and cause, as we have said.399

By parity of reasoning, however, as Albert puts it elsewhere, in the notion (ratio) according to which such names are predicated of the first cause, they are denied of effects.400

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397 Alb., *De causis et proc. univers.* 1.3.6, Ed. Colon. 17/2, 42, Ins. 6–23.
398 Alb., *Metaph.* 11.2.7, Ed. Colon. 16/2, 491, Ins. 86–90. For other senses of “substance” in a Trinitarian context, see Alb., *Super I Sent.* d. 8, a. 5, Borgn. 25, 227–28; and d. 23, a. 4. 592–593.
400 Alb., *De causis et proc. univers.* 1.3.6, Ed. Colon. 17/2, 41, Ins. 64–66, 72–74.
Retrospect. The first chapter of De praedicamentis is particularly instructive for Albert's metaphysics of substance. The Master of Cologne builds his account of substance around the Aristotelian distinction between primary and secondary substances. But one might wonder whether the global meaning of Aristotle's Categories is not deeply altered by Albert's threefold account of substance. The distinction between the three modes introduces a new classification and offers a hierarchical dimension absent from Aristotle's text. Whereas Aristotle begins his own chapter on substance-essence (ousia) with the distinction between primary and secondary substances, Albert presents primary substance as the third mode, only after having introduced a “substance in the primary mode” of his own. Even as Albert insists upon the distinction of disciplines, namely, between logic and metaphysics, the reader is invited, here in a logical context, to assign to the metaphysical sense of substance the most proper mode, absolutely speaking. Without introducing the problematic of the Metaphysics' first substance, the principle upon which “depend the heavens and nature”, which is pure act, Albert draws our attention to the fact that just as secondary substances are rooted in primary substances, so each are grounded in a form that is causally prior, which flows from higher Intelligences and ultimately from the light of the divine artist. Instead of taking actuality as a criterion for primary ousia, Albert takes up the Boethian distinction between essence-substance and “that which is” (see Section 8), against which he reads the Avicennian distinction between essence and existence, between essentia and esse. In this new ontology, actuality is

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401 See Alb., De praedic. 2.1, p. 179, lns. 74–77; chap. 2, 180, lns. 2–3; 183, lns. 81–84; chap. 3, 183, lns. 2–5; chap. 4, 190, lns. 2–15.
404 This distinction characterizes in Avicenna the first Necessary Existent, as opposed to the other existents and especially the other Intelligences (Avic., Liber de philosophia prima 1.5–6; 8.3; 9.4); for various interpretations of this distinction in Avicenna, see Amélie-Marie Goichon, La distinction de l’essence et de l’existence d’après Ibn Sīnā (Avicenne) (Paris: 1937);
the result of essence-substance, the primordial form that flows from the divine essence in which it exists as one with all other forms. Essence-substance is mediately received in the Intelligences, in “that which is”, before subsequently being received in a “quod est” that contains matter (see Section 12A). A whole set of distinct substances is thus hierarchically organized: the divine “substance”, the separate substances or Intelligences, and sensible substances, celestial and terrestrial.

Substance, then, for Albert constitutes the heart of the whole metaphysical system. Its priority is not only logical but also ontological: if there is no substance, there is no predication, and nothing other than the first cause exists. Substance is not only the subject of predication, or the substratum of accidents, but also the condition for the existence of causality and beings in the world. The interwoven movement of logic and philosophy is not proper to Albert, nor is it an innovation on his part. In a broad sense, it is first to be found in Aristotle, who underscores the logical priority of substance in the Categories and its causal primacy in Metaphysics Lambda. Neither Aristotle nor Albert blend the two dimensions thoughtlessly. They take note of the fact that some notions apply both to logic and First Philosophy. It is Albert’s own tendency, however, to lay stress on what he finds to be most foundational. This is particularly evident...


405 Alb., *De praedic.* 2.4, ed. Gremper, 190–191.
407 “So if the primary substances did not exist it would be impossible for the other things to exist”; Arist., *Cat.* 2b5.
408 “Substance is the subject of our inquiry; for the principles and the causes we are seeking are those of substances. For if the universe is of the nature of the whole, substance is its first part”; Arist., *Metaph.* 12.1, 1069a18. “For substances are the first of existing things, and if they are all destructible, all things are destructible”; *Metaph.* 12.6, 1071b5.
from his treatment of the Avicennian *triplex universale*,\(^{410}\) which becomes the pattern for the *triplex substantia*. Paralleling the logical order, in which we get to know and to name things as substances, is the real order that exists between those things and the primary causes. It is not enough for Albert to observe individual substances in the natural world and to notice that we have mental representations rooted in them: he also wants to go up to the primary origin of things and to manifest the underlying unity of reality. Hence, prior to commenting on Aristotle, he states and briefly explains to his reader that primary and secondary substances are rooted formally in the first Intelligences, and ultimately in God. As Alain de Libera puts it, all of Albert’s effort is employed in substituting, “the formal-exemplar causality of the philosopher-theologian for the formal-univocal causality of the theologian-philosopher”,\(^{411}\) and to favor the “theological separated universal” over the “abstract logical universal”.\(^{412}\) For, in his “Dionysian peripateticism”, Albert is more focused on the exemplar causality of “creative Being” as the emanative source of all that is than on “being *qua* being”. Yet, as the discussion of substance reveals, however “Dionysian” or “Avicennian” Albert may be, far from making his Aristotelianism disappear, it is an Aristotelianism transformed.

10. **Albert’s Arguments for the Existence of God and the Primary Causes**

*David Twetten*

For Albert, as we have seen, the existence of God and separate substances, far from being the subject matter of metaphysics, is one of the claims to be proved in First Philosophy.\(^{413}\) One could infer from one text even that this task belongs to metaphysics alone, not physics:

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\(^{410}\) See, in addition to Section 7, Avic., *Liber de philosophia prima* 9.7; Alb., *Phys.*, 11.6, Ed. Colon. 4/1, 10, Ins. 53–70 (above, n. 277); Alb., *De praedic. 2.3*, ed. Gremper, 184, Ins. 27–32; Alb., *De V univ. 2.3*, Ed. Colon. 1/1a, 24, Ins. 59–72; Alb., *De intellig. et intellig. 1.2.5*, Borgen. 9, 496; Alb., *Metaph. 5.6.5*, Ed. Colon. 16/1, 285, Ins. 57–72; Alb., *De causis et proc. univers. 2.2.22*, Ed. Colon. 17/2, 116, Ins. 44–62. For Albert’s dependence upon Avicenna in this connection, see Bertolacci, “Le citazioni implicite testuali,” 221–230.


\(^{412}\) Alain de Libera, *Métaphysique et noétique*, 227.

\(^{413}\) See above, Section 1, esp. notes 15 and 18.
It is clear from the aforesaid that some philosopher is superior to the physicist, since nature is a certain determinate genus and subject of being. For this reason, to examine these principles [of all demonstrations] will belong to the one who theorizes about universal being and who theorizes or contemplates about what concerns the first substance, which is the principle of all beings—and this is God himself. For, physics is indeed a certain philosophy, but it is not first philosophy, and therefore it does not belong to the physicist to know about these things.\footnote{\textit{Alb., Metaph. 4.2.1, Ed. Colon. 16/1, 173, ln. 61–p. 174, ln. 4; italics mark the lemmata in Arist., \textit{Metaph.} Γ.3, 1005a33–b2, as identified in the Cologne edition.}}


\textbf{A. The Metaphysica's Proposal and Surrogate Proofs in Book \textit{n}}

There is no question that for Albert the Peripatetic science of metaphysics provides a special argument for the first efficient cause or God. He puts this as follows:

\begin{quote}
In physics we considered matter and the efficient [cause]... Here however we shall show that the first and per se\footnote{\textit{See below, note 426.}} efficient [cause] is the universal
end, and that from it flow all movable substances, and that it [stands] in
relation to the universe as is the commander of an army [to the army]. For,
this is proper to this science, and in this way we shall not take anything from
natural science. For, although there we showed through motion that the
prime mover is immobile, nevertheless we did not show it [i.e. the prime
mover] according as it is the cause, form, and end of universal being. And
in this way we shall investigate the prime mover here. Hence, it is clear that
this theoria is far beyond the contemplation of physics.\textsuperscript{417}

The question is, then, where and how does Albert's Aristotle prove such
an efficient cause?

Against Averroes, Albert affirms that metaphysics, just as physics, stud­
ies all four causes,\textsuperscript{418} but he concedes to Averroes that it focuses on formal
and final, so that among efficient causes, its interest is principally first
movers and makers.\textsuperscript{419} Later in the passage just quoted, a digressionary
chapter entitled, “How the Physicist and the First Philosopher Make Use
of the Causes in Different Ways,” Albert explains:

The physicist considers these [four] insofar as they are principles of what is
movable, but the first philosopher resolves (\textit{reducit in}) the efficient into the
first form and ultimate end—and in this way it itself is the cause of universal
being and the form, and end.\textsuperscript{420} And, if it is taken as the first cause through
motion, this is not so that it may be known insofar as it is the mover of a
certain sort of motion, but rather insofar as it itself encompasses, by its own
power and form, what is movable and the motion that is an instrument of
the flow of the whole of being (\textit{totius entis}) from it. And in this way the
physicist does not consider it [i.e. the efficient cause].\textsuperscript{421}

\textsuperscript{417} Alb., \textit{Metaph.} 11.1.3, Ed. Colon. 16/2, 462, lns. 58–73; italics added. The words “in this
way” are emphasized since Albert does not exclude metaphysics' borrowing argumenta­
tion from physics for the existence of the prime mover as such; see below, note 451.

\textsuperscript{418} Alb., \textit{Metaph.} 11.1.3, Ed. Colon. 16/2, 462, ln. 81–p. 463, ln. 1; Alb., \textit{Metaph.} 3.2.1 and
3.3.1, Ed. Colon. 16/1, 113, lns. 60–65, and 138, lns. 67–72.

\textsuperscript{419} Alb., \textit{Metaph.} 3.2.1, Ed. Colon. 16/1, 113, lns. 56–58, translated above, note 111.

\textsuperscript{420} Alternatively, in the words in lines 69–70, “non tamen ostendimus ipsum, prout
ipsum est causa universi esse et forma et finis”, one might take the \textit{et... et as explicative
of causa universi esse} and argue that \textit{reducit} means “reduces to”. Nevertheless, in this and
the previously quoted passage, Albert is speaking of the first efficient cause, which is also
form and end. See also below, note 427. We shall see below how Albert’s paraphrases, in
fact, fulfill the promise of arriving at a first efficient cause of universal being, which is also
an exemplary formal and final cause; and how the first efficient cause, whether or not it is
also first mover, communicates even to all movable things, through the first motions, the
flow of the whole of being.

\textsuperscript{421} Alb., \textit{Metaph.} 11.1.3, Ed. Colon. 16/2, 463, lns. 1–10.
The question is, again, where does Albert see this promise fulfilled? Of course, Albert sees *Metaphysics* Λ.6 as focusing on immobile substance as the principle of mobile substance. The fact that there is a continuous, perpetual motion that is always caused by a perpetual mover, he remarks at the outset of the chapter, he has sufficiently demonstrated in Book 8 of his *Physica*, and the proof need not be repeated here. Instead, Chapter 6 principally proves that “that substance that is the mover of the first motion” is pure act, without any potency, and immaterial. Albert adds a property of his own, which he says “we will show below”: the first mover moves *through its essence*. Only such a mover need never cease acting, since motion is its act, just as illuminating is the act of light. Albert’s *Physica* had highlighted the importance of this property precisely in distinguishing the way the physicist and the metaphysician look at efficient causes:

[N]atural science proceeds only from those [principles, causes, and elements] that are taken in accord with the ambit that is common (*ambitum communitatis*) to the principles and causes in its own genus. And for that reason it accepts and gathers together every *physical* principle and every *physical* cause, but not, however, every efficient cause or every end. For, were [natural science] to accept every efficient cause, it would be necessary for it to extend to something non-physical, since the first cause is *efficient through its essence*, and physics does not aim at (*intendit de*) it, but [only] first philosophy. It is the same, moreover, with the ultimate end, which is the end of the universe and is in the first cause as in the commander of an army. Similarly, form and matter, resolved into (*reducta in*) the principle of substance as such, do not belong to the aim of natural [science], nor from such is anything proved in natural science.

Albert subsequently establishes this property in the course of demonstrating “in a different and stronger way” (than in Aristotle himself) that the first substance is unmixed with any potency. Albert’s own “stronger” demonstration expressly appeals to the conclusion of *Metaphysics* α.2, that there must be one first cause in each of the four genera of causes.

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422 For the answer, based on this passage, that Albert offers (and can offer) no proof of God as the cause of being—a position for which Aquinas criticizes him—see Doig, *Aquinas on Metaphysics*, 54, 202–204, 207–208, 210 and 335.


424 Alb., *Metaph.* 11.2.1, Ed. Colon. 16/2, 483, lns. 23–33.


426 Alb., *Metaph.* 11.2.2, Ed. Colon. 16/2, 483, lns. 80–p. 484, ln. 3.

427 Alb., *Phys.* 1.1.5, Ed. Colon. 4/1, 9, lns. 58–73; italics added.

This first cause must also be the cause of all the rest, adds Albert, since a second cause has from a first both that it is and that it is a cause. Such a first mover, he continues, must move through its essence; for, what moves through something added to its essence moves *per accidens* and therefore cannot be first. But what moves through its essence may never cease from its essential act as long as its essence remains. Therefore, it and it alone may cause an everlasting motion.

Can this proof, then, be Albert’s demonstration of God’s existence? The problem is that Albert goes on to apply similar reasoning to each of the perpetual celestial motions. In fact, he explicitly ascribes to a plurality of celestial causes several attributes that might have appeared proper to God alone: causing *per essentiam*; pure intelligence, lacking any potency in the intellect; pure act; thoroughly immobile; indivisible; immaterial; all-encompassing; existing always and everywhere, as does every intellect as such; simple or incomposite; and even per se existing. Furthermore, Albert discovers no subsequent proof in Chapters 6–10 that warrants the identification of the first mover with an absolutely first efficient cause, with a first being or first substance called God. Chapter 7, according to him, shows that what moves *per essentiam* moves on account of itself, and therefore is also an end desired by what it moves. But although the prime mover is thereby known as also the end of all that is below it—another conclusion promised as drawn in metaphysics—this conclusion again follows equally for the plurality of celestial movers of Chapter 8. Furthermore, for Albert, Chapter 9 discusses

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430 Alb., *Metaph.* 11.2.3, Ed. Colon. 16/2, 485, Ins. 36–42, on A.6, 1071b20–22; 11.2.32, 524, Ins. 69–70.  
Albert attributes the doctrine to Aristotle at ibid., 522, Ins. 83–85).  
433 For example, Alb., *Metaph.* 11.2.3, Ed. Colon. 16/2, 486, Ins. 4–11; 11.2.11, 497, Ins. 30;  
11.2.12, 499, Ins. 5–12; 11.2.30, 521, Ins. 50–52; and 11.2.32, 524, Ins. 71–72.  
434 Alb., *Metaph.* 11.2.15, Ed. Colon. 16/2, 502, Ins. 98–100; 11.2.19, 507, Ins. 7–13; and 11.2.21,  
509, Ins. 56–57; 11.2.30, 521, Ins. 43.  
11.2.21, 509, Ins. 38–56; 11.2.28, 518, Ins. 36; 11.2.30, 522, Ins. 40–54 (attributed to Aristotle at  
522.83–85); 11.2.32, 524, Ins. 71–73; and 11.2.33, 524, Ins. 90–p. 525, Ins. 23.  
the mode of understanding of the many separate substances, whereas Chapter 10 shows how the prime mover as end is the good to which all things are ordered. But why need a prime mover be the first substance or God?

B. The Peripatetic Supposition and Aristotle’s God in the Metaphysica

In one passage, after paraphrasing the proof in Chapter 6 of an everlasting, immaterial substance, Albert himself points to the inconclusiveness of Book 11’s reasoning:

But you should know that all these demonstrations are necessary on this supposition alone: that the first mover be the first substance. But Plato and his followers denied this, distinguishing the first efficient cause from the first moving cause. And, if this is true, then [the arguments] that have been introduced are not conclusive.

Let us be clear on what Albert is saying: the soundness of Aristotle’s reasoning for a first celestial cause is not in question. But that the first celestial cause is also the first substance is a supposition that has not been proved. Given the supposition that the first mover is the first substance, the conclusion of Chapter 6 is sound. In Albert’s words, “It is therefore clear that there is a first substance that is immobile, incorruptible, immaterial, everlasting and everywhere-existing.” But Book 11 offers no proof of the existence of a first substance as such, and no proof that the first celestial cause in question must be the first substance.

Albert tacitly uses this supposition throughout the rest of Book 11. For example, he reports or even embraces in the name of the Peripatetics the identification he sees them make between the prime mover of the heavens and the first substance in the universe. In making such an

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441 See Alb., Metaph. 11.2.30, Ed. Colon. 16/2, 520, Ins. 22–23; 11.2.36, 527, Ins. 60–63.
442 Alb., Metaph. 11.2.3, Ed. Colon. 16/2, 486, Ins. 61–66.
443 Alb., Metaph. 11.2.3, Ed. Colon. 16/2, 486, Ins. 53–56; italics added.
444 Alb., Metaph. 11.2.17, Ed. Colon. 16/2, 505, Ins. 38–47 (see below, notes 464–465). Given the same supposition, even Physics 8 is taken as discussing the first substance (ibid., 11.2.15, 501, Ins. 70–72). For the identification of prime mover and the first cause of universal being, see, in addition to the quotation in note 463 below, ibid., 11.2.17, 504, Ins. 71–80: “et suus motor [primi, diurni motus] est prima causa universi entis secundum Peripateticos...”. Similarly, throughout the Metaphysica Albert himself will speak of the first cause as first mover, as in Alb., Metaph. 1.4.8, Ed. Colon. 16/1, 57, Ins. 7–12; Alb., Metaph. 11.1.9, Ed. Colon. 16/2, 472, Ins. 94–p. 473, Ins. 4 (where he apparently identifies first cause and first sphere-mover); 11.1.11, 476, Ins. 29–37; 11.2.9, 494, Ins. 34–35; 11.2.11, 497, Ins. 33–46; 11.2.32, 524, Ins. 32–35; and 11.2.35, 527, Ins. 37–59.
identification, according to Albert, they were opposing the “Platonic” position that there exist separate efficient causes that effect no motion.\footnote{For this “Platonic” position, see Alb., \textit{Metaph.} 11.1.11, Ed. Colon. 16/2, 476, Ins. 82–86; 11.2.4, 487, Ins. 29–33; and 488, Ins. 9–11; 11.2.17, 504, Ins. 81–p. 505, Ins. 2; and 11.2.20, 508, Ins. 75–83.} The \textit{via Platonis}, for him, is founded on probable propositions, namely, that before the corporeal exists the incorporeal, and before the composite, the simple.\footnote{Alb., \textit{Metaph.} 11.1.8, Ed. Colon. 16/2, 468, Ins. 62–87, and 470, Ins. 31–32, 68–76; 11.2.22, 510, Ins. 21–24; 11.2.27, 517, Ins. 63–81; 3.3.2, 141, Ins. 10–13; 1.5.15, Ed. Colon. 16/1, 89, Ins. 64–69, quoted below, note 623; and Alb., \textit{Phys.} 8.1.11, Ed. Colon. 4/2, 570, Ins. 5–24.} Hence, for the Platonists, the first being, the principle of all being, is not conjoined to a body, nor is it in the same genus as anything caused. It is, instead, the “giver of forms” (\textit{dator formarum}; ibid.) to the first composite beings, the separate substances, and thereby to all corporeal things. Accordingly, “Plato” and the “Platonists”, in different ways, all affirm subordinate gods (or Intelligences), as well as a god who causes all of the other gods—none of which primary causes immediately effect any change in the proper sense.\footnote{Alb., \textit{Metaph.} 11.2.4, Ed. Colon. 16/2, 487, Ins. 29–33.}

Far from adopting the \textit{via Platonis}, nevertheless, Albert, speaking peripatetically, relentlessly criticizes all such positions as, not impossible,\footnote{Alb., \textit{Metaph.} 11.2.4, ed. colon. 16/2, 487, lns. 29–33.} but as conjectural, baseless and vain in philosophy, unworthy of consideration there, and simply erroneous.\footnote{Alb., \textit{Metaph.} 11.2.17, ed. colon. 16/2, 504, lns. 17–21, and 505, lns. 3–7, 26–31 (quoted below at n. 465); 11.2.27, 517, lns. 60–71, and 518, lns. 1–4 (below at n. 454).} The Peripatetic habit, on the contrary, is to say absolutely nothing which is not able to be proved through certain reasoning.\footnote{Alb., \textit{Metaph.} 11.2.12, Ed. Colon. 16/2, 504, Ins. 17–21, and 505, Ins. 3–7, 26–31 (quoted below at n. 465); 11.2.27, 517, Ins. 60–71, and 518, Ins. 1–4 (below at n. 454).} Since the first things cannot be demonstrated through causes that are \textit{prior} to them, their existence is demonstrable only through effects.\footnote{Alb., \textit{Metaph.} 11.2.12, Ed. Colon. 16/2, 500, Ins. 5–7; see also Alb., \textit{Phys.} 8.1.2, Ed. Colon. 4/2, 553, Ins. 40–48 (lemmata from Aristotle, \textit{Metaph.} H.1 251a5–8, as per the Cologne edition): “Considerandum igitur est de hoc, quomodo se habet. Est enim hoc nobis \textit{praev} opere utile, non solum ut sciamus in naturalibus motibus veritatem considerare, sed etiam ad sciendum primum principium, eo quod nos ipsum non possimus scire nisi ex posterioribus se; et ideo etiam metaphysicus in hoc primum motum perpetuum a physico accipiens per motum probat motorem esse; aliter enim motores scire non possimus nisi ex motibus ipsis . . .”.} Accordingly, explains Albert, the Peripatetics affirmed only as many separate substances as are necessary to account for evident
effects. And so, to affirm dormant causes or causes unrelated to motion amounts to idle speculation. Albert writes:

[T]he number of separated substances that cause motion should be taken to correspond to the number of those things that are moved, and were there some separate substances that do not cause motion, as Plato said, they would be superfluous, because causes cannot cause being (esse) among lower things (in inferioribus) except through the motion of superior things. Hence, whatever is said about causes or gods that do not cause motion, which are said to be prior to the prime mover, is an error according to philosophy…. Because none of these [i.e. incorporeal and corporeal gods, handed down from the followers of Socrates] can be proved through reason, [that such gods exist] should not be stated in philosophy, and the philosopher cannot dispute with those [ancients] because he does not share principles with them.

In Albert’s eyes, then, the Peripatetics had good philosophical grounds for supposing the first mover of the spheres to be the first substance. It follows that for him the supposition which founds the conclusion in Λ.6 to a first substance, even if undemonstrated, is justified by sound philosophical method. Nevertheless, this reading of Aristotle has an apparent consequence which Albert must face. If the proof of Chapter 6 for him demonstrates no cause other than the first mover of the heavens—which is then assumed to be God—and if, as according to Albert’s Physica, the immediate first mover of the heavens must be a sphere-soul, then is Aristotle’s God nothing but the soul of the outermost sphere?

What is most puzzling for the interpreter of Albert’s Metaphysica is that, apparently for the first and only time in his works, Albert answers, yes, to this question. He appears to be especially impressed by the statement of the Latin Aristotle calling god “an everlasting, most noble
animal” (Metaphysics Λ.7 1072b28–29, media trans.). The Peripatetics, he explains, applied this formula to the first heaven, which heaven was established in Physics 8 (as we have seen) to be a composite of the simple prime mover and of the first body moved by it. This composite received the name “god” as possessing a living, divine intellect; for, this life was said to be god, and “soul” was said to be “in” the celestial sphere. Albert puts the matter as follows:

To live, therefore, is the pure life of an intellect that is entirely separate, [and] this sort [of life belongs to] the first substance and the separate intelli-
gences. For this reason, according to the ancient philosophers, we say god is a sempiternal, most noble animal. And, this indeed is the definition given by the Peripatetics of the first thing that causes motion and is a composite, as we distinguished in Physics 8. And, it is composed of the prime mover that is simple, and of the first moved body. For, this was called “god” according to the ancients on account of the intellect that is divine and [on account of ] its having perpetuity and universality in causing. For, of this they said: such a life—which is always—is everlasting in god; and this, they said, is god. And, when they say that thus soul is in the celestial sphere, they do not say that soul has the same definition (ratio) as that soul that belongs to inferior animals. But as we remember having said in De anima 1, since every principle from which through its essence many operations come forth is called “soul”, for that reason they call separate substances “souls” because they effect many things essentially.

In this equivocal use of “soul”, Albert goes on to explain, Apuleius even defined god as “a soul governing the world with motion and reason”. Of course, as Albert observes, neither “animal” nor “soul” were thereby used univocally with that belonging to terrestrial life. The heavens have “soul” not as the actuality of their body but as a principle from whose essence multiple effects are accomplished. Nevertheless, in giving motion, this

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457 For the identification of this prime mover as a soul, see Alb., Metaph. 11.1.13, Ed. Colon. 16/2, 478, Ins. 71–82: “Et haec substantia animata est corpus caeli secundum sentientiam Peripateticorum. Ostensum est autem in VIII Physicorum, quod movens primum, quod est compositum ex motore et moto sive lato, est caelum primum… Item ibidem in fine VIII Physicorum ostendimus, quod primo primum movens est simplex penitus. Et hoc cum sic se habeat ad corpus primum sicut motor, pro certo habebit rationem animae et non naturae…”.
458 Alb., Metaph. 11.2.12, Ed. Colon. 16/2, 499, Ins. 35–53; italics mark the lemmata in Aristotle, Λ.7 1072b28–30, as identified in the Cologne edition.
459 Alb., Metaph. 11.2.12, Ed. Colon. 16/2, 500, Ins. 3–5, quoted below, note 463.
460 Alb., Metaph. 11.2.12, Ed. Colon. 16/2, 499, In. 47–P. 500, In. 3.
461 Alb., Metaph. 11.2.12, Ed. Colon. 16/2, 499, Ins. 49–53, quoted above, note 458.
substance is said by Aristotle to give life to what it moves; only by being alive through itself could its motion cause life in all other living things.\textsuperscript{462}

It follows, then, for Albert’s Aristotle in the \textit{Metaphysics} that the first cause is identical with the first natural mover of the universe, the mover that is conjoined to the outermost sphere. Albert makes the point explicit:

The habit of the Peripatetics, moreover, was to say nothing at all that they were unable to prove by certain reasoning. And, because nothing prior to the mover of the first heaven could be explored by reason, they used to affirm that nothing exists prior to the prime mover. Furthermore, because in all nature the mover of what is per se moved is proportioned and conjoined to its mobile [body], they therefore used to say that the prime mover is both proportioned and conjoined to the first mobile body, and that from these [two] there exists one thing which is per se moved. And, whether this is true or false, it is certainly the sense of Aristotle’s words in first philosophy, in \textit{On the Heaven and the Earth}, and in book 8 of his \textit{Physics}.\textsuperscript{463}

Albert here admits that Aristotle’s affirmation is unexpected. Furthermore, as one might guess, he subsequently acknowledges that the description of the heavens as an animal is (very possibly) erroneous:

\textit{[T]he mover of that [i.e. the first mobile body] is the first substance according to the Peripatetics, as we have said. And for this reason they said that that is an animal. And, it is quite possible that they erred in this. Nevertheless, they speak in this way, and their reason (\textit{ratio}) is the one we have stated.}\textsuperscript{464}

Albert here refers to the reasonableness of the Peripatetic approach, discussed above. For, immediately before he had said:

What certain people say, [namely,] that [the first substance] causes angels, and afterwards the orbs, cannot be proved through demonstration. Therefore, to say this is to speak outside philosophy, and we do not dispute and cannot dispute against this. And for that reason we refute topical arguments of this kind [mentioned above]. Hence, according to philosophical reasoning there cannot be a separate substance that is not related to motion and to something movable, and [there cannot be] anything moved prior to what is locally moved. Therefore, reason says nothing but that the first moved body is immediate to the first substance that moves [it].\textsuperscript{465}

\begin{flushleft}
\textsuperscript{462} Alb., \textit{Metaph.} 11.2.12, Ed. Colon. 16/2, 499, Ins. 15–26; see also 11.2.10, 496, Ins. 19–25.
\textsuperscript{463} Alb., \textit{Metaph.} 11.2.12, Ed. Colon. 16/2, 500, Ins. 3–17.
\textsuperscript{464} Alb., \textit{Metaph.} 11.2.17, Ed. Colon. 16/2, 505, Ins. 46–50.
\textsuperscript{465} Alb., \textit{Metaph.} 11.2.17, Ed. Colon. 16/2, 505, Ins. 24–34. See also ibid., 11.2.20 [digr.], Ed. Colon. 16/2, 508, Ins. 83–93, and 11.2.21, 509, In. 87–p. 510, In. 5.
\end{flushleft}
Still, why is Albert so tolerant of the conclusion that God is a celestial soul? Apparently a primary interest of Albert throughout Book 11 is to affirm the “Aristotelian” method of demonstrating causes through sensible effects. That Aristotle in Book 11 drew a false conclusion following this method does not condemn the method itself. Albert uses his disclaimers, which increase in frequency in Book 11, precisely in order to prevent any such false conclusion from being ascribed to himself.  

Two of the five disclaimers in Books 11–13, for example, serve as “bookends” at the beginning and end of the discussion of separate substances in Λ.6–10:

However, in what we are going to say henceforth, let no one think that we are saying something about our own meaning (intentione), just as we did not say anything [in this way] in any of the books on natural [science], but we shall only make known (declarabimus) the opinions of the Peripatetics about these substances [that are immobile, non-sensible, and indestructible], leaving to others the judgment as to what is true or false in what they say.

Just as we have attested in what came before, we do not pursue these claims [such as regard a divine agent in theology, acting through will], because in this enterprise we have undertaken to explain only the way of the Peripatetics. Whatever Plato said, let it possess the stability it can until perhaps it be explained by someone.

The irony is that Albert himself personally agrees, as we shall see, with most of the elements of the conclusion that he summarizes as Plato’s: that the first cause is prior to the prime mover, and that without motion or time it simultaneously made the prime mover and what it moves. But Plato did not arrive at this conclusion for the right reasons. Albert evidently believes that this mistake is more serious than Aristotle’s false conclusion.

Given Albert’s agreement with Plato’s conclusion, a problem arises for his treatment of the proof of God’s existence. If the first cause or first substance, which is to be identified as “God”, is beyond a first mover, and if the argumentation of the Peripatetics arrives at no more than a first mover, then it apparently fails to prove God’s existence. Now, if Albert’s intention were to deny that the Peripatetics successfully prove the existence of a first

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466 See, in addition to those quoted here: Alb., Metaph. 11.1.9, Ed. Colon. 16/2, 473, lns. 92–96; 11.2.10, 496, lns. 63–70; see also 11.2.3, 486, lns. 66–70, quoted above, note 442; and 11.2.31, 522, lns. 83–85.
467 Alb., Metaph. 11.2.1, Ed. Colon. 16/2, 482, lns. 23–29, on Λ.6, 1071b3–5.
468 Alb., Metaph. 11.3.7, Ed. Colon. 16/2, 542, lns. 20–25.
substance beyond the celestial movers, one would expect him to express this denial clearly. In fact, one finds in Albert’s paraphrases a defense of a first cause beyond the first mover, but the defense comprises two independent lines of reasoning, what we may call an argument “from above” and an argument “from below”. The argument “from above” proves the existence of a cause that is conceptually prior to the first mover; whereas the argument “from below” proves that the first mover must be really distinct and ontologically subordinate to the first cause. Let us begin with the former.

C. Albert’s “Aristotelian” Proofs in Metaphysics of a First Cause

Contrary to appearances, Albert does not leave unfounded his judgment, found in the first four passages quoted in this section, that Peripatetic metaphysics offers reasoning peculiar to itself for God’s existence. One finds at least two lines of argument that reach beyond the prime mover, one in Albert’s Metaphysica, another in his De causis, each of which can claim some provenance in the first two chapters of Metaphysics α of Aristotle, read under the influence of Avicenna (among others).

1. Albert’s Argument for a First Agent Cause of Being Based on Metaphysics α.1

In Metaphysica 11, as we shall see, Albert relies on this first argument, which he had presented previously in an unexpected place: in a digression on Δ.2, where he deals with different kinds of causality within each of the four causes. In order to address the Avicennian distinction between agent and moving causes, Albert first offers proof of the existence of a cause of being that is prior to the prime mover:

Furthermore, all multiplicity amidst things that simply and universally cause motion is necessarily traced back to (reducitur ad) one first mover. And, regarding it one must consider further whether or not it belongs to the same thing to produce being (facere esse) and to move that which is and is movable. For, since every being (esse) is necessarily from a first being (ens), given that the principle of universal being (universi esse) is necessarily one, I do not think any of the wise doubt that before the mover of this motion and this mobile [thing] is the being of this mover and of this mobile [thing]. But since this being (esse) is already in many things and is predicated of many, yet not in an entirely equivocal way, it must be traced back to one principle which is its cause and from which it flows into many. There will therefore be a cause of being prior in notion and in the order of nature to the prime mover. Furthermore, since it is a cause of being, it is not a formal cause; for, form exists in all these things of which it is form—and this
cannot be first. Nor can it be an end, since that is last in being. Therefore, it must be an efficient cause. Efficient cause is therefore prior to moving cause in the order of nature and of concept. And, being (esse) supposes nothing in [the order of] concept prior to itself from which it is.\textsuperscript{469}

The steps of the argument may be expressed as follows:

1. Being belongs analogously to all things—even prior to their moving or being moved.
2. What belongs to all things thus must be traced back to some one as to its cause—a cause of being that is therefore prior to a cause of motion or “moving cause”.
3. Since formal [and material] causes exist in the effect, and final causes of the effect are posterior, the prior cause must be a first efficient cause of being or “agent cause”.

Albert gives no defense for Premise (2), but his readers would recognize it as what grounds Aristotle’s argument in *Metaphysics* α.1 (993b24–31) that the cause of all truth is most true: “everything that is found in many and is univocal in them must be found in some one first that is the cause of all of them”, as Albert elsewhere reports Aristotle’s premise.\textsuperscript{470} However, Albert here neither alludes to the Aristotelian character of this argument nor ascribes it to Aristotle, nor does he put forward a similar argument in his paraphrase of Book 2. Yet the proof in the digression to Book 5 is important enough for Albert to embark on an extended discussion in which he infers from it a set of distinctly divine properties of this primary “agent cause”: it acts through its essence and so is a separate rather than a composite substance; it is the unique cause of the first effect in all things that are, being, by continually causing all things to be *ex nihilo*, with nothing presupposed (even if some things have always existed); and, it is equivocal with its effects, receiving nothing from them, so that it alone is a true

\textsuperscript{469} Alb., *Metaph.* 5.1.3, Ed. Colon. 16/1, 213, lns. 57–77. For Albert’s affirmation of a kind of efficient causality that is neither creative nor moving, see esp. ibid., 11.2.20 [digr.], Ed. Colon. 16/2, 507, lns. 81–87, as well as Section 12A below.

\textsuperscript{470} Alb., *Phys.* 8.2.5, Ed. Colon. 4/2, 597, lns. 28–33, where the premise is used to prove a first among movers: “Et haec probatio fundatur super tres propositiones, quaram una accipitur ex secundo *Metaphysicorum* Aristotelis et est, quod omne quod invenitur in pluribus et est univocum in illis, oportet, quod inveniatur in uno primo, quod est causa omnium illorum…”. In Alb., *De mot. animal.* 1.1.4, Borgen. 9, 264b, the premise is used to establish the fact that all moving substances resemble the first separate moving substances, the Intelligences. See also Alb., *Super Dion. de div. nom.* 4.44, Ed. Colon. 37/1, 178, lns. 47–53; and chap. 5,206, 315, lns. 42–46. See also Vincent de Couesnongle, “La Causalité du maximum: L’Utilisation par S. Thomas d’un passage d’Aristote,” *Revue des sciences philosophiques et théologiques* 38 (1954), 433–44, 658–680.
agent cause, whereas all others are agents only in a qualified sense, as receiving their agency from it.\footnote{471}

As Albert observes, finally, the investigation into such agent causality is proper to metaphysics:

This, therefore, is the true consideration of agent cause according to the proper consideration of this [science of] wisdom. And, from this consideration it is known (scitur) that the moving cause… belongs to the consideration of the physicist. The first agent cause, however, acts through a separate essence, and this belongs properly to the consideration of the first philosopher. It is also known how being (esse) depends on this cause, and how it is one of the four causes and the first among them. It is also known, from the things that have been said, how certain [thinkers] have said that there are five causes, since they divided the efficient [cause] from which follows being (esse) insofar as it is being, from the moving cause insofar as it is moving.\footnote{472}

One might imagine that Albert's argument in Book 5 has thereby arrived at a first agent cause of being that is ontologically beyond the prime mover or "soul" that is conjoined non-hylomorphically to the outermost sphere, as we have seen. If so, then it appears that Albert backtracks in Book 11 in defending the Aristotelian supposition, contrary to Plato, that agent and moving causes are one. Nevertheless, Albert is quite clear here in Book 5 that the priority of the agent over moving cause, and of being over motion, is in the order of nature and intelligibility (without necessarily entailing separate entities in reality).\footnote{473} It may still be that the first agent here proved is also the prime mover, as Aristotle's \textit{Metaphysics} supposes. By contrast, Albert in Book 11 has justification for referring to the fact that being (esse) belongs to all things except one insofar as they are "possible with respect to it" and are "not purely necesse esse".\footnote{474} For, Albert relies on his discussion in Book 5. Accordingly, he writes in Book 11:

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\textsuperscript{472} Alb., \textit{Metaph.} 5.1-3, Ed. Colon. 16/1, 214, Ins. 32–39.

\textsuperscript{473} See Alb., \textit{Metaph.} 5.1-3, Ed. Colon. 16/1, 213, Ins. 70–71, 76–77 (quoted above, n. 469), and 214, Ins. 1–11, 41–56. According to the latter, the number of causes can therefore be considered, depending on one's point of view, to be four or five. For a discussion of the sorts of priorities mentioned here, see Section 3.

\textsuperscript{474} Alb., \textit{Metaph.} 11.2-3, Ed. Colon. 16/2, 486, Ins. 19–35: "Sed esse semper diversimode convenit primae substantiae et substantiae inferiori secundae, quia prima substantia sic semper est, quod tota simul, non divisa nec distensa per formam et ubi. Inferior et secunda
“Existing per se” is also said in opposition to that which is “existing through a cause”. Thus, the first divine substance alone is a thing existing per se, because it alone has absolutely no cause in being (esse). . . . And, in this way we said above in book 5 of this [science of] wisdom that it alone is a necessary being in that it has no potency that depends on any other cause.475

And, it is precisely under the (Avicennian) title of necesse esse that Metaphysica 11 distinguishes the prime mover that is God from all other prime movers:

[S]ubstances of this kind [immaterial] that cause motion through their essence must be sempiternal. But the first among them, along with this, must be the necessary being; and what the necessary being is we have said in book 5 of this [science of] wisdom.476

We may say, then, that Book 11 of Albert’s Metaphysica, helped by the argumentation of Book 5, does identify and ascribe to Aristotle at least one attribute that can only belong to the First Cause or God: a per se necessary being that is the cause of the being of all other things. This attribute can be ascribed also to the prime mover by a supposition that sound methodology requires.

2. Albert’s Argument for a First Uncaused Cause Based on Metaphysics α.2 and Physics 8.5

In the De causis et processu universitatis 1, Albert gives what we may take to be a second Aristotelian argument for a first cause. Book 1, unlike Book 2,
is Albert’s own composition, not a paraphrase of the *De causis*, in which he discusses the properties of the first cause and what proceeds from it. From the words with which Albert concludes the *De causis*, we may gather that he intends Book 1 also as part of the completion of Peripatetic metaphysics.

In hoc ergo libro ad finem intentionis pervenimus. Ostendimus enim causam primam et causarum secundarum ordinem et qualiter primum universi esse est principium et qualiter omnium esse fluit a primo secundum opiniones Peripateticorum. Et haec quidem quando adiuncta fuerint XI *Primae philosophiae*, tunc primo opus perfectum est.477

After rejecting a number of erroneous positions at the outset of Book 1, Albert proposes in Tractate 1, Chapter 7 to demonstrate that one first principle exists in every genus of cause.478 This demonstration in turn serves as the basis for his subsequent proof of two key attributes of the first cause: that *esse* and *id quod est* in it are identical (Chapter 8); and that the first is therefore entirely *necesse esse* (Chapter 9). Chapter 7, then, opens with Albert’s observation that although there are many “ways” of proving a first in each genus, there is one that is most powerful, reasoning as follows (14, ln. 89–p. 15, ln. 7):

1. In every genus of things in which an intermediate is found composed of two opposites, the simple extremes can also necessarily be found by themselves.
2. But in the genus of *causes*, some things both cause and are caused.
3. Therefore, there necessarily exist also (a) what only causes, and (b) what is only caused.

But why is it necessary that the simple extremes *actually exist* as opposed to merely being conceivable? In the rest of the chapter, Albert presents five original proofs refuting what he takes as the alternative: that there be an infinite series of intermediates both causing and caused. The first proof is the simplest and perhaps most powerful of the five (15, ins. 12–32):

4. Any intermediate caused cause is resolvable into something prior to it as its cause and into something posterior to it as its effect.


478 Alb., *De causis et proc. univers.* 1.1.7, Ed. Colon. 17/2, 14, ins. 89–92.
5. Hence, were there a series of intermediates that is infinite as to beginning or end, it would be resolvable into something prior to it as its source and something posterior to it as its end.479

6. But premise (5) is an impossible consequence, since the infinite has nothing prior or posterior to it, no beginning or end.

7. And so, in every genus of causes, there must be a first principle which is an uncaused cause, and an ultimate term which is a non-causing effect.

Albert’s proof here tacitly resembles an argument of *Metaphysics α.2,480* the chapter in which Aristotle, just as Avicenna after him, proves, similarly, that there cannot be an infinite series in each of the four causes. In proving a first efficient cause, Aristotle uses the same abstract division into intermediate causes and extremes, without relying merely on motion. And Aristotle uses the division in a similar way, reducing a purportedly exhaustive class of intermediate causes to an infinite series in order to deny its possibility.481 The important point is that through such a proof,

479 One may wonder how this argument may avoid the “fallacy of composition”.

480 Aristotle, *Metaphysics α.2, 994a11–19*. In the course of the proof in the *De causis*, Albert expressly refers (Alb., *De causis et proc. univers.* 1.1.7, Ed. Colon. 17/2, 15, ln. 8) only to Aristotle’s *Physics* 8 (c. 5, 256b14–27) and its version of a proof that argues from the existence of what is composed of opposites to the existence of the opposites by themselves, a version that uses mover and moved, and does not rely on the denial of an infinite series. In fact, Albert’s *De causis* here also summarizes, as an equivalent alternative to the version that uses only cause and effect, the argument of *Physics* 8.5 using mover and moved (ibid., 15, Ins. 8–12; see also 16, Ins. 25–27). Nevertheless, the same reference to *Physics* 8 can be found also in Albert’s paraphrase of the proof of *Metaphysics α.2*, a proof that Albert there reads only in terms of motion (Alb., *Metaph.* 2.6, Ed. Colon. 16/1, 97, Ins. 6–11). Note also that both in the latter and in the *De causis*, Albert considers at length the objection that an infinite temporal series is in fact possible (ibid., 97, ln. 12–p. 98, ln. 9; and Alb., *De causis et proc. univers.* 1.1.7, Ed. Colon. 17/2, 15, Ins. 33–52). On the other hand, in contrast to Albert, Aristotle’s own proof in *Metaphysics α.2*, without employing motion, actually uses the reasoning of *Physics* 8.5, not of 256b14–27, but of 256a4–21, in order to reject an infinite series. Avicenna’s version, which inspires Albert’s, is quite close to Aristotle; Avicenna, *Liber de philosophia prima* 8.1, vol. 2, 376, ln. 10–p. 379, ln. 2.

481 In the *Metaphysica*, after paraphrasing Aristotle’s central argument in Λ.6 that there must be a first substance that is entirely in act and in no way in potency, Albert adds a “stronger” proof of his own, a proof that is expressly founded on the argument of *Metaphysics α.2*, and which summarizes the latter with the abstract terms “cause” and “caused”, though it concludes to a first moving cause: “Hoc autem adhuc aliter et fortius demonstratur. Revoctetur enim nobis id quod in II huius sapientiae habitum est, omnes videlicet causas in quolibet genere causae resolvit ad unam primam, quae est causa omnium alienarum, eo quod causa secunda a prima causa habet et quod est et quod causa est. Omnes igitur moventes causae resolvuntur ad caussam primam moventer” (Alb., *Metaph.* 11.2.2, Ed. Colon. 16/2, 484, Ins. 48–55). For the abstract use of this proof, see also Alb., *De causis et proc. univers.* 2.2.17, Ed. Colon. 17/2, 110, Ins. 35–42. It is possible that Albert, because he interprets the prime mover as possibly God during his paraphrase of Book Λ, comes to see a new role for the proof of *Metaphysics α.2*. 
Aristotle in the *Metaphysics* can be regarded by Albert as proving, without using motion, an absolutely first cause that is not necessarily the prime mover. Once again, such a proof establishes a first cause that is conceptually prior to, but need not be ontologically beyond, the prime mover. No reasoning introduced thus far requires us to withdraw the Peripatetic supposition, deemed appropriate by Albert up to this point, that the first cause is also the prime mover. For such reasoning, we need to turn to Book 2 of Albert’s *De causis*.

D. Albert’s Proof in the *De causis* of a Triad of Separate Substances as Celestial Causes

Albert’s *De causis* provides the key as to how he reconciles the prime mover proved in physics and metaphysics as a celestial “soul” with his monotheist account of a Peripatetic cosmos. As we have already seen, Albert regards the discussion in the *Liber de causis* of the “primary causes” as the completion of Aristotle’s metaphysics. His remark to this effect at the outset of his paraphrase in *De causis* 2 indicates that he has in mind precisely the discrepancy between Plato—with whose conclusions he agrees—and Aristotle, whose method he follows:

> Since it belongs to the metaphysician to treat of separate substances—upon which Plato and Aristotle made determinations in diverse ways—a determination is made here about separate substances according to the full truth. Aristotle made a determination about these in *Metaphysics* 12 and 13 only according to opinion. Therefore also this book [i.e. the *Liber de causis*] should be joined together with First Philosophy in order that from this [book] it [i.e. First Philosophy] receive its final completion (*perfectionem*). 483

Albert realizes that the *Liber de causis* was not composed by Aristotle, but he regards it nevertheless as having its origins in Aristotle. For late Albert, it was composed by ibn Daoud, based on the propositions of Aristotle’s lost epistle *De principio universi esse*. 484 Ibn Daoud added propositions

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482 For the terminology, see especially *On the Causes and Procession of the Universe from the First Cause* 2, Tractate 1; e.g. Alb., *De causis et proc. univers.* 2.1.1, Ed. Colon. 17/2, 59, Ins. 2–9.

483 Alb., *De causis et proc. univers.* 2.1.1, Ed. Colon. 17/2, 59, ln. 34–p. 60, ln. 5. See also the quotation at note 477, translated in note 22 above.

484 Alb., *De causis et proc. univers.* 2.1.1, Ed. Colon. 17/2, 61, Ins. 65–68; see also Alb., *De intell. et intellig.* 1.2, Borgn. 9, 479b; and Alb., *Problem. determ.* 10, Ed. Colon. 17/1, 53, Ins. 6–8. See the studies by Alarcón and de Libera cited above in this volume, in the entry on Physics, note 135. Early Albert acknowledges that “there are those who do not attribute
from Avicenna and Farabi, ordered the propositions in the manner of theorems, and provided commentary proving each theorem, as did Euclid in his *Elements*. Thus, Albert has no hesitation in seeing the *Liber de causis* as a Peripatetic work, containing certain doctrines of Aristotle himself. As a result, Albert can avail himself of the suggestions of a work that we know as part of the Plotiniana Arabica in fleshing out a Peripatetic cosmos that is monotheist.

As before, Albert, in effect, deploys a two-pronged argument strategy to distinguish God from the celestial movers: an argument from below and from above. The former allows Albert to separate ontologically a celestial soul from an Intelligence; the latter allows him to separate Intelligence from God.

1. The Heavenly Bodies are Moved by Two Immaterial Movers: Soul and Intelligence

Just as Plotinus separates the realms of Soul and Intellect, so the emanation scheme common to many 10th–13th-century Islamic and Jewish philosophers separates nine or ten celestial souls, which are responsible for each of the main astronomical orbits, from the equivalent number of Intelligences. Accordingly, Albert in the course of paraphrasing the *Liber de causis* offers some seven arguments that the proximate movers of the heavens must be souls, not Intelligences, and some five further arguments that there must also be separate Intelligences moving the proximate movers or celestial souls. Many of the arguments are found in previous

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485 Alb., *De causis et proc. univers.* 2.1.1, Ed. Colon. 17/2, 59, Ins. 9–18.

486 Throughout his works, Albert frequently ascribes the treatise to Aristotle: e.g. Alb., *De IV coaeq.* q. 1, a. 1 ad 4, Borgen. 34, 30a; Alb., *Phys.* 8.1.4, Ed. Colon. 4/2, 557, Ins. 69–72; 8.1.13, 577, Ins. 35–36; Alb., *De caelo et mundo* 2.3.14 (quoted below, n. 655), Ed. Colon. 5/1, 174, Ins. 77–78; and Alb., *Problem. determ.* 1, Ed. Colon. 17/1, 47, Ins. 7–9 (quoted below, n. 537); see also Alb., *Summa de mir. scient. dei* 2, q. 4, m. 2, a. 1c, Borgen. 32, 82b.

works of Albert, though they were not there explicitly used to prove two separate causes for each celestial motion. Also, some of the arguments are repeated in subsequent personal works of Albert, the *Problemata determinata* and Book 2 of the *Summa de mirabili scientia dei*, in which he also presents a triadic account of celestial causality. Albert’s reasoning may be abbreviated as follows.

1. There are features of celestial motions that require a separate immaterial cause that cannot be an Intelligence.
2. There are features of celestial motions that require a separate immaterial cause that cannot be a Soul.
3. Therefore, each perpetual rotation of a celestial sphere requires at least two separate, immaterial causes, Soul and Intelligence.

The reasoning is straightforward, requiring of us to understand only what is meant by Soul and Intelligence in order to assess the features in question. We may examine the attributes of each, following Albert’s frequent practice, according to what belongs to “soul as soul” or “Intelligence as Intelligence”. Of course, Albert’s conclusion will be that celestial souls have special operations, not in virtue of themselves, but by participating in superior Intelligences through an intellectual light.
S) A Soul as soul (unlike an Intelligence): (1) is not something separate, but is conjoined to a body, toward which it is inclined as a mover and of which it is in some way the act, spread out over or diffused through it as a principle of life and motion; (2) it has no operation separate from a body. It does not “unfold” (explicit) form in things inferior to it, but distributes form through a body, by being spread out over its multiple powers; (3) it moves through will, can either cause or not cause motion, and so does not remain in a uniform condition, therefore (4) it does not cause simple, continuous, regular, temporally infinite motion; but (5) it causes motions that are directed to a particular time and place, and not to every place.

By contrast, an Intelligence as such has opposite properties:

I) An Intelligence as Intelligence (unlike a soul as such): (1) is separate, not naturally conjoined to a body, is not the act of a body and has nothing in

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489 Alb., *De causis et proc. univers.* 2.1.11, Ed. Colon. 17/2, 73, Ins. 37–57, where Albert also denies, of course, that celestial soul is the entelechia or corporeal form of its body; see also 2.2.3, 96, Ins. 8–25.

490 Alb., *De causis et proc. univers.* 2.1.3, Ed. Colon. 17/2, 63, Ins. 35–37; 2.1.11, 74, Ins. 37–41; 2.2.1, 92, Ins. 50–56 (quoted below, n. 517); and 1.4.7, 53, Ins. 36–42 (ascribed to Avicenna); see also Alb., *Metaph.* 11.2.12, Ed. Colon. 16/2, 499, Ins. 20–26.

491 Alb., *De causis et proc. univers.* 2.2.38, Ed. Colon. 17/2, 132, Ins. 51–64 (on *Liber de causis* 13 [14], ed. R. Taylor, ibid., 134, Ins. 77–84); 2.5.18, 183, Ins. 85–89; and 184, Ins. 16–18, 26–29.

492 Alb., *De causis et proc. univers.* 2.1.11, Ed. Colon. 17/2, 73, Ins. 58–63; 74, Ins. 32–39; for soul as a cause of motion, see ibid., 2.3.2, 140, Ins. 60–61; see also 2.2.5, 99, Ins. 4–5.


495 Alb., *De causis et proc. univers.* 2.5.18, Ed. Colon. 17/2, 184, Ins. 11–37.


497 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 93, Ins. 37–42; and 2.3.2, 141, Ins. 8–18; see also 1.4.7, 54, Ins. 6–9, 18–19, and 35–37 (ascribed to Averroes et al.).

498 Alb., *De causis et proc. univers.* 2.3.2, Ed. Colon. 17/2, 140, Ins. 57–82.

499 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 92, Ins. 68–69 (quoted below, n. 519), 93, Ins. 15–16; and 2.3.2, 140, Ins. 53.

500 Alb., *De causis et proc. univers.* 2.1.14, Ed. Colon. 17/2, 78, Ins. 40–46; 2.2.1, 92, Ins. 61–p. 93, Ins. 10 (quoted below, n. 519); and 2.2.5, 98, Ins. 87–p. 99, Ins. 7; 2.3.2, 140, Ins. 51–58, see also 1.4.7, 54, Ins. 1–7 (ascribed to Averroes et al.).

501 Alb., *De causis et proc. univers.* 1.4.7, 54, Ed. Colon. 17/2, Ins. 8–12, 58–66 (ascribed to Averroes et al.).

502 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 92, Ins. 57–60 (quoted below, n. 517); and 1.4.7, 54, Ins. 45–46 (ascribed to Averroes et al.). See also Alb., *De caelo et mundo* 1.3, Ed. Colon. 5/1, 9, Ins. 59–70 (ascribed to Avicenna); and Alb., *Summa de mir. scient. dei* 2, q. 53, m. 3, quaest. 1, ob 1, Borgen. 32, 566b (ascribed to the philosophers).
common with it; it is not in contact with a body and cannot act on a body; it has universal ideas that maintain their indivisibility and uniformity, and that, as always and everywhere, have no relation to a particular time or place; and so, it remains in a uniform condition and therefore it remains perpetually uniform and regular in its causality and is able to cause a perpetual and infinite motion; and (5) it has no proportion or inclination to particular bodies or motions, but moves universally.

In light of this distinction between Soul and Intelligence, Premises (1) and (2) may be expanded so as to show the properties of celestial motion that require two prior causes. Each expanded premise is accompanied by one half of a single, continuous passage from Albert's *De causis* that best lays out his reasoning.

1.1) Each celestial sphere requires a cause that is naturally conjoined to its body, which is its act as a cause of its motion, which is therefore proportionate to the body and finite in strength (and thereby accounts

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503 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 92, Ins. 56–57 (below at n. 517); 2.2.3, 95, In. 84–p. 96.28; 2.2.36, 129, Ins. 19–24; and 2.5.18, p. 184, Ins. 16–22; 1.4.7, i. 53, Ins. 36–42 (ascribed to Avicenna). See also Alb., *Problem. determ.* 2, Ed. Colon. 17/1, 49, Ins. 49–56 (quoted below, n. 525); and Alb., *Summa de mir. scient. dei* 2, q. 53, m. 3, quaest. 1, ob 1, Borgen. 32, 566b (ascribed to the philosophers).

504 Alb., *De causis et proc. univers.* 1.1.4, 10, Ed. Colon. 17/2, Ins. 12–18 and 37–38 (ascribed to the Stoics).

505 Alb., *De causis et proc. univers.* 2.5.18, Ed. Colon. 17/2, 184, Ins. 11–37.

506 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 92, Ins. 30–44, 92, In. 64–p. 93, Ins. 10 (quoted below, n. 519); 2.3.2, 141, Ins. 2–5; and 2.5.18, 184, Ins. 23–24; see also 1.4.7, 54, Ins. 74–79 (ascribed to Averroes et al.).

507 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 93, Ins. 7–8 (quoted below, n. 519), 93, Ins. 16–18; 33–35; 2.2.3, 141, Ins. 63–67; and 1.4.7, 53, Ins. 21–32, 34–34, 54, Ins. 1–7 (ascribed to Avicenna, Averroes et al.).

508 Alb., *De causis et proc. univers.* 2.2.5, Ed. Colon. 17/2, 99, Ins. 1–7; and 2.3.2, 141, Ins. 20–34.

509 Alb., *De causis et proc. univers.* 2.3.2, Ed. Colon. 17/2, 140, Ln. 80–p. 141, Ln. 27; and 2.2.3, 141, Ins. 62–68.

510 Alb., *De causis et proc. univers.* 2.1.14, Ed. Colon. 17/2, 77, Ins. 31–34; see also 2.1.10, 72, Ins. 78–81.

511 Alb., *De causis et proc. univers.* 1.4.7, 54, Ed. Colon. 17/2, Ins. 8–12; 58–62; and 76–77 (ascribed to Averroes et al.).

512 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 93, Ins. 68–73; 2.3.2, 140, Ins. 47–50. See also Alb., *Metaph.* 1.2.12, Ed. Colon. 16/2, 500, Ins. 9–17 (quoted above, n. 463); 11.2.17, 504, Ins. 11–13; and Alb., *De mot. animal.* 1.4, Borgen. 9, 265a. See also Alb., *Problem. determ.* 2, Ed. Colon. 17/1, 49, Ins. 44–49 (quoted below, n. 525); and Alb., *Summa de mir. scient. dei* 2, q. 53, m. 3, quaest. 1, ob 1, Borgen. 32, 566b (ascribed to the philosophers).

513 Alb., *De causis et proc. univers.* 2.1.3, Ed. Colon. 17/2, 63, Ins. 35–37; 2.1.9, 71, Ins. 41–43; 2.5.18, 184, Ins. 19–22; and 1.4.7, 53, Ins. 36–42 (ascribed to Avicenna). See also Alb., *Problem. determ.* 2, Ed. Colon. 17/1, 49, Ins. 44–49 (as quoted below, n. 525); and Alb., *Summa de mir. scient. dei* 2, q. 53, m. 3, quaest. 1, ob 1, Borgen. 32, 566b (ascribed to the philosophers).

514 Alb., *De causis et proc. univers.* 2.1.11, Ed. Colon. 17/2, 74, Ins. 8–13 and 25–47.
for the fact that each sphere, given its particular size, has a particular direction and velocity); through this cause forms are applied to bodies. We say, therefore, following the Peripatetics, that two arguments compelling [us] to affirm Intelligences are most powerful. The first of these is from the motion of celestial things. For, since celestial things are moved of themselves (a se) and not by a generator, it follows necessarily that nature is not their mover. Since, moreover, everything moved has a mover conjoined to itself, as was proved at the beginning of Physics 7, and we observe that the celestial bodies are moved, it is necessary that they be moved by a mover conjoined to themselves, which is [their] act, that is, the perfection of the mobile [body] per se, not per accidens. But an Intelligence is, of its [very] notion (ratio), the act of no body. Therefore, the celestial body does not have as mover an Intelligence that is a mover conjoined to a body. It remains, therefore, that it has as mover a soul.

2.1) Each celestial sphere also requires a cause of its uniform, simple, regular, temporally infinite motion, and of its being directed to every place it occupies.

Still, the soul as soul cannot be the principle of a motion that is uniform, simple, regular and infinite through time. For, it is fitting that the principle of what is uniform and regular be uniform and regular. But there is no uniform and regular principle except an Intelligence that holds itself uniformly and regularly in all time. For, the soul as soul does not hold itself uniformly and regularly unless it is formed and contained by what is uniform. Hence, Aristotle in De anima 3 says that "the intellect is always right, but phantasia is both right and not right". The prime mover in any mobile [body] that is moved uniformly and regularly is therefore necessarily uniform and regular. Therefore, it is necessary to attribute to each motion of the heavens a uniform and regular mover, which can only be an Intelligence, which pours into (influat) the soul uniform, regular, continuous, and infinite motion, [and] which is the first and immobile mover.

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515 Alb., De causis et proc. univers. 2.1.3, Ed. Colon. 17/2, 63, Ins. 35–48, where Albert echoes Averroes's conclusion that the proximate mover could not move a sphere that had more stars than is proportionate to its power; 2.1.9, 71, Ins. 41–43 and 70–75; 2.2.1, 93, Ins. 68–73; see also Alb., Metaph. 1.1.2.12, Ed. Colon. 16/2, 500, Ins. 9–17 (quoted above, n. 463); Alb., Problem. determ. 1, Ed. Colon. 17/1, 47, Ins. 4–23 and 53–57; q. 17, 54, Ins. 85–87; 55, Ins. 15–19.

516 Alb., De causis et proc. univers. 2.2.38, Ed. Colon. 17/2, 132, Ins. 59–64 (on Liber de causis 13 [14], ed. R. Taylor, ibid., 134, Ins. 79–84).

517 Alb., De causis et proc. univers. 2.2.1, Ed. Colon. 17/2, 92, Ins. 48–60.

518 In addition to the following quotation, see Alb., De causis et proc. univers. 2.2.1, Ed. Colon. 17/2, 93, Ins. 11–19, 31–36, 46–52, and 56–59; 2.3.2, 140, Ins. 83–p. 141, Ins. 18; see also 1.4.7, 54, Ins. 20–26, 58–63, and 74–80 (ascribed to Averroes et al.).

519 Alb., De causis et proc. univers. 2.2.1, Ed. Colon. 17/2, 92, Ins. 61–p. 93, Ins. 10, citing Aristotle vetus, De anima 3.10, 433a26–27.
Another passage summarizes especially well Albert’s subsequent dual affirmation of celestial soul and Intelligence, Premise (3).\footnote{520 For the dual affirmation of Premise (3) as a conclusion, see also Alb., De causis et proc. univers. 2.2.1, Ed. Colon. 17/2, 93, Ins. 60–62; and 2.3.2, 140, Ins. 37–p. 141, ln. 34.} Notice also Albert’s first disclaimer in his De causis, at the beginning of Book 2, as well as the terminology of the Liber de causis: “noble” soul for the proximate celestial mover.

The “noble soul” (\textit{anima nobilis}), according to the Peripatetics—whose meaning (\textit{intentio}) we explain here, saying nothing about our own, but interpreting their meaning insofar as we are able—is not the soul of animals or humans, but the soul of the celestial orbs. For, everything that is moved by itself necessarily has a mover conjoined to itself. But nothing is moved by itself locally except by a soul. And, for this reason the Peripatetics said that the heavens are moved by a soul, and that each heaven has its own soul. But this soul, desiring the light (\textit{lumen}) of the Intelligence, moves the heaven “toward” the Intelligence with a motion that is, with respect to position, always and everywhere, so that [the soul] might “unfold” (\textit{explicet}), through the motion of the heaven, the light of the Intelligence [that has been] poured into it (\textit{sibi influxum}), and so that it might bring [it] forth in effects (\textit{producat ad effectum}). For, Intelligence as Intelligence, taken in itself, cannot be a conjoined mover.\footnote{521 Alb., De causis et proc. univers. 2.1.2, Ed. Colon. 17/2, 62, Ins. 34–48. For Albert’s reticence in De causis 1 in calling the proximate mover a “soul”, see below, note 588.}

And so, since a soul as soul does not cause perpetual, regular motion without the influence of Intelligence, and Intelligence as such is not a proximate mover, a soul must move a celestial body by receiving the intellectual forms through which it acts from an Intelligence, which it loves as an end and object of desire.\footnote{522 Albert’s argumentation for distinct celestial souls and Intelligences, although heavily indebted especially to Avicenna and Averroes, displays one marked difference. Albert does not appear to argue from the finitude of the celestial soul’s power to the infinite first. All of the celestial movers are infinite in power in relation to what is below them, but are finite in relation to the first cause, which alone is properly infinite; see below, note 535.}

One may object: do not disclaimers such as the aforementioned one force us to dismiss the account of celestial movers in the De causis paraphrase as irrelevant to Albert’s personal thought? Several other quotations from a late, clearly personal work provide an adequate reply. Albert’s Problema determinata is his formal response, of April 1271, to the request of the master general of his Dominican order to evaluate a series of controversial propositions defended by a lector at the Dominican priory in
Venice.\footnote{523 See Daniel Callus, “Une œuvre recémment découverte de S. Albert le Grand: De XLIII problematis ad Magistrum Ordinis (1271),” Revue des sciences philosophiques et théologiques 44 (1960), 243–61; James Weisheipl, “The Problemata Determinata Xliii ascribed to Albertus Magnus (1271),” Mediaeval Studies 22 (1960), 3–16.} Albert, Aquinas, and Kilwardby were asked to indicate whether “the saints” would accept a given proposition, and whether the Dominican masters would accept it, or, if not, whether its affirmation could at least be tolerated.\footnote{524 See thomas Aquinas, Responsio ad magistrum Ioannem de Vercellis de 43 articulis, prol., in Aq., Opera omnia: Iussu impensaque Leonis XIII P.M. edita (Rome, 1882–), vol. 42: 327, Ins. 7–14.} Consequently, in response, Albert highlights the teachings of philosophy to show that the philosopher’s Intelligences are not the theologians’ angels, as in the following four quotations:

Furthermore, it has been proved [in philosophy] that in local motion, the proximate mover, between which and the mobile [body] moved there is nothing, cannot be an Intelligence, since the immediate mover of the body is an act of the body—which [mover] cannot cause motion naturally unless it is the act of the body that it moves. That, however, which is identical in its substance, its being, and its notion cannot be the act of a body but is a separate Intelligence, which has nothing in common with anything.\footnote{525 Alb., Problem. determ. 2, Ed. Colon. 17/1, 49, Ins. 44–52.} Now that these things have been made known in this way, it is therefore clear that an Intelligence does not cause motion except as immobile, in the way that what is desired moves desire. For, since an Intelligence by its own light (lumine) actualizes all of the forms of its own sphere and order, and [since] those forms are its light, the proximate mover, also desiring to educe this light into being (ad esse deducere), moves an orb and by moving [it] draws form into being. All of these things, moreover, have been proved in philosophy, and the proofs of the philosophers have been carefully explained by us in the Book on the Causes. It is clear, therefore, that an Intelligence is not an angel—and, if it were, it would still not be the proximate mover of any celestial sphere. And if it is so—which has been proved with the greatest certitude—then angels do not move the celestial bodies by [their] ministry.... Furthermore, should someone say that at God’s command the angels move the celestial spheres, that motion will be a motion of obedience, and not a natural [motion]. And, about this [matter], nothing can be determined through philosophy, because the principles of philosophy, which are per se known axioms, do not suffice for this. And, for this reason, he who speaks this way, because he is not holding the principles of philosophy, ought not talk with the philosopher. For, Aristotle says that the conversation of a geometer is not with a non-geometer.\footnote{526 Alb., Problem. determ. 2, Ed. Colon. 17/1, 50, Ins. 24–47, citing Aristotle, Posterior Analytics 1.12, 77b9–14; italics added.}
And, this [that Intelligences are the movers of the celestial bodies] has been infallibly proved by the philosophers, and here we have briefly laid out the argument by which the philosophers have proved this.527

The celestial movers stand in comparison to their bodies moved, which are the celestial orbs, just as the souls of animals [stand] in relation to their bodies.528

2. **The First Cause Is Other than the Celestial Soul and Intelligence**

It follows from the previous set of arguments that the first cause, as arrived at in subsection C above, cannot be the proximate celestial mover. But it could be an Intelligence. Accordingly, Book 2 of Albert’s paraphrase of the *Liber de causis* offers an “argument from above” as the second prong of his attack: he gives three reasons from the divine nature why the absolutely first cause or God cannot be the proximate mover of the heavens, a celestial soul, or even the immediate “mover” of this proximate mover, a celestial Intelligence. Just as Plotinus affirms the One as ontologically prior to and other than Intellect, Soul, and Nature, so Albert accepts the emanation scheme common to 10th–13th century Islamic and Jewish philosophers insofar as it affirms (except in Averroes) the one God above the Intelligences, celestial souls, and celestial bodies as the source from which all emanate.529 Albert’s reasoning may be abbreviated as follows.

1. The First Cause or God is in no way proportionate to its effects, for three reasons:
   a. because of its infinity, simplicity, and eternity;530
   b. because divine goodness in itself, given its simplicity and purity, exceeds all desire;531
   c. because the first intellect, as absolutely simple and infinitely powerful, shares no genus in common with its effects or with other intellectual agents, which are related to it only analogously; thus, it does not touch or mix with effects.532

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527 Alb., *Problem. determ.* 4, Ed. Colon. 17/1, 50, Ins. 72–75.
528 Alb., *Problem. determ.* 17, Ed. Colon. 17/1, 55, Ins. 12–15. For the reasoning, see ibid., q. 2, 49, Ins. 28–33, 41–43; q. 12, 53, Ins. 35–39. The doctrine is ascribed to Aristotle at ibid., q. 21, 56, Ins. 45–46.
529 For the triad ascribed to Aristotle, Avicenna, and Averroes, see also Alb., *Summa de mir. scient. dei* 2, q. 53, m. 3, quaest. 1c, Borgen. 32, 567ab; for a personal view, see ibid., 569ab; q. 57, m. 2, ad 3. 581b; and q. 77, m. 1, ad 5, Borgen. 33, 70b–71a.
530 Alb., *De causis et proc. univers.* 2.2.1, Ed. Colon. 17/2, 94, Ins. 47–64 (quoted below in n. 536); 2.2.17, 110, Ins. 74–76.
531 Alb., *De causis et proc. univers.* 2.5.18, Ed. Colon. 17/2, 184, Ins. 1–10.
532 Alb., *De causis et proc. univers.* 2.3.3, Ed. Colon. 17/2, 141, Ins. 76–p. 142, Ins. 37; see also 2.4.1, 156, Ins. 60–88, on *Liber de causis* 19 (20), ed. R. Taylor, ibid., 158, Ins. 74.
2. By contrast, Intelligences as celestial movers (and \textit{a fortiori} celestial souls):
   a. must have some proportion to their effects in order to cause them;\footnote{See, in addition to note 463, ibid., 2.2.17, 110, Ins. 59–62, 77–80; Alb., \textit{Metaph.} 11.2.15, Ed. Colon. 16/2, 502.11–48; and Alb., \textit{De princ. mot. proc.} 1.4, Ed. Colon. 12, 53, Ins. 53–58.}
   b. must be finite in degree of goodness, proportionate to a celestial soul's desire;\footnote{In addition to note 531, see also Alb., \textit{De causis et proc. univers.} 1.3.3, Ed. Colon. 17/2, 38, Ins. 68–p. 39, Ins. 13, where despite insisting that not only an efficient cause but also an object of desire must be proportionate to its effect, Albert apparently holds that the first cause, not in itself, but as desired, can be finite. See also Alb., \textit{Problem. determ.} 7, Ed. Colon. 17/1, 54, Ins. 36–45.}
   c. must be proportioned to the first intellect, in which they participate and whose infinite power their own infinite power imitates; accordingly, they “touch” or are “mixed” with their effects through something they share with them: \textit{esse}.

3. Therefore, the first cause can be neither the proximate nor immediately remote cause that is naturally ordered to the motion of the heavens.

Two quotations, from the \textit{De causis} and the \textit{Problemata}, effectively capture Albert's thought:

And in this way the light (\textit{lumen}) of each agent intellect, [though] one in essence, is distinguished and determined according to diverse being (a) in the powers (i) of the moved mover, which is the soul, and (ii) of the heaven that is moved by it, and (b) in the active and passive powers that are subordinate to it. For, the light of the first cause is of such great simplicity that in that simplicity, it is proportionable to nothing. The influx of the first Intelligence, however, is proportionate to the first soul, and through the soul, to the first heaven and to the motion of the first heaven. And, by the same argument it is necessary that through an Intelligence of the second order, [the light] is proportioned to the soul of the second sphere and to the motion of the same, and so on all the way down to the Intelligence of the tenth order, as we have said above. For, the form of the first Intelligence is not immediately proportioned to prime matter except through

\footnote{In addition to note 532, see Alb., \textit{De causis et proc. univers.} 2.3.4, Ed. Colon. 17/2, 142, Ins. 64–67, 143, Ins. 3–18; and 2.4.1, 156, Ins. 60–88; see also ibid. 2.2.17, 17/2, 110, Ins. 54–71. According to Alb., \textit{Problem. determ.} 16, Ed. Colon. 17/1, 54, Ins. 52–63, all of the celestial movers below the first cause, although they are infinite in power in relation to what is below them (even though this is a qualified infinity, e.g. in duration, not in strength, according to Averroes; ibid., Ins. 64–80), are finite in relation to the first cause, which constitutes them in being and in power. And, according to ibid., q. 1, 47, Ins. 75–p. 48, ln. 4, no creature, as finite, can naturally cause an infinite motion, as Aristotle has shown, and so can mediate the properly infinite power of the first cause.}
many intermediaries. . . . For, it is not possible to descend from the First to
the last except through many intermediaries. 536

Does God immediately move some body according to the order of
nature such that, as Aristotle proves at the beginning of Physics 7, mover and
moved have an immediate union? . . . If [the question] is understood of the
sort of mover such that out of it and its mobile [body] there comes to be one
[thing] by nature, as out of body and soul, or [as out of] the heaven and the
mover of the heaven, as Aristotle says, it is agreed that “since the first rules
all things in such a way that it is not commingled with them,” as Aristotle
says in the Book on the Causes, God in this way moves no body immedi­
ately. . . . For, were this granted, it would follow that God would in some way
be the act of a body and would have power proportioned to moving it. . . . It
would also follow that God would not be the first cause. For, nothing by
nature unitable to another can be the First. . . . This has been discussed by us
with demonstrative arguments in our Book on the Causes. 537

E. The Immediacy of the First Cause of Obediential Motion

One may object that Albert’s final position leaves us with a Peripatetic
notion of God as a first cause of being that flows to all other beings—as a
first cause that is, ironically, only thinly connected (through Metaphysics
α.1) to Aristotle’s first cause of motion, the prime mover. Albert’s late Prob­
lemata, however, develops a theme that indicates a deeper unity in Albert’s
synthesis than this objection would suggest. As we have seen, Albert there
sharply rejects the idea, which he had maintained in his Sentences com­
mentary (see below, note 545), that God is the immediate natural mover
of the heavens. However, Albert’s Problemata identifies another way in
which God exerts immediate and even unique causality over all motion:
not through the order of nature, but through command of his will; that
is, not through nature, but through “the motion of obedience”. 538 Albert
explains this divine causality by comparison to the doctrine “proved with
necessity” in Physics 8.4: what generates a natural body by causing its form
causes also what follows upon its form, its natural motion and place. 539

God, however, clarifies Albert, gives form, not through generation, but
through the influence of His primary causality, that is, as the cause of

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536 Alb., De causis et proc. univers. 2.2.1, Ed. Colon. 17/2, 94, lns. 47–64.
537 Alb., Problem. determ. 1, Ed. Colon. 17/1, 46, ln. 86–p. 47, ln. 23, citing Liber de causis
19 (20), 158, ln. 74.
538 Alb., Problem. determ. 1, Ed. Colon. 17/1, 47, ln. 24–p. 48, ln. 21; see also q. 2, 50,
lns. 39–47; q. 5, 51, lns. 4–12.
539 Alb., Problem. determ. 1, Ed. Colon. 17/1, 48, lns. 4–11.
being. By causing the being of all form, then, God causes all motion consequent upon form. Furthermore, God in moving all things in this way can have no medium. In order to prove this point, Albert draws on the conclusion of Physics 8.10 that there must be a mover of infinite power. But no thing other than God, adds Albert, can through its own nature cause an infinite motion, since such a thing is created. Because God causes even the celestial movers themselves both to be and to be movers, they are not infinitely powerful without qualification. Thus, God alone immediately moves all things through obedience. Albert even takes occasion to affirm that Aristotle agrees also on this point.

F. Résumé

We have by now watched Albert develop and defend his account of the primary causes of the universe against the background of Peripatetic philosophy as he understands and presents it. In his Metaphysica he takes Aristotle to identify, through a supposition, the proximate prime mover of the heavens with the first cause, even as the first cause is also proved there to exist through metaphysical reasoning independent of motion. In his De causis, however, Albert presents Peripatetic reasoning (rigorously arguing from effects to causes, unlike in “Platonic” speculation) for a triad of “primary causes” prior to each celestial motion: a soul and an Intelligence for each, in addition to the one first cause. In retrospect, one can discover in texts from the early 1250s Albert’s references to such a triad, even if his affirmations are not yet fully backed up by evidence, whether from the text of Aristotle or from conclusive Peripatetic reasoning. In fact,

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540 Alb., Problem. determ. 1, Ed. Colon. 17/1, 47, ln. 75–p. 48, ln. 4.
541 Alb., Problem. determ. 16, Ed. Colon. 17/1, 54, Ins. 55–58.
542 Alb., Problem. determ. 1, Ed. Colon. 17/1, 47, Ins. 24–63. As evidence, Albert again reinterprets the important text from De caelo 2.6 (see above, n. 455) according to which the first cause moves the first heaven (ibid., Ins. 26–29). He now takes Aristotle as referring to God’s immediacy as an obediential mover, without in any way denying the role of the proximate celestial movers. For, by tracing the plurality of motions of the first stellar sphere to one prime mover, which also thereby moves all the lower spheres, Aristotle, argues Albert, can only be referring to an obediential mover, since a conjoined, natural mover causes only one kind of effect (ibid., Ins. 29–57). Subsequently, Albert attributes to Aristotle’s De principio universi esse and to the Liber de causis the doctrine that the first cause alone strictly causes the being of things (ibid., q. 10, 53, Ins. 6–8).
543 See especially Alb., De sex prin. 1.2, Ed. Colon. 1/2, 6, Ins. 8–19 (quoted above; see, in this volume, Physics, at n. 163); Alb., De mot. animal. 1.1.1, Borgen. 9, 258b–259a; and the argument of Al., Metaph. 11, tractate 3, chap. 2–7. Amos Bertolacci, “Subtilius speculando,” 328–29, aptly observes that Albert’s De causis is more Avicennian on the triad of
we know that with such affirmations Albert was returning to the main outline of an original position that he had defended in the early 1240s, well before becoming a master of theology at the University of Paris in 1245. However, in his *Sentences* commentary composed as a master, he had rejected the mediate causality of a celestial soul or Intelligence and had affirmed God as the sole and immediate primary cause, even of celestial motion. As he himself indicates, his concern there was to avoid equating the teachings of the philosophers with those of the Bible on two issues: to avoid identifying the universal causality of God with the celestial souls of the philosophers; and to avoid identifying the proximate movers of the heavens with the angels of Scripture, as he himself had once done. As the disclaimers in Albert’s Peripatetic paraphrases indicate, these two issues continue to haunt him throughout his career. It appears that his original position of the 1240s underwent some theological criticism (from his own students while a master at Paris?) analogous to the sort of objections raised, and accepted by Albert himself, against the Dominican lector of Venice in 1271. Albert’s oeuvre composed after leaving Paris, beginning with the Dionysian paraphrases, reflects an extended effort to show the consistency of the best philosophical and theological thought on these issues, while retaining the independence of the conclusions and the integrity of the approach of each of these disciplines. In the end Albert has clearly distinguished the work of the universal celestial causes, souls and Intelligences, from that of both God and angels.

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primary causes than Albert’s *Metaphysica*. But in retrospect, *Metaphysica* 11, Tractate 2 (just as Book 2 of the *Sentences* commentary), represents the departure from Albert’s default position elsewhere: to accept the triad—although he often does not distinguish sharply between a non-hylomorphic celestial soul, with powers of intellect and will alone, and an Intelligence. This default position does not prevent Albert from continuing to express preference for Averroes’s way as more authoritatively Peripatetic than Avicenna’s, especially insofar as Albert has always rejected an inherent and imaginative celestial soul; see Alb., *De causis et proc. univers.* 1.4.7, Ed. Colon. 17/2, 53, ln. 3; and 54, lns. 79–80.

544 Alb., *De IV coaeq.* q. 16, a. 1c, Borna. 34, 438ab; q. 16, a. 2c, ad sc 6, 443ab and 445a.

545 Alb., *Super II Sent.* d. 14, a. 6, Borna. 27, 266ab. For the rejection of Intelligences, see ibid., d. 3, a. 3c, 65a.

546 The first and last disclaimers in Albert’s *De causis* are directed specifically at this issue; see above, note 521, and *De causis et proc. univers.* 2.5–24, Ed. Colon. 17/2, 191, ln. 24–p. 192, ln. 11 (quoted above in this volume, in Physics, n. 32).

547 See Twetten, “Albert’s Early Conflations,” which needs to be supplemented with the discovery of Albert’s own redactions of his *De quattuor coaequaevis*; see Rigo, “Zur Redaktionsfrage der Frühschriften.”
A. Some Difficulties

When discussing divine causality in his paraphrase of the Liber de causis, Albert pays close attention to two aspects of the problem: how it is possible for God to create anything and how it is possible for anything to be created by God.

1. Can God Create Anything?

Several considerations suggest that God cannot bring anything other than himself into being.

First, however often the origination of creatures has been described in terms of emanation—how can we avoid picturing an efflux of God himself, if nothing but God exists until he has caused it?—that language seems quite inappropriate. The same water is in both source and stream, whereas the same divinity is not in both God and creatures: pantheism involves mistaken notions not only of God, but of creatures too, in that making the divine essence the form of each creature destroys the evident gradation of created reality.

And upon closer inspection, the very image which suggested pantheism excludes it: yes, the same water is in both source and stream, but the farther the water flows from the source, the less its clarity and brightness as it picks up ever more sediment. The unity expressed by emanation is that of a hierarchy, not that of bare identity.

However, if we try to avoid pantheism and respect the grades of being by arguing that the same divinity is not in both God and his effects because each creature receives the divine outpouring only in part, according to its rank, then once again we face an apparent impossibility: how can a God who has no parts be received at all if he is not wholly received?

For these reasons, Albert often writes that God is incommunicable. Yet that cannot be the whole truth: God must be communicable, because he is good and—as Dionysius affirms—the good is self-communicative.
and self-diffusive. Indeed, God must be most communicable, because he is not merely one good among others, good only to this or that extent or through the addition of a quality; rather, he is the highest good. And as Albert reads in *Liber de causis* 19 (20), for unbounded goodness, there can be no question of holding back and giving less to one creature than to another, or of giving less than all to any creature: a God who is essentially good must be essentially self-diffusive.

2. *Can Anything Be Created by God?*

That God can withhold nothing presents us again with the problem of how the self-communication of an utterly simple God can be received at all if not wholly. And, plainly, it is not wholly received: no creature is God’s equal. Indeed, the complexity inherent to a creature, as recipient with received existence, rules out the creation of an equal to the simple God, the ultimate source, who receives nothing. But if no envy restricts the creative overflowing of God’s goodness, whence comes inequality? To put the problem in its most acute form, why would even the first creature, the creature with no mediator standing between it and God and perhaps obstructing the flux, be less than God?

When we ask about the origin of things other than God, we are asking how otherness and duality or still greater multiplicity come from oneness and sameness. An agent cannot give what it does not have; how, then, can the One cause the non-one, and how can the sameness of the simple and immutable God cause the other?

According to many of Albert’s contemporaries, Peripatetics held that only one thing, the first created thing, can be created by the one God—which seems to mean that other creatures proceed from created creators, not directly from God. Such appeared to be the teaching of Aristotle.

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550 Alb., *De causis et proc. univers.* 1.3.5, Ed. Colon. 17/2, 40, Ins. 47–54; 1.4.1, 43, Ins. 26–30; and 2.3.15, 152, Ins. 5–9.

551 Emanation imagery already suggests the necessity in this claim; however, Albert thinks it compatible with divine freedom: God’s goodness is such that, although bound by no necessity to create, he will create as a matter of course, much as the just man, though free, will not act other than justly. See Alb., *De causis et proc. univ.* 1.3.1, Ed. Colon. 17/2, 36, Ins. 20–34.

552 For the problem, see e.g. Alb., *De causis et proc. univers.* 2.1.21, Ed. Colon. 17/2, 86, Ins. 22–31.

553 For Albert’s statement of the difficulty, see Alb., *De causis et proc. univ.* 1.4.5, Ed. Colon. 17/2, 48, In. 82–p. 49, In. 1.

554 Arist., *De gen. et corr.* 2.10, 336a27, *translatio Vetus*: “idem enim et similiter habens semper idem innatum est facere”.
and of the supposedly Peripatetic *Liber de causis*, and that looked heretical.

However, maintaining that God creates only the first creature, while it may shrink the difficulty, in no way solves it, because even that one creature would fall short of unqualified oneness. Albert, dismissing the hasty and careless readings of others, makes a close examination of the philosophers’ claims and finds that, in truth and in a deep sense unimagined by their opponents, only one can proceed from the One; in his view, the conclusion follows from sound reasoning and, far from being heretical, has the support of Dionysius.

**B. Albert’s Solution**

To understand Albert’s insight, we need to ask what is the “one” which alone the one God creates, and whence comes whatever else is in—and must be in—the creature.

The one thing which alone God creates is being, which Albert identifies with the subject matter of metaphysics and with the first procession described in Dionysius’s *On the Divine Names*. Being must be the one and only created thing, Albert argues, because creation is from nothing, and only being has nothing before it. That is, such realities as life and intelligence, since they presuppose being, result from “information”, not from creation; it is not merely by reference to the First that being is multiplied.

Whence, then, is “information”? If God’s outpouring is just being, how does one thing come to enjoy, say, feline existence while another experiences equine existence? This brings us back to the problem of inequality,

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555 Proposition 19 (20) argues that the first cause has but a single outpouring because it acts by its very being, with nothing added. In point of fact, the *Liber de causis*, at the end of Proposition 17 (18), also states that only the first cause creates, so that, while there is indeed a first creature, the first cause has many more creatures besides; however, defects in the Latin version obscure this aspect of its teaching, with the result that many readers assimilated it to Ibn-Sīnā’s doctrine.


557 In addition to note 259 above and Section 12A below, esp. note 578, see Alb., *De causis et proc. univers*. 2.1.17, Ed. Colon. 17/2, 80, Lns. 73–p. 81, Lns. 46.

558 See Alb., *De causis et proc. univers*. 2.1.23 (with lemma from *Liber de causis* 4 italicized as in the Cologne edition), Ed. Colon. 17/2, 87, Lns. 70–75: “[Q]uamvis esse primum creatum sit unum, tamen multiplicatur propter hoc quod per divisionem recipit multiplicatatem. Multiplicitatis autem illius non est susceptibile secundum relationem ad primum, sed secundum seipsum. Secundum enim seipsum est potentia quodlibet sequentium.”
since for a thing to be what it is means not being what something else is and therefore not being all that being can be. God, the essentially self-diffusive, cannot be the cause why a thing has limited being; but, at least in the case of the first creature, no other cause exists to which we could assign responsibility for that limitation.

Albert answers that, indeed, there is no cause why a thing is what it is. God produces the creature’s existence, but the creature’s essence (its possibility, Albert also calls it, because essence is possibility for existence) is from itself—which does not mean that it causes itself, a suggestion Albert dismisses as absurd, but only that looking for a cause why a cat is a cat or a horse is a horse makes no sense: self-evidently, a thing is itself.

But does not arguing that God creates only being remove him from the diversity and multiplicity of creatures? Not at all, because whatever is, is only by its act of existing. If there is nothing that is not a being, then the One, by producing this one, creates all things.

That is, while essence (quod est) is not created, it is concreated—or, to use the expression Albert favors in De causis et processu universitatis, it is created under the shadow of existence, just as God produces matter under the shadow of form and, generally, potency under the shadow of act. Clearly, then, to say that we cannot look for a cause why a thing is what it is does not mean that a thing’s essence (quod est) or possibility is uncaused in every respect: when possibility is actualized, it has at least an efficient cause. In emanationist terms, a thing’s intrinsic possibility is the recipient of God’s outpouring (somewhat as the bed and banks of a river are the receptacle of the waters of its source); that possibility is from itself, because the One cannot be the source of more than one, and yet it

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559 Alb., De causis et proc. univers. 1.4.2, Ed. Colon. 17/2, 44, lns. 37–50. See also above, note 316.
560 Alb., De causis et proc. univers. 1.1.8, Ed. Colon. 17/2, 16, ln. 69–p. 17, ln. 11 (quoted above, n. 320); 1.1.10, 20, lns. 6–8, 21, lns. 28–31; and 1.4.5, 48, lns. 52–55 (quoted above, n. 317), to be read with Aristotle, Metaph. 1041a9–20. For the reasoning, see also Section 8 above, notes 316–18.
561 Albert uses this term in his theological works; for a discussion of the notion, see Bonin, Creation as Emanation, 73–74 with the notes on 145–146.
562 Albert’s way of speaking comes from the accounts of soul and vital spirit in Isaac Israeli, Book of Definitions, where it describes the origination of lower from higher levels of reality; see Joseph T. Muckle, “Isaac Israeli Liber de definitionibus,” Archives d’histoire doctrinale et littéraire du moyen âge 11 (1937–38), 299–340, at 313–316. Albert interprets shadow as difference, because of which light streaming from above is restricted to a narrower field; in other words, “shadow” means a diminution of the power transmitted (Alb., De causis et proc. univ. 1.4.5, Ed. Colon. 17/2, 48, lns. 42–44; 2.2.35, 128, lns. 53–54).
is not at all independent of God, because it becomes an actually existing
recipient only in the receiving.

C. Clarification of His Solution

The reader may be thinking that Albert’s solution falls short both as an
account of a text and as an account of reality.

As far as concerns exegesis, in the Liber de causis as in other Neopla­
tonic works, the first created thing is the Being which is the potential
aspect of Intellect, the second hypostasis. For that reason, the text says
sometimes that the first created thing is being, and sometimes that it is
intelligence. It does not say that the first created thing is the one created
thing, the being whereby whatever is, is.

And even setting textual difficulties aside, how is being one thing?
What really exists are beings in the plural; they are neither numerically
nor even generically one. Albert claims to be presenting Peripatetic
thought, but every Peripatetic knows that only by analogy is each being
called “being”.

Albert sees perfectly well that the Liber de causis refers to the first cre­
atied thing sometimes as being, and sometimes as intelligentia. But he also
sees that intelligentia can mean “concept”; that is the case in the transla­
tion of Aristotle’s De anima by James of Venice. And the Latin Aristotle
is not irrelevant here, since Albert regards the Liber de causis as not just a
Peripatetic work but the supplement to Aristotle’s Metaphysics.

How so? Albert holds that the subject of metaphysics is being, which is
said of all things, while the goal of metaphysics is the cause of being, that
is, the cause of all things. And he thinks that the Liber de causis brings
Aristotle’s Metaphysics to its goal by presenting Peripatetic doctrine on
the first cause. In other words, Aristotle’s Metaphysics talks about being,
and the Liber de causis talks about the cause of being. Consequently, when
the Liber de causis discusses the effect of the first cause, that effect must be
the being which is said of all things; it must be the subject of metaphysics,

563 At 430a26–28, James uses intelligentia for νοησις, which there refers to simple appre­
hension; Albert quotes the passage from memory at De causis et proc. univ. 2.1.19, Ed. Colon.
17/2, 83, Ins. 70–71. See also the translatio Media of Metaph. 1074b19–20, paraphrased by
Albert at Metaph. 11.2.30, Ed. Colon. 16/2, 520, Ins. 55–p. 521, Ins. 70.
the subject which the metaphysician has been examining for clues about the first cause.\textsuperscript{565}

Accordingly, when the \textit{Liber de causis} says that the first created thing is being, that the first created thing is intelligence, and that being is intelligence, Albert concludes that the first created thing is \textit{simplex esse}, the concept of being taken by itself.\textsuperscript{566} We need not agree that he has discerned the intention of the anonymous author of the \textit{Liber de causis}, but his interpretation is not arbitrary, and it opens the way for a resolution of the other difficulty, the difficulty about the oneness of being.

To appreciate the resolution, we must think of God as an artist whose Ideas flow into his works. This means that we can consider the divine Idea of being in three ways.\textsuperscript{567} Considered as in God, it is one and identical with the absolutely simple God. But we can also consider the divine Idea of being as received in beings. These beings are not identical with God, nor are they identical with each other; they are indeed many, not one. Finally, we can consider the divine Idea of being as flowing from God to things, as on the way between God and things. In that consideration, the idea is no longer identical with God, though it is like the Idea in God; nor is it yet multiplied in particular things. Instead, it is one idea of being which is about to be received diversely in the many diverse beings; it is the single outpouring from the pure Good which the \textit{Liber de causis} says is diversified only by its recipients.\textsuperscript{568}

In other words, Albert thinks of the analogically common notion of being, in which all beings participate, as the divine Idea already flowing out of God but not yet received in things. He does not maintain that the idea has extramental existence somewhere between God and things—he

\begin{footnotes}
\item[565] Alb., \textit{Metaph.} 1.1.1, Ed. Colon. 16/1, 3, lns. 1–4, quoted above, note 21 (see the note also for "\textit{simplex esse}"); and 1.4.8, 57, lns. 69–70.
\item[566] Reading the text in this way was easier than one might think because its intelligences were concepts, though not concepts abstracted by and dependent upon human minds. As for Plotinus and Proclus, so for the \textit{Liber de causis} each Form is a thinking Intellect, and the Intelligents make up a hierarchy of genera and species. Intellectual substances and intelligible forms are but the subjective and objective aspects of the one intelligible world.
\item[567] Alb., \textit{De causis et proc. univ.} 2.1.20, Ed. Colon. 17/2, 85, lns. 39–44; and 2.2.12, 105, lns. 9–10. This triple consideration is inspired by Dionysius’s triad of the unparticipated, the participated, and the participant (\textit{Divine Names} 2.5 [644A], 11.6 [953B–956A]), a triad Dionysius takes from Proclus (see, for instance, propositions 23–24, 63, 99–102, and 116 of the \textit{Elements of Theology}; the \textit{Liber de causis}, though also dependent on Proclus, does not have this triad).
\item[568] See Alb., \textit{De causis et proc. univ.} 2.1.21, Ed. Colon. 17/2, 86, lns. 37–39: “\textit{Esse enim et vita et ratio in primo sunt ut unum. In sequentibus autem non uniuntur nisi per modum compositionis potentiae et actus}.”
\end{footnotes}
takes that to be the error of which Aristotle accused Plato; this is only a mental consideration. Nonetheless, it is an important consideration, allowing Albert to grasp the coherence of what he believes to be the Peripatetic tradition: the first emanation in the *Liber de causis* is the same as the first procession from God in Dionysius’s *Divine Names*, and both are the same as the analogically common notion of being in Aristotle’s *Metaphysics*.

Beside this elaborate interpretation of the first created thing in the *Liber de causis*, we find another, complementary interpretation. Albert knows that *intelligentia* does not always signify “concept”, and he recognizes that the *Liber de causis* speaks of Intelligences that are celestial. These, too, are called the first created thing, in that they are the first and most excellent recipients of created being.\(^{569}\)

Albert judges the twofold sense of “first created thing” necessary for grasping the whole truth about causation: when we read what the text says about (1) the intelligence-concept of being, we learn how God’s causality extends to all beings; whereas when we examine its discussion of (2) celestial Intelligences, we come to see the role of secondary causality. And secondary causality, however secondary, is required: emanation implies order, mediation, and ever increasing distance, just as the waters of a source flow first into one part of a river and then through that part into another, until finally the stream of emanation gives out.

12. **Causality and Emanation in Albert**

*Isabelle Moulin and David Twetten*

Whereas Section 11 focused on how *esse* is created by the First, here we examine (a) how the diversity of things emerges in being, emanating or flowing from the First by the mediation of the Intelligences and other primary causes; and (b) how Albert accounts for causality in the material order, under the influence of primary causes.

Albert adopts a colorful language for his metaphysics of the “flow” from “Platonic” sources, but he harmonizes emanation with an Aristotelian account of causality in nature, which emphasizes the “eduction” of form from the potency of matter through prior causes. In contrast with a pure theory of *induction* from the “giver of forms” or *dator formarum*, which

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569 In addition to note 584 below, see Alb., *De causis et proc. univ.* 2.1.24, Ed. Colon. 17/2, 90, Ins. 78–83 for a particularly clear case of this usage.
the Master of Cologne attributes to Plato and Avicenna, the Albertan theory of *eduction* presents an elaborate combination of Aristotelian hylo-morphism and theory of act, on the one hand, with elements borrowed from what, on the other, one could call “Neoplatonism” were they not so diverse (including from Alexander of Aphrodisias’s so-called “Epistle” *On the Universe, De mundo*, Pseudo-Dionysius, Isaac Israeli, and the *Liber de causis*). Among them, such principles as the preholding (*praehabere*) in the approach to first causes, the *per modum causae* principle (whatever is in effects is in the cause after the manner of the cause), and especially the *quidquid recipitur* principle, or *virtus recipiendi* (each substance receives according to its own capacity), together with the principle that the agent effects something similar to itself, are the main components in the background out of which Albert develops his own account of causality.

### A. Albert’s Theory of Causal Influx

Albert’s theory of emanation is one of the most fundamental parts of his metaphysics, yet it is also one of the most difficult to discuss systematically. It completes the distinctively Albertan answer, corresponding to the doctrine of creation in theology, to the question of causality from

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571 See, for instance, Alb., *Metaph.* 11.2.8, Ed. Colon. 16/2, 493, Ins. 40–43; Alb., *Super Dion. de div. nom.* 5, Ed. Colon. 37/1, 308, Ins. 51–58; see also ibid., chap. 1, 28, Ins. 65–71; chap. 2, 97, Ins. 49–53 (where preholding is ascribed also to Averroes).


574 “Whatever is received in something is received in it only according to the power and faculty of the recipient, not according to the power and faculty of the thing received”; see Alb., *De causis et proc. univers.* 2.2.23, Ed. Colon. 17/2, 117, Ins. 28–31 (on *Liber de causis* 9 [10], ed. R. Taylor, ibid., 117, Ins. 68–70); Alb., *De fato* 2, Ed. Colon. 17/1, 68, ln. 56–p. 69, ln. 3 (ascribed to Boethius and Aristotle); Alb., *Super Dion. de div. nom.* 1.60, Ed. Colon. 37/1, 37, Ins. 61–65.

575 See below, notes 631 and 651.

the first principle in philosophy. Therefore, we must locate it, as Albert himself does, against the background of his account of creation *ex nihilo*. *Esse simplex*, as we have seen in Sections 8 and 11, presupposes no other notions. For that reason, if something exists other than that whose *quod est* is identical to its *esse*, it must be caused by such a being alone. It follows, as we have seen, that all *esse*, and only *esse*, proceeds from God alone.\(^{577}\)

Everything besides *esse* proceeds from God (otherwise it would not *be*) through mediation. In the *Divine Names*, Albert puts the matter succinctly as follows:

> Being (*esse*) taken simply is prior to all other things in nature and in understanding. For, it is the first conception of the intellect, and in it the intellect comes ultimately to a standstill in [the operation of] resolution. Also, *esse* alone is produced through creation without anything else being presupposed, whereas all other things [are produced] by “being informed” (*per informationem*), namely, as upon a preexisting being, as the Commentator says in the *Liber de causis*. But that which proceeds without anything being presupposed is the first thing that proceeds from another. And so, it remains that *esse* is the first among all of the divine processions.\(^{578}\)

Accordingly, in his paraphrase of the *Liber de causis*, Albert articulates the following as principles:

1. Since each of the things that are subsequent [to *esse*] presupposes in its concept what precedes it, each is produced, not *ex nihilo*, but out of something (*ex aliquo*) in which there is something inchoate of its *esse*.

2. Therefore nothing subsequent [to *esse*] comes to be through creation.\(^{579}\)
The terms “theory of emanation” or of “influx” (cf. “informatio” above), then, refer to the account in Albert of how everything else besides being proceeds from or “is produced” by God.\textsuperscript{580} The theory is a major theme, as the title indicates, throughout Albert’s \textit{De causis et processu universitatis a prima causa}, and he takes it up systematically in a personal way in Book 1, Tractate 4. We should observe immediately that “emanation discourse” in Albert, contrary to the English usage that is regularly associated with a necessary Plotinian emanation, is always to be read against the background of divine free will in creation, an issue that Albert discusses extensively in \textit{De causis} 1, Tractate 3. In general, Albert deals with two groups of “emanations” or “processions”, which in one place he calls “those that pertain to the being of nature simply speaking” (the transcendentals), as opposed to “those that pertain to the being of nature as determined in the form of a genus or species” (natural classes).\textsuperscript{581} Usually, however, he addresses these groups by offering paradigmatic lists: transcendentals are typically referred to by “being, one, true” (or “being, true, good”); whereas the Platonic triad “to be, to live, to understand” (or to reason), or “being, intelligence, soul”, and so on, refers to natural classes. Albert uses three strategies for explaining how such “processions” are produced: (1) an “emanation scheme” typical of Islamicate philosophy, especially of al-Fārābī and Avicenna; (2) a “concept procession” (as we shall call it), using the terms of a Porphyrian tree; and (3) a “light procession” (hereafter so-called). The latter two strategies are especially typical of Jewish Neoplatonists with whom Albert is familiar, particularly of Isaac Israeli and ibn Gabirol. These three strategies are often blended in some fashion by Albert against the background of the dominant framework of a Plotinian fourfold procession: Intelligence, Soul, Nature, and matter. In light of Section 10, we can see that this framework fits Albert’s final Peripatetic defense of the “primary causes” of the cosmos, and he often replaces these four, accordingly, with, for example: Intelligence, (celestial) soul, heaven, and body. Let us consider the three strategies singly, even as we read characteristic passages where they are often blended. We should

\textsuperscript{580} This terminology is not strictly Albert’s. For, he contrasts “creation” and “information”, but he also speaks of \textit{esse} as “inflowing” or “proceeding” from the first; e.g. Alb., \textit{De causis et proc. univ.} 2.1.17, 81, lns. 30–38, 48–52, 82–84, and the quotation above, note 351. “Processing”, “flowing”, “emanating”, or “inflowing” are, broadly speaking, synonyms in Albert; but here all but “processing” shall be typically used synonymously with “informing” to refer to a kind of causality or “production” (for this term as a genus, see ibid., lns. 40–44) that is other than creation or the production of \textit{esse}; see below, note 617.

\textsuperscript{581} Alb., \textit{De causis et proc. univ.} 2.1.4, Ed. Colon. 17/2, 65, lns. 11–31 (in note 360 above).
start with Albert’s emanation scheme, which maps best onto his Plotinian (and “Peripatetic”!) framework. First, however, it is important to remind ourselves of the ontological foundation for all three strategies.

We left off in Section 11 by considering the first procession, the *primum creatum*, as *esse* versus as Intelligence. Of course, *esse* by itself is simply a conception and cannot be created as such; in order to come into being it must be differentiated from the first principle and so must be received in “that which is”, as we have seen in Sections 8 and 11. Thus, Albert writes:

> It is established that from one agent *in form* (*ab uno agente secundum formam*), which remains in the same condition, there is immediately only one thing *in form*. It is nevertheless necessary that this [one], because it is second, be in potency and that there be in it one thing that is being (*esse*), another that is “that which is” (*quod est*). But neither through *esse* nor through “that which is” does it fall into a division, but division is through a plurality or diversity of essences.582

The point of all three strategies is to explain how this “diversity of essences” (natural classes) emerges. No created being (*ens*) is merely, as it were, a concretized *esse*; other attributes proceed or “arise”, so to speak, in the order of nature together with such a being. Albert is not usually concerned with explaining how the transcendental properties arise, since they follow necessarily upon *ens*.583 More problematic are the properties of the natural classes: the aforementioned “diversity of essences”. In his paraphrases Albert usually explains them, in keeping with the text of the *Liber de causis*, not by immediate and exclusive appeal to divine ideas, as do some of his contemporaries, but as flowing or emanating naturally, given the first thing freely created, under the influence of divine active intelligence and free mediated causation. The three strategies help explain how.

1. **The Emanation Scheme in Albert**

   The first substance in the order of nature that is known philosophically to exist after the first cause, for Albert, is the Intelligence that is ultimately responsible for the motion of the outermost sphere. How, then, does “Intelligence”, as the essential determination of the first created thing,

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582 Alb., *De causis et proc. univ.* 2.2.7, Ed. Colon. 17/2, 100, lns. 50–57; italics added. For the plurality in the *primum ens* once it is no longer a mere concept, see also ibid., 2.1.18, Ed. Colon. 17/2, 82, lns. 53–71, quoted above, note 362.

583 See esp., in addition to Section 6, Alb., *De causis et proc. univ.* 2.1.4, Ed. Colon. 17/2, 65, lns. 31–41 (in n. 360 above).
“proceed” beyond esse?584 Sometimes Albert is content to answer merely by appeal to the “light procession” and the notion of diminution of light, as is discussed in subsection 3 below. The most thorough of the several passages that appeal instead to an emanation scheme is found in Tractate 4 of the personal work, De causis 1, on the “flow” of caused things from the first cause. Chapter 8, which treats the order of the “flow”, begins with the important clarification that all of the processions (at the highest levels, beyond the terrestrial realm) are simultaneous, following “the order of nature” rather than of time.585 Now, all “emanation schemes”, including Albert’s, are founded on the principle “ab uno non nisi unum”. This principle, Albert observes, when properly understood, “all philosophers preceding us have supposed”, and only one person has ever denied: ibn Gabirol.586 Albert adds a second supposition: that the first intellect, acting universally, constitutes intelligence. The emanation scheme, in effect, explains how the second supposition does not contradict the first. We read:

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584 For the assertion that the Intelligence is the primum creatum, see e.g. Alb., De causis et proc. univ. 2.2.19, Ed. Colon. 17/2, 112, lns. 53–54, quoted above, note 577; 2.4.10, 164, lns. 2–4 (with Liber de causis 22 [23]); see also ibid., 2.3.4 (with Liber de causis 15 [16]), 143, lns. 47–48. That the primum causatum is Intelligence, see ibid., 2.2.7, 100, lns. 36–37; 2.3.4, 143, lns. 3–5; 2.3.6, 145, lns. 11–12 (with Liber de causis 15 [16]), quoted below, note 594. Albert more often says that esse as primum creatum is intelligence (in the lower case sense) or is in Intelligence (for Albert’s identification of the two senses of “intelligentia”, see ibid., 2.1.21, 85, p. 88, lns. 3–25). Without entering into too much detail, we should note that Albert sometimes distinguishes carefully between esse as intelligentia (the most universal concept, as isolated in Section 11C) and Intelligentia as a formal determination of this esse (the cause of celestial motion, with a capital “I” added). Each (or “intelligentia” in each sense) can be called primum creatum, but when we consider esse as primum creatum, Intelligence is a secundum. See ibid., 2.1.23 (with lemmata from Liber de causis 4 italicized as in the Cologne edition), 87, lns. 3–25: “Esse tamen primum creatum est in resolutione entium inteligentia ultima. Et propter hoc tam in potentia influendi quam in reliquis bonitatis potentius est omnibus alis. Et formae intelligibles omnes acceptae in ipso sunt latiores et vehementius universales. In ipso enim acceptae confusae sunt, in seipsis autem determinatae. Id autem quod inferius est esse procedens ab ipso, est etiam intelligentialis formalis. Verumtamen intelligentialis illa est sub intelligentialis eius quoque esse, et inferior tam in complemento quam in virtute et alis bonitatibus et nobilitatibus, sicut causa secundaria inferior est quam primaria. In his autem secundis intellectibus non sunt formae adeo dilatatae et confusae, sicut est latitudo earum, quando accipiuntur in illa intelligentia, qua est esse. Aduh ilium manifestum est, quod esse, quod est creatum primum, secundum totum sui est intelligentia in lumine intellectus agentis constituta. Verumtamen propter hoc quod est secundum a primo, intelligentia diversificatur in ipso per modum, quem ante diximus. Et quia sic in ipso diversificatur intelligentia, consequenter fit in eo forma intelligibilis diversa, sicut diversa est forma determinata et confusa.”

585 Alb., De causis et proc. univ. 1.4.8, Ed. Colon. 17/2, 55, lns. 67–72.

586 Alb., De causis et proc. univ. 1.4.8, Ed. Colon. 17/2, 55, lns. 72–80; see also Phys. 8.1.13, Ed. Colon. 4/2, 576, lns. 44–48. For the principle, see also above, notes 149, 554–555, 582.
Therefore, when the first universally acting intellect understands itself in this way, the light (lumen) of the intellect, which is from it, is the first form and the first substance, which holds the form of what understands in all things apart from “that which is from another”.  

Albert is here referring to the first “mode of substance”, discussed in Section 9, and to what has until now been understood as esse, which is “apart from”, or other than, the complete ens. But now, seen as proceeding from the first intellect, it is understood as form (a transcendental), as light (light procession), and as substance (natural class). He proceeds to explain how:

And, in “that which is from another”, there is found a threefold comparison: namely, (1) in relation to the first intellect, from which it is and by which being (esse) belongs to it; (2) in relation to itself as “that which is” (“id quod est”); and (3) in relation to this, that it is “in potency” insofar as it is ex nihilo... The first Intelligence, therefore, only has necessary being (necesse esse) according as it understands itself to be from the first intellect. But according as it understands itself as “that which is”, the light (lumen) of the first intellect falls (occumbit) on it, by which [light] it understands itself to be from the first intellect. And in this way it is necessary that an inferior is constituted under it—and this is the second substance, which is either soul or that which is in the place of soul in the heavens. But according as it understands itself to be ex nihilo and to have been “in potency”, it is necessary that that level (gradus) of substance that is in potency begin. And, this is matter under the first form, which is the matter of the celestial body, which is called the “primum mobile”.

The main feature of Islamicate emanation schemes is found in Albert’s account: three considerations, relating to self and to what is above and below. In his commentary on the Divine Names (ca. 1250), Albert had reported, in the name of the philosophers, a twofold scheme, perhaps in light of the fact that he did not then distinguish between celestial soul and Intelligence. Here in the De causis, Albert continues to be agnostic about the term “soul” as used of the heavens, in keeping with his

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587 Alb., De causis et proc. univ. 1.4.8, Ed. Colon. 17/2, 55. Ln. 84–88. Perhaps “that which is from another” refers to the entire first “composite” of esse or form and quod est.


589 Alb., Super Dion. de div. nom. 7.3, Ed. Colon. 37/1, 335, Ins. 9–35. For a reading of Avicenna in the same work that involves only light procession, see below, note 637. For Albert’s position on celestial causes in the Dionysian works, see Twetten, “Albert’s Early Conflations,” 37–40.

590 We find a twofold scheme ascribed to the Peripatetics also in e.g. Alb., Metaph. 11.2.20 [digr.], Ed. Colon. 16/2, 508, Ins. 28–47, 509, Ins. 6–19 (where Albert affirms a twofold “consideration” also of the first cause; ibid., 508, Ins. 20–35, 83–92).
presentation of this theme in the previous chapter. But he is not agnostic about there being three substances in the first order of the light procession, and he identifies the second of these (considered in the vertical order, according to a priority of nature) with the “proximate” versus remote mover of the first heavens. At the same time, the Avicennian character of Albert’s account is evident in its calling the result of the first “consideration”: “necesse esse” (or as Avicenna would say, “necessary because of another”). But if the “second substance” is soul, under which of the three considerations does “Intelligence” proceed? Albert answers in what follows:

According as Intelligence, which is the first among the substances that are made, understands itself to be from the first intellect, it is in the light (lumen) of the first intellect, it is itself the light, and so it is Intelligence.

Still, there is a second major feature of developed emanation schemes: the identification of a causality that is both vertical (according to a priority of nature: Intelligence, celestial soul, heavenly body) and horizontal (ten Intelligences corresponding to ten spheres); the latter ensures the continuation of the vertical emanation (celestial soul, heaven) for each of the subsequent nine celestial spheres. And, this feature is what Albert goes on to draw out in the same eighth chapter:

And once [the first Intelligence] understands itself in this way [as having received the overflow of light from the intellect of the First], it constitutes, by the same principle (ratio), the Intelligence of the second order. This also understands itself according as [it is] “that which is” (“id quod est”), and in this way it constitutes the proximate mover [of the sphere]. It also understands itself as in potency, and in this way it constitutes the second mobile [thing] (secundum mobile), which is the second heaven. For, in an active intellect, to understand itself is to emit an intellectual light (lumen) for the constitution of a thing. And in this way [results] the second Intelligence, the second mover, and the second mobile [thing]. And, once that Intelligence, again, understands itself to be from the first intellect, it necessarily understands itself in a light that overflows. And in this way the Intelligence of the third order is constituted.… And, in this way it is not difficult to determine

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592 Alb., De causis et proc. univ. 1.4.8, Ed. Colon. 17/2, 56, Ins. 18–21.
593 If Albert’s emanation scheme contains the standard triad in the vertical order, nonetheless, his other strategies typically include more than these three vertically ordered substances, as we shall see. He even records the view of “alii” who identify ten levels, in obvious parallel to the spheres, although the lower members include non-celestial entities, such as purpose (propositum), fortune, and chance; see Alb., De causis et proc. univ. 1.4.6, Ed. Colon. 17/2, 51, In. 40–p. 52, In. 5.
the Intelligences, the movers, and the heavens as far as the “heaven of the moon”…

2. **Concept Procession**

We have seen how in his *De causis* 1.4.8, Albert mixes the strategy of “light procession” and diminution with his emanation scheme. Similarly, the previous Chapter 5, a more general discussion of the order in the “flow” than Chapter 8, mixes “light procession” with “concept procession”. One passage at the end of this chapter, however, articulates as well as any the idea behind the strategy of “concept procession” in itself. Albert there admits that it is difficult to see why there should be any diminution at all in the processions from the first principle. But he rejects as *pessimus* the error of those who, given the principle “*ab uno non nisi unum*”, say that all things are one, and who therefore identify the diffusion of the First in all things with the *esse* of all things. By contrast, Albert presents his own answer:

Through levels (*gradus*) of that which is being in potency, all posterior things differ from the first…. It is apparent, moreover, that according to a differentia of potency, the being (*esse*) in act and the essence that is in those [things] differ. Therefore, all posterior things differ both in *esse* and in essence. For, the first procession, which proceeds immediately from the First, is made (*efficitur*) the essence of the second through a certain *esse*; and through another *esse*, it is made the essence of the third; and so on, in turn, all the way to the last, in which such a procession comes to a stop. And, the statement that what is posterior receives nothing from what is prior is false. For, it receives a certain *esse* from it, through which it is made its essence according to “that which it is” (“*id quod ipsum est*”).

The paragraph might be too abstract to comprehend were it not the culmination of Albert’s previous examples in Chapter 5 of concept procession. It is noteworthy that his account of this sort of procession there also opens, as in Chapter 8, with the First understood as an intellect that is universally active. However, says Albert, “we call *intellectus* everything

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594 Alb., *De causis et proc. univ.* 1.4.8, Ed. Colon. 17/2, 56, Ins. 46–64.

595 Alb., *De causis et proc. univ.* 1.4.5, Ed. Colon. 17/2, 48, Ins. 82–83.

596 Alb., *De causis et proc. univ.* 1.4.5, Ed. Colon. 17/2, 49, Ins. 14–15. See also ibid., 1.4.3, 45, Ins. 23–p. 46, Ins. 30, esp. Ins. 7–11, and the pantheistic position ascribed to Hermes Trismegistus, Asclepius, etc. (Albert often has in mind the views of David of Dinant and Amaury of Béné.)

597 Alb., *De causis et proc. univ.* 1.4.5, Ed. Colon. 17/2, 49, Ins. 51–64.

598 Alb., *De causis et proc. univ.* 1.4.5, Ed. Colon. 17/2, 48, Ins. 45–51 (continued above, n. 317): “Diximus enim, quod primus fons est intellectus universaliter agens ita quod nihil est de intellectis quocumque modo quod non agat eo modo quo intellectus est. Intellectum
that is in any way whatever capable of being understood”. For, no “intellect” (or concept), can be understood unless it is constituted in the light of the first intellect. This constitution is easily seen in the case of the second level, Intelligence. But it is also evident in the third level, possible intellect.599 The latter is “made” intellect through Intelligence, but it is not intellect alone (which is “universally active”), since possible intellect also receives from another the power of understanding concepts (intellecta).600 Albert draws a principle from these three levels that he finds in lower-level things, that is, in things that are intellecta but are not intellectually received. He writes, blending concept procession and light procession:

And so it is in the case of all things, that a subsequent differentia of a being is always constituted upon a certain “decline” (occasum) or “shadowing” of what is prior, just as the sensible [is] “in the shadow” of the intellectual, the vegetative [is] “in the shadow” of the sensible, body determined by corporeity alone [is] “in the shadow” of the vegetative, and body determined by contraries [is] “in the shadow” of the heaven, which is determined by corporeity alone.… And this, indeed, Isaac said even before us in his Book on Definitions (ibid.). In this passage, the strategy of concept procession in itself is perhaps obscured by that of light procession. Thus, it will be helpful to contrast it with a passage from Book 2 of Albert’s De causis in which concept procession stands out (as does also the act-potency relation mentioned before in regard to this strategy):

The first in all things is “a being” (ens)—which is necessarily ex nihilo, since it presupposes nothing conceptually prior to itself. And for this reason, in all things in which it is, it is necessary that it come to be through creation. For, what comes to be ex nihilo comes to be through creation. But life presupposes “a being” as naturally prior to itself. And, also intellect is produced out of being (esse), as what is determinate out of what is undifferentiated (confusum). Hence, “life” does not express the simple concept of esse, but it expresses esse that is formed in relation to something. Therefore, life cannot come to be through creation, because it comes to be out of something

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599 Elsewhere Albert integrates the procession of possible intellect into his emanation scheme as a fourth level emanating from the “noble soul”: “Et cum intelligere in talibus sit intellecta constituere, secundum hoc constituit esse animae nobilis. Et haec iterum secundum quod seipsam intelligit secundum ‘id quod est’ et non secundum esse suum, constitutiva est intellectus possibilis. Et tunc intellectus possibilis a primo erit in quarto gradu”; Alb., De causis et proc. univ. 2.5-2, Ed. Colon. 17/2, 171, Ins. 2–7.

600 Alb., De causis et proc. univ. 1.4.5, Ed. Colon. 17/2, 48, Ins. 58–79.
It follows that it comes to be “by being informed” (*per informationem*). The same holds true in a similar way for what has intellect and knowledge. For, this presupposes “being” and “living” prior to itself. Therefore, it cannot come to be through creation. For, it presupposes something prior to itself in which it is potentially, just as a quadrilateral is in a triangle. Hence, what has intellect and knowledge is produced out of esse “by being informed”, whereas it is produced out of life “by being determined” (*per determinationem*) to the intellectual form of life.601

We see in this passage, then, how wider concepts in the Porphyrian tree stand indeterminate and in that sense in potency to being actualized by determinate forms that “overshadow” them. Thus, the strategy of concept procession highlights how forms in a series are related to each other and how they are integrated into a new unity. It does appear, however, that concept procession by itself cannot stand alone as an account of the origin of the flow. The strategy by itself highlights formal rather than efficient or final causality. There is nothing in it, unlike the “considerations” in an emanation scheme, that propagates the series of effects. For that we need something like a source of light.

3. *Light Procession*

In the last passage quoted from Albert’s *De causis* 1.4.5, the strategy of light procession is already evident. Several characteristics of the causal influx are particularly highlighted by this strategy. Given the *primum creatum*, freely willed by God, the rest of the emanation is a spontaneous overflow (also freely willed) from the First as universally active intellect, just as from a light source such as the sun. For colors to appear, there must be a light source actualizing and making them visible. In emanation, however, the divine light is the source of the very existence of all forms (colors), with which the light is full, as well of their “coloredness” or form-ness (or goodness, as the *Liber de causis* will often say). The Intelligence is entirely illuminated by its source and is “full of forms”, says *Liber de causis* 9 (10). In fact, Albert appeals precisely in this context to the frequently cited etymology of “form” as “*foris manens*”, “remaining outside” the First (cf. “Plato’s giver of forms”), and even as “emanating” (*manans*) from the First.602 Through the Intelligences, which illumine the celestial souls that...

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601 Alb., *De causis et proc. univ.* 2.3.13, Ed. Colon. 17/2, 150, lns. 44–63; italics added.

move the sun and “oblique sphere”, which in turn cause the generation and destruction of enformed material composites, the forms in the first light flow into the corporeal world.

One point that the light image captures especially well, which is a point notoriously unclear in emanation schemes, is that the First, as the light source, or the font of the emanation, is and remains integral to the procession of all being and form. Accordingly, Albert says in his *Divine Names* (in the name of the philosophers): “the whole diversity of sensible forms is from the light (*lumine*) of the Intelligences by virtue of the divine light”.603 At the same time, this light, one in its source, extends everywhere, illuminating even the lowest of things. And so, we read, “Since every form is given by intelligence, it is necessary that the light (*lumen*) of intelligence surround everything that is formed in a natural form.”604

On the other hand, the very ability of light to extend to all indicates how differentiation of form occurs: “We call ‘differentia’ the shade by which the fullness of the light (*luminis*) from what is prior, proceeding according to the genus of a given cause, is contracted and shaded.”605 At the same time, “distance” alone is enough to account for the diminution of “light”, leading to a new blend of “color” in the diminished form. And, by contrast, every effect is simpler, nobler, and truer as in its source than as in itself, as Plato sees (ibid., 49, lns. 1–19). Albert thus explains the origin of the lower form Soul, which “stands apart from” Intelligence:

[N]othing that stands apart (*distans*) from the first cause is of the same essence with it. But what stands apart in this way is made less in its power as an agent and greater in its power of becoming or undergoing…. Nevertheless, whatever it has of being (*esse*) and power, it has from the first cause. And, such *esse* of form that stands apart in this way and is brought into “poweredness” (*potentialitatem*) is the cause of the *esse* of soul…. And,
because the procession stands apart, it is the constitutive differentia of soul.  

The effect of the diminution and shadowing is that a superior light has more in it than an inferior one, it extends to more, shining over an inferior light that is also contained in the source.  

Again, light is an effective metaphor for the fusion of lights from above. A third effect receives the overflow of the first and second, and is in potency to both; a fourth effect receives the overflow of the first, second, and third, and is more in potency than the third effect, and so on.  

The same form is more contracted and determinate, less universal, in successively lower things, just as is a blueprint in the architect, in the workers, and in the house built.  

By parity of reasoning, higher causes are proportionately more powerful, more full of more, and of more universal, forms than lower ones according as they illumine a greater number of lower causes.  

And, only the first cause flows universally into all. In fact, nothing flows into another except in virtue of the inflowing from the First (ibid., lns. 47–48).

The diminution theme is central to the discussion of Albert’s *De causis* 1.4, Chapter 2, where Albert traces in detail the origin of, not only soul, but also body to the shadowing and loss of the limpidity of light. But how does one account for matter given that it lacks form? At the extremity of the reach of light is darkness, and the material world is a mixture of the light with the darkness that is potentiality for corporeal form. And so, we read: “[The light from the first cause] flows, therefore, as standing apart (*distans*) [in the case of Intelligence], as falling (*cadens*) [in the case of Soul], as ‘setting’ (*occumbens*) [in the case of body], and as submerged (*oppresum*) into darkness [in the case of matter].” The language becomes metaphorical, but Albert often brings us back to earth with concrete images: so also art, crystal clear in itself, stands apart in the artist’s mind, falls into the motive power and the *pneuma*, settles into the tools.

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606 Alb., *De causis et proc. univ.* 2.1.14, Ed. Colon. 17/2, 78, lns. 35–48. “Soul” is sometimes used with an upper case in this context to refer to a nature that extends to celestial soul, its primary instance.

607 See Alb., *De causis et proc. univ.* 2.2.6, Ed. Colon. 17/2, 100, lns. 5–20.

608 See Alb., *De causis et proc. univ.* 1.4.5, Ed. Colon. 17/2, 49, lns. 48–56, quoted above, note 597.

609 Alb., *De causis et proc. univ.* 1.4.6, Ed. Colon. 17/2, 50, lns. 2–11. For more and less universal forms, see esp. the texts cited below in note 621.

610 See Alb., *De causis et proc. univ.* 1.4.2, Ed. Colon. 17/2, 44, lns. 58–66.

before being “sunk” into the artifact.\textsuperscript{612} He reminds us that the light in question is not material but intellectual.\textsuperscript{613} Its reception is not in a physical thing but in possibility, that is, in the possibility of “that which is” at the level of “higher being” (esse superius), and then in the possibility of matter that receives corporeal form at the level of esse inferius.\textsuperscript{614} The result is a grand vision of the mediation of primary causality through the entire cosmos, whose Neoplatonic character can be seen beneath Albert’s paraphrase of Liber de causis 15 (16):

The remaining simple goodnesses that flow from the first cause, as do being (esse), life, the light (lumen) of intelligence, and what is similar to these, that is, [all] that is noble and immaterial that pertains to the substantial esse of things, having exemplary esse in the first cause, are formal and ideal causes of all things having goodnesses that, while being exemplary in the first cause, descend from the first cause itself. But they descend first over the first effect, which is Intelligence. Then through the light of the Intelligence they descend over the rest of effects, both intelligible and corporeal. But they descend into them through the mediation of Intelligence.\textsuperscript{615}

One curious point remains. Despite the ability of the “flow” to reach all things, what Albert emphasizes from the outset of his personal, systematic discussion of it is its distinction (within formal, final, and efficient orders)\textsuperscript{616} from the notion of causality as such (to say nothing of the notions of “element” and “principle”), insofar as causality includes “equivocal” and “univocal” causes.\textsuperscript{617} Flux or emanation is neither so purely equivocal that nothing formal is in any way shared between cause and effect, nor so purely univocal that the same form is “brought about in another subject”.

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\item \textsuperscript{612} See Alb., De causis et proc. univ. 1.4.1–2, 6, Ed. Colon. 17/2, 43, lns. 48–52, 44, lns. 31–36, and 50, lns. 5–8.
\item \textsuperscript{613} Alb., De causis et proc. univ. 1.4.1, Ed. Colon. 17/2, 43, lns. 48–53.
\item \textsuperscript{614} Alb., De causis et proc. univ. 1.4.2, Ed. Colon. 17/2, 44, lns. 37–45, 67–76. See also note 602 above.
\item \textsuperscript{615} Alb., De causis et proc. univ. 2.3.6, Ed. Colon. 17/2, 145, lns. 11–12; italics mark the lemmata in Liber de causis 15 (16), as identified in the Cologne edition.
\item \textsuperscript{616} See Alb., De causis et proc. univ. 1.4.4, Ed. Colon. 17/2, 47, lns. 1–13.
\item \textsuperscript{617} See esp. Albert’s De causis 1.4.1. By “equivocal causation” there Albert apparently means cause and effect that are radically heterogeneous (e.g. sun and heat), whereas “influx” includes forms that are analogously one according to prior and posterior. See Alb., De causis et proc. univ. 1.4.6, Ed. Colon. 17/2, 49, ln. 73–p. 50, ln. 5, where Albert also holds that the First efficient cause, from which one must say the “second” flows, is neither in the same genus as the “second”(and so is a univocal cause), nor is it an equivocal cause; thus the “second” is a quasi-instrumental efficient cause of the First.
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which then possesses it in the same way as does its cause. As Albert prefers to put it, to flow or emanate as such expresses no transmutation per se of that to which such intelligible form is communicated. What is crucial, then, is that all flowing involves some “verticality”, some transmission of a form that is only analogously one according to prior and posterior. Flowing as such involves similarity of form between cause and effect but not any univocity (as in form received “in a subject” of the same kind). So, Albert wants to include in the notion of the “flow” the entire causality of “superior being” on every effect below it (including esse but excluding any “equivocal” causality), even the origin of natural classes as such, versus as communicated horizontally from one member of a material species to another. He wants thereby to claim, among other things, that the same natural kind that is in all material things is also found, but in a higher way (see also notes 40, 597, and 621), together with higher, analogously common forms, in the intelligible light of the superior beings that serve as exemplar and final causes. He does not see this claim as preserved by divine ideas alone (although his emanation itself proceeds from the first universally active intellect), perhaps partly because of his emphasis upon mediation by Intelligence, celestial souls, and the heavens—not of the creation of esse as such—but of the emanation of all other forms in everything below them. Again, the light metaphor helps preserve this “mingling of lights” in the higher causes. But water, the first image used in De causis 1.4.1, preserves the notion of the integrity of the flow in communicating form. If the river bank is changed, it is in any case not changed into water, and whatever change thereby occurs can only be accidental to

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618 Alb., De causis et proc. univ. 1.4.1, Ed. Colon. 17/2, 43, Ins. 38–48, 59–63: “Non enim fluit nisi id quod unius formae est in fluenete et in eo a quo fit fluxus. Sicut rivus eiusdem formae est cum fonte, a quo fluit, et aqua in utroque eiusdem est speciei et formae. Quod non semper est in causato et causa. Est enim quaedam causa aequivoce causa. Similiter non idem est fluere quod univoce causare. Causa enim et causatum univoca in alio causant aliquando. A fonte autem, a quo fit fluxus, non fluit nisi forma simplex absque eo quod aliquid transmutet in subiecto per motum alterationis vel aliquem alium. . . . Unde cum causa nihil agat nisi in subiecto aliquo existens, fluxus autem de ratione sua nihil dicat nisi processum formae ab ipso simplici formali principio, patet, quod fluere non est idem quod causare.”

619 See, in addition to the following subsection, notes 580 and 602 above. It follows, in case it is not by now evident, that each Intelligence differs in species from every other, as is true also of each celestial soul and each heavenly body. Contrast this fact with Albert’s support in Summa theologiae 2 of the theological opinion that the angels are one in species, though they differ “in hierarchies and orders”; Alb., Summa de mir. scient. dei 2, q. 8, Borgn. 32, 137b–138a.
the rush of water from its source into the deep, even while it is diffused into lakes, pools, rivulets, and swamps.

4. Objection: Emanation Contradicts Faith
The objection against the presentation in this subsection will be that Albert could not have held such positions personally since they are contrary both to good Aristotelian philosophy and to his personal religious views. Of course, his disclaimers in the paraphrase of the *De causis* shield him from the charge that he writes in his own name. But if they apply to Book 1 as well, what principle of selection (apart from Albert’s expressly saying even there that he is summarizing the views of others) allows us to distinguish, for example, his arguments for the existence of God and a freely willed creation from arguments on behalf of causal influx?

The emanation scheme may appear (may, in fact, turn out) to contradict a freely willed creation, but Albert seems to have done all he can to show how causal influx can be understood consistently with his theological views. Is this the only possible universe? Could different lights have been “turned on” or diffused in different ways? It seems that Albert has as much right to causal influx as does the theistic evolutionist who says that the information behind all things came prepackaged within the original bang; yet the original information, to say nothing of the laws, could have been different. Albert’s unfolding is not one with a temporal duration, but it is an immaterial “explosion” that stretches out at its outer reaches to be received in the potentiality of matter. From one comes only one considered as one. But the font of light is so full of intelligibility that there are many ways in which it could have been “considered” so as to produce pluralities. Albert, as other thinkers before him, relies on the best science of his day to target precisely ten celestial spheres and their movers all at once at the first “moment” of his “bang”, together with the earth at its center. So, the threefold “consideration” of his emanation scheme is affirmed through “effect-to-cause” reasoning so as to account (ten times) for the series “Intelligence-soul-heaven”. In a way similar to our material “unfolding”, which takes time, Albert’s immaterial “unfolding” of forms, which happens all at once, has a kind of spontaneity and inner law-likeness. If one focuses on that feature alone, one naturally overlooks the idea that the entire outpouring, including each intelligible form, owes all that it is to the free action of the primary font.

The language of emanation and mediate causality is associated in Islamic philosophy with the claim that God immediately causes the existence of no more than the first substance, and that all other effects are directly
caused only by non-divine agents. Nevertheless, we have seen that Albert protects himself extensively from these claims. First, although he accepts the principle “ab uno non nisi unum”, he understands the one according to conceptual distinctions such that the principle applies only to the one considered under one aspect. Second, although only being proceeds from the First as being, the procession of being is understood as a form that belongs as well to all other things so that they be. Third, although all other processions, then, proceed under the mediation of being or Intelligence, they also proceed from the First as intellect, life, and so on, and none of them would be unless they possessed being from the First alone. So, “emanation” and “mediate causality” create no more problems than “procession” when understood in an Albertan way.

5. Is Emanation Peripatetic or Platonic?
As to the second part of the aforementioned objection, this chapter as a whole has brought out that appreciating Albert’s thought ex Alberto requires recognizing his distinctive—and, perhaps by our standards, bizarre—philosophical doxography, at the center of which lies the Aristotelian character of the *Liber de causis*. Without this doxography, Albert’s theory of emanation will appear to contradict his Peripateticism; indeed, it will appear the work of a pedant. At this point it will be helpful to review, in addition, Albert’s own attitude to the relation of Platonic and Aristotelian philosophy given that it is precisely on our present theme that they most converge. In the midst of a digression on Plato’s philosophy in *Metaphysica* 1, Albert draws out what is positive in the theory of Forms:

Plato used to say that the first forms of things—which, also, are truly called forms—are the lights (*lumina*) of intelligences—which are themselves formed by nothing, but they form all other things…. [W]hatever power those formative [material] powers [below] have is from these, and in this way these confer these [powers] upon the powers of matter that determine them…. And, this is what is said in the *Liber de causis*: “all Intelligence is full of forms”. Nevertheless, some Intelligences have more universal forms, and some have less universal forms,…. in such a way, nevertheless, that those forms are not distinguished from the essential light of intelligence; and they are not a set of concepts varied according to the things of which they are forms, but rather are a “forming light”, just as … a light source (*lucem*) is related to the forms of colors. For this reason Plato used to say that sensible things are more noble and true in their separate forms than in themselves,

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620 For the multiple conceptual distinctions in the First, see e.g. Alb., *De causis et proc. univers.* 2.1.18, Ed. Colon. 17/2, 82, Ins. 53–71, quoted above, note 362.
because they exist in themselves through a “decline” (occasum) and a darkening of the light of intelligence, whereas in the light of intelligences they are a light source, which is the intelligibility (ratio) and formative form of those things that attain forms.\textsuperscript{621}

It may now be seen that Albert offers here as well a summary of his Peripatetic “light procession” that is, in fact, as good as can be found in his works. He goes on to take up Plato’s consequent theory of knowledge (and theory of Forms) in a remarkably sympathetic way:

Also, [Plato] used to say… that form is the principle of cognition through its being separate and not through its being conjoined with matter. He, nevertheless, was not intending that [it] have being (esse) that is separate in reality, existing in a particular way in nature, but was intending [by speaking thus] the being (esse) of form insofar as it is form. For, this being of form is truer insofar as it is a more separate form. But form has the being of form neither from matter nor in matter per se in such a way that it would not have it outside matter. For, were it to have [it] only in matter, there would only be form in matter—which is false…. But form has the being of form in that a separate light (lumen) is the hypostasis of forms, just as a corporeal light source (lux) is the hypostasis of colors; for, through this, it in no way depends on matter.\textsuperscript{622}

Notice again that what is offered here is Albert’s own notion of form as essence or substance. Indeed, his presentation of the first mode of substance as caused (Section 9) makes more sense than before now that we may understand it to be ontologically present (hypostasized) in an indeterminate way in the celestial Intelligence. As he goes on to say, echoing Liber de causis 3, because the intellectual soul is like the “bed of straw” (stramentum) of the light of the Intelligence, the result of the light hypostasized in it is an intellect that is the image of Intelligence.

Albert next presents Plato’s view that our intellect has ideas connatural to the soul, not by abstracting anything from sensible things, but by the soul’s withdrawing (abstrahendo, abstrahat seipsam) from sensible things and by its turning within itself to discover there “the lights of all truths”. Rather than criticize Plato, he finds a way to show, because of the connection of these lights to the first light source, how true knowledge of individual things in themselves is preserved in Plato’s theory of knowledge:

\textsuperscript{621} Alb., Metaph. 1.5.15, Ed. Colon. 16/1, 88, ln. 64–p. 89, ln. 6. For the doctrine on the more and less universal forms that are virtually and not ontologically contained in the Intelligences, as in light, see esp. Alb., Metaph. 11.2.19 [digr.], Ed. Colon. 16/2, 506, ln. 77–p. 507, ln. 40; and 11.2.21, 510, Ins. 43–57.

\textsuperscript{622} Alb., Metaph. 1.5.15, Ed. Colon. 16/1, 89, Ins. 6–24; italics added.
[T]hese lights [of all truths] (lumina) are the images of the first light source (lux), and the forms of sensible things are the images of forms that are separate in this [aforementioned] way. In the acquisition of knowledge, moreover, it was very necessary (1) that the lights of the separate forms be determined to the forms of things that are received through sense; (2) that in this way the proper cognition of each thing come to be—for, Plato used to say [according to Boethius] that the intellect “retains the whole (summa) and loses the individuals”; and (3) that in this way there be cognition of all things in us, and that nevertheless diligence be needed for these two reasons: so that, namely, the intellect, turning (se convertens) into itself and withdrawing (abstrahens) from sensible things, find the lights of the forms within itself; and so that those lights that are determined to the forms of things perfect the proper cognition of a thing (Ins. 38–52).

Taking Plato in this positive light allows Albert to end the digression with what is, in effect, extremely high praise for Plato (especially given the context and Albert’s remarks elsewhere), whose thought is regarded as an authentic and complete alternative system (philosophia) to Aristotle’s. That said, we must not miss the fact that Albert here highlights the agreement of the two philosophers as to the role of light and intelligences in communicating form to all things in the cosmos that have it, even if they disagree as to the way in which “inferior being” participates in the bringing about of this communication, as we shall review in the following subsection. Albert even chides Aristotle a little for hypostasizing Plato’s Forms in a way that prevents him from seeing the radical agreement of their thought in the intentions that ground it:

And, given this way of understanding Plato, he did not deviate much from the truth, because Aristotle also says things that are not very different from this understanding… Aristotle, however, went against these [findings], not insofar as [Plato] said that the forms are derived from the primary lights (luminibus) of intelligences, but rather insofar as he said that they are not “educated” from matter but are given extrinsically by a giver of forms; for, thus there would be no motion, as we have shown above. Also, [Aristotle] went against these insofar as Plato said that there is in the many [what is] one in reality (secundum esse), not [what is] said in multiple ways. You see, Plato was wanting [to say] that the unity of form is from the unity of light, which is its hypostasis. But Aristotle was saying, as is also true, that although this light is the hypostasis of forms, still what determines the light is whatever items are essential to form as the form of this or that thing. And for this reason, the being (esse) of light is “participated” in a plurality of ways within forms and things that are formed, just as also a corporeal light source (lux) receives multiple esse in different colors. For, just as colors are resolved into one hypostasis of a corporeal source of light (lux), Plato was saying, accordingly, that forms are resolved into the unique hypostasis of the first light
source. For this reason, sometimes Aristotle raises an objection against him, as if [Plato] were saying that there is one idea of all things, which is the same in all things through a unique esse. And, may you understand that a human is only perfected in philosophy through the knowledge of the two philosophies of Plato and Aristotle.623

B. Albert on Causality within the Material Order: Induction versus Eduction

For Albert, eduction and induction are two theoretically possible modes of describing the relation of material effects to their proper causes. In the material world, where substances are, as we have seen he sometimes puts it, comparatively obscure and opaque because of their composition with matter, the reception of form can be conceived as occurring in two ways: either as an induction, according to which a dator formarum introduces the form into the matter to produce the compound thing,624 or as an eduction, according to which an efficient cause in act acts upon a thing that already possesses potentially within itself the form.625 The main difficulty involved in grasping Albert’s theory of eduction stems from the fact that Albert sometimes criticizes what he seems to accept as his own view elsewhere: he strongly criticizes theories of induction though he adopts much of their language in the late metaphysical paraphrases, as we have seen. The reader’s task, then, is to discern what is the real point at stake in each case. Even though it is still not clear whether there is a shift in Albert’s thought on the issue, one cannot but notice that he gives

624 For other Albertan references to the dator formarum, see Alb., Super Dion. de div. nom. 1.30, Ed. Colon. 37/1, 15, Ins. 24–45 (Avicenna); ibid., 2.44, 72, Ins. 35ff. (Plato, Avicenna); ibid., 4.90, 194, Ins. 55–75 (Plato, Avicenna, Aristotle, Anaxagoras); Alb., De causis et proc. univers. 1.1.3, Ed. Colon. 17/2, 8–9; Alb., De anima, 3.2.5, Ed. Colon. 7/1, 183, Ins. 32–45 (Alexander, Averroes, Albert); Alb., De nat. et orig. an., 1.2, Ed. Colon. 12, 5, Ins. 51–59 (Plato, Pythagoras, as in Alb., Super II Sent. 1.12, Borgen. 27, 34a); Alb., De unit. intell. Ed. Colon. 17/1, 14, Ins. 84–90 (Stoics); Alb., De caelo et mundo 2.3.3, Ed. Colon. 5/1, 152, Ins. 87–92 (Plato); ibid., 3.2.6, 233, Ins. 55–64 (Plato, Anaxagoras, and his latitio formarum); Alb., De IV coaeq. 1.5.26, Borgen. 34, 175, Ins. 10–15; Alb., Metaph. 1.5.3, Ed. Colon. 16/1, 72, ln. 92; ibid., 1.5.8, 79, Ins. 65–70 and 70ff. (Plato, cf. Anaxagoras); ibid., 1.5.15, 89, Ins. 61–87 (Plato), quoted above, note 623; ibid., 3.1.2, 108, ln. 8; ibid., 3.2.5, 120, Ins. 39–42 (Stoics); ibid., 3.3.9, 147, Ins. 13–14 (Stoics); ibid., 11.1.8, 468, Ins. 66–72; ibid., 470, Ins. 31–34; ibid., 11.3.7, 541, Ins. 59–64; and Alb., Super Ethica 1.10.54, Ed. Colon. 14/1, 54, ln. 10.
emanation a central place in his later works, especially in his *Metaphysica* and *De causis et processu universitatis a prima causa*, in contrast to the question-commentaries on Dionysius, and that he confines eduction to the proper mode of explaining the generation of things, the *opus naturae*.

Eduction, thus, is the “causal” side of creative emanation within the terrestrial order. But before studying it in detail, let us look at some of the different theories in history that, according to Albert himself, had been proposed to solve the problem of generation and the procession of things from the First. In the midst of these emerge the alternative approaches of induction versus eduction.

In his commentary on Book 2 of the *Sentences* of Peter Lombard, Albert presents different answers to the question concerning the cause of the creation of universal being: (1) four *viae* before Aristotle, namely (a) the atomists Democritus and Leucippus, (b) Empedocles, (c) Anaxagoras, and (d) Plato and Pythagoras; (2) two *viae* for the “modern philosophers” who are following the *via Aristotelis*, namely (a) Avicenna, and (b) Averroes; and (3) two *viae* for the “modern theologians”. All accept two fundamental propositions that are equally true but that are also, in Albert’s eyes, badly misunderstood by most of them: “nothing comes to be out of nothing” (*ex nihilo nihil fit*); and “every agent causes something similar to itself” (*omne agens agit sibi simile*). Anaxagoras was the first

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626 Perhaps this shift results from accounting for the “coming-to-be” of material versus immaterial substances, given the impossibility of applying eduction to the latter. For reference to the bringing into existence of immaterial things as a special kind of non-eductive causality, as a “substantifying” or “founding”, see Alb., *Metaph.* 11.2.20, Ed. Colon. 16/2, 507, Ins. 83–92 (as well as n. 469 above).

627 As we have seen, emanation for Albert is not a causation in the strict Aristotelian sense. It was originally introduced to cover what the Aristotelian four causes do not quite fit: the philosophical notion of creation or the dependence of all being on a first. But Albert extends it to any derivation of form from primary principles. See Alb., *De causis et proc. univers.* 1.4.1, Ed. Colon. 17/2, 42, Ins. 35–63.

628 Alb., *Super II Sent.* 1.12, Borgn. 27, 32–34: “[Q]uid sit causa creationis totius universi esse?”

629 Albert borrows most of his material from Aristotle’s *Metaph.* A.3 and *Phys.* 1.3–4, but reinterprets these passages in his own way.

630 As Albert later puts it, “he wants to be a Peripatetic”; Alb., *De causis et proc. univers.* 1.4.7, Ed. Colon. 17/2, 53, Ln. 3.

631 Alb., *Super II Sent.* 1.12, sol., Borgn. 27, 33b, Ins. 16–18: “Omne quod extrahit aliquid de potentia ad actum, simile est illi in actu secundum speciem” (“Anything that draws something from potency into act is similar in species to it in act”). Albert gives different examples of this principle, which is applicable both to efficient and formal causality: heat comes from heat, health from health (in the mind of the doctor), a house from a house (in the mind of the builder), according to an interpretation of Aristotle, *Gen. Corr.* 1.7, 324a10. The proper notion of similarity allows Albert to think of the identity between cause and
to discern in things substantial forms; for him all of these forms are actually in matter, but in a hidden state. There is no eduction in this dormancy of forms or *latitatio formarum*, since the dormant forms are not in potency, but fully in act. They are unveiled under the action of the *Noûs*, considered as the pure and unmixed agent intellect.\[^{632}\] By contrast, Avicenna represents the first thinker of the *via modernorum*, and he is a developed induction theorist. In the commentary on the *Divine Names*, Albert places Avicenna in the same category as Plato by identifying the Avicennian *dator formarum* of the *Shifā* \[^{633}\] with the Platonic demiurge of the *Timaeus*.\[^{634}\] The principle that founds the Platonic account of the procession of things from the First, though it can be reconciled with Aristotle, is that “what exists in one way in some ‘first’ is received in other things in ways that are diverse in species from each other and from [the way of ] the first”.\[^{635}\]

Induction, as conceived by Avicenna, presupposes the communicative power of the first Intelligence, thought of as an irradiation\[^{636}\] in which the unity of the irradiation is preserved by the fundamental unity of form, grounded in the first cause (ex uno non fit nisi unum), whereas its diversification results from the receptive capacities in the hierarchy of beings.\[^{637}\] In a way dissimilar to the case of eduction, the form is induced into matter *in se* and in act: *in se*, as it is the very ray of the first cause

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\[^{632}\] Alb., *Super II Sent.* 1.12, Borgn. 27, 34a. The reader will notice how far Albert stands from Anaxagoras’s true doctrines and even from Aristotle’s partly biased account of the pre-Socratics. Albert’s perspective is marked not only by Aristotle’s hylomorphism and his doctrine of the four causes but also by Albert’s own interpretation of efficient and formal action in the context of a theology of creation *ex nihilo.*


\[^{634}\] The two passages that influenced Albert are: *Timaeus* 30b and 41a–d (secondary gods as intermediaries). For Albert’s criticism of the Platonic triad of principles to account for creation: demiurge, eternal matter, eternal exemplars (interpreted as the ideas of God), see Alb., *Super II Sent.* 1.3–5, Borgn. 27, 11a–17a.

\[^{635}\] Alb., *Super Dion. de div. nom.* 2.44, Ed. Colon. 37/1, 72, Ins. 41–43.

\[^{636}\] Alb., *Super II Sent.* 1.12, Borgn. 27, 34a, Ins. 36–37; Alb., *Super Dion. de div. nom.* 1.30, Ed. Colon. 37/1, 15, Ins. 23–26. See also ibid., 2.44, 72, Ins. 46–49.

\[^{637}\] If the form is received in a celestial body, it creates an Intelligence; if it is received in a body similar to a celestial body, it creates a rational soul, similar to an Intelligence, etc., according to the progressive lack of similitude of the terrestrial with the celestial body; Alb., *Super Dion. de div. nom.* 1.30, Ed. Colon. 37/1, 15, Ins. 37–42.
that is incorporated into bodies; in act, as there is no additional action needed on the part of an agent that would bring the incorporated form from potency to act. The role of secondary causes is in this case limited to the “preparation of matter” for the induction.638

By contrast, Albert consistently prefers the way of Aristotle and Averroes as less contrary to the faith and more probable than Plato’s or Avicenna’s.639 For Aristotle and Averroes affirm an eduction theory: substantial forms in terrestrial things are educed from the potency of matter and are not merely induced from above once the matter is sufficiently prepared.640 Albert makes the point in a surprisingly bold way in his question-commentary on the Divine Names: “We, however, say otherwise—in a way more suited to theology and philosophy—that, according to the opinion of Aristotle, all forms are drawn (educantur) from the potency of matter.”641 Albert treats these historical theories, which arrive at induction versus eduction, as opposed—at least insofar as Plato and Avicenna leave no room for eduction. For Albert, the hallmark of their pure induction theory is the claim that “form through its very essence is the embodied light source (lux) of the first cause” (ibid.). This claim, he acknowledges, would seem to fit with the “intention of Dionysius” in the Divine Names based only on a surface reading of his text. But Dionysius should be understood as meaning that each thing rises up, insofar as it is able, to the likeness of the divine light—a claim better suited than induction theory to both philosophy and theology. A pure induction theorist must say either that the form is the same in the proximate cause and effect, or that the form

638 Alb., Super II Sent. 1.12, Borgn. 27, 34a, Ins. 32–34.
639 Alb., Super Dion. de div. nom. 1.30, Ed. Colon. 37/1, 15, Ins. 45–48; chap. 2.45, 73, Ins. 41–60; 74, Ins. 7–20 (where Albert clarifies that Aristotle’s eduction theory is consonant with faith especially when to it is added the claim that “the First through its own efficiency produces the whole thing according to [both] matter and form”); and Alb., Super II Sent. 1.12, Borgn. 27, 34b, Ins. 14; see also Alb., Metaph. 11.1.8, Ed. Colon. 16/2, 470, Ins. 31–46; 471, Ins. 4–7.
640 Albert’s theory of eduction reaches its limit with the human soul, which cannot be said to be educed from matter; see, for instance, Alb., De causis propr. elem., 1.2.13, Ed. Colon. 5/2, 86, Ins. 71–77, according to which the philosophers affirm as source the giver of forms, but Albert affirms the Creator. Similarly, Albert does not speak of eduction in reference to spiritual substances, since he rejects spiritual matter, or in reference to the order of grace. And, no substantial form in the heavenly bodies is drawn from the potency of matter. Still, Albert would reject the univocity of form between proximate agent and effect that he finds in the “Avicennian” induction theory; see above, note 617.
641 Alb., Super Dion. de div. nom. 1.30, Ed. Colon. 37/1, 15, Ins. 43–64 (on ibid., 14, Ins. 80–81, PG 3: 588C); italics added.
is created wholly anew in each material thing, with nothing presupposed.642 This latter claim is contrary to the faith, especially in that an Intelligence below the first cause becomes creator of such form in eternal, uncaused matter.

In eduction theory, then, the form is, as Albert puts it, “not the incorporated light source (lux) of the first cause, but its similitude that is caused by it”.643 One might imagine that an eduction theorist must consequently reject all elements of an induction theory; in other words, for example, that the horizontal causal series excludes anything of a vertical series.644 In commenting on the Divine Names, Albert proceeds to clarify expressly that such is not the intended result of Aristotle’s opposition (in Nicomachean Ethics 1.4) to Plato, who affirms that natural forms are separate both in notion and in being:

It is not the intention [of the Philosopher] to deny one exemplar of all good things according as the exemplar is called an idea in the mind of the artisan, just as he himself says in Metaphysics 7 that health exists in the hot and the cold from the health that exists in the soul of the doctor, and a house from a house.645

The image used by Albert to explain this exemplar causality of form, which he ascribes to Averroes in his account of the triplex universal, is that of the exemplar of a book from which are derived many copies.646 The original is common to all of the copies, but it is not predicated of them, nor do they participate in it univocally; rather, it is received in diverse ways in diverse parchment and copyist’s script. But the image would be improved, insists Albert, if the exemplar could produce itself in the copies, just as the first good is the universal exemplar of all good things.

The key to Albert’s affirmation of exemplar causality as opposed to mere induction theory appears to be that the forms effected in matter are

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642 Alb., Super Dion. de div. nom. 2.45, Ed. Colon. 37/1, 73, lns. 30–40; 74, lns. 14–18; see also Alb., Super II Sent. 1.12, Borgn. 27, 34b, lns. 3–8; Alb., Metaph. 11.1.8, Ed. Colon. 16/2, 469, lns. 26–64; and 471, lns. 8–25.
644 Notice that Albert can also use the verb “induce” in discussing horizontal terrestrial efficient causes; Alb., Super Dion. de div. nom. 4.57, 164, lns. 57–62; and 4.82 ad 6, Ed. Colon. 37/1, 189, lns. 65–77. See also Alb., Metaph. 11.2.2, Ed. Colon. 16/2, 484, lns. 82–89; and 11.2.13, 500, lns. 38–49.
645 Alb., Super Dion. de div. nom. 2.84, Ed. Colon. 37/1, 97, lns. 44–49.
646 Alb., Super Dion. de div. nom. 2.84, Ed. Colon. 37/1, 97, ln. 5–p. 98, ln. 9.
not in the same species or genus with the original exemplar.\textsuperscript{647} We make a mistake when, with our abstractive intelligence, we draw from particulars our generic and specific notions and then ascribe them as such to the exemplar cause.\textsuperscript{648} To do so is to confuse the universal \textit{ante rem} with the universal \textit{post rem}, as explained in Section 7.

Let us now try to understand what Albert means by a theory of induction against the background of his own emanation theory. Albert’s metaphysics of flow is based on the diffusion from the first principle. This diffusion can be understood either as an effusion, that is, an outpouring of the communicative power, or as an infusion, that is, the same act considered as coming into the very being of effects.\textsuperscript{649} Here we find both transcendental properties—one, true, good—and natural kinds. But the infusion implies a point of contact between the \textit{fluxus formae} and the recipient; or, we might say in light of Sections 8 and 9, between the \textit{quo est}, or the substance-essence, and the \textit{quod est} that receives it. In any created being, whether material or immaterial, the act of reception corresponds to the \textit{virtus recipiendi} of the recipient, that is, to its capacity to receive the flux.

The \textit{virtus recipiendi} of the recipient, when fulfilled, so to speak, places the recipient within the hierarchy of being, where each substance is organized according to its proximity to the first principle. A passage from one of the last tractates of the “Peripatetic” paraphrases summarizes as well as any the origin of the diversity of substances in the divine wisdom:

> It is clear, therefore, that although the First is compared in one simple way to all things that are, nevertheless the universe of things is not compared to it in one way. The cause of this diversity is the diversity of the recipients, in each of which, that which is received is in accord with the mode and power of the receiver, not in accord with the mode and power of what is received. But the diversity of receivers, as we have said before, is determined by the wisdom of the First as it “determines”, which [First] would not be super-bountiful (\textit{superdives}) were it communicated in only one way. But it is super-bountiful when it is communicated in accord with every possibility that belongs to the recipients. It is clear, therefore, that the First is in all

\textsuperscript{647} Alb., \textit{Super Dion. de div. nom.} 2.84, Ed. Colon. 37/1, 98, Ins. 22–41. For the ascription of exemplarity through analogy to Aristotle as opposed to Plato, see also ibid., 4.143, 231, Ins. 10–31.

\textsuperscript{648} Alb., \textit{Super Dion. de div. nom.} 2.84, Ed. Colon. 37/1, 98, Ins. 11–21.

\textsuperscript{649} Alb., \textit{De causis et proc. univers.} 1.4.1, Ed. Colon. 17/2, 44, Ins. 1–3 (italics added): “[P]rimum principio est indeficierter fluentes et… intellectus universaliter agens indesinenter est intelligentias \textit{emittens}.” Ibid., 1.4.2, 44, Ins. 5–6 (italics added): “Influere autem est fluxum talem alicui receptibili \textit{immittere}.”
things in one way, and nevertheless that none of the “secondary things” is in it in one and the same way as [is] another.\footnote{Alb., \textit{De causis et proc. univers.} 2.4.12, Ed. Colon. 17/2, 166, ins. 34–50.}

Albert’s eduction theory is not only consistent with the metaphysical flow of forms, it represents the ultimate explanation of how substantial form flows to each individual thing in the terrestrial order. Let us review how. “Every agent,” writes Albert, “causes what is similar to itself, as the Philosopher proves—or, [in other words, acts] as an exemplary cause.”\footnote{Alb., \textit{Super Dion. de div. nom.} 1.30, Ed. Colon. 37/1, 36, ins. 53–54. See Arist., \textit{Gen. Corr.} 1.7, 323b31–32, and Alb., \textit{Gen. Corr.} 1.5.4, Ed. Colon. 5/2, 156. See also Moulin, “Éduction et émanation chez Albert le Grand.”}

As \textit{umbra}, \textit{vestigium}, or image, according to its own hierarchical degree of materiality (see Sections 2 and 9), the form within existent material things always has a certain degree of similarity to the unique divine form. The terrestrial form, moreover, is never “induced” (against Avicenna) in act (against Anaxagoras),\footnote{See Étienne Gilson, \textit{La philosophie de saint Bonaventure} (Paris: 2006), 237. Bonaventure’s notion of seminal principles has a clear similarity to Albert’s own theory; Bonaventure, \textit{In II Sent.} 18.1.3, in Bonaventure, \textit{Opera Omnia}, ed. Quarrachi (Florence: 1882–1902), vol. 2: 440–44. See also Augustine, \textit{De Genesi ad litteram} 1.8 (PL 34: 260).} but it is virtually contained in the potency of matter. The creation of material beings, therefore, is the creation of compounds of matter and form that are capable of being in act under the action of an agent (parent, sun, Intelligences, etc.). Without any action from a proximate efficient cause, the “virtual” form remains in potency. The terrestrial efficient cause is a true, acting, secondary cause. Albert uses another, and perhaps better, image of the virtuality of the form: \textit{semen} as it is used in the account summarized under the Aristotelian formula, “it takes man and the Sun to generate man.”\footnote{Arist., \textit{Phys.} 2.2, 194b13; \textit{Metaph.} A.5, 1071a1–17; \textit{Gen. Corr.} 2.10, 336a31–b17.} In concrete terms, \textit{semen} contains virtually the form of the animal, actualized by the male parent under the influence of the primary causes (which ultimately depend on God).\footnote{The semen and the seed possess the capacity to produce the “anima” of animals and plants in the fertile menstruum. See Alb., \textit{De animal.} 16.1.6–7 and 11, and 20.2.1–2, ed. Stadler, 2: 1058–1083, 1091–1094, and 1306–1310.}

Albert thereby rejects occasionalism, the view that secondary causes are impossible: without being co-creators, secondary causes have a true role to play in the natural world. And yet, with regard to the influx from above, secondary causes are only instrumental (see above, note 617). Under their influence, proximate terrestrial causes bring about their effect.

So far we have seen how Albert accounts for the causality of immaterial and material substances \textit{as such}, that is, as diverse forms below the
one divine “substance”, which precontains them in his wisdom. How, then, should we understand Albert’s statement in his *Divine Names* that *all forms* are educed from the potency of matter? Let it suffice to read a passage from Albert’s second physical paraphrase, on Aristotle’s *De caelo*, which establishes considerable continuity between Albert’s thought in the early 1250s and that of the *De causis* paraphrase:

It has been said in what came before, and rather often in book 8 of the *Physics*, that the Intelligences, which move the heavens, are intellects that are of themselves operative and that of themselves produce the forms of their own works. For, just as the Sun produces light (*luces*) of itself, so each Intelligence produces of itself the forms of the works of nature, which it effects by “filling them out” through the motion of the sphere which [each] moves. Moreover, this form in the first cause is an “ideal” form and is operative of the universal being (*universi esse*) of the entire world, and therefore [the Intelligence of the first order] is said to be universal and simple. And, the same form, more determinate, is in the Intelligence of the second order. And in the Intelligence of the third order, it is again a more determinate form, and in this way [the form] is determined in all of the orders of Intelligences. For this reason the Philosopher in the *Book on the Causes* says that “the Intelligence is full of forms. But some Intelligences have [more] universal forms and some Intelligences have less universal forms.” . . . And the Intelligences have this [i.e. universal form] without motion and operation through this: that they are a certain light (*lux*) of the first cause. But the spheres moved by the Intelligences receive this [form] of universal being through one or more motions and operations.…

It is thereby possible for Albert to assert that the work of nature is the work of Intelligence: *opus naturae est opus intelligentiae*. The *virtus formativa* within the natural world comes from intelligence and is an exemplar of the Intelligence:

For this power, which is called “formative”, does not have this [property] insofar as it is a form or nature but insofar as it is an exemplification of the intelligence and contains within itself the power of the intelligence. For this

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655 Alb., *De caelo et mundo* 2.3.14, Ed Colon. 5/1, 174, ln. 64–p. 175.1 (on Aristotle, 2.12, 292b17–19). This passage identifies the first cause with the first Intelligence, which appears also to be the proximate mover of the spheres; see also above, Section 10b and note 590.

656 For a list of all the references of this axiom, see Weisheipl, “The Axiom *opus naturae est opus intelligentiae*,” Appendix, 460–63; see also Adam Takahashi, “Nature, Formative Power and Intellect in the Natural Philosophy of Albert the Great,” *Early Science and Medicine* 13 (2008), 451–81.
reason in *On Animals* book 16, intelligence is said to be in the semen, and the whole work of nature is said to be the work of intelligence.\(^{657}\)

What is more, the more one ascends in the hierarchy of beings, the more one approaches the world of intelligence:

For, since the work of nature and the work of intelligence are one and the same—given that nature operates with the help of intelligence and intelligence operates within nature, the completion of the work is sometimes closer to nature, sometimes closer to intelligence. . . . But when form is raised above the conditions of corporal matter, the more it is raised, the more it approaches the similitude of intellectual nature, that is, intelligence.\(^{658}\)

There is, then, continuity within Albert's conception of causality: the horizontal continuity between substantial forms educed from matter within terrestrial substances reflects the continuity and unity of the forms that flow vertically from superior causes and ultimately from the First (without being univocally present in them as distinct existences). Correspondingly, despite the fact that metaphysics and physics each has its own proper domain and principles, the continuity of causal action of lower causes under higher reflects a complementarity of the disciplines. The account agrees with the spirit, if not the letter, of Aristotle's notion of causality: final causality belongs to the sphere, not only of *philosophia prima*, but also of physics. Thus, Albertan exemplary formal causality is also a final causality: the *reditus* to the first principle is no less fundamental than the *exitus*.\(^{659}\)

\(^{657}\) Alb., *De causis et proc. univers.* 1.2.8, Ed. Colon. 17/2, 34, Ins. 41–47. The “final” aspect of this axiom can be found in ibid., 2.1.2, 62, Ins. 21–33.


\(^{659}\) See William J. Hoye, "Mystische Theologie nach Albert dem Grossen," in *Albertus Magnus 1200–2000: Zum Gedenken nach 800 Jahren*, ed. Senner et al., 587–603. The editors would like to express their gratitude especially to Rollen E. Houser, Daniel Vecchio, and an external reader for their help in preparing this chapter.
PART THREE

EPILOGUE
ALBERT’S CONTRIBUTIONS TO OR INFLUENCE ON VERNACULAR LITERATURES

Dagmar Gottschall

From the 14th century on, Albert the Great’s work was received in the vernacular, although only very specific parts of his oeuvre and not as a word-for-word translation, but rather in excerpts and loose adaptations. This selective reception is essentially due to the popular portrayal of Albert, which began to spread probably while the famous Dominican was still alive, but was certainly underway immediately after his death.

Albert’s fame was less as a philosopher and a theologian than as a natural scientist who mastered even magical practices and did not shy from the devil. To this legendary Albert were soon attributed numerous contemporary writings in the fields of natural science, medicine, and magic. A second subject area where Albert’s works were received consists of the cure of souls and catechism. Vernacular sermons, commentaries on the Mass, and sayings concerning the spiritual life were based on Albertan or pseudo-Albertan works in which the authoritative voice of Bishop Albert can be heard.

Albert’s legacy in the vernacular has not yet been systematically explored. The authority remains Grabmann’s study of Albert’s influence on medieval intellectual life. Illing surveys the Middle High German and Middle Dutch adaptations. Meyer provides the most recent compilation of medieval vernacular texts that have been associated with Albert.

The following contribution first considers Albert the Great’s reputation as it developed along with his legend in the vernacular. Then it will explore the vernacular reception of Albert’s authentic works, namely his natural-scientific and theological writings. This can involve the explicit

and intentional transmission of Albert’s works as well as their tacit use by medieval authors writing in the vernacular. Then follow vernacular adaptations of texts ascribed to Albert. My contribution concludes with an overview of vernacular sayings that circulated under his name. The inquiry focuses on the German- and Dutch-speaking world, but it considers other European vernaculars as well.

1. Albert the Great’s Portrayal in Vernacular Legends

Anecdotes and legends about the figure of Albert the Great relate to the most important phases of his life: Cologne, Paris, and Regensburg. The earliest anecdote concerning Albert as a clever mediator of family disputes surfaces in the life of Yolanda of Vianden (1231–83), recorded ca. 1290 in the Moselle Franconian dialect by the Dominican Hermann of Veldenz, chaplain of Mariental (d. 1308). This text describes how Albert intervened between the count of Vianden and his daughter, Yolanda, who had entered the Dominican convent of Mariental against the will of the family, and it especially stresses Albert’s learned formation as a wise teacher and preacher.

Already at the beginning of the 14th century Albert shows up in the first Bavarian continuation of the Saxon World Chronicle. This continuation, which encompasses the period 1225–1314, portrays Albert as a devil tamer. While bishop of Regensburg, Albert tamed a devil, who taught
him special knowledge. Thus, the devil was in a position to detect whether Christ was present or not in the monstrance of a passing priest.9

Two 15th-century songs relate wonders from Albert's student life in Paris. Towards the end of the 15th century, Martin Schleich wrote a 15-stanza ballad, in which Albert convicts the amorous queen of France of murdering her nine lovers, and he escapes her vengeance by flying away. The oldest known evidence for this motif appears in François Villon's *Ballade des Dames du temps jadis* from the second half of the 15th century. Villon, however, associates the account with John Buridan.10

An anonymous 19-stanza *meisterlied* in *Marners Golden Ton* tells how Albert the Great, a student in Paris, brought the daughter of the king of France into his bed by means of magic. He was convicted, condemned to death, and used a magical ball of yarn to clamber up into the air and escape. After having sworn off magic, he became bishop of Regensburg and did many good deeds.11 The basis for this story can be found in an *exemplum* that Albert introduces during a disputation in the presence of the bishop of Paris, as recounted by Albert's student Thomas of Cantimpré in his *Bonum universale de apibus*. In that account, Albert tells the astonishing tale of the count of Suavelenberch's daughter, who at night would be kidnapped and transported through the air by devils, and be brought back hours later.12 The vernacular text places Albert himself in the role of the kidnapper.

This story was known already to Peter of Prussia, a Dominican in the convent of Cologne, and the official biographer of Albert the Great,13 although in a version where Albert worked from Cologne bringing the king's daughter all the way from Paris. Peter tried in vain to fight this

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12 Thomas Cantimpratensis, *Bonum universale de apibus* 2.57.18 (Douai: 1627), 550.

“silly tale”.\textsuperscript{14} But the draw of the legend was stronger and the attractive theme had a life of its own in fairy tales and anecdotal literature.\textsuperscript{15}

2. Translations and Adaptations of Albert the Great’s Natural-Scientific Works in the Vernacular

a. Authentic Writings

Among Albert’s natural-scientific works, those that met practical needs of daily life made their way into the vernacular, namely the \textit{De mineralibus}, \textit{De animalibus}, and \textit{De vegetabilibus}, all three of which had applications in the medical sector. The \textit{Meteora}, having instead a theoretical interest, serves as an exception. These texts presented the translators with the task of developing a scientific terminology in the vernacular. This process began in the 14th century and individual translators handled it in entirely different ways.

One of the most widespread of Albert the Great’s natural-scientific texts is his treatise on minerals and their powers (\textit{De mineralibus libri} 1–5),\textsuperscript{16} which exists in over 140 surviving Latin manuscripts.\textsuperscript{17} To date, only a single translation of a brief extract is known: an anonymous lapidary in Middle High German (“Tractatus II De lapidibus pretiosis”: “Ey n ander capitell von edelm gesteincz”), which puts \textit{De mineralibus} 2.2 into German. Around 1460, probably in Speyer, the text was copied for a medical compendium.\textsuperscript{18} This very precise translation of Albert’s text succeeds even without a specialized vocabulary. It continues, without signaling the change, into a translation of two chapters from Thomas of Cantimpré’s \textit{Liber de natura rerum} concerning engravings on precious stones.\textsuperscript{19} The

\begin{itemize}
\item \textsuperscript{16} Alb., \textit{Mineral.}, Borgn. 5, 1–116.
\item \textsuperscript{17} See Winfried Fauser, \textit{Die Werke des Albertus Magnus in ihrer handschriftlichen Überlieferung}, part 1: \textit{Die echten Werke} (Münster in Westfalen: 1982), 67–81.
\item \textsuperscript{18} This 15th-century manuscript (ca. 1460), Salzburg, Universitätshbl., M III 3, paper, 518 folios (40×30 cm), contains various natural-scientific/medical works including many sole witnesses to texts, among others our lapidary on fols. 226ra–271vb. See Anna Jungreithmayr, \textit{Die deutschen Handschriften des Mittelalters der Universitätsbibliothek Salzburg} (Vienna: 1988), 193–209.
\item \textsuperscript{19} Salzburg, UB, M III 3, fol. 271vb (middle)—273ra = Thomas Cantimpratensis, \textit{Liber de natura rerum}, 14.69: “Relationes quorundam antiquorum de sculpturis lapidum et de
pure medical context of the lapidary suggests that it was classified as a medical writing. Its diffusion was not particularly broad. Its readers used it as an anonymous writing without knowing that its author was Albert the Great.

With regard to Albert's extensive zoology (De animalibus libri 1–26), basically only Books 22–26 were rendered in the vernacular. They contain descriptions of the appearances, behaviors, and possible medical usages of quadrupeds, birds, fish, snakes, and insects. For this zoology, Albert relied primarily on the encyclopedic Liber de natura rerum of his student, Thomas of Cantimpré, although he inserted original material on the handling of dogs, horses, falcons, and hawks, that is, on animals that were important for the hunting sports and tournaments of the court. In the late Middle Ages, precisely these chapters from De animalibus 22 and 23 were received in the courts.

Only a single manuscript contains the translation by the University of Heidelberg professor and member of the circle of King Ruprecht, Werner Ernesti, completed in 1404, and dedicated to the Count Palatine, Louis, who later became Elector Louis III, with the title Buchelin von den suchten der fogel, hunde vnd pferde (Little Book on the Illnesses of Birds, Dogs and Horses), hence a treatise on veterinary medicine, addressing non-learned practitioners in the vernacular. The difficult-to-understand mixture of German and Latin, laden with gross errors of comprehension, has been

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21 Alb., De animal., ed. Stadler.


dismissed as an awkward first try. In a careful analysis, Müller makes clear Ernesti's purpose: to reconcile theoretical knowledge in the language of the educated with the knowledge of practitioners who until that point used no written tradition, and to do so in a concrete case: the specialist knowledge of veterinary medicine for the court's falconers and hunters. For this task Ernesti consciously selected the text of Albert the Great, whose uncontested authority guarantees the learned tradition of the schools. The numerous Latin technical terms preserve and perpetuate the text's authority. Yet the text does not name Albert; rather he appears only as “der Meister” and Ernesti reduces Albert’s text to the chapters on veterinary medicine. Although Ernesti was linguistically competent in technical Latin, he did not have the knowledge of a practitioner, and thus he also translated the errors of his Latin source. In a second phase, a German gloss mitigated the large number of Latin terms. This witnesses the prolonged development leading to a German technical language that, in the time to come, would only allow Latin lexemes when no corresponding res could be found in the Germanic tongue.

While Ernesti’s text still requires a “mediator” skilled in Latin, the translation by the medical doctor Heinrich Münsinger directly addresses practitioners unfamiliar with Latin. In 1421 Elector Louis III sent Münsinger to study medicine in Padua, where he was promoted to doctor of medicine in 1425. He then served the elector in Heidelberg as physician-in-ordinary. His linguistic and technical expertise made him the ideal translator of those texts on veterinary medicine and hunting that interested the court. Around 1440 he submitted a new translation of the relevant excerpts from Albert’s De animalibus libri 22 and 23, the Buoch von den falcken, hebchen, sperbern, pferden vnd huonden (Book of Falcons, Hawks, Sparrow-hawks, Horses and Dogs). He dedicated the treatise to Count Louis I of Württemberg, whom he also honors as having commissioned the work.

25 At the Heidelberg court veterinary medical literature was available—for example, a Practica equorum, Practica canum, and Practica avium (Heidelberg, Universitätsbibl., Cpl 1253). Nevertheless, Ernesti selected Albert’s natural-historical compendium in the form of De animalibus, 22–26. In the manuscript that he had available, MS Cpl 1326 (copied in 1346), the relevant chapters were already set off. See Müller, “Naturkunde für den Hof,” 122–124.

But the work very likely came about at the initiative of Elector Louis III, at the time the count's guardian, and later his father-in-law.27

Being a specialist in the subject, Münsinger expertly works around Albert's text, completing it,28 as well as restructuring and reforming it. Treating the theme more broadly, he develops the discussion on the nature and handling of animals, in the course of which he evokes the learned tradition of the “philosophers and masters of nature,”29 and he even explicitly cites Albert by name: “As the great Albrecht writes”.30 Münsinger gave to his text an original articulation in four parts, subdivided into chapters, and made the layout clear to the reader by rubrics and lists of chapters. His easy-to-read text is strictly situational and practice-oriented. Münsinger almost entirely dispenses with a Latin technical vocabulary, save only the names for foreign, Mediterranean ingredients that lack a German counterpart. Even in these cases Münsinger takes care to describe the thing.

Münsinger's book on veterinary medicine was well received by his public. Today, 11 manuscripts of his treatise are known to survive.31 Münsinger's transmission of Albert the Great was still read and used in the 16th century. Shortly after 1500, Sebastian Ranck,32 known as Greiff, produced a shortened version of the text for Emperor Maximilian, in which he especially abbreviated the section on the illnesses of horses.33

27 See Müller, “Naturkunde für den Hof,” 148. One suspects that Ernesti’s translation did not satisfy the Heidelberg court.

28 Chapter 5 of the second part (Cpg 247, fols. 43r–48r; Lindner, Von Falken, Hunden und Pferden, vol. 2, 85–92) presents an exceptional case: there, Münsinger copies a second treatise bearing no relation to Albert the Great’s De animalibus. This treatise concerns the sickness of hunting birds and claims the authority of Hippocrates. The Latin source, ascribed to Hippocrates, has not been identified, yet it was widespread and also formed the basis for Provençal and Spanish translations. (Lindner, Von Falken, Hunden und Pferden, vol. 1, 110).


31 Lindner, Von Falken, Hunden und Pferden, vol. 1, 79–80, lists 11 manuscripts that transmit the whole treatise or fragments thereof. Except for Cpg 247, the Heidelberg codex that reports the best text, Münsinger’s work is witnessed in whole or part by three other Heidelberg codices; see also Müller, “Naturkunde am Hof,” 146, note 128.


33 See Keil, “Münsinger, Heinrich,” col. 788, and Bernhard D. Haage and Wolfgang Wegner, Deutsche Fachliteratur der Artes in Mittelalter und Früher Neuzeit (Berlin: 2007), 175.
Albert's directions for the handling and treatment of horses and hunting birds in *De animalibus* 22 and 23 were also rendered into the romance vernaculars. Thus, the humanist Guillaume Tardif at the end of the 15th century worked up Albert's chapters on dogs and hunting birds for King Charles VIII of France.\(^{34}\) In Italy there also appeared a translation of Albert's treatise on falcons, the *Cura degli asturi*.\(^{35}\)

Horses were not merely a hobby for nobles; rather, they were an indispensable aid for medieval life in war and peace. Hence, knowledge concerning horse maladies and how to heal them had always been sought. So-called “Rossarzneibücher” (books on horse medicine) had circulated in Latin since the 12th century and in the vernacular not long thereafter. Albert the Great incorporated into his chapters on horses an anonymous Latin hippiatric treatise, the *Liber de cura equorum*. This treatise entered circulation at the beginning of the 13th century at the latest, and served as a practical guide to horse medical science for the experienced stable master. Since, in adapting this text, Albert only occasionally changed the wording, and never touched the content, it is difficult to determine if vernacular versions are based directly on the *Liber de cura equorum* used by Albert, or if they knew that text through reading Albert.\(^{36}\) Certainly, the hippiatric chapters in the works of Werner Ernesti and Heinrich Münsinger come from Albert's text, as the context of their treatises makes clear. Unclear, on the other hand, is the origin of the Prussian compilation carrying the Latin title *Liber de cura equorum cum registro*, which was produced in 1408, probably by a member of the Teutonic Order, and dedicated to Grand Master Ulrich von Jungingen. Although composed by an expert in the field of horse husbandry, compiled in the vernacular from the most important hippiatric works, enriched with the author's personal experience and written in a technically clear, literary Middle German free of Latin, his text survives in only one manuscript.\(^{37}\)

\(^{34}\) See Keil, “Münsinger Heinrich,” col. 788. The text in question is Guillaume Tardif, *Art de faulconnerie et des chiens de chasse*, produced in 1492.


\(^{37}\) Edited by Ottomar Bederke from the sole manuscript witness, Wien, Österreichische Nationalbibl., cod. 2977 (Med. 123), fols. 53v–115v, as *Liber de cura equorum. Bearbeitungen von Albertus Magnus und Jordanus Ruffus aus dem Deutschen Ritterorden* (1408) (Hanover: 1962). The unknown author compiled his text from three works: (1) Albert’s *De cura
As was the case with mineralogy, the vernacular treatments of Albert’s zoology examined so far were not particularly successful. None of those who translated or reworked the text took advantage of the fame carried by Albert the Great’s name to give weight to his own work. This was chiefly due to the texts’ purely practical applications: a reference to the “Masters” or the “Philosophers” in general sufficed to lend credence to a given bit of technical knowledge. The reception of the text was limited to an exclusive circle of users whose needs had brought about the production of the text.

In the 16th century, the Strasbourg pharmacist and active producer of technical literature, Walther Hermann Ryff, tried to give Albert’s zoology new popularity by publishing De animalibus libri 22–26 in a German version and revised in places as the 1545 Thierbuch Alberti Magni.\textsuperscript{38} Ryff’s edition had competition in the form of Heinrich von Eppendorf’s translation of Pliny the Elder’s Naturalis historia, also published in Strasbourg, which appeared in 1543, and a contemporary compilation of Michael Herr (Strasbourg: 1546) that already entered into polemic against Albert’s work as obsolete.\textsuperscript{39} Walther Ryff sought to make his Thierbuch interesting to the largest possible audience. Not only did he place at the beginning a first book, on humans, in which he treats first and foremost reproductive questions, but he also informed his readers in detail about the famous author Albert the Great, portraying him as a great natural scientist of irrevocable authority.\textsuperscript{40}

In the history of the reception of Albert the Great’s natural-scientific writings, a special place is accorded to the Buch von den natürlichen Dingen by the canon of the cathedral of Regensburg and master of arts, equorum, from De animal. 22.2.1.38.52–93 (horses) (ed. Stadler, 2: 1379–1399: “Est autem hoc animal cui plurimae accidunt infirmitates quas oportet marescalcum cognoscere, qui curare habet equos . . . Et haec de cura equorum dicta sint a nobis”) or from Albert’s source; (2) Jordanus Ruffus, Emperor Frederick II’s stable master, Medicina equorum, taken from the chapters on treating horses in Petrus de Crescentiiis, Ruralium commnodorum libri 12; and (3) a series of prescriptions from the Rossarzneibuch of Master Albrant, likewise stable master to Emperor Frederick II.

\textsuperscript{38} The title page of the 1545 printing (“Getruckt Zu Franckfort am Main bei Cyriaco Jacobi zum Bart M.D.XLIV.”), copy consulted: München, Bayerische Staatsbibl., 2 M. med. 31 m: “Thierbuch. Alberti Magni / Von Art Natur vnd Eigenschaft der Thierer / . . . / Durch Waltherum Ryff verteurscht . . .” (The Tierbuch of Albert the Great on the kinds, natures and properties of animals . . . translated into German by Walther Ryff).

\textsuperscript{39} See Müller, “Naturkunde für den Hof,” 124, note 9 and Haage and Wegner, Deutsche Fachliteratur, 168 and passim.

\textsuperscript{40} München, Bayerische Staatsbibl., 2 M. med. 31 m, fol. A i: preface addressed to the reader.
Conrad of Megenberg (Konrad von Megenberg; 1309–74). Although an early work, coming from the mid-14th century, Conrad’s book is composed by an author whose supreme command of the technical language of Middle High German largely does away with Latinisms. It also met with huge success: over 150 complete and fragmentary copies survive in manuscript, as well as a slew of printed editions, making it a medieval “bestseller” of natural-scientific technical literature. Although Conrad of Megenberg’s purpose was to make Albert’s Latin paraphrase of Aristotelian natural science accessible to a vernacular public, as the main source of his book he used a pseudo-Albertan writing, and he mixed authentic texts with ones that are merely said to be by Albert. Therefore his *Buch von den natürlichen Dingen* should be understood as straddling the fence between the reception of Albert’s authentic and inauthentic works.

In order to appreciate Conrad’s work, it is necessary to briefly consider the career and intellectual profile of this translator and author. Conrad of Megenberg was born in Mäbenberg near Schwabach (in modern-day Middle Franconia). Around 1322/3, he began studying philosophy in the arts faculty of Erfurt. As Erfurt did not acquire the legal privileges of a university, above all the ability to promote to degrees, until 1392, Conrad of Megenberg moved to Paris in 1330/31, where, in 1334, the arts faculty bestowed upon him the rank of master. In Paris he taught in the arts faculty for eight years as professor of philosophy, and he also held politically important offices in the university. In addition, he studied in the Paris theology faculty, without however bringing these studies to term. In order to

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42 Concerning its transmission, see Gerold Hayer, *Konrad von Megenberg, "Das Buch der Natur". Untersuchungen zu seiner Text- und Überlieferungsgeschichte* (Tübingen: 1998). The *Buch von den natürlichen Dingen* is transmitted in a so-called “Prologue Redaction” (*Prologefassung*, 51 manuscripts) and in a “Dedication Redaction” (*Widmungsfassung* 26 manuscripts). The investigation that follows applies only to the “Prologue Redaction”, which appears to have been the original, and in any case forms the basis for both editions; see Gottschall, *Konrad von Megenbergs Buch von den natürlichen Dingen*, 14–23.

43 See the relevant chapter in Gottschall, *Konrad von Megenbergs Buch von den natürlichen Dingen*, 25–94.
ensure a lasting livelihood, in 1342 he acceded to the post of rector of the Vienna *Stephansschule*, an arts faculty comparable to that of Erfurt, which in 1365 would acquire the privileges of a university. Moreover, Conrad's repeated petitions to the curia in Avignon met with initial success: Pope Benedict XII, on 16 May 1341, granted Conrad of Megenberg the provision to a canonry in Regensburg, which he was able to take up in 1348. That year, Conrad left Vienna and thereafter lived as a canon of the cathedral chapter of Regensburg. At any rate, he was not content with this post. He was incessantly on diplomatic missions to Avignon. Besides this activity as an exceptionally fruitful author, Conrad enlisted his knowledge in the service of the cathedral and city of Regensburg, where he died in 1374.

Conrad of Megenberg thus spent several years teaching, and taught philosophy in the arts faculty, whose course of study he himself had gone through. That means that he taught first and foremost the *Corpus Aristotelicum*, divided into logic, metaphysics, natural philosophy, moral philosophy, and mathematics. He also published works in these fields, naturally in Latin. Towards the end of his rectorate in Vienna, Conrad produced a vernacular translation, the *Deutsche Sphaera*. We do not know his motive for making this translation. But he obviously felt validated in his "mission". Shortly thereafter, in his early Regensburg years, around 1350, appeared his second vernacular book, which would be his greatest success as an author: the *Buch von den natürlichen Dingen*.

The nucleus of this book is the *Liber de natura rerum* by Albert's student Thomas of Cantimpré, in what has been labeled the third redaction. Conrad presents this redaction as being by Albert and translates it from the Latin. Moreover, Conrad completes, glosses, and structures his source

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45 Conrad of Megenberg, *Die Deutsche Sphaera*, ed. Francis B. Brévart (Tübingen: 1980). This text is the German translation of Johannes de Sacrobosco's mid-13th-century *Tractatus de sphaera*, the fundamental astronomical textbook for every arts faculty.

46 Thomas Cantimpratensis, *Liber de natura rerum. Editio princeps secundum codices manuscriptos*, ed. Helmut Boese, part 1: Text (Berlin: 1973). This work of the Augustinian canon and later Dominican friar, Thomas of Cantimpré (1201–63/72), exists in three redactions. Boese's edition combines the first redaction, in 19 books, with the second redaction, a total revision of the first draft where Thomas adds a new, 20th book. The third redaction also comes from the 13th century, and is a severely shortened version by an anonymous abbreviator that was widely distributed, particularly in southern Germany (contained in over 100 manuscripts, and in further redactional modifications). Benedikt K. Vollmann is preparing a critical edition of this “third redaction”. See Benedikt K. Vollmann,
at his own discretion\textsuperscript{47} and in accordance with his ambitious project: to communicate the entirety of the Aristotelian natural world, that is, the physical world (as opposed to metaphysics) to a public that only reads Latin books poorly or unwillingly.

Nevertheless, for his book of nature Conrad of Megenberg did not translate any text from the teaching canon of the arts faculty, as he did in the case of Sacrobosco’s \textit{Sphaera}. Rather, he selected a compendium of more “popular” science,\textsuperscript{48} although this compendium carried the name of one who was still in the 14th century one of the greatest authorities in the realm of natural philosophy: Albert the Great.\textsuperscript{49} In the controversy over the so-called Nominalist Statute (1339–41), Conrad of Megenberg, a defender of a conservative position faithful to the pope, sought to oppose the pernicious science of William of Ockham (\textit{scientia Okamica}) by means of Aristotle and his time-tested commentators (\textit{scientia Aristotelica}), including, among others, Albert the Great.\textsuperscript{50} Thus Conrad valued Albert as a personal model.\textsuperscript{51}

None of Conrad’s works is as dependent on and shaped by Albert as is his \textit{Buch von den natürlichen Dingen}. Not only does a pseudo-Albertan

\textsuperscript{47} Conrad himself says of the Latin book that served as his exemplar: “Daz han ich mer dann daz drittail gemert vnd den sin erlevcht, so ich pestt mocht” (“I have expanded it by more than a third, and clarified its sense, as well as I could”); Conrad of Megenberg, \textit{Buch von den natürlichen Dingen}, ed. Luff and Steer, 522, 16–17.

\textsuperscript{48} This could also be due to external forces motivating Conrad—he speaks of “good friends” who asked him to do a translation—and since at the time of his writing he no longer had teaching obligations, he did not have in mind a technical audience.

\textsuperscript{49} Thomas of Cantimpré’s original as well as all the following redactions are transmitted either as anonymous or under the names of various authors, including that of Albert the Great. Conrad used such an exemplar. For the \textit{Liber de natura rerum} as a pseudo-Albertan writing, see Fries and Illing, “Albertus Magnus,” (see above, n. 2), col. 124–139, at V. Pseudepigrapha, col. 133–135. For the transmission of the anonymous third redaction of Thomas of Cantimpré under the name of Albert the Great, see Helgard Ulmschneider, “Ain puoch von latein. Nochmals zu den Quellen von Konrads von Megenberg ‘Buch der Natur’,” \textit{Zeitschrift für deutsches Altertum und deutsche Literatur} 123 (1994), 309–333.


work provide the overall structure, but even the organizational detail follows Albert: a conspicuous medical interest penetrates the whole text; the macrocosm and microcosm undergo the continual influence of the stars (“zwischenwirkende Kräfte”, that is, “intermediary powers”), which keep the universe in harmonious balance;52 other texts by Albert are used to complete the work, among them explicitly the De vegetabilibus. In his verse-prologue to the Buch von den natürlichen Dingen Conrad presents his informant, Albert the Great, as an indefatigable collector and compiler of “famous” texts: “Also trag ich ein puoch / von latein in dauetschev wort, / daz hat Albertus maisterleich gesamnet von den alten” (“Thus I translate a book from Latin to German, that Albert had masterfully assembled from the writings of the ancients”).53 Hence, as Conrad writes in his Yconomica, Albert had also done a good job of emending these ancient writings when necessary. This point leads Conrad to doubt the authenticity of his Latin source. When his translation reaches the sixth book, treating precious stones, he encounters a view that is so clearly obsolete that it could not have come from Albert the Great: on the powers of precious stones, Conrad observes that his source does not consider “zwischen wuorchende chreft… der stern an den himeln” (“the mediating powers… of the stars on the celestial spheres”).54 The text he had present refers the wondrous effects of precious stones directly to the will of God. Conrad could not believe that Albert the Great would hold such a naive opinion, and draws the conclusion: “Dar vmb sprich ich Megenbergar, daz ich zweifel, ob Albertus daz puoch hab gemacht ze latein, wan er in andern puochern verr anders redet von den sachen, dann daz puoch red…” (“Therefore, I, Megenberger, say that I doubt that Albert was the author of the Latin book, since in other books he discusses the subject in a completely different way than he does in this book…”).55 Then Conrad makes the required corrections. In the ensuing text, Conrad refers to the author of his Latin source only as “the Master”. But in spite of his recognition that he had translated a pseudo-Albertan work, nevertheless Conrad of Megenberg did not change his prologue, and permitted his Buch von den natürlichen Dingen to circulate with the attribution to Albert the Great, which he knew was false.

53 Conrad of Megenberg, Buch von den natürlichen Dingen, ed. Luff and Steer, 26, Str. 6, 1–3.
54 Conrad of Megenberg, Buch von den natürlichen Dingen, 6, ed. Luff and Steer, 465, 32–33.
Conrad of Megenberg articulated the *Buch von den natürlichen Dingen* into eight books: (1) man (the microcosm); (2) the celestial and elemental spheres with their attendant meteorological phenomena (the macrocosm); (3) animals; (4) trees; (5) herbs; (6) precious stones; (7) metals; (8) miraculous springs; and an appendix on fantastic creatures (an addition that Conrad found in another manuscript of the *Liber de natura rerum*). Conrad completed and in places freely reworked Book 1 with many additional sources; Book 2 is a compendium of astronomy and meteorology compiled by Conrad that at times departs entirely from its source. Since often he only paraphrases, it is difficult to determine his sources. Books 3–8 are translations of the Latin exemplar, the only exception being that Books 4 and 5 are systematically completed from Albert’s *De vegetabilibus*.

A comprehensive study of his sources still needs to be done. With that proviso, nevertheless, the following Albertan texts can be named as having inspired Conrad, and as serving as the basis for his paraphrases, for his development of a German technical vocabulary and for his translations: *De anima*; *De somno et vigilia*; *De animalibus*; *Meteora*; *Physica*; *De impressionibus aeris* (Ps.-Albert); *De caelo et mundo*; *De mineralibus*; *De generatione et corruptione*, and *De vegetabilibus*.

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57 The completions come from Albert the Great, *De veg.* 6.1: “De arboribus”, and 6.2: “De herbis specialiter secundum ordinem alphabeti.” Conrad translates in whole or in part 42 chapters of Albert’s text.
58 Conrad of Megenberg, *Buch von den natürlichen Dingen* 1.39 (ed. Luff and Steer, 56, 1–4), defines the soul according to Albert the Great, *De anima* 2.1.1–2. Moreover, Conrad gives a physical definition of sound (*Buch von den natürlichen Dingen* 1.13) from *De anima* 2.3.17,19, and 21.
59 Conrad of Megenberg, *Buch von den natürlichen Dingen* 1.4 (ed. Luff and Steer, 32, 6–26) defines and describes sleep according to Albert the Great, *Somn. Vig.* 1.1.7 and 1.2.5–8.
60 In his treatise on comets (*Buch von den natürlichen Dingen* 2.11), alongside his own prior Latin works, Conrad of Megenberg draws upon Alb., *Meteora* 1.3: “De cometis”; his Chapter 2.16 (on rain) comes from 2.1.20–23.
62 Conrad calls upon Alb., *Mineral.*1.1.2, where Albert copies Avicenna’s *De congelatione et conglutinatione lapidum*; see *Buch von den natürlichen Dingen* 2.33 (ed. Luff and Steer, 136, 16–21) and later in a very general way, 6.84 (ed. Luff and Steer, 505, 14–16).
64 Translation from Alb., *De veg.* 6.1.1, 4, 6–11, 16, 18–20, 22–24, 26–31, 33–35, and 6.2.1–4, 6–9, 11–19, 21.
Conrad of Megenberg worked on his German text as translator, reviser, exegete, and philologist. He saw himself as a translator who sought to write a supraregional and universally comprehensible German for a literate public that placed the same value on its native tongue as on the Latin of the learned. This attitude places Megenberg in the “avant garde” of the vernacular transmission of knowledge in the 14th century.

In the vernacular reception, it is unusual to find an interest in Albert’s theoretical, natural-philosophical works that do not have an immediate practical application. Meyer indicates one case where an anonymous author and translator produces in the vernacular a treatise Von dem Regenbogen. He follows the corresponding chapter in Albert’s Meteora and explicitly names the great philosopher Albert as his informant: “Waz der Regenbogen sey, wövon der bechúmpt, waz varbe er ist vnd auch was da ist zu bedewten, daz redt maister Albrecht von Regenspurkch der natürlich maister, der gröss philosophus und sprichet also: Der Regenpogen ist der sünne pild…” (“What the rainbow is, where it comes from, how it is coloured, and what can be said about it, of these things speaks Master Albert of Regensburg, the master of nature, the great philosopher, and he says thusly: the rainbow is the image of the Sun…”). Immediately thereafter he puts into German explanations of the phenomenon of “comets”, although it is not clear where his material on comets comes from.

Likewise, in Italy in the 14th century Aristotle’s Meteorology was made accessible in the vernacular through the use of the commentaries of Albert the Great and Thomas Aquinas, an undertaking that remotely recalls that of Conrad of Megenberg, namely the Metaura. It is interesting that the anonymous Florentine translator of this work let it circulate under the

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65 In his verse prologue to the Buch von den natürlichen Dingen he discusses the absolute equivalence of the languages and puts himself as translator in a line with Jerome and Boethius. In his epilogue he self-confidently calls his translation: “Daz ist daz devtsch von Megenberch” (“That is Megenberg’s German”) (ed. Luff and Steer, 529, 13), but he also takes care to communicate different regional variants for the names of things in order to reach a supraregional public. See Gottschall, Konrad von Megenbergs Buch von den natürlichen Dingen, 169–185.


67 Cgm 317, fol. 100vb; see also Meyer, 117, note 15. The text introduced is the translation of Alb., Meteora 3.4.7.

name of Thomas Aquinas, although he used almost exclusively Albert the Great’s commentary on the *Meteora*. The editor of the *Metaura* supposes that by the middle of the 14th century Albert’s text was already considered obsolete, but it was also easier to understand, and thus better suited for translation.

b. *Pseudepigraphic Works*

Towards the end of the 13th century there appeared, possibly coming from the circle of Albert the Great, the Latin gynecological and obstetrical treatise *De secretis mulierum*. From the middle of the 14th century this text received many different Latin commentaries, and it was printed, with and without Albert’s name, both in Latin and in the European vernaculars into the 19th century. The text is primarily based on Aristotle and Galen. Albert allegedly authored this work as atonement for his magical kidnapping of the daughter of the king of France (see above). This work is framed as a letter by the fictive author, Albert, to a fictive clergyman, who receives instruction on the dangerous subject of “Woman”.

Albert the Great, who knew nature’s secrets, explains to his male readers everything worth knowing on the theme of sexuality from a male perspective: procreation, conception and contraception, the development of the fetus and pregnancy, signs of pregnancy and predicting the sex of the

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70 The text is rendered from Alb., *Meteora* 1.1.1; 1.2.2–1.4.10; 2.1.1–2.3.20; 3.1.1–23; and from Thomas Aquinas,* Meteora* 1.1–5, lect. 2–8; see also Librandi, *La Metaura*, 35–40.

71 Among Albert’s pseudepigraphic works, we consider here only those that have been attributed to Albert the Great and whose actual author cannot be identified.


73 See the anonymous *meisterlied* on Albert the Great and the daughter of the king of France, edited in Görres, *Altteutsche Volks- und Meisterlieder* (see above, n. 11), 195–208, at 207.

child, birth, including miscarriages and birth defects, and the dangers that stem from menstrual blood. Of course, all these things are subject to the continual influence of the stars, and hence basic knowledge of astrology is necessary. In 1604, this work was placed on the Index, but this prohibition did not slow its exceptionally wide diffusion.

The work circulated in the vernaculars from the early 14th century, and above all in the Low Countries and Upper Germany. In the 15th century it was rendered many times in German and French. At the beginning of this period of circulation is an anonymous Middle Dutch rhymed version from the 14th century: _Der vrouwen heimelykheid (The secret of women)._ A French rendition is witnessed by numerous 15th-century manuscripts. German renditions exist in four anonymous and unrelated versions, in addition to that of Johannes Hartlieb. The German vernacular tradition begins in the 14th century and builds up strength into the 15th century.

The most important and original German rendition of the _Secreta mulierum_, however, is that by the physician Johannes Hartlieb from the second half of the 15th century. Hartlieb first appears as the author of his early work on memory, written in 1430. From 1440 he was active in the court of Duke Albrecht III of Bavaria as physician-in-ordinary, adviser, diplomat, and translator of Latin literature for the court. After the duke’s death in 1460 he stayed faithful to the family and served his sons as palace physician, through which he established a special relationship with Albrecht’s son, Duke Siegmund. On Siegmund’s commission, after 1465 he rendered the pseudo-Albertan _Secreta mulierum_ in the vernacular. A second version was made for Emperor Friedrich III. Hartlieb intended his translation as instruction for the knowledge-hungry prince as well as a guide for a marital sex life that satisfied both man and woman equally. Officially, Duke Siegmund led an unmarried life; in reality he lived with a bourgeois lover, with whom he also had children. Thus, the theme was

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77 Bosselmann-Cyran, _Secreta mulierum mit Glosse_, 14.
78 Bosselmann-Cyran, _Secreta mulierum mit Glosse_, 15–19. There is a heavily abbreviated Upper German version, an anonymous translation and commentary coming from the upper German region, an anonymous East Middle German version, and an Alemannic translation.
very sensitive, and Hartlieb in his prologue especially underscores that, as arcane literature, it should only be made accessible to his princely patron, and he defended it against any suspicion of sorcery. The legendary figure of Albert the Great (whom Hartlieb did not doubt was the author) fit very well in this aura of the arcane. In any case, he is not content with Albert’s explanations—Hartlieb felt they lacked the physician’s voice—and improved upon his Latin source with additional source texts that he used for commentary.

Hartlieb’s German rendition of the *Secreta mulierum* is, therefore, a freestanding compilation. Its base text is the Latin commentary on the *Secreta* that Thorndike has described as being the oldest. Hartlieb translates the glosses of this text and completes them through four other commentaries: the 6th-century *Gynaecia Muscionis*; Macrobius’s commentary on Cicero’s *Somnium Scipionis* (ca. 400); the *Compendium medicinae* by Gilbertus Anglicus (beginning of the 13th century); and, the book *Trotula* (Salerno, 12th century). In his prologue, Hartlieb names and describes all additional sources. There are eight complete manuscript witnesses of Hartlieb’s two versions (one for Duke Siegmund and one for Emperor Friedrich III). In addition, individual parts of Hartlieb’s compilation circulated separately.

Albert the Great also appears as master of the arcane arts in a Latin treatise attributed to him that sits on the boundary between natural philosophy and magic: the *Experimenta Alberti*, also known as the *Secreta Alberti* or the *Liber aggregationis*. In three books, the unknown author describes the magical powers of certain herbs, precious stones, and animals. This work is characterized by a continual connection between the influence of the planets and their effects on earthly objects and organisms, as well as by a defense of magic: as a science, magic is in itself good,

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81 Johannes Hartlieb, *Secreta mulierum*: “das hochverborgen buch, die gehaim der frauen, das albertus Magnus mit grosser mwe vnd arbait gesampt vnd gemacht hat…” (“the top-secret book of the secret of women that Albert the Great took great efforts and toil to compile and to write”; ed. Bosselmann-Cyran, 101, 18–20).
but its bad application can bring about evil. Only the work’s abundant use of Albert’s *De mineralibus* can be proven with certitude.

The text first achieved exceptional diffusion with the advent of printing, and “flooded” the 16th-century book market with numerous editions in Latin and the vernacular, which integrated other pseudo-Albertan treatises, namely a book *De mirabilibus mundi* or the *Secreta mulierum*. A study of the development and spread of the vernacular versions of the *Experimenta Alberti* still needs to be done. I will limit myself here to presenting two arbitrarily chosen examples.

In 1537, Heinrich Steiner in Augsburg published Albert the Great’s *Buch der Heimlichkeiten*. Although the title page only refers to the *Secreta*, that is to the *Experimenta Alberti*, other German texts are included: at the beginning the *Secreta mulierum* and, following the *Secreta Alberti*, a treatise on astronomy, various prescriptions, and a plague regimen. After the *Secreta Alberti* had already been circulating for some time in German and in the romance languages, it was translated into English: *The Book of*...

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85 See Thorndike, “Further Consideration,” 413–414: discussions of 37 precious stones are taken verbatim from Alb., *Mineral. 2.2.*


87 See Draelants and Sannino, “Albertinisme et Hermétisme,” 249–250: 49 printings in German, 15 printings in Italian, nine printings in French, nine printings in English, a first edition in Spanish in 1499, and one in Dutch in the 16th century.

88 See Thorndike, “Further Consideration,” 422–423, and Draelants and Sannino, “Albertinisme et Hermétisme,” 250. Not only did the printed editions bring in additional material, they seem to have deepened and expanded Albert’s role: in the foreword, Albert describes in the first person his procedure in composing the book.

Secrets and the Book of Marvels, published by William Copland in London, first in 1525. This version includes at the end the De mirabilibus mundi.

3. Vernacular Translations and Renditions of Albert the Great’s Theological Works

a. Authentic Writings

Since the 14th century, Albert’s double treatise on the Mass and the Eucharist has been rendered in the vernacular in numerous anonymous versions. In each case, these translations or renditions are only partial. In addition, Albert’s commentary on the Mass and the Eucharist served as a source text for authors writing in the vernacular, who would borrow ideas from it, quote from it, or reproduce sections of it, with and without naming their source. To date, Kurt Illing has produced the most comprehensive study of these topics.

The oldest witness for the vernacular reception of Albert’s De sacramento eucharistiae occurs in the treatise Von den sechs Namen des Fronleichnams by the so-called “Monk of Heilsbronn”, a member of the Cistercian convent in Heilsbronn in the 14th century who wrote in German a text on the Eucharist. In this work, he adopted from Albert’s treatise the arrangement and copied large parts of the text, and he twice cited it using Albert’s name.

90 Photostat in Henry Huntington Library, San Marino, CA. London: William Copland 1525; 1549; 1565? [Title Page] The booke of secretes of albert the great of the vertues of Herbes stones and certayne Beastes. ¶ Also the booke of the same author of the maruaylous thinges of the world and of certayn effectes caused of certayne Beastes (The book of secrets of Albert the Great of the powers of the herbs, stones and certain beasts. Also, the book of the same author of the marvelous things of the world and of certain effects caused by certain beasts).

91 Alb., De sacrificio missae / De mysterio missae, Borgen. 38, 1–189, and Alb., De sacramento eucharistiae / De corp. domini, Borgen. 38, 191–432. Both treatises also circulated together with the title Super missam. Their authenticity is not entirely undisputed. Although a preponderant number of manuscripts contain an attribution to Albert the Great, nevertheless the text has no self-citations to Albert’s work, and there are differences in the citations of texts that Albert uses in his authentic works. See also Fauser, Die Werke des Albertus Magnus in ihrer handschriftlichen Überlieferung, 314–336 and Albert Fries, Der Doppeltraktat über die Eucharistie unter dem Namen des Albertus Magnus (Münster in Westfalen: 1984), 196–201.


93 See Illing, Der Einfluss des ‘Super Missam’-Traktats, 44–48 with tables of the precise textual correspondences. Illing (48) makes a likely case that the monk’s exemplar was
In the second half of the 14th century, the Franciscan Marquard von Lindau wrote a German treatise on the sacrament of the altar, the *Eucharistie-Traktat*, which was continuously reworked across three redactions, and, next to the *Buch von den sechs Namen des Fronleichnams*, became the most successful late-medieval German writing on this theme. What has been called “Redaction Ic” presents a greatly expanded version. Among other things, it contains an additional commentary on the Mass (additional with respect to the earlier redaction it is based on), which has as its most important source Albert’s *De sacrificio missae*. Furthermore, the sermon on the Eucharist by the Franciscan Berthold von Regensburg was also used. The additions in Ic primarily consist of mystical-edificatory insertions, sections on the prefiguration of the Eucharist in the Old Testament, and discussions of pastoral problems concerning receiving the sacrament. Together, they give the text a more educated feel. It is entirely conceivable that Marquard von Lindau himself undertook this reworking.

Konrad Bömlin also sought inspiration in Albert the Great. Born around 1380, probably in Esslingen, Bömlin entered the Franciscan convent there and from 1438 served as prior provincial of Alemania superior. His modest literary output dates to between 1409 and 1438. His sermonic work comprises 47 Latin Advent sermons and approximately 12 German sermons, among which the most widely diffused is his sermon on the Eucharist,
Venite ad me omnes (Matt. 11:28). In the middle section, Bömlin uses a few passages from Albert’s De sacramento eucharistiae. The bulky two-volume, 11-book Beschlossen gart des rosenkrantz marie by an unknown author contains tenets of Christian faith and exercises in piety. The focus is on the rosary and the fraternity of the rosary. In 1505, the Beschlossen gart, sumptuously adorned with over 1000 woodcuts, was printed in Nuremberg by Friedrich Peypus in the workshop of Ulrich Pinder. Book 11 contains a commentary on the Mass on folios ccxxxii va–ccxcii va. The author draws upon Albert the Great’s Mass commentary. The text is first given in Latin, and then translated interlinearly. Albert is explicitly named in the preface: “[ccxxxii vb] Uon etlichen heymlicheiten der heiligen mess als sy dan Albertus magnus verschrieben haut . . .” (“On a few secrets of the holy Mass, as put down in writing by Albert the Great . . .”).

Traces of the German reception of Albert’s Super missam do not only appear in the works of renowned authors or texts known by name, but they are even scattered throughout the countless late-medieval German manuscripts with an edificatory-ascetic content that belong to the nameless mass of spiritual literature. Since the theme of the reception of the Eucharist could be interpreted as a union in via with Christ, it resonated deeply in anonymous German mystical treatises. Illing assembled a whole series of such kinds of reception, which range from simple citations through partial translations to free adaptations.

In this context, there are two citations from the De sacramento eucharistiae in the Munich manuscript Cgm 851. The author uses Albert’s words to oppose the practice of women receiving the Eucharist daily. Daily communion hurts them more than it helps, since it easily becomes mere habit. In the same manuscript, a few folios before, there is an

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97 See Illing, Der Einfluss des ‘Super Missam’-Traktats, 53–54: the copied sections are Alb., De eucharistiae sacramento d. 4, c. 3 (Borgn. 38, 334a) and c. 1, n. 1 (Borgn. 38, 331a).


99 See Illing, Der Einfluss des ‘Super Missam’-Traktats, 30.

100 München, Bayerische Staatsbibliothek, Cgm 851, fols. 190v–191r and 191r; these fols. correspond to Alb., De sacramento eucharistiae, Borgn. 38, p. 432a–b; The citation and its identification is published in Illing, Der Einfluss des ‘Super Missam’-Traktats, 52.
anonymous commentary on the Mass that often takes a major point from a section of Albert’s De sacrificio missae and then provides its own, independent, continuation. The central notion is the mystical union of the soul with Christ, such that one may speak of it as a “treatise from the circles of the mystics”. Three citations of the De sacramento eucharistiae also appear in a Salzburg manuscript, embedded in a short treatise on the Eucharist. The author explicitly names Albert the Great three times. A large, anonymous, partial translation is even transmitted in two redactions. The anonymous author, possibly a Bavarian Benedictine, discusses the sacrament of the altar from the perspective of grace. A member of the charterhouse of Marienbühl bei Strassburg is probably the author of a “eucharistic compendium” in the Alsatian dialect that is assembled from a nearly complete translation of Albert’s double treatise on the Mass, complemented by a few additional sources and his own observations. With reservation we can also mention an anonymous Dutch treatise: Vandem helighen eerweerdighen sacramente des lichaems ons liefs heeren ihesu ypistī. Fifteen chapters in two parts comprise this work. The introduction especially emphasizes Albert the Great as a source: “dat werdich licht der helighen kercken. Albert the Great” (“that worthy light of the holy church, Albert the Great”). But only the division of the subject matter comes from Albert; beyond this, only trace influences of the De eucharistiae sacramento can be found.

No less vague is Albert’s influence on a widespread Middle-Dutch text that is transmitted anonymously as well as under the names of Albert

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101 München, Bayerische Staatsbibliothek, Cgm 851, fols. 83v–179r. An identification and description of the text, its manuscript witnesses, and a discussion of its parallels with the De sacramento eucharistiae is in Illing, Der Einfluss des ‘Super Missam’-Traktats, 26–29.

102 Salzburg, Stiftsbibl. St. Peter, cod. a III 9, fols. 13v–16v.

103 The citations are to Alb., De eucharistiae sacramento, d. 4, c. 6; d. 1, c. 5, n. 1; d. 4, c. 3; d. 3, c. 8, n. 6; cf. Illing, Der Einfluss des ‘Super Missam’-Traktats, 53.


105 Excerpts are from Thomas Aquinas’s Sentences commentary and from Paschasius Radbertus, Liber de corpore et sanguine Domini.


107 Brussels, Koninklijke Bibliotheek, MS 4407–4408, fols. 8r–78v.

108 See Illing, Der Einfluss des ‘Super Missam’-Traktats, 56ff. The citation comes from the Brussels manuscript, fol. 8r.
and Ruusbroec: the pseudo-Ruusbroec Vanden sacramente des outaers, also known as the Vijf-gaven-text.\textsuperscript{109} This short eucharistic text, which distinguishes the five gifts of grace in the reception of the Eucharist, can be interpreted with qualification as an anonymous gloss on a section of Albert’s De sacramento eucharistiae.\textsuperscript{110} This gloss was originally in Latin and on the Latin text, and was then translated into Dutch.\textsuperscript{111} The Dutch treatise circulated as an interpolation in the sermon by the pseudo-Tauler: Ecce ego vobiscum sum (Matt. 28:20), and also as a work of Jan van Ruusbroec, into whose corpus it was eventually absorbed.\textsuperscript{112} Although this treatise does not come from Ruusbroec, in Ruusbroec’s Een spieghel der eeuwigher salicheit one can find traces of Albert’s De sacramento eucharistiae.\textsuperscript{113} The Vijf-gaven-text also exists in two Middle-English versions, both of which attribute it to Albert the Great. Here as well, they appear to be translations of a Latin base text.\textsuperscript{114}

\textbf{b. Pseudepigraphic Writings}

At the end of the 12th century or the beginning of the 13th century, there appeared an extensive Latin treatise on the virtues entitled Paradisus animae, which was copied widely in an unbroken tradition up to the age of printing.\textsuperscript{115} Although the Paradisus animae was still transmitted as anony-


\textsuperscript{110} See Ampe, “Kritisch onderzoek,” 7. The Gloss’s reference text is Alb., \textit{De sacramento eucharistiae}, d. 1 (Borgn. 38, 208), where the sacrament of the altar is understood as \textit{gratia}. This \textit{gratia} is an aggregation of the gifts of grace, which come from the corpus, sanguis, anima, spiritus, and \textit{deitas} Christi and \textit{ex toto signo sacramenti}. In the vernacular version, however, these six gifts of grace of Albert are reduced to five.


\textsuperscript{112} Ibid., 7–10 and 13–19.

\textsuperscript{113} See Jan van Ruusbroec, \textit{Opera omnia}, 8, ed. Guido de Baere and Thom Mertens (Tielt: 2001). Ruusbroec lists five gifts of grace in the reception of the sacrament (author’s note: these could have also taken their inspiration from the Vijf-gaven-text). See also Geert Warnar, \textit{Ruusbroec. Literatuur en mystiek in de veertiende eeuw} (Amsterdam: 2003), 245.


mous in the 13th and 14th centuries, in the 15th century it shows up almost exclusively under the name of Albert the Great.116

Forty-two chapters each treat a virtue (virtus) and its opposite (falsa virtus). The most important source for this anonymous author is Holy Scripture; among the church fathers used, Augustine takes first place, followed by Gregory the Great and Jerome. Of medieval authors, only Bernard of Clairvaux and, rarely, Anselm of Canterbury are mentioned. The lack of dogmatic and moral-theological sources qualify the Paradisus animae as a work of edificatory literature. Shortly after coming into existence, the treatise on the virtues was translated into German. Four different complete translations are transmitted in the manuscripts. The printed version (Augsburg: 1518) also contains its own translation. In addition, there are still other partial German translations and renditions.

The successful Strasbourg preacher Johannes Geiler von Kaysersberg assembled a German collection of sermons based on the Paradisus animae. By analogy, he called his collection the Seelenparadies.117 Between 1503 and 1505 these sermons were held before the Penitent Sisters of Strasbourg. Geiler used Martin Flach of Strasbourg’s 1498 printing of the Paradisus, and in addition consulted Latin manuscripts of the text.118 He transferred his Latin models into German and adapted them into sermons, whereby he called upon the typical sermonic technique of dilatatio. Geiler indicates the author of his source only as the “teacher”, but he did not take him to be Albert the Great, for whom he cites in the introduction a doctrinal position that contradicts that of the “teacher”.119

4. Bischof Albrecht spricht:
Original Vernacular Texts Attributed to Albert the Great

This last section treats texts that are not immediately connected with an authentic or pseudepigraphical work of Albert, but rather that use the name of the great Dominican to guarantee their own popularity. These “small texts of spiritual content” constitute the majority of the flood of late-medieval vernacular religious literature: sermons, didactic dialogues,

116 Alb., De veris virtutibus sive Paradisus animae, Borgn. 37, 447–520.
118 See Schmidt, ‘Seelenparadies,’ 149.
maxims, and collections of sayings. In this way Albert the Great is swept up in the current of vernacular mysticism, the practical-didactic aspect of which opposes purely external, formal religious exercise and church service in favor of an internal, ethico-religious comportment. Likewise, Bishop Albrecht as well teaches moderation in asceticism, true *imitatio Christi*, and meditative immersion in the Passion. The foundational studies in this field have been conducted by Wolfgang Stammler and recently by Ruth Meyer, who has searched for German texts ascribed to Albert in 110 14th- and 15th-century manuscripts.

A priori, one would expect that Albert left behind traces in vernacular sermons. As a Dominican, he of course preached in Latin and very probably also in German, like his younger colleague Meister Eckhart. Yet there is no authentic collection of Albert's sermons. Currently four university sermons are known to be definitely by Albert.

In the realm of vernacular sermons, the situation looks even worse. At present, we do not know of any vernacular sermon given by Albert on any occasion whatsoever, even though there exist written sermons that have been associated with his name. Kurt Ruh calls attention to an interesting reference to Albert's preaching activity preserved in a Saint Gall codex: “Maister Albertus sprach in ainer bredi: kinder, ich han vch XVIII bredinen geton. Nun wil ich vch fünf stuck sagen, vnd wer die five stuck an im hat, der hat die achzechenden bredinen all” (“Master Albert said in a sermon: my children, I have held 18 sermons for you. Now I will say five pieces, and who partakes of these five pieces, he will have all 18 sermons”). In any case, here there is mention of 18 German sermons. Unfortunately, we know nothing more about the “five pieces”, but they

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suggest the characteristic aphoristic form in which nearly all the vernacular teachings of Albert have come down to us. In all the sermons in which his name shows up, Albert appears only as the source of concise sayings cited by the sermon’s author. This holds even in the few cases where the title implies a complete sermon by Albert.

In the so-called “Kölner Klosterpredigten” (Cologne convent sermons), a collection of outlines and excerpts from sermons by 13th- and 14th-century Cologne authors, there are two sermons by “Bischof Albrecht.” As the only witness to this collection has been lost since World War II, we must now rely on Philipp Strauch’s transcription, that copied Albert’s first sermon, but from the second it only recorded a short, anonymous maxim. Although this complete sermon is identified as Byschofs Ailbrets Sermon, on closer examination it reveals itself to be a mosaic-text that, as the anonymous author states, is based primarily on Albert’s sayings. The text thus witnesses Albert’s preaching activity without itself transmitting it to us. No better is the case of a text edited by Pfeiffer in his collection Predigten und Sprüche deutscher Mystiker, which states: “Disen sermôn hât gesprochen bischof Albreht” (“Bishop Albert spoke this sermon”). Here too, it is nothing other than a collection of instructive sayings that circulated under the name of Albert the Great, some of which also surface in books of adages. Alongside teachings for leading a true religious life, the legendary, stylized persona of Albert comes into view: Albert brags that if the Old and New Testament were to be lost, he would be able copy them down again from memory. At the same time he places himself humbly at

127 For the introductory formulae for the individual sayings of Albert, see Strauch, “Kölner Klosterpredigten,” 34–36. Albert speaks on the themes of the Trinity, God as the highest good, Christ as comforter in sorrow, perfect humility, how one should honor God, and how the heart of man should prepare for God.
128 Yet another saying by Albert occurs in a sermon by Prior Rufus (excerpt in Strauch, “Kölner Klosterpredigten,” 42ff.) on the “School of the Holy Spirit” (Strauch, 42, 32–36).
130 A few of the dicta find correspondence in the Sprüchen der zwölf Meister zu Paris and in the Neun-Punkte-Lehre attributed to Albert; see Meyer, “Magister—Mystiker—Magier?” 126.
the feet of the poorest man who made himself voluntarily poor, in order to experience the secrets of God from his mouth.  

Text no. 57 from the famous Nuremberg sermon book of the 14th century, which Franz Jostes published as “Meister Eckhart und seine Jünger” (“Meister Eckhart and his disciples”) begins: “Bischof Albrecht sprach: Von deme vater vloz ein liht und sturzet sich uf alle herzen . . .” (“Bishop Albert said: from the Father flows a light, and it falls upon all hearts . . .”). Here a saying ascribed to Albert is used in an otherwise anonymous sermon.

Albert is also cited by renowned authors. Geyer has studied Meister Eckhart’s citations of Albert and recently Sturlese has subjected them to an in-depth analysis. The writings of Albert the Great were among Eckhart’s most important sources. Most of the time they are used tacitly, or cited as the doctrine of the masters. Yet Eckhart also cites Albert by name. His handling of Albert’s texts shows that he knew well the work of his great predecessor. In his German sermons Eckhart cites “Bischof Albrecht” five times. Three of these citations are to Albert’s commentary on the Gospel of Matthew, and a correspondence has not been found for the other two. Johannes Tauler cites “Bischof Albrecht” twice in Sermon 64, in which he refers to Albert’s commentary on the Gospel of Luke. Furthermore, there is a citation of Albert in Sermon 66 (Vetter, 362) and an example in Sermon 80, in which Albert performs a natural-scientific experiment (Vetter, 426–27). Finally, Rulman Merswin, in his Buoch von

134 Loris Sturlese, Meister Eckhart und seine Quellen (forthcoming).
137 See Morvay and Grube, Bibliographie der deutschen Predigten, 60, note 187.
den drien durchbrüchen, cites Albert as an authority in the practice of the mystical life.\textsuperscript{138}

Sayings placed in the mouth of Albert the Great also occur outside of the sermonic literature, either by themselves or in collections of dicta.\textsuperscript{139} In this way, Albert’s sayings can form a series, and, when furnished with a frame story, can take the shape of a didactic dialogue.\textsuperscript{140} The following dialogues are known in which Albert the Great plays the role of interlocutor.

In a dialogue with Berthold von Regensburg, Albert the Great answers, according to the redaction, three, four, or five questions. They concern (1) the sin-forgiving power of penitence, (2) the benefits of meditation on the Passion, (3) the deed most pleasing to God, (4) the gift of tears of love, and (5) the exercise of the virtues. Albert advises love of one’s neighbor and inner devotion instead of rigorous asceticism.\textsuperscript{141} There is historical evidence for contact between Berthold and Albert. In 1263 Pope Urban IV charged Berthold von Regensburg with supporting Albert the Great, then the bishop of Regensburg, in preaching the crusade against the heretics, that is, the Waldensians. In addition, there also survives a Latin letter by Albert, which makes reference to a query by Berthold von Regensburg regarding the practice of levying a certain tax (the *vngelt*).\textsuperscript{142}

From the 14th century comes a short dialogue between Thomas Aquinas and his teacher, Albert the Great, over the greatest joy bestowed by Christ on earth. Albert replies that it is the Last Supper, in which Christ gives himself. To Thomas’s subsequent questions, Albert provides three

\begin{footnotesize}
\footnote{139 Four dicta of “Bischof Albrecht”, framed in brief occasions for speaking, are printed in Pfeiffer, “Predigten und Sprüche,” from Einsiedeln, Stiftsbibl., Cod. 278 (14th century), fols. 329r–330r: no. III.2, 216–217: (1) a saying for nuns on receiving God spiritually in the soul; (2) a saying for the sick on the benefits of sickness; (3) a saying on the benefits of intercession; (4) a saying on the benefits of mental suffering. (1), (2), and (4) are also printed in Stammler, *Gottsuchende Seelen*, 23, n. VII and 24, n. IX.}
\footnote{140 See Wolfgang Stammler, “Albert der Grosse und die deutsche Volksfrömmigkeit,” 287–319.}
\footnote{142 See Fauser, *Die Werke des Albertus Magnus in ihrer handschriftlichen Überlieferung*, 229: five Latin manuscripts are known, but no corresponding German text.}
\end{footnotesize}
reasons. Only in the 15th century do we come across a didactic dialogue between Albert the Great and his students about the joys of Christ on the Cross. Among the students, only Thomas Aquinas is mentioned by name.

In the context of the reform efforts targeting the religious orders that were underway in the 15th century, there circulated a collection of aphorisms on Christ’s passion attributed to Albert the Great. The widely copied text has not yet been printed. In it, Albert explains that contemplating Christ’s suffering is more beneficial than all mortifications of the flesh. This theology of suffering was still current in secular-humanist circles at the turn of the 16th century and entered Hartmann Schedel’s world chronicle as the specific teaching of Albert.

A further collection of aphorisms, probably of Dominican origin, uses as a frame the presentation of a learned disputation in the university. Twelve masters of the University of Paris come together and each makes a statement pertaining to his specific field. The first nine masters are anonymous. But in the oldest surviving redaction of the so-called Sprüche der zwölf Meister zu Paris Albert the Great, as the tenth master, states four aphorisms. Three follow the structure “It is better to do something than something else”: (1) it is better to give a single egg to the poor in one’s lifetime, than all the gold of the earth after death; (2) it is better to endure with patience a single wicked word than all mortifications of the flesh;

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144 This widely copied text is not edited. The manuscript tradition is discussed in Meyer, “Magister—Mystiker—Magier?” 124, note 70.


148 The oldest redaction (III) names the tenth master, Bishop Albrecht, the 11th, Hartmann von Kronenberg, and the 12th, Meister Eckhart.
(3) it is better to forgive one’s enemy than to make the longest pilgrimage; (4) the most learned theologians are in Paris; yet the man who is freely poor for God’s sake knows more of God’s secrets. Aphorism (1) corresponds to the “penny” saying from the *Neun-Punkte-Lehre* (see below). Here the offering is an egg. The egg-motif also appears in the *Sermôn* printed by Pfeiffer as one of Albert’s. Aphorisms (2) and (3) likewise find corresponding passages in the *Neun-Punkte-Lehre* and in the *Sermôn*. The fourth aphorism only has a parallel in the *Sermôn*, and in a slightly modified form also circulated as a saying of Meister Eckhart. The later redactions I, II, and IV of the *Sprüche der zwölf Meister zu Paris*, for which there are also manuscript traditions in Old French and Middle English, do not call any of the masters by name.

Among the small spiritual texts in the vernacular ascribed to Albert, the one called the *Neun-Punkte-Lehre* (*The Nine-Point Doctrine*) is most important in terms of historical impact. The sayings it contains—all of which follow the formula noted above, “It is better to do something than something else”—are preserved in German, French, English, and Latin and in the first half of the 14th century were incorporated into what is known as the *Spruchsammlung des Pseudo-Engelhart von Ebrach*, which most recently Karin Schneider has studied, editing it under the title *Das Buch der Vollkommenheit*. This collection contains 251 short texts for spiritual edification and instruction, and the nine points appear in it as no. 27 of the first part of the collection. This first part (nos. 1–143) predominantly consists of excerpts from mystical texts of the end of the 13th and beginning of the 14th centuries. The nine points that interest us are not attributed to any author here; rather, they are presented in a very

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149 See Stammler, “Albert der Grosse und die deutsche Volksfrömmigkeit,” 316, n. XI.
150 See Pfeiffer, “Predigten und Sprüche,” no. III.1, 215f.
152 On the manuscript traditions, see. Albert Auer, *Leidenstheologie*, 72–97.
general way as the revelation of some holy man. In the course of the text’s transmission, Albert was identified as the writer of the revelation, or as the holy man himself who heard from the mouth of God the teachings that follow.

The origins of the sayings appear to lie in the 13th century, and already then they were considered to be by Albert the Great, as the two oldest-known manuscripts in French state: “Ci comensennt les IX paroles que mestre Auuers arce <veque> de cologne dyst en un sermon, qui fist a gens de religion” (“Here begin the nine words that Master Albrecht, archbishop of Cologne, said in a sermon, which was held before religious people”) and “Les IX points de maistres Aubers archevesque de Coloigne” (“The nine points of Master Albrecht, archbishop of Cologne”). Albert appears here as the archbishop of Cologne, an attribute that is not given to him in the German-speaking world. Perhaps the Cologne area is the point of origin for the collection of Albert’s sayings, which then flowed out to the west, north, and south, using the Rhine Valley, as is so often the case, as a literary conduit. The connection of the Neun Punkte with Albert the Great in the German manuscript tradition occurs in a predominately Dominican context. Most of the time, Albert the Great is introduced as the speaker, for example “Bischof Albrecht sprichet”. Likewise, one also encounters the title “Bischof Albrechts 9 Sprüche”, which corresponds to the second French version. While the first French version makes mention of a sermonic context, such a reference first appears in Upper German in the 15th century, and then only occasionally.

In the German tradition, the order of the sayings and their number (between 4 and 19) varies considerably. The text is printed several times

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157 Pseudo-Engelhart von Ebrach, 14, n. 27. The English version also uses the image of the revelation without naming Albert; the text is in Auer, Leidenstheologie, 110.
158 For example, Wolfenbüttel, Herzog August-Bibliothek, Cod. Helmst. 1308, fol. 64r; printed in Stammel, “Albert der Grosse und die deutsche Volksfrömmigkeit,” 317f., n. XII.
159 See the Latin version that surfaces in the 15th century: “Infrascripta revelata fuerunt per os Christi Alberto Magno episcopo celebranti” (“what is written below was revealed by the mouth of Christ to Bishop Albert the Great, as he celebrated the Mass”); Auer, Leidenstheologie, 99.
163 Berlin, Staatsbibliothek zu Berlin—Preussischer Kulturbesitz, mgq 1486, fol. 94r.
and in different versions. The “common redaction” has nine sayings, and looks like this: it is better to give a single penny in alms during one’s lifetime than mountains of gold after death (1). It is better to endure a single abusive word with patience than all mortifications of the flesh (2). It is better to let God into one’s heart than to go on pilgrimage to the ends of the world (3). It is better to humble oneself before God and all creatures than to walk until one’s feet bleed (4). It is better to address oneself personally in prayer to God than to let all the saints pray for oneself (5). It is better to cry a single tear out of love than streams of tears out of pain (6). It is better to endure each misfortune with patience than to flagellate oneself until bloody seven times a day (7). It is better to have compassion for one’s neighbor than to be rapt like Saint Paul (8). It is better to judge nobody than to feed a whole country’s poor and sick (9). The tendency of these aphorisms is clear: in place of ascetic practices and mystical ecstasy, the pious are urged to an active life of social responsibility and examination of one’s conscience.

In the 15th century, the Neun-Punkte were put into the official Latin of the church and were presented as the revelation of Christ to Bishop Albert as he celebrated the Mass. The Latin redaction also begins with the aphorism about the penny and includes, apart from one exception, exactly nine points.

The latest narrative frame for the Neun-Punkte-Lehre is as a revelation to Albert during the Mass, and in the 17th century it is transposed in iconography in what are known as the Alberti-Tafeln. In an area limited to upper Bavaria, north Tirol, and the region of Salzburg, that is, in the area that used to be bounded by the bishoprics of Freising and Salzburg, the nine sayings of the Neun-Punkte-Lehre show up in popular admonishing-pictures (Mahnbilder). The nine sayings, accompanied by illustrations, surround a large central portrait of Albert the Great celebrating the Mass. In 1623, immediately after Albert’s beatification, the Augsburger engraver, Wolfgang Kilian, produced the prototype for these pictures, a broadsheet dedicated to the Dominican prior of Regensburg.

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167 Meyer, “Magister—Mystiker—Magier?” 128; on the manuscript tradition, see note 106.


169 See Nitz, Albertus Magnus in der Volkskunst, 11.
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