

ROBERT W. SCHMIDT, S.J.

THE
DOMAIN
OF
LOGIC
ACCORDING
TO
*Saint
Thomas
Aquinas*

MARTINUS NIJHOFF / THE HAGUE

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by

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PREFACE

Ever since philosophy became conscious of itself, there has been a problem of the relations between the real world which philosophy sought to understand and explain, and the thought by which it sought to explain it. It was found that thought had certain requirements and conditions of its own. If the real world was to be understood through thought, there was a question whether thought and the real corresponded in all respects, and therefore whether they had the same conditions and laws, or whether some of these were peculiar to thought alone. For the solution of this problem it was necessary to study thought and the process of knowing and the conditions which the manner of knowing placed upon our interpretation of the real. With a consciousness of the peculiarities of thought and of its laws, philosophers could then more surely make use of it to arrive at the knowledge of the real world which they were seeking, without danger of reading into the real what is peculiar to thought.

This necessity gave rise to the science of logic, a science which is still necessary, and for the same reasons. It has an importance in philosophy which it is disastrous to overlook.

In the last three or four decades interest in logic has been revived and has grown enormously. While most of the renewed effort has gone into the development of new techniques and instruments, there has been an accompanying discussion of the foundations and nature of the whole enterprise called logic. To some extent this has led to a re-examination of the logical doctrine of the great philosophers of the past; but for most of these the investigation remains insufficient even to the present.

In the wake of the current heightened evaluation of logic there have come some excesses as well as benefits. Some philosophers have gone so far as to equate logic with the whole of philosophy. The present fashionable excess is almost the contrary of that of Hegel, who expanded logic until it embraced all of philosophy and became especially

a constructive metaphysics. Many currently reduce all of philosophy to logic, understood as the analysis of language. This is something like confusing chemical formulae with the physical world.

Since it is important to understand logic and its place in philosophy, it would seem to follow necessarily that, for the understanding of any man's philosophical teaching, it is important to know what he conceived logic to be and just what he assigned as the field of its labors.

This is what the present study attempts to do for the philosophy of St. Thomas Aquinas. Its aim and scope is to determine what St. Thomas considered logic to be, exactly what its domain is, and, more specifically in Thomas' own terminology, what constitutes the "subject" (the *genus subiectum*) of which this science of logic treats. Any attempt at original, independent philosophizing or even of criticism and judgment upon the teachings of Aquinas in this matter would be beyond its scope. This study is an exegetical and historical one. It seeks to discover and expound the doctrine of St. Thomas on the domain of logic, not to speculate independently on what the domain of logic should be or to evaluate the speculations of Aquinas. Its direct concern is historical truth rather than absolute philosophical truth. Whether the two coincide or diverge in this case is a question that can be left for some other more strictly philosophical study or for the private conclusions of the reader.

In view of the many treatises on logic which profess to follow the doctrine of St. Thomas, it may be questioned whether there is any further need for such a study, or whether there are any exegetical and doctrinal problems left unsolved. The purpose for which most of these treatises were written, however, distinguishes them radically from the present study. Most are intended as manuals of logic for classroom use; and because logic is almost universally taught at the beginning of any course in philosophy, they must be adapted to philosophical beginners, who are not yet equipped to digest any detailed discussion of the nature of logical being, its relations to real being, and its dependence upon the manner of human knowing. Logic manuals for beginners must usually be content to give a very brief statement of what logical being is, then go on to expose its various kinds, its principles, and some of its applications.

Even if the capacity of the readers for whom they are intended were no limitation upon these treatises of logic, a mere question of size would be; for if one is to write a complete treatise on logic, one must either restrict the discussion of each of the many points involved, or write

many volumes. No one, it seems, has chosen the latter course. Among the most voluminous of the avowed Scholastic treatises is Coffey's, with two large octavo volumes of nearly four hundred pages each.¹ Even with this size, not much philosophical discussion is devoted to the precise domain of the science or the nature of logical being. And furthermore, this work does not pretend to be an exegesis of the writing of St. Thomas.

Few of the manuals, even those professing to follow the teaching of St. Thomas, enter into an exegetical exposition of his doctrines. Most, as that of Maritain, give few citations or none.² Some, such as the Latin manuals of Hugon³ or Pirota,⁴ give some textual quotations, but necessarily few because of their small size and brief treatment of each of the questions.

The best manual from the point of view of exegesis in the logic of St. Thomas is the old work of Alamannus, which dates from 1618.⁵ As the first section of the first volume of a *Summa Philosophiae* which is compiled from the works of St. Thomas, it uses many texts which it joins together with relatively little original discussion interspersed. But the mere collocation and ordering of the matter involves in itself a considerable amount of interpretation. In its general aspect this work differs notably from our current manuals, which seem little but catalogues of terms and distinctions and rules compared to its scholastic discussions in the form of questions and articles. Even its more philosophical approach, however, does not permit it within its limitations of space to go into much detail regarding the subject of the science of logic. For the questions treated in the first chapter and in part of the third of this present study Alamannus' work has been somewhat helpful.

As an interpreter of St. Thomas' logic John of St. Thomas (1589–1644) is considered by modern Thomists to hold the first place. His *Ars Logica*, a weighty tome of eight hundred and thirty-six two-column royal octavo pages, forms a part of his *Cursus Philosophicus Thomisticus*, which, according to its subtitle, is "according to the mind of Aristotle and St. Thomas": "secundum exactam, veram, genuinam

¹ P. Coffey, *The Science of Logic* (2 vols.; London: Longmans, Green, 1918).

² Jacques Maritain, *An Introduction to Logic* (New York: sheed & Ward, 1937).

³ Edouard Hugon, P. O., *Cursus Philosophiae Thomisticus* (6 vols.; Paris: Lethielleux, 1927).

⁴ Angelo Pirota, O.P., *Summa Philosophiae Aristotelico-Thomisticae* (3 vols.; Turin: Marietti, 1931).

⁵ Cosmus Alamannus, S.J., *Summa Philosophiae* (3 vols. quarto; edited by B. Felchlin and F. Beringer; Paris: Lethielleux 1885).

Aristotelis et Doctoris Angelici mentem.”⁶ After the brief first part, on formal logic (“de dialecticis institutionibus quas summulas vocant”), in which a didactic method is followed, the rest is treated philosophically, discussing many difficulties, problems, or questions, among which are included many of the questions which are examined in the present study. Of these some are treated at length, others receive little attention. Still other questions are not treated. What chiefly distinguishes John’s work, however, from the present investigation of even the same questions, is its author’s aim and method. His work, though “according to the mind of St. Thomas,” is not an exegetical investigation, but a philosophical exposition of the matter for its own sake. Though a fair number of texts from St. Thomas are brought in, there is not much effort at exegesis and the explanation of one text by another text; but the author proceeds on his own, and the quotations are incidental to his own development of the doctrine. Hence, even if John of St. Thomas had covered all of the same ground sufficiently from the point of view of philosophical truth, there would still be room left for an investigation of the historical truth regarding just what St. Thomas taught.

It may even be added that, on the supposition that a careful textual examination of the works of St. Thomas had already been made concerning the domain of logic, that would not necessarily preclude another independent exegetical study; for a single discussion seldom succeeds in saying the definitive work or in giving absolute assurance of the accuracy of all its interpretations.

But very little detailed exegesis has been done in the writings of Aquinas on our question. Among Thomistic studies monographs on logical questions are few,⁷ and of these most are devoted to particular logical problems rather than to the general problem of what logic is.

⁶ Joannes a Sancto Thoma, O.P., *Cursus Philosophicus Thomisticus* (3 vols.; new edition, edited by Beatus Reiser, O.S.B.; Turin: Marietti, 1930-37).

⁷ How few they are is revealed in a glance at the Thomistic bibliographies. In P. Mandonnet, O.P., and J. Destrez, O.P., *Bibliographie Thomiste* (Kain, Belgium: Revue des sciences philosophiques et théologiques, 1921) of the 806 titles in philosophy only eight are devoted to logic; ten times as many are listed under epistemology and almost fourteen times as many under theodicy. In Vernon J. Bourke, *Thomistic Bibliography: 1920-1940* (St. Louis: The Modern Schoolman, 1945) against 350 items listed for metaphysics, 285 for ethics, and 265 for epistemology and the theory of knowledge, there are only 48 listed for logic, logics, and mathematics together, of which five deal with mathematics and eleven are logic manuals.

Several titles which hold out some promise regarding the domain of logic may serve as examples of the frustration that meets the researcher. Odon Lottin, O.S.B., “L’ordre moral et l’ordre logique,” *Annales de l’Institut Supérieur de Philosophie*, V (1924) (Louvain, and Paris: Alcan), 310-399, is much more interested in the moral order (as might be expected from its author) than in the logical order, which is brought in only incidentally and for purposes of comparison (on logic: pp. 303-308, 323-328, 348-354).

Because the present study is intended to be textual and exegetical, the doctrine evolved must follow the texts. This means, first of all, that the doctrine expounded must be that of St. Thomas rather than any private opinions of the exegete; secondly, that this doctrine must be shown to be St. Thomas' from the texts brought forth; and thirdly, that the order of the exposition must grow from the texts.

In regard to the first, an exegete must be on his guard against reading any preconceived notions of his own into the interpretation of the author. With the writings of Aquinas there is particular danger because very many of the questions upon which he touches have not been given any extended *ex professo* treatment. The nature of logic is one of these, for he never wrote a treatise on logic as such. To discover his doctrine it is therefore necessary to gather texts from many sources and many different contexts, supplementing one text by the other. When a point has not at all been treated by the author, it is not legitimate for the exegete to attempt to fill in the gaps with his own conclusions, taking perhaps one premise of the arguments from the author and supplying another himself. When, however, a point of doctrine is implicit in the author, it seems legitimate to make it explicit; as, when two premises are given by the author, it seems permissible to draw the conclusion that naturally follows from them, even though it was never explicitly drawn by the author, but only on the condition that nothing contrary to such a conclusion is anywhere said.

In a study of this kind when what is said in one passage needs further

André Hayen, S.J., *L'intentionnel dans la philosophie de saint Thomas* (Paris: Desclée de Brouwer, 1st ed., 1942; 2nd ed., 1954), though distinguishing different meanings or kinds of intention, one of which is the cognitive intention, takes no notice of logical intentions or of logic. Lucien Dufault, O.M.I., "The Concept of Being Which Is the Proper Object of Logic," *Proceedings of the Am. Cath. Phil. Assn.*, XXI (1946), 77-83, seems to be directly on the topic at hand; but in addition to its brief compass (six pages) it turns out to be almost completely a study of John of St. Thomas rather than of St. Thomas Aquinas. Joseph J. Sikora, "The Art and Science of Formal Logic in Thomistic Philosophy," *The Thomist*, XXII (1959), 533-541, is the discussion of a problem with little pretense of documentation from St. Thomas or of the explanation of his texts. Among recent works one of the best treatments of the question is a short chapter (twelve pages) in Ralph M. McInerny, *The Logic of Analogy: An Interpretation of St. Thomas* (The Hague: Nijhoff, 1961), chap. 3, "The Nature of Logic," pp. 37-48, plus 100-106 and 118-122 from the following chapter. But being very brief, this can present only a few passages from St. Thomas and omits many of the principal and most explicit statements by Aquinas on logic; those brought in are not much explicated; and the doctrinal background or presuppositions of these statements are not examined. At about the same time there appeared an excellent article on almost the same topic, Edward D. Simmons, "The Nature and Limits of Logic," *The Thomist*, XXIV (1961), 47-71. Without being expressly an exposition of the doctrine of St. Thomas, it does follow him rather closely and makes a few incidental references to his works. But it is not an exegetical study; and, in so far as it acknowledges any inspiration or basis, this would be John of St. Thomas as much as St. Thomas himself.

explanation, that explanation also must be found in the author: text must be explained by text, with due regard all the while for the context so that no violence is done to the real sense of the texts brought forth

Such a procedure dictates to a certain extent the order that is to be followed. The passages from which a start is made reveal points for further investigation and elucidation, which must then be examined in the light of other texts; and these may in turn lead to others. From this there arises a great difficulty in keeping a clear order in such an exegetical study, especially when the works of the author are as complex as those of Aquinas. Because most of the logical doctrine is incidental to some other explanations, related points may occur in a variety of contexts, which complicate the exposition. The various related texts, furthermore, though mutually supplementary, will often be relatively complete summary treatments by themselves, according to the immediate needs of the context. From this two chief inconveniences follow. First, the progression of the argument in a given passage is often more rapid than is desirable for a lengthier and more detailed explanation; and secondly, when the supplementary texts are quoted for the additional information or new point of view contained in each of them, there will be a certain amount of repetition and overlapping. An even greater difficulty in the order of presentation arises from explaining text by text, because the first may contain more than one point that needs further development, then the text brought forward for this purpose itself contains one or more points requiring clarification, and so on until it is difficult to know what point was originally being explained. Some workable compromise must in each case be found between following the lead of the texts into an inextricable maze and multiplicity of points within points, on the one hand, and, on the other, imposing a rigid *a priori* order on the exposition regardless of the texts of the author. The prudence of the compromise will inevitably be debatable and its success at best relative.

It has not been judged necessary to follow a historical order in the presentation of the doctrine of St. Thomas on this matter. First of all, the whole project has not been conceived as a literary and chronological inquiry but rather as a doctrinal one. And what is more important, no appreciable change or evolution has been discerned in Aquinas' doctrine on the nature of logic, and consequently no significance has been found in the chronological sequence of the works.

The general procedure followed in this study is a natural one. First

those texts in which Aquinas gives some *ex professo* and explicit explanation of logic by name, saying what it is or does, however brief the statement may be, are found and set forth. Then, since the explanations will necessarily be made in terms other than logic itself, those terms must be examined for a fuller explanation of what logic is.

The treatment is divided into three parts, each containing three chapters. In Part I the explicit statements about logic are examined, including both absolute statements of what logic is or does, and relative statements about logic made by comparing it with something else. In Part II the general terms used to explain logic are themselves investigated in detail. And in Part III the particular kind of logical entity belonging to each of the three operations of reason respectively is examined in order to present more concretely the nature of logical being.

In the choice of passages adduced a few are cited or even quoted in the text from *opuscula* whose authenticity is questioned or even denied by some. These are *De Natura Generis*, *De Natura Accidentis*, *De Principio Individuationis*, *De Propositionibus Modalibus*, and *De Fallaciis*. Regarding their authenticity the opinion which has been followed is that of Grabmann, who upholds it, rather than of Mandonnet, who denies the authenticity of the first three and hesitates to accord fully that of the last two.⁸ In almost all cases, however, these works are merely cited in the notes along with other texts; or if they are quoted in the body of the work, it is usually with parallel passages. In the few instances in which such quotations stand by themselves it will be found that no essential point of the argument depends upon them alone, but that the texts quoted before or after them in the argument are sufficiently close in meaning for the doctrine to stand as explained even without the passages from works of questioned authenticity. No notice whatever is taken of certainly spurious works, particularly the *Summa*

⁸ P. Mandonnet, O.P., *Des écrits authentiques de S. Thomas d'Aquin* (Fribourg: L'oeuvre de Saint-Paul, 1910) holds all spurious because not in the "official catalogue." See the table, p. 108, for *De Prop. Modal.* (n. 84), *De Fallaciis* (n. 88), *De Nat. Acc.* (n. 90), *De Nat. Gen.* (n. 92), and p. 109 for *De Prin. Indiv.* (n. 104), and supplementary notes on *De Nat. Gen.* (p. 105) and *De Prin. Indiv.* (p. 151). In his edition of the *Opuscula* (Paris: Lethielleux, 1927) he gives in vol. IV among the *vix dubia* the *De Prop. Modal.* (p. 505) and the *De Fallaciis* (p. 508); the rest he places in vol. V among the *spuria*. In an article of 1925 ("Thomas d'Aquin, Novice Prêcheur," IV, *Revue Thomiste*, n.s. VIII, 406-409) and in his introduction to the *Opuscula* (pp. xxxviii, xl, & xlvii) he holds the *De Fallaciis* and the *De Prop. Modal.* to be "almost surely authentic."

M. Grabmann, *Die Werke des hl. Thomas von Aquin* (in "Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters," XXII, 1-2, 3rd ed.; Munster: Aschendorff, 1949), holds them all authentic (*De Prin. Indiv.*, p. 342; *De Fallaciis*, pp. 348-352; *De Prop. Modal.*, pp. 352-353; *De Nat. Acc.*, p. 354; *De Nat. Gen.*, 354-353).

*Totius Logicae*⁹ and several treatises *De Universalibus*,¹⁰ although they deal with the direct subject of this study or with closely related questions.

Because this is a textual study, it has been deemed advisable to quote in the text of the exposition itself passages from St. Thomas, and in the original Latin. This is not done on subsidiary points but on those points which deal rather directly with the particular topic that is under investigation. It seems hardly possible to do exegesis in any other way. Too often in studies that are purportedly expounding the doctrine of St. Thomas, interpretations, sometimes rather surprising ones, are given without the textual basis. When the references are checked, it is sometimes hard to judge what in the article or lesson or chapter referred to is supposed to convey the meaning extracted. In the present investigation the evidence, real or alleged, is presented so that it can be examined and judged. But although Latin passages are inserted into the text, it will be observed that in almost all cases the pertinent contribution of each quoted passage is expressed completely in the English exposition, either before or after the quotation, so that the argument can be followed even if the Latin passages quoted are not read.

The orthography in the texts quoted from St. Thomas requires a word of explanation. Although various editions of various works are used, and different orthography is followed by them, for the sake of uniformity in quoting some changes are made where needed. With the Leonine and most recent editions the consonantal *i* is always used instead of *j* (e.g., *subiectum*, *huiusmodi*, *eius*). For the rest the orthography is made to conform to that of the Parma edition (as *enunciatio*, *numquam*, and *in quantum* of the Leonine edition are written *enuntiatio*, *numquam*, and *inquantum* with Parma).

Similarly, the punctuation of the editions (for the most part not derived from the original manuscripts but supplied or modified by the editors according to the fashion of their own region and era) has not always been kept, especially the overabundance of commas separating subordinate clauses and phrases, or the use of a colon where modern style would dictate a semicolon or comma.

Regarding the use of italics a similar liberty has been taken with the editions used. Because the italics are not from St. Thomas but were put in by the editors, sometimes in a rather eccentric fashion, it has been considered justifiable to disregard the italicization of the editions and use italics only for the purpose at hand, to emphasize the main point

⁹ Grabmann, *op. cit.*, pp. 238-242.

¹⁰ *Ibid.*, pp. 397, 413.

of an argument and particularly to make a word or words under discussion stand out for the eye.

Because it is the aim of this study to present the doctrine of St. Thomas on the domain of logic and on the nature of the subject of this science directly from the works of St. Thomas himself and independently of any received traditions of interpretation, no effort has been made to bring in and discuss other interpretations of St. Thomas on the many points that have been treated or mentioned in the course of this study. To do so would lead this inquiry too far afield and unduly lengthen a work already of ample proportions from the pursuit of its direct objective. This is not to say, of course, that the author has not been influenced by other works and other men. The many authors, teachers, associates, and even students who have been a part of his intellectual environment have helped to form his opinions, which undoubtedly condition his judgments to some extent even when he is trying to be purely objective.

This book was originally written in substantially its present form and size some years ago (1945–47) and presented as a doctoral dissertation at the University of Toronto. Various other duties, activities, and projects have in the meantime prevented until now the completion of the work of revising and preparing for the press that was deemed necessary or desirable. Besides stylistic changes some clarifications and corrections have been made; documentation has been strengthened in many places; some parts have been amplified (notably those on logic as a science, the sense in which Thomas' logic can be called formal, the foundations and kinds of relation, truth in judgment, the intention of universality, the whole section on the syllogism especially regarding the role of formal principles in reasoning, the section on the intention of consequence, and the final section of the Conclusion on the salient features of the logic of St. Thomas); two entire sections have been added (in chap. VII, which deals with the intention of universality, the final section, "Identity or Likeness?" and in chap. IX, on the intention of consequence, the long section on "Induction" with its five subsections); and the bibliography has been rearranged and updated.

To all persons and works whose influence, recognized or unrecognized, has contributed to this work the author wishes to express his gratitude. Special acknowledgement must be made to the authors of two works, unpublished at the time of the original composition of this study, which were of greater assistance than any published books or articles.¹¹

¹¹ Published works were of relatively little assistance on the direct subject of this study. The works mentioned above, especially, Alamannus, John of St. Thomas, and

One was a doctoral dissertation presented at the University of Toronto in 1944 by Clifford G. Kossel, S.J., "Relation in the Philosophy of St. Thomas Aquinas." This has since been published almost integrally in a series of articles.¹² The other work is an unpublished "Cours de Logique" given in the year 1939-1940 at the Institut d'Etudes Médiévales at Ottawa by the Reverend L. M. Régis, O.P., whose notes were consulted by the author. To Father Régis there is a further debt of gratitude for some enlightening conversations, helpful suggestions, and valuable criticisms. To the late Rt. Rev. Msgr. G. B. Phelan also, who first encouraged work upon the topic and who contributed considerably to a deeper insight into the doctrine of St. Thomas, the author is sincerely grateful. But most of all thanks are due to Dr. Anton C. Pegis for the kind encouragement which, as adviser for the dissertation, he gave in the course of the composition of this work, for his generosity and care in reading the manuscript, and for the many invaluable criticisms and suggestions which he offered.

Pirotta were most directly helpful. For particular questions, mostly on the metaphysical and psychological foundations of the different logical intentions, other works exercised influence in the formative stages of the author's thought. Examples are A. Forest, *La structure métaphysique du concret*, (Paris: Vrin, 1942), especially chap. 3, "Les rapports de l'abstrait et du concret"; Bernard J. Muller-Thym, "The *To Be* Which Signifies the Truth of Propositions," *Proceedings of the Am. Cath. Phil. Assn.*, XVI (1940), pp. 230-254; Th. Philippe, O.P., "Bulletin de Philosophie," *Rev. des sci. phil. et théol.*, XXII (1933), pp. 71-78, where he discusses certain logic manuals; Hayen, *L'intentionnel* (1942), on the general notion of intention (though not of logical intentions); Bernard J. Lonergan, S.J., "The Concept of *Verbum* in the Writings of St. Thomas Aquinas," *Theological Studies*, VII (1946) 349-392 (later completed: VIII [1947], 35-79, 404-444; X [1949], 3-40, 359-393); J. Péghaire, C.S.Sp., *Intellectus et Ratio selon S. Thomas d'Aquin* (Ottawa: Inst. d'Etudes Médiévales; Paris: Vrin, 1936) for reasoning.

Several works which treat related questions were published in Europe prior to the original completion of this study but, because of World War II and the resulting disruption of commercial relations and transportation between Europe and the American continent, did not come into the author's hands until later. L. B. Geiger, O.P., *La participation dans la philosophie de S. Thomas d'Aquin* (Paris: Vrin, 1942), has excellent discussions of the metaphysical foundations of logic; J. de Finance, S.J., *Etre et agir dans la philosophie de S. Thomas* (Paris: Beauchesne, 1945) presents stimulating views on the psychology and metaphysics of cognition; and P. Hoenen, S.J., *La théorie du jugement d'après S. Thomas d'Aquin* (Rome: Gregorian University Press, 1946), now in English as *Reality and Judgment According to St. Thomas* (trans. by H. Tiblier; Chicago: Regnery, 1952), gives the most thorough treatment available of St. Thomas' conception of judgment and propositions.

By all means the most help was derived from indices to the works of St. Thomas: L. Schütz, *Thomas-Lexikon* (2nd ed. Paderborn: Schöningh, 1895); Peter of Bergamo, *Tabula Aurea* (in *Opera Omnia*, Parma: Fiacadori, 1852-73, vol. XXV); and subsequently the Leonine *Indices Auctoritatum Omniumque Rerum Notabilium Occurrentium in Summa Theologiae et in Summa Contra Gentiles* (editio Leonina manualis; Rome: Leonine Commission, 1948).

¹² "The Problem of Relation in Some Non-Scholastic Philosophies," *The Modern Schoolman*, XXIII (1945-46) 61-81; "Principles of St. Thomas's Distinction between the *Esse* and the *Ratio* of Relation," *ibid.*, XXIV (1946-47), 19-36, 93-107; "St. Thomas's Theory of the Causes of Relation," *ibid.*, XXV (1947-48), 151-172.

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PART I

THE SPECIFICATION OF LOGIC AS A SCIENCE

An investigation of the doctrine of St. Thomas Aquinas on the domain of logic takes its most natural beginning from the passages in which logic is discussed or mentioned explicitly. It is to be expected that there will be found in these passages some clues or even more definite information regarding the function and nature of logic in general. But not all such information need be conveyed absolutely, by the direct explanation of what logic is. It may also be put relatively, in comparisons of logic with other intellectual pursuits or habits.

The examination of the express references to logic will constitute Part I of this study.

From the direct statements about logic some questions will arise, and thus these direct statements will themselves need further examination, and elucidation from further texts. This will constitute an indirect investigation into the domain of logic and will be left to Parts II and III.

Among the direct statements about logic there are, first, an extended general statement and some apparently conflicting assertions; secondly, a comparison of logic with other sciences; and thirdly, some more detailed statements of just what it is with which logic deals.

CHAPTER I

PRELIMINARY VIEW OF WHAT LOGIC IS

Of the considerable number of passages in which St. Thomas speaks of logic by name relatively few have as their direct purpose to explain what logic is. Among the few that do, the fullest discussion is found at the beginning of the commentary on Aristotle's *Posterior Analytics*. Better than half of the first lesson is devoted to an introduction, not so much to the particular work at hand, but to the study of logic as a whole. This occurs before the commentary proper on the words of Aristotle, even his preliminary remarks, is begun. It is clearly, therefore, St. Thomas' own teaching, though it is, to be sure, based upon Aristotle's treatment of logical problems in the whole *Organon*. It discusses the necessity of logic, its nature, and its divisions and subdivisions, then gives a specific introduction to the *Posterior Analytics* itself.

LOGIC AS AN ART

Logic is spoken of as an art which has as its business to direct the acts of reason in man. Whereas brute animals have instincts to guide their actions, man has reason. The ways in which reason directs various human actions to their proper ends constitute different arts. But reason itself must be guided, and for this a special art is needed. It is, as it were, a super-art, or art of arts, since it directs the director of the arts:

Alia enim animalia quodam naturali instinctu ad suos actus diriguntur; homo autem rationis iudicio in suis actionibus dirigitur. Et inde est quod ad actus humanos faciliter et ordinate perficiendos diversae artes deserviunt. Nihil enim aliud ars esse videtur, quam certa ordinatio rationis quomodo per determinata media ad debitum finem actus humani perveniant. Ratio autem non solum dirigere potest inferiorum partium actus, sed etiam actus sui directiva est. Hoc enim est proprium intellectivae partis, ut in seipsam reflectatur: nam intellectus intelligit seipsum et similiter ratio de suo actu ratiocinari potest. Si igitur ex hoc quod ratio de actu manus ratiocinatur, adinventata est ars aedificatoria vel fabrilis, per quas homo faciliter et ordinate huiusmodi actus exercere potest; eadem ratione ars quaedam necessaria est, quae sit directiva ipsius actus rationis, per quam scilicet homo in ipso actu rationis ordinate, faciliter et sine errore procedat.

Et haec ars est *logica*, idest rationalis scientia. Quae non solum rationalis est

ex hoc quod est secundum rationem (quod est omnibus artibus commune); sed etiam ex hoc quod est circa ipsum actum rationis sicut circa propriam materiam.

Et ideo videtur esse ars artium, quia in actu rationis nos dirigit, a quo omnes artes procedunt.¹

From this we can take the definition of logic as the art which is directive of the very act of reason, so that in using his reason man proceeds by it methodically, easily, and without error.

To understand what is said about logic we must, then, understand what is meant by art. Aquinas teaches that it is one of the intellectual virtues or habits by which the soul expresses what is true ("habitus quibus anima dicit verum"). This particular habit perfects the intellect in the cognition of a contingent matter, namely, how to make something. It is accordingly called a "rationally factive habit" ("habitus factivus cum ratione"). Its operation produces a product or work which is distinct from the action itself: "Omnis ars est circa generationem, aut circa constitutionem et complementum operis, quod ponit tamquam finem artis, quae disponit materiam, et est etiam circa speculati qualiter aliquid fiat per artem."² A brief and untranslatable formula defines art as the *recta ratio factibilium*.³ It means both the rational plan of things that are to be made and the reasoned process of making them.

It is essential to the strict notion of art that an external product result. This distinguishes it from the intellectual virtue of prudence, which also pertains to the contingent truth of particular human operations, but differs from art in that it has no product beyond the action itself:⁴

Prudentia vero et ars est circa animae partem practicam, quae est ratiocinativa de contingentibus operabilibus a nobis. Et differunt: nam prudentia dirigit in actionibus quae non transeunt ad exteriorem materiam, sed sunt perfectiones agentis: unde dicitur quod prudentia est recta ratio agibilium. Ars vero dirigit in factionibus, quae in materiam exteriorem transeunt, sicut aedificare et secare; unde dicitur quod ars est recta ratio factibilium.⁵

A distinction is made between doing and making, "action" and "faction." "Action" is an immanent operation; "faction" is transient, producing an effect in external matter as its product:

Differunt enim agere et facere: nam agere est secundum operationem manentem in ipso agente sicut est eligere, intelligere et huiusmodi. ... Facere autem est secundum operationem quae transit exterius ad materiae transmutationem, sicut secare, urere et huiusmodi.⁶

¹ *In I Post. Anal.*, 1, n. 1 (ed. Leonina).

² *In VI Eth.*, 3, n. 1143, 1151-56 (ed. Pirotta).

³ *In I Eth.*, 1, n. 8; *In I Met.*, 1, n. 34 (ed. Cathala-Spiazzi).

⁴ *In VI Eth.*, 3, nn. 1143, 1151, 1158; lect. 4, nn. 1166-67, 1172-74.

⁵ *In I Met.*, 1, n. 34.

⁶ *In VI Met.*, 1, n. 1152; cf. *In XI Met.*, 7, n. 2253.

Nam actio manens in ipso agente operatio dicitur, ut videre, intelligere et velle. Sed factio est operatio transiens in exteriorem materiam ad aliquid formandum ex ea, sicut aedificare et secare.⁷

The external work produced is the particular end which the artificer always has in view, and it is produced because of its utility:

Omnis faciens, puta faber aut aedificator, facit suum opus gratia huius, idest propter finem, et non propter finem universalem; sed ad aliquod particulare quod est factum, idest constitutum in exteriori materia, puta cultellus aut domus; et non est finis aliquid actum, idest aliquid agibile in agente existens, puta recte concupiscere aut irasci. Facit enim omnis faciens propter aliquid, quod est alicuius, idest quod habet aliquem usum, sicut usus domus est habitatio; et talis quidem est finis facientis, scilicet factum et non actum.⁸

The utility may be either the provision of the necessities of life or the giving of pleasure: "Plures artes [sunt] repertae quantum ad utilitatem, quarum quaedam sunt ad vitae necessitatem, sicut mechanicae, ... vel ad voluptatem, sicut artes quae sunt ordinatae ad hominum delectationem."⁹

If logic is now compared with this explanation of art, it is seen to agree in some respects. It too is useful, having the important function of directing the acts of reason, as has been said. Among the useful arts ("repertae quantum ad utilitatem") we find logic listed: "Quaedam sunt ad vitae necessitatem, sicut mechanicae; quaedam vero ad introductionem in aliis scientiis, sicut scientiae logicae."¹⁰ Its utility consists in the aid it gives to the other sciences and arts:

[Quaedam] sunt ad eruditionem necessaria, sicut scientiae logicae, quae non propter se quaeruntur, sed ut introductoriae ad alias artes.¹¹

Res autem de quibus est logica non quaeruntur ad cognoscendum propter seipsas, sed ut adminiculum quoddam ad alias scientias.¹²

Secondly, logic is concerned with operations, just as are other arts. Its operations are those of reason, as we have seen: "Necesse est quod eius consideratio versetur circa ea quae pertinent ad tres praedictas operationes rationis."¹³

There are, however, differences as well as similarities between logic and art. In distinguishing four different orders according to the way in which the things are related to reason, St. Thomas opposes logic to art

⁷ *In VI Eth.*, 3, n. 1151; cf. *C.G.*, II, 1; *De Ver.*, 5, 1 c (prin.).

⁸ *Ibid.*, 2, n. 1136.

⁹ *In I Met.*, 1, nn. 32 & 33.

¹⁰ *Ibid.*, n. 32.

¹¹ *Ibid.*, 3, n. 57.

¹² *In De Trin.*, 5, 1 ad 2.

¹³ *In I Pevih.*, 1, n. 2.

as well as to natural and moral philosophy. The order which reason, by its very consideration, makes in external things belongs to the mechanical arts, whereas a separate order is assigned to logic, here called *rationalis philosophia*; it is the order which reason by its consideration makes in its own act, as when it puts order into its concept and the signs of concepts:

Ordo quem ratio considerando facit in proprio actu, puta cum ordinat conceptus suos adinvicem, et signa conceptuum, quia sunt voces significativae, ... pertinet ad rationalem philosophiam. ... Ordo autem quem ratio considerando facit in rebus exterioribus constitutis per rationem humanam, pertinet ad artes mechanicas.¹⁴

The obvious and important basis for this distinction is the absence of any real, external product in logic: "non ordinantur ad aliqua operata... intelligere et sentire."¹⁵ Understanding has a very important place among the acts of reason which logic studies, since it includes simple apprehension and judgment. It could be said equally well of reasoning that it has no product. If a product can be spoken of at all, it remains in the mind. There is nothing "constitutum in exteriori materia," and the logical operation is not "transiens in exteriorem materiam."¹⁶

There does, however, result from the logical operation a certain kind of product or work, such as a proposition or syllogism:

Hae [logica et mathematica] inter ceteras scientias dicuntur artes quia non solum habent cognitionem, sed opus aliquod, quod est immediate ipsius rationis, ut constructionem, syllogismum et orationem formare, numerare, mensurare, melodias formare, cursus siderum computare.¹⁷

The formation of syllogisms mentioned here obviously points to logic. It may possibly be that St. Thomas intended to refer also to logic "construction" and "oration"; but it seems more likely that he rather meant to indicate by them grammar and rhetoric, envisaging in the enumeration the trivium and quadrivium of the medieval educational curriculum: grammar, logic, rhetoric, arithmetic, geometry, music, and astronomy respectively. Though the works resulting from these quasi-arts are not external, material products, they can in some sense be considered distinct from the operations from which they spring, and thus verify to some extent the notion of art:

¹⁴ *In I Eth.*, 1, nn. 1 & 2.

¹⁵ *C.G.*, III, 25.

¹⁶ *In VI Eth.*, 2, n. 1136 & lect. 3, n. 1151.

¹⁷ *In De Trin.*, 5, 1 ad 3.

Sicut in actibus exterioribus est considerare operationem et operatum, puta aedificationem et aedificatum; ita in operibus rationis est considerare ipsum actum rationis, qui est intelligere et ratiocinari, et aliquid per huiusmodi actum constitutum. Quod quidem in speculativa ratione primo quidem est definitio; secundo, enuntiatio; tertio vero syllogismus vel argumentatio.¹⁸

Omnis applicatio rationis rectae ad aliquid factibile pertinet ad artem. ... Quia ergo ratio speculativa quaedam facit, puta syllogismum, propositionem et alia huiusmodi, in quibus proceditur secundum certas et determinatas vias, inde est quod respectu horum potest salvari ratio artis.¹⁹

The examples of products here given, namely, the syllogism, the proposition, and the definition, very clearly indicate that logic is the "art" referred to. Since they are obviously not material, and not external unless made so by their oral or written expression, which is quite accidental to them, they do not constitute a product in the full sense given above; and logic is, therefore, not strictly an art as described; that is, it is not a mechanical art.

The term *art* is not, however, always taken strictly, but is sometimes applied in an extended sense ("per quamdam similitudinem").²⁰ "To make" (*facere*) is then not restricted to the meaning that was distinguished from "to do" (*agere*), but may even be taken as a synonym of it:

Facere autem dupliciter potest accipi: uno modo proprie; alio modo communiter. Proprie autem facere dicitur operari aliquid in exteriori materia, sicut facere domum vel aliquid aliud huiusmodi. Communiter autem dicitur facere pro quacumque actione, sive transeat in exteriorem materiam, sicut urere et secare; sive maneat in ipso agente, sicut intelligere et velle.²¹

When logic is said to *make* something, the word "make" is not taken in the absolutely common sense which would identify it with "to do," since a product can be distinguished from the operation; but it seems to be used in an intermediate sense between its proper and common acceptations. If making is taken in this way, logic verifies the definitions of art that were given; it can be called a "habitus ad faciendum aliquid cum ratione,"²² "habitus factivus cum ratione,"²³ "ratio recta aliquorum operum faciendorum,"²⁴ or "recta ratio factibilium."²⁵ Thus it can be called an art "after a fashion" or a quasi-art.

¹⁸ S.T., I-II, 90, 1 ad 2; cf. *De Ver.*, 3, 2 c: quidditas formata in intellectu vel etiam compositio et divisio est quoddam operatum ipsius.

¹⁹ S.T., II-II, 47, 2 ad 3. The fact and nature of this logical product will be studied more in detail in Chap. III and following chapters.

²⁰ S.T., I-II, 57, 3 ad 3.

²¹ S.T., II-II, 134, 2 c.

²² *In VI Eth.*, 3, n. 1153.

²³ *Ibid.*, nn. 1151 & 1153.

²⁴ S.T., I-II, 57, 3 c.

²⁵ *In I Met.*, 1, n. 34; *In I Eth.*, 1, n. 8.

For this reason it is not surprising to see logic listed among the liberal arts. In the continuation of one of the passages already quoted in which it was said that logic has something of a product, logic is now said to be a liberal art. In speaking of the disciplines of the trivium and quadrivium St. Thomas says:

Hae inter ceteras scientias dicuntur artes quia non solum habent cognitionem sed opus aliquod, quod est immediate ipsius rationis, ut constructionem, syllogismum et orationem formare. ... Aliae vero scientiae vel non habent opus sed cognitionem tantum, sicut scientia divina et naturalis: unde nomen artis habere non possunt, cum ars dicitur ratio factiva ...: vel habent opus corporale, sicut medicina, alchimia, et huiusmodi. Unde non possunt dici artes liberales, quia sunt hominis huiusmodi actus ex parte illa qua non est liber, scilicet ex parte corporis.

The reason given for the distinction of liberal arts from others seems at first glance to be that the liberal arts proceed from the soul, the non-liberal from the body. But this could not be since every art proceeds from reason and has *ratio* in its definition. The product of the non-liberal arts is said to be "corporal" and to belong to man as a result of the body. The meaning is not, however, that they proceed from the body, but rather that they are ordained to it. This is brought out in another passage, in which the non-liberal arts are called mechanical or servile: "Illae solae artes liberales dicuntur, quae ad sciendum ordinantur: illae vero quae ordinantur ad aliquam utilitatem per actionem habendam, dicuntur mechanicae sive serviles."²⁷ The liberal arts are ordained to the intellectual act of knowing. They are even designated as speculative habits in another passage which excellently expresses the meaning of liberal arts. We note that logic is again used as an example and therefore classed as such an art:

In ipsis speculabilibus est aliquid per modum cuiusdam operis, puta constructio syllogismi aut orationis congruae, aut opus numerandi vel mensurandi. Et ideo quicumque ad huiusmodi opera rationis habitus speculativi ordinantur, dicuntur per quamdam similitudinem artes, scilicet liberales, ad differentiam illarum artium quae ordinantur ad opera per corpus exercita quae sunt quodammodo serviles, inquantum corpus serviliter subditur animae, et homo secundum animam est liber. Illae vero scientiae quae ad nullum huiusmodi opus ordinantur, simpliciter scientiae dicuntur, non autem artes. Nec oportet, si liberales artes sunt nobiliores, quod magis eis conveniat ratio artis.²⁸

The last sentence is pertinent to our problem. Although the liberal arts are nobler than the others, still they are not so strictly *arts*.²⁹ The

²⁶ *In De Trin.*, 5, 1 ad 3.

²⁷ *In I Met.*, 3, n. 59.

²⁸ *S.T.*, I-II, 57, 3 ad 3.

²⁹ A similar difference is pointed out between intellectual and moral virtues: although intellectual virtues are more noble, they are less strictly virtues (*De Virt. in Com.*, a. 12—ante med.).

distinction between them and the speculative sciences often appears very dim.

The term art is, in fact, sometimes used very broadly; it includes not only liberal arts (in which there is still, in a way, some productive operation), but also speculative sciences. In the first lesson on the *Metaphysics* St. Thomas, following Aristotle, speaks of "speculative" as well as "active" arts ("Comparat artem activam speculativae") and interchanges the terms "art" and "science":

In quibuscumque scientiis vel artibus invenitur id propter quod homines scientes prae aliis hominibus in admiratione vel honore habentur, illae scientiae sunt magis honorabiles, et magis dignae nomine sapientiae. ...

Cum igitur plures artes sunt repertae quantum ad utilitatem ...: illi artifices dicendi sunt sapientiores quorum scientiae non sunt ad utilitatem inventae, sed propter ipsum scire, cuiusmodi sunt scientiae speculativae.³⁰

Two paragraphs later he takes cognizance of the interchange of terms and now points out their proper meanings, distinguishing art, science, and wisdom. Art is here taken in its restricted sense of *ars mechanica* as in the sixth book of the *Ethics*. In another place it is said that some arts are speculative and some practical: "dicuntur artium quaedam speculativae, quaedam practicae."³¹

From this broad use of the name art, it becomes clear that, when it is applied to logic, it need not be taken in the restricted sense which would exclude logic from being a science.

LOGIC AS A SCIENCE

In the same passage in which an explanation is given of logic as an art, it is also called a science—"rational science": "Et haec ars est logica, idest rationalis scientia."³² The same name is applied to logic in the first lesson of the commentary on the *Peri Hermeneias*¹³ and in the opusculum *De Fallaciis*.³⁴ An alternative designation of logic is "rational philosophy." One occurrence is in a passage that has already been quoted from the first lesson on the *Ethics*: "Ordo quem ratio considerando facit in proprio actu, pertinet ad rationalem philosophiam."³⁵ And again in the introductory passage of the *Posterior Analytics* this

³⁰ *In I Met.*, 1, n. 31.

³¹ *In De Trin.*, 5, 1 ad 4.

³² *In I Post. Anal.*, 1, n. 2.

³³ *In I Perih.*, 1, n. 2: Cum logic dicatur rationalis scientia ...

³⁴ Prol.: Logica est rationalis scientia et ad ratiocinandum inventa. Regarding authenticity see Preface, p. xi, and note 8.

³⁵ *In I Eth.*, 1, n. 2.

designation is used. After enumerating the divisions of the third part of logic as judicative and inventive, Aquinas says, "Omnia haec pertinent ad rationalem philosophiam."³⁶ That philosophy is considered by St. Thomas to be a science is evident wherever he speaks of philosophy at all, even though he seems never to have written explicitly that philosophy is a science. His frequent conversions of the terms leave no doubt as to his identification of them. This is particularly apparent in his classification of sciences,³⁷ where "first philosophy" is a science, the philosophy of nature is called natural philosophy or natural science, and ethics is referred to either as moral philosophy or as moral science.¹⁸ Thus the terms "rational philosophy" and "rational science" are used interchangeably as perfect synonyms.

If logic is to be considered a science, it must meet the requirements of a science. St. Thomas, following Aristotle, explains that science is certain knowledge³⁹ of what must necessarily be so,⁴⁰ had by demonstration⁴¹ from first principles⁴² as the effect from a cause⁴³ and known as such.⁴⁴ From this it is evident that the end of science is the certain

³⁶ *In I Post. Anal.*, 1, n. 6.

³⁷ See chap. II, first section.

³⁸ E.g., *In I Eth.*, 1, n. 2: "diversae scientiae" are enumerated as "naturalis philosophia," "rationalis philosophia," "moralis philosophia," and "artes mechanicae"; *In I Phys.*, 1, n. 3 (within about four lines): Naturalis enim *philosophia* de naturalibus est; ... de his igitur quae habent in se principium motus, est *scientia* naturalis; *In I Sent.*, Prol., 1, 1 ad 2: *Philosophia* sufficit ad perfectionem intellectus secundum cognitionem naturalem et affectus secundum virtutem acquisitam; et ideo oportet esse aliam *scientiam* per quam intellectus perficiatur quantum ad cognitionem infusam et affectus quantum ad dilectionem gratuitam.

³⁹ *In I Post. Anal.*, 4, n. 5: Scientia est certa cognitio rei ... per certitudinem ... quod non possit aliter se habere; cf. *De Ver.*, 11, 1 ob. 13: Ad scientiam requiritur cognitionis certitudo.

⁴⁰ *In I Post. Anal.*, 4, n. 7: Illud de quo habetur scientia oportet esse necessarium, scilicet quod non contingat aliter se habere; cf. *In VI Eth.*, 3, n. 1145: Scientia perficit intellectum circa necessaria; *S.T.*, II-II, 1, 5 ad 4: De ratione scientiae est quod id quod scitur existimetur esse impossibile aliter se habere; *C.G.*, III, 39, Praeterea: Scire aliter non dicimur nisi cognoscimus quod impossibile est aliter se habere.

⁴¹ *In I Post. Anal.*, 4, n. 9: ... cum scire nihil aliud esse videatur quam intelligere veritatem alicuius conclusionis per demonstrationem; cf. *ibid.*, lect. 44, n. 3: Scientia importat certitudinem cognitionis per demonstrationem.

⁴² *Ibid.*, lect. 4, n. 10: Necesse est quod demonstrativa scientia ... procedat ex propositionibus veris, primis et immediatis ... [et] ex propriis principiis; *ibid.*, 41, n. 8: Progressus scientiae consistit in quodam motu rationis discurrentis ab uno in aliud: omnis autem motus a principio quodam procedit et ad aliquid terminatur; unde oportet quod in progressu scientiae ratio procedat ex aliquibus principiis primis. Si qua ergo res est quae non habeat principia priora ex quibus ratio procedere possit, horum non potest esse scientia, secundum quod scientia hic accipitur, prout est demonstrationis effectus.

⁴³ *In IV Met.*, 4, n. 574: Certa cognitio sive scientia est effectus demonstrationis; cf. *C.G.*, I, 94, Item: Scientia est rei cognitio per propriam causam.

⁴⁴ *In I Post. Anal.*, 4, n. 5: Oportet scientem simpliciter cognoscere ... applicationem causae ad effectum; cf. *In I Met.*, 1, n. 34: Scientia est [habitus] conclusionis ex causis;

possession of truth; its mode of acquisition is demonstration. *Something* is demonstrated *about something else from something*. Thus there are three elements to be considered in a science: (1) *that which* is known, (2) *that from which* it is known, and (3) *that about which* it is known:

In demonstrationibus tria sunt. Unum est, quod demonstratur, scilicet conclusio, quae quidem continet in se id quod per se inest alicui generi: per demonstrationem enim concluditur propria passio de proprio subiecto. Aliud autem sunt dignitates, ex quibus demonstratio procedit. Tertium autem est genus subiectum, cuius proprias passiones et per se accidentia demonstratio ostendit.⁴⁵

As is explained here, what is known is the conclusion; and this is composed of a subject and a predicate, the predicate standing for a proper accident (*id quod per se inest*) or property (*propria passio*) of the subject. The second element, that from which the conclusion is known, consists of axioms (*dignitates*) or evident principles. Thirdly, there is the subject whose properties are manifested in the conclusions. This is what modern terminology designates as the "object" of a science. But St. Thomas calls it the subject because it is subjected to investigation or inquiry, because the proper accidents are predicated of it, and because it underlies these accidents. He also uses the term "object," but reserves it chiefly to the act or faculty or to the habit viewed psychologically (and, as we should say in modern usage by an inversion of the terms, "subjectively"), as an accidental perfection of the faculty and of the knower: "Sic enim se habet subiectum ad scientiam, sicut obiectum ad potentiam vel habitum."⁴⁶ When the term "subject" is used, it is viewed entitatively (or, again in the inversion of modern terminology, "objectively"), according to the being and nature which the thing known has in itself.

It is the subject about which knowledge is sought. And though we come to understand a thing by knowing its causes, and thus in a science seek causes,⁴⁷ still it is not the causes which we are seeking to know,

In VI Eth., 3, n. 1149: Scientia est habitus demonstrationis, idest ex demonstratione causatus; *S.T.*, II-II, 55, 3 c: Scientia est recta ratio scibilium.

⁴⁵ *In I Post. Anal.*, 15, n. 3; cf. *ibid.*, 18, n. 9: Omnis enim scientia demonstrativa est circa tria: quorum unum est genus subiectum, cuius per se passiones scrutantur; et aliud est communes dignitates, ex quibus sicut ex primis demonstrat; tertium autem passiones, de quibus unaquaque scientia accipit quid significent; *In III Met.*, 5, n. 390: ... oporteret tria tunc considerari; scilicet genus subiectum, passiones, et dignitates. ... Necessae est demonstrationem esse ex aliquibus, sicut ex principiis, quae sunt dignitates, et circa aliquod, quod est subiectum, et aliquorum, quae sunt passiones.

⁴⁶ *S.T.*, I, 1, 7.

⁴⁷ *In VIII Met.*, 1, n. 1682: Scire unumquodque non contingit nisi cognitis principiis et causis eius; *In II Post. Anal.*, 9, n. 2: Scire opinamur cum sciamus causam; *In I Post. Anal.*, 4, n. 5: Oportet igitur scientem, si est perfecte cognoscens, quod cognoscat causam rei scitae; *In IV Met.*, 1, n. 533: Quaelibet scientia est cognoscens causas proprias sui subiecti.

but the subject of our science: "Hoc enim est subiectum in scientia cuius causas et passiones quaerimus, non autem ipsae causae alicuius generis quaesiti."⁴⁸ Because the subject is the cause of its property ("Subiectum enim est causa propriae passionis"⁴⁹), in discovering the causes of the subject we discover also the causes of its properties:

Subiectum est causa propriae passionis. Et ideo si volumus investigare causam alicuius passionis, propter quam insit quibusdam rebus inferioribus, oportet accipere commune quod est proprium subiectum, per cuius definitionem accipitur causa illius passionis.⁵⁰

It is the subject which specifies the science, gives it its true nature, and distinguishes that particular science from others. The unity of a science comes from the unity of its subject; the science is one if its subject is one.⁵¹ If two sciences have the same subject, either the two are identical and thus are really one, or one is subordinated to the other and a part of it.⁵² The subject must not, however, be considered merely in a material sense—from the viewpoint merely of the *thing* which is under investigation; for in that case two different sciences can agree in subject and still be distinct. The subject stands in the same relation to a science as the object to a power or habit; and it is not the object considered materially that determines its reference to the power or habit but rather the formal aspect under which the object is grasped:

Sic enim se habet subiectum ad scientiam, sicut obiectum ad potentiam vel habitum. Proprie autem illud assignatur obiectum alicuius potentiae vel habitus, sub cuius ratione omnia referuntur ad potentiam vel habitum, sicut homo et lapsis referuntur ad visum in quantum sunt colorata; unde coloratum est proprie obiectum visus.⁵³

Materially different objects, such as stone and man, are referred to the same power, sight; but this common reference is in virtue of a common formal object, color; for both are referred to sight only inasmuch as they are colored. And just as diverse material objects have a common

⁴⁸ *In Met.*, Prooem.; cf. *In V Met.*, 1, n. 749: Cuiuslibet autem scientiae est considerare subiectum et passiones et causas; *In I Perih.*, 1, n. 3: Est enim proprium uniuscuiusque scientiae partes subiecti tradere, sicut et passiones.

⁴⁹ *In I Post. Anal.*, 38, n. 2; cf. *In V Phys.*, 3, n. 4: Manifestum est enim quod propriae passiones causantur ex principiis subiecti.

⁵⁰ *In II Post. Anal.*, 17, n. 2 (fin.); cf. *ibid.*, 7, n. 8 (fin.): Cum enim subiectum sit causa passionis, necesse est quod definitio passionis demonstretur per definitionem subiecti.

⁵¹ *In I Post. Anal.*, 41, n. 7: Scientia dicitur una ex hoc quod est unius generis subiecti.

⁵² *In II Phys.*, 3, n. 2: Quaecumque scientiae considerant eadem subiecta, vel sunt eadem, vel una est pars alterius.

⁵³ *S.T.*, I, 1, 7 c; cf. a. 3 c.

reference by reason of a common formal object, so also a difference of objects taken formally distinguishes habits:

Materialis diversitas obiecti non diversificat habitum, sed solum formalis. Cum ergo scibile sit proprium obiectum scientiae, non diversificabuntur scientiae secundum diversitatem materialem scibilium, sed secundum diversitatem eorum formalem.⁵⁴

But the formal aspect under which the objects of a science (*scibilia*) are grasped, is determined by its principles of demonstration:

Sicut autem formalis ratio visibilis sumitur ex lumine, per quod color videtur, ita formalis ratio scibilis accipitur secundum principia, ex quibus aliquid scitur. Et ideo quantumcumque sint aliqua diversa scibilia secundum suam naturam, dummodo per eadem principia sciuntur, pertinent ad unam scientiam; quia non erunt iam diversa in quantum sunt scibilia. Sunt enim per sua principia scibilia.⁵⁵

Different principles accordingly distinguish both different sciences and different subjects (if the subjects are taken formally): "Patet ergo quod ad diversificandum scientias sufficit diversitas principiorum, quam comitatur diversitas generis scibilis."⁵⁶

Sometimes when the principles of a science are spoken of, what is meant is all three of the elements enumerated above: the subject, the properties, and the axioms.⁵⁷ At other times the principles are distinguished from the subject.⁵⁸ In that case the term "principles" is re-

⁵⁴ *In I Post. Anal.*, 41, n. 11; cf. *In II De An.*, 6, n. 307: Ex obiectis diversis non diversificantur actus et potentiae animae, nisi quando fuerit differentia obiectorum in quantum sunt obiecta, id est secundum rationem formalem obiecti, sicut visibile ab audibili. Si autem servetur eadem ratio obiecti, quaecumque alia diversitas non inducit diversitatem actuum secundum speciem et potentiae. Eiusdem enim potentiae est videre hominem coloratum et lapidem coloratum; quia haec diversitas per accidens se habet in obiecto in quantum est obiectum; *De Car.*, a. 4 c: Ratio et species potentiae ex obiecto accipitur; et similiter est de habitu, qui nihil est aliud quam dispositio potentiae perfectae ad suum obiectum. Sed in obiecto consideratur aliquid ut formale, et aliquid ut materiale. Formale autem in obiecto est id secundum quod obiectum refertur ad potentiam vel habitum; materiale autem id in quo hoc fundatur; ut si loquamur de obiecto potentiae visivae, obiectum eius formale est color, vel aliquid huiusmodi, in quantum enim aliquid coloratum est, in tantum visibile est; sed materiale in obiecto est corpus cui accidit color. Ex quo patet quod potentia vel habitus refertur ad formalem rationem obiecti per se; ad id autem quod est materiale in obiecto per accidens: et ea quae sunt per accidens non variant rem, sed solum ea quae sunt per se: ideo materialis diversitas obiecti non diversificat potentiam vel habitum, sed solum formalis.

⁵⁵ *In I Post. Anal.*, 41, n. 11; cf. n. 12: Distinguntur autem genera scibilium secundum diversum modum cognoscendi.

⁵⁶ *Ibid.*, n. 11; cf. n. 13: Et sic patet quod unitas generis scibilis, in quantum est scibile, ex quo accipiebatur unitas scientiae, et unitas principiorum, secundum quae accipiebatur scientiae diversitas, sibi mutuo correspondent; *In II Sent.*, 24, 2, 2 ad 5: Diversae enim scientiae ex diversis principiis procedunt.

⁵⁷ E.g., *In III Met.*, 5, n. 390: oporteret tria ... principia considerari; scilicet genus subiectum, passionem, et dignitates.

⁵⁸ *In I Post. Anal.*, 2, n. 3: ... cum principium sit enuntiatio quaedam ...; *ibid.*, 20, n. 4: Omnes scientiae in communibus principiis communicant hoc modo, quod omnes utuntur eis, sicut *ex* quibus demonstrant, quod est uti eis ut *principiis*: sed non utuntur eis ut *de* quibus aliquid demonstrant, ut *de subiectis*, neque sicut quod demonstrant, quasi conclusionibus.

stricted to axioms, and the subject is taken materially, merely as the thing about which properties are to be predicated. But in any case the definition of the subject is a principle or goes to make up a principle of the science; for it is the most important middle term from which the properties are demonstrated of the subject: "Definitionibus subiecti utimur ut principiis in demonstrationibus",⁵⁹ "Nam definitio est medium in demonstratione propter quid";⁶⁰ for the middle term is the formal determinant of knowing in a demonstration: "Formalis vero ratio sciendi sunt media demonstrationis."⁶¹ This is the same as saying that the subject taken as defined is a principle of demonstration and the basis of the distinction of sciences. But what is taken expressly according to its definition is taken formally. Therefore the subject taken formally and properly distinguishes sciences.

When the subject is thus taken in a formal sense, it is not distinguished from the proper principles of the science, even if the term "principles" is taken as meaning axioms; for the axioms proper to a science are taken from the definition or formal character of its subject. Then the subject is identified with the proper principles of the science: "Propria principia sunt quae supponuntur in scientiis, scilicet subiecta, circa quae scientia speculatur ea quae per se insunt eis."⁶²

In one passage St. Thomas explains that the term "subject" as applied to a science has three different meanings, or is used in three different degrees of breadth. In its broadest sense the subject of a science is whatever enters into the consideration of the science; in a more restricted sense it means that which the science principally considers; and taken strictly it is that which distinguishes the science from other sciences:

Subiectum habet ad scientiam ad minus tres comparationes. Prima est, quod quaecumque sunt in scientia debent contineri sub subiecto. ... Secunda comparatio est, quod subiecti cognitio principaliter attenditur in scientia. ... Tertia comparatio est, quod per subiectum distinguitur scientia ab omnibus aliis.⁶³

In its most proper sense, then, the subject is that which distinguishes

⁵⁹ *In I Post. Anal.*, 43, n. 13; cf. 2, n. 3: praesertim cum ex definitione subiecti et passionis sumatur medium demonstrationis; *ibid.*, 31, n. 7 (fin.): in demonstrationibus utimur definitione quasi medio ad demonstrandam propriam passionem de subiecto; *In VI Met.*, 1, n. 1150: principium demonstrationis est definitio; *In XI Met.*, 7, n. 2256.

⁶⁰ *In VI Met.*, 1, n. 1149; cf. *S.T.*, I, 3, 5 c; 46, 2 c; *C.G.*, I, 3, Quod autem; *De Pot.*, 7, 3 c; *In I Phys.*, 1, n. 1; *In I Post. Anal.*, 2, n. 3; 13, n. 3; 22, n. 5; 26, nn. 2-3; II, 1, n. 9; 17, n. 2; 19, n. 2.

⁶¹ *S.T.*, II-II, 1, 1 c; cf. *De Car.*, a. 13 ad 16: formalis ratio scientiae est medium demonstrationis.

⁶² *In I Post. Anal.*, 18, n. 9.

⁶³ *In I Sent.*, Prol., 1, 4 sol.

the science from all others. In a passage already seen this is explained by a comparison with the object of a faculty; for the subject of a science stands to the science in the same way as the object to a faculty or habit: the proper object is not the object taken materially but the aspect under which all things (taken materially) are referred to that faculty or habit, that is, the formal object; so also in regard to a science the proper subject is not the subject merely in the material sense of a thing which happens to fall under the consideration of the science, but it is the precise aspect under which things come under that consideration.⁶⁴ In the continuation of this passage those are criticised who confuse everything that is treated in a science with its proper subject, that is, with the formal aspect under which all those things are considered: “attendentes ad ea quae in ista scientia tractantur, et non ad rationem secundum quam considerantur,” because all the things which are materially considered in a science belong to that science only in relation to (“secundum ordinem ad”) the proper or formal subject.

Now since logic is considered to be a science, it must verify St. Thomas' conception of what a science is. There must be some definite subject or kind of being about which it gives certain knowledge; it must proceed by demonstration; and it must yield a certitude which is consciously apprehended. Its nature will be seen especially from its proper or formal subject, and by this it will be distinguished from other sciences.

Before inquiring more deeply into the intimate nature of logic, it will be profitable to see how St. Thomas regards it in comparison with other sciences.

⁶⁴ *S.T.*, I, 1, 7 c; quoted p. 12.

CHAPTER II

RELATION OF LOGIC TO OTHER SCIENCES

If logic is a science, it must stand in definite relations to other sciences. Either it is identical with some other or subordinated to some other, or at least it is distinguished from other sciences in a determined way. To understand how St. Thomas considers logic to be related to other sciences would throw much light upon his conception of logic itself. And its relations to other sciences will appear if we can discover where he places it in his general classification of sciences.

CLASSIFICATION OF SCIENCES

The most common general division of sciences found in the work of St. Thomas Aquinas is that of speculative and practical sciences. If the science is pursued for the sake of some work or product, it is practical; if it is pursued for its own sake, it is speculative: "In scientiis autem quaedam sunt practicae, et quaedam sunt speculative; et hae differunt quia practicae sunt propter opus, speculativae autem propter seipsas."¹ The subject matter of the practical sciences is things that we can make by our own efforts; that of the speculative, things that we do not make but discover:

Cum ergo oporteat materiam fini esse proportionatam, oportet practicarum scientiarum materiam esse res illas quae a nostro opere fieri possunt, ut sic earum cognitio in operationem quasi in finem ordinari possit. Speculativarum vero scientiarum materiam oportet esse res quae a nostro opere non fiunt; unde earum consideratio in operationem ordinari non potest sicut in finem. Et secundum harum rerum distinctionem oportet scientias speculativas distingui.²

As is apparent, the distinction of both the sciences and their subject matter is based on a distinction of ends: that is practical which has as its purpose operation, and speculative or theoretical which has as its purpose only the knowledge of truth:

¹ *In I De An.*, 1, n. 3 (ed. Pirota).

² *In De Trin.*, 5, 1 c.

Cum enim philosophia vel artes per theoreticum et practicum distinguuntur, oportet accipere distinctionem earum *ex fine*, ut practicum dicatur id quod ordinatur *ad operationem*, theoreticum vero quod ordinatur *ad solam cognitionem veritatis*.³

In both cases strict scientific knowledge (*scientia* or *scire*) is sought; but in the one case the knowledge is sought for its own sake and nothing more; in the other it is sought for the sake of something to which it leads, whether that be an action or a product: "Scientiæ speculativæ sunt nobilissimæ inter omnes alias scientias, quia in eis quaeritur scire propter seipsum, in scientiis autem operativis quaeritur scire propter opus."⁴ Although the knowledge sought in the practical or operative sciences is an immediate end, nevertheless it is subordinated to a further goal, which is viewed as the effective end of the science. For this reason it is sometimes said that the end of such a science is not knowledge but that to which the knowledge is directed:

Omnes autem scientiæ et artes et potentiae practicae sunt propter aliud diligibiles; nam in eis finis non est scire sed operari. Scientiæ autem speculativæ sunt propter seipsas diligibiles; nam finis earum est ipsum scire.⁵

The speculative sciences are divided into natural science, mathematics, and metaphysics. Natural science is also called physics; and metaphysics, when the terminology is imposed by a text of Aristotle being commented upon or referred to, also receives the names of first philosophy or theology:

Tres sunt partes philosophiæ theoreticae, scilicet mathematica, physica et theologia, quae est philosophia prima.⁶

Tria sunt genera speculativarum scientiarum: scilicet naturalis quae considerat ea mobilia, quae in sui definitione materiam sensibilem recipiunt; et mathematica

³ *Ibid.*, ad 4.

⁴ *In XI Met.*, 7, n. 2265.

⁵ *C.G.*, III, 25, Item²; cf. *In I Met.*, 1, nn. 32 & 33; *In II Met.*, 2, nn. 289-291; *In VI Met.*, 1, n. 1145, & n. 1155: Omnis scientia est aut activa aut factiva aut theoretica; *In XI Met.*, 7, nn. 2248 & 2255; *S.T.*, I, 1, 4; 14, 16. This distinction of practical and speculative sciences is based on the distinction of practical and speculative intellect, which St. Thomas takes from Aristotle: *In III De An.*, 15, n. 820: Intellectus qui movet est intellectus qui ratiocinatur propter aliquid, non propter ratiocinari tantum; et hic est intellectus practicus, qui differt a speculativo secundum finem. Nam speculativus speculatur veritatem, non propter aliquid aliud, sed propter seipsum tantum; practicus autem speculatur veritatem propter operationem; cf. *In De Trin.*, 5, 1 c: theoreticus sive speculativus intellectus, in hoc proprie ab operativo sive practico distinguitur, quod speculativus habet pro fine veritatem quam considerat, practicus autem veritatem considerat ordinat in operationem tamquam finem; see also *De Ver.*, 3, 3; *In I Eth.*, 1, n. 8; *C.G.*, III, 75, Adhuc²; *In I Post. Anal.*, 41, n. 7.

⁶ *In VI Met.*, 1, n. 1166; cf. n. 1145. The fullest discussion of this division, with its foundation in different modes of abstraction from matter, is found in *In De Trin.*, 5, 1 and the following three articles.

quae considerat immobilia, quae non recipiunt materiam in sui definitione, licet habeant esse in materia sensibili; et theologia quae est circa entia penitus separata.⁷

This classification of speculative sciences is said to be complete. In the long discussion of the matter found in the fifth question on the *De Trinitate* of Boethius, after enumerating the kinds of dependence of speculable objects upon matter as (1) "secundum esse et intellectum," (2) "secundum esse, non tamen secundum intellectum," and (3) "nec secundum esse," St. Thomas adds that there cannot be a fourth:

Non est autem possibile quod sint aliae res quae secundum intellectum dependant a materia, et non secundum esse: quia intellectus, quantum est de se immaterialis est: et ideo non est quartum genus philosophiae praeter praedicta.⁸

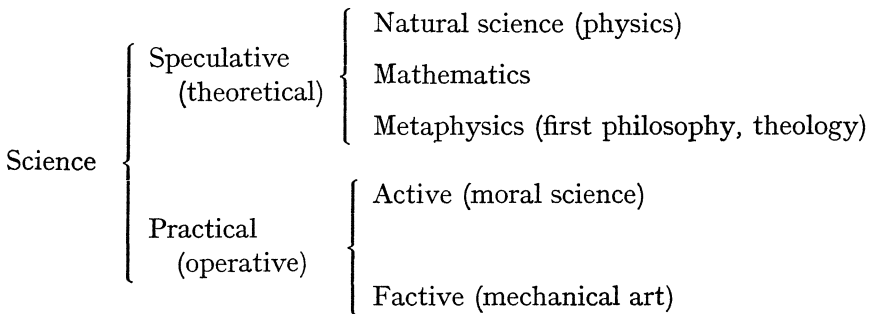
The classification given is therefore exhaustive.

In the practical sciences a division is made giving active and factive sciences or moral philosophy and art: "Omnis enim scientia operativa vel est activa vel factiva."⁹ This division is based on the distinction of doing and making that was discussed above:

Est ergo scientia activa ex qua instruimur ad recte exercendum operationes, quae actiones dicuntur; sicut est scientia moralis. Factiva autem scientia est per quam recte aliquid facimus; sicut ars fabrilis et alia huiusmodi.¹⁰

The active sciences are also called moral, and the factive, mechanical arts: "Scientiae activae dicuntur scientiae morales... Scientiae factivae dicuntur artes mechanicae."¹¹

The common classification of sciences just seen in the works of St. Thomas Aquinas can accordingly be schematized as follows:



⁷ *In XI Met.*, 7, n. 2264; cf. n. 2267.

⁸ Art. 1 c (ad fin.).

⁹ *In XI Met.*, 7, n. 2252.

¹⁰ *Ibid.*, n. 2253.

¹¹ *In VI Met.*, 1, n. 1152.

PLACE OF LOGIC IN THIS CLASSIFICATION

When we try to fit logic into this scheme of the sciences, we meet a number of difficulties. If it is a practical science, it must be either factive or active. Its relation to factive science has already been considered under the discussion of logic as an art; for a factive science is a mechanical art. It is essential to the notion of a mechanical art that it have an external, material product. Though logic can be said to have products in a certain transferred sense, these products are certainly not external and material. We can accordingly apply to logic the argument which St. Thomas uses to show that natural science is not factive: factive sciences have their principle in the maker, not in the thing made; and this principle is three-fold: (1) the intellect, which contrives the plan; (2) the plan (or art) itself; and (3) the power which carries out and executes the plan:

Quod autem ... non sit factiva patet; quia principium scientiarum factivarum est in faciente, non in facto, quod est artificiatum. ... Hoc autem principium rerum artificialium, quod est in faciente, est primo intellectus, qui primo artem adinvenit; et secundo ars, quae est habitus intellectivus; et tertio aliqua potentia exsequens, sicut potentia motiva, per quam artifex exsequitur conceptionem artis.¹²

Even though logic does have a *factum* or *artificiatum* in the broad sense, and can be called an art by extension, still, having no executing power other than the intellect and no distinct external product executed, logic cannot properly be classed as a factive science. It is, indeed, explicitly excluded; for "factive arts" are contrasted with "sciences which do not have an operation passing over into external matter, of which examples are logical and moral sciences."¹³ We cannot, therefore, put logic among the factive sciences.

Is it, then, active? There are reasons for thinking so, since logic is concerned with operations, and should therefore be practical; but the operations are not properly productive, and therefore not factive. It would, accordingly, seem to belong with the active sciences. This conclusion receives some apparent confirmation from the definitions which we find of action and acting as an immanent operation; e.g.: "Agere proprie dicitur secundum operationem quae permanet in agente et non transit in materiam exteriorem; sicut intelligere et sentire et huius-

¹² *Ibid.*, n. 1153.

¹³ *In IX Met.*, 2, n. 1788: omnes artes factivae ... et omnes scientiae, quae scilicet non habent operationem in exteriorem materiam transeuntem, sicut sunt scientiae morales et logicae.

modi.”¹⁴ The examples given in the explanations of immanent action practically always include *intelligere*, an operation of reason with which logic is concerned. And the conclusion which is drawn in this context would seem to range under active science all the sciences dealing with the “actions” enumerated: “Est ergo scientia activa, ex qua instrumur ad recte exercendum operationes, quae actiones dicuntur; sicut est scientia moralis.”¹⁵ Logic would seem to be included as well as ethics.

There are, however, reasons against such a conclusion. In the same context in which *intelligere* is cited as an example of “action,” active science is equated to *moral* science: “Unde scientiae activae dicuntur scientiae morales.”¹⁶ This alone would lead one to suspect that logic cannot be placed here. A closer examination of the meaning of active science bears this out. The principle of action is choice:

Et per eandem rationem patet quod non est activa. Nam principium activarum scientiarum est in agente, non in ipsis actionibus, sive moribus. Hoc autem principium est ... electio. Idem enim est agibile et eligibile. Sic ergo patet quod ... non sit activa.¹⁷

But choice is an act of the will: “Electio substantialiter non est actus rationis sed voluntatis: perficitur enim electio in motu quodam animae ad bonum quod eligitur. Unde manifeste actus est appetitivae potentiae.”¹⁸ It is clear, then, that active science is concerned with the will.¹⁹ Logic, however, is not concerned with acts of the will but with those of reason. It does not deal with “action” in this sense.

If we re-examine the meaning of the term “action” as applied to active science, we find that it does not apply to every immanent operation. If it did, there would be no distinction of speculative sciences from active. “Action” is immanent in the sense that it does not have an *operatum*: “Quarumdam activarum potentialium ultimus finis est solus usus potentiae, et non aliquid operatum per actionem potentiae.”²⁰ Yet it is directed to something beyond the mere exercise of the power. Its activity is exercised for the sake of an *opus*: “Practicae [scientiae] sunt propter *opus*, speculativae autem propter seipsas.”²¹ And this *opus* is extrinsic to the faculty: “Duplex est opus: scilicet exterius et interius.

¹⁴ *In XI Met.*, 7, n. 2254; cf. *In VI Met.*, 1, n. 1152: Nam agere est secundum operationem manentem in ipso agente, sicut est eligere, intelligere et huiusmodi; *In VI Eth.*, 3, n. 1151: Nam actio manens in ipso agente operatio dicitur, ut videre, intelligere et velle.

¹⁵ *In XI Met.*, 7, n. 2253.

¹⁶ *In VI Met.*, 1, n. 1152.

¹⁷ *Ibid.*, n. 1154.

¹⁸ *S.T.*, I-II, 13, 1 c.

¹⁹ *In I Eth.*, 3, n. 35: Scientia moralis est de actibus voluntariis.

²⁰ *In IX Met.*, 8, n. 1862.

²¹ *In I De An.*, 1, n. 3.

Practicum ergo, vel operativum, quod dicitur contra speculativum, sumitur ab opere exteriori, ad quod non habet ordinationem habitus speculativus."²²

Though the term *opus* can have various meanings ranging from that of the product made by mechanical arts to that of a mere operation in itself,²³ the operation that applies to active science is not simply that of contemplating the truth; for active science is opposed to speculative. In speculative science there is no question of any operation except that of the intellect. In active science, though the operation of the intellect is involved since there is question of science, this operation is directed to other operations as its end:

Duplex est cognitio, una speculativa, cuius finis est veritas ...; alia cuius finis est operatio, quae est causa et regula eorum quae per hominem fiunt.²⁴

Actus intellectus practici non quaeritur propter seipsum sed propter actionem. Ipsae autem actiones ordinantur ad aliquem finem.²⁵

These operations or "actions" to which active science is directed are those of the inferior powers of man: "[Est] alia [vita] quae consistit in operatione intellectus et rationis secundum quod ordinat et regit et imperat inferioribus partibus, et haec dicitur *activa* vita."²⁶

It is a question of the use of the other powers of man; and this involves the use of the external things; but the use of things, whether external or a part of man himself, depends upon the will:

Usus rei alicuius importat applicationem rei illius ad aliquam operationem; unde et operatio ad quam applicamus rem aliquam, dicitur usus eius. ... Ad operationem autem applicamus et principia interiora agendi, scilicet ipsas potentias animae vel membra corporis, ut intellectum ad intelligendum et oculum ad videndum; et res exteriores, sicut baculum ad percutiendum. Sed manifestum est quod res exteriores non applicamus ad aliquam operationem nisi per principia intrinseca, quae sunt potentiae animae, aut habitus potentiarum, aut organa, quae sunt corporis membra. ... Voluntas [autem] est quae movet potentias animae ad suos actus; et hoc est applicare eas ad operationem. Unde manifestum est quod uti primo et principaliter est voluntatis, tamquam primi moventis, rationis autem tamquam dirigentis; sed aliarum potentiarum tamquam exsequentium.²⁷

²² *S.T.*, I-II, 57, 1 ad 1.

²³ As above in the distinction between acting and making, "action" and "faction" (chap. I, p. 4, and chap. II, p. 18), and as in the last-quoted passage.

²⁴ *In III Sent.*, 35, 1, 3 sol. 2.

²⁵ *S.T.*, I-II, 3, 5 c; cf. *ibid.*, ad 2: Intellectus practicus habet bonum quod est extra ipsum, sed intellectus speculativus habet bonum in seipso, scilicet contemplationem veritatis.

²⁶ *In III Sent.*, 35, 1, 1 sol. In this passage the contemplative and the active life are contrasted. The difference is the same as that between speculative and active science. Cf. *ibid.*, a. 3 sol. 2: Quae autem ab homine fiunt, quaedam ... transeunt ... in moderationem propriarum passionum et operationum.

²⁷ *S.T.*, I-II, 16, 1 c.

As is explained in the continuation of this passage and in the following article, what is used is like an instrument of the one using it. To use something, therefore, implies that the user has it in his power. And when we speak of the actions of man in the strict sense, we consider his use of things and of his own powers precisely inasmuch as he is the master of them:

*Ageve proprie dicitur operatio quae est a voluntate imperata, in ipso operante consistens.*²⁸

Duo opera dicuntur esse propria homini: scilicet cognitio veritatis et actus: inquantum scilicet homo agit tamquam dominus proprii actus.²⁹

Thus "action" in its proper sense is human action precisely as it is distinctively human. Since man is characterized by reason and rational appetite, it is as proceeding from reason and will that his actions are distinctively human:

Unde illae solae actiones vocantur proprie humanae, quarum homo est dominus. Est autem homo dominus suorum actuum per rationem et voluntatem. ... Illae ergo actiones proprie humanae dicuntur, quae ex voluntate deliberata procedunt.³⁰

From this it is apparent that "action" in the special sense in which the term is taken in active science does not apply to all activity of every kind or to immanent operations in every sense; it is restricted to the operation of man in so far as it is under the domination of the will and directed to some end distinct from the mere contemplation of truth. Active science which treats of it is identified with moral philosophy. Since logic is not concerned with the will, but only with the operations of the intellect in the quest of truth, it must accordingly be distinguished from active science. And it is, in fact, explicitly so distinguished; for the order with which rational philosophy deals is distinguished from that of moral philosophy: "Ordo quem ratio considerando facit in proprio actu pertinet ad rationalem philosophiam... Ordo autem actionum voluntariarum pertinet ad considerationem moralis philosophiae."³¹ Logic cannot, therefore, be classed as an active science any more than as factive.

Because it is neither a factive nor an active science, it would seem that we must conclude in regard to logic, as St. Thomas does in regard to natural science, that it must then be speculative: "Si igitur omnis

²⁸ *In III Sent.*, 35, 1, 1 sol.

²⁹ *In VI Eth.*, 2, n. 1126.

³⁰ *S.T.*, I-II, 1, 1 c; cf. *In I Eth.*, 1, n. 3: Dico autem operationes humanas quae procedunt a voluntate hominis secundum ordinem rationis.

³¹ *In I Eth.*, 1, n. 2.

scientia est aut active, aut factiva, aut theorica, sequitur quod... theorica sit.”³²

But a closer view of the speculative sciences presents difficulties against ranging logic among them. With which of the speculative sciences are we to identify it; physics, mathematics, or metaphysics?

Physics treats of natural, mobile substances: “Scientia naturalis... est ... circa substantiam naturalem, quae habet in se principium motus et quietis.”³³ Logic is not concerned with material substances but with acts of reason; it does not find its objects ready-made in nature, but makes them: they are such mental products as syllogisms and propositions.³⁴ These are clearly not mobile, sensible beings.

Logic agrees with mathematics inasmuch as it has immobile and immaterial objects; but it differs in that the objects of mathematics have their real existence in sensible matter;³⁵ whereas those of logic have their being only in the mind. Mathematics, furthermore, deals with quantity and its properties.³⁶ Because logic is not concerned with these, it cannot be identified with mathematics or made a part of it.

If logic is to be a speculative science, it apparently must, then, be metaphysics or a branch of it. The likeness and difference of logic and metaphysics will have to be studied in greater detail a little further on. For this reason only a few brief indications will be needed here. The object of metaphysics is immaterial:

Quaedam vero sunt speculabilia quae non dependent a materia secundum esse, quia sine materia esse possunt, sive numquam sint in materia, sicut Deus et angelus, sive in quibusdam sint in materia et in quibusdam non, ut substantia, qualitas, ens, potentia, actus, unum et multa, et huiusmodi. De quibus omnia est theologia, idest divina scientia, quia praecipuum in ea cognitorum est Deus; quae alio nomine dicitur metaphysica, idest transphysica, quia post physicam discenda occurrit nobis, quibus ex sensibilibus oportet in insensibilia devenire.³⁷

This much logic has in common with metaphysics; for it too deals with immaterial objects, such as the acts of reason, propositions, and syllogisms. There are other respects in which it differs, however. Metaphysics treats of being as such and its proper modes: “Est quaedam

³² *In VI Met.*, 1, n. 1155; cf. *In XI Met.*, 7, n. 2255.

³³ *In VI Met.*, 1, n. 1152; cf. *In XI Met.*, 7, n. 2264: considerat ea mobilia quae in sui definitione materiam sensibilem recipiunt.

³⁴ *In De Trin.*, 5, 1 ad 3; *S.T.*, II-II, 47, 2 ad 3.

³⁵ *In XI Met.*, 7, n. 2264: considerat immobilia quae non recipiunt materiam in sui definitione, licet habeant esse in materia sensibili.

³⁶ *In De Trin.*, 5, 3 c (med.--ed. Decker, n. 2, fin.): considerat quantitates et ea quae quantitates consequuntur, ut figuras et huiusmodi; *In XI Met.*, 3, n. 2202: Speculatur enim mathematica auferens a sua consideratione omnia sensibilia ..., et relinquit in sua consideratione solummodo quantum et continuum.

³⁷ *In De Trin.*, 5, 1 c.

scientia, quae speculatur ens secundum quod ens, sicut subiectum, et speculatur 'ea quae insunt enti per se,' idest entis per se accidentia."³⁸ But logic is not concerned with substances, with accidents really existing in real substances, with the distinction of act and potency, with the one and the many, or with being taken without qualification, but only with acts of reason and the special entities that arise from those acts. A further sign that St. Thomas does not identify logic with metaphysics is the order which he assigns for teaching these sciences: logic is to be taught first, and metaphysics last:

Erit ergo congruus ordo addiscendi, ut primo quidem pueri logicalibus instruantur. ... Quinto autem in sapientialibus.³⁹

Metaphysica, quae circa divina versatur, inter philosophiae partes ultima remanet addiscenda.⁴⁰

And finally, logic is distinguished from metaphysics on the basis of its end or purpose; metaphysics is an end in itself; logic is not: "Scientiae logicales ... non proper se quaeruntur. ... Sapientia ... quaeritur ... propter seipsam."⁴¹

The conclusion must be that logic is not metaphysics. But neither is it natural science or mathematics. And since the division of speculative sciences into natural science, mathematics, and metaphysics is exhaustive, there is no room left for logic in the speculative sciences. We accordingly find it expressly distinguished from speculative sciences:

Plures artes sunt repertae quantum ad utilitatem, quarum ... quaedam ... ad introductionem in aliis scientiis, sicut scientiae logicales; ... [aliae] scientiae non sunt ad utilitatem inventae, sed propter ipsum scire, cuiusmodi sunt scientiae speculativae.⁴²

Inasmuch as logic cannot be fitted into either the practical sciences or the speculative, there seems to be no place for logic in the classification of sciences which Aquinas commonly employs.

SPECIAL PLACE FOR LOGIC

We find, however, a slightly different classification which does make a place for logic. This occurs in the introduction to the *Commentary on the Ethics*, to which reference has already been made several times. Four

³⁸ *In IV Met.*, 1, n. 529.

³⁹ *In VI Eth.*, 7, n. 1211.

⁴⁰ *C.G.*, I, 4; cf. *In I Met.*, 2, n. 46: Ista scientia, quae sapientia dicitur, quamvis sit prima in dignitate, est tamen ultima in addiscendo.

⁴¹ *In I Met.*, 3, n. 57.

⁴² *Ibid.*, 1, n. 32.

different orders are distinguished according to the relation which things that can be made the object of science bear to reason; and the four orders are assigned to four different sciences:

Ordo autem quadrupliciter ad rationem comparatur. Est enim quidam ordo quem ratio non facit sed solum considerat, sicut est ordo rerum naturalium. Alius autem est ordo quem ratio considerando facit in proprio actu, puta cum ordinat conceptus suos adinvicem, et signa conceptuum, quia sunt voces significativae. Tertius autem est ordo quem ratio considerando facit in operationibus voluntatis. Quartus autem est ordo quam ratio considerando facit in exterioribus rebus, quarum ipsa est causa, sicut in arca et domo.

Et quia consideratio rationis per habitum perficitur, secundum hos diversos ordines quos proprie ratio considerat, sunt diversae scientiae. Nam *ad philosophiam naturalem* pertinet considerare ordinem rerum quem ratio humana considerat sed non facit; ita quod sub naturali philosophia comprehendamus et metaphysicam. Ordo autem quem ratio considerando facit in proprio actu, pertinet *ad rationalem philosophiam*, cuius est considerare ordinem partium orationis adinvicem, et ordinem principiorum adinvicem et ad conclusiones. Ordo autem actionum voluntariarum pertinet ad considerationem *moralis philosophiae*. Ordo autem quem ratio considerando facit in rebus exterioribus constitutis per rationem humanam, pertinet *ad artes mechanicas*.⁴³

There is a general correspondence of this classification to the one previously seen. *Artes mechanicae* correspond to factive science, and *moralis philosophia* to active science. *Naturalis philosophia* is here taken in a broader sense than the natural science which was listed as one of the divisions of speculative science; it is said to include metaphysics, and its definition as studying the order of things "which reason considers but does not make" corresponds to that of speculative science as a whole. It might for this reason properly be called "real" science; it alone of the four classes of science listed finds its objects already at hand in real being; the others make the objects which they study. Thus speculative science is collectively included in this classification, and the two practical sciences are separately listed; and so the classification previously seen is exhausted. But another class remains over in this new scheme, giving a place apart to logic. In this science reason does not find things ready-made and study them, nor make external things and study their making; it does not study the immanent operations of the will; but it studies its own operations, the operations of reason itself.

Since logic is given a place outside of the practical and speculative sciences of St. Thomas' more frequent classification, its relation to these other sciences must be examined.

We are told, first, that logic is *introductory* to other sciences: "Quaedam [artes repertae sunt] ad introductionem in aliis scientiis, sicut

⁴³ *In I Eth.*, 1, nn. 1 & 2.

scientiae logicales.”⁴⁴ Instruction in other sciences requires previous instruction in logic: “[Quaedam sunt] ad eruditionem necessaria, sicut scientiae logicales, quae non propter se quaeruntur, sed ut introductoriae in alias artes.”⁴⁵ This is because the knowledge of other things depends on knowledge of logic:

In addiscendo incipimus ab eo quod est magis facile, nisi necessitas aliud requirat. Quandoque enim necessarium est in addiscendo non incipere ab eo quod est facilius, sed ab eo a cuius cognitione sequentium cognitio dependet. Et hac ratione oportet in addiscendo a logica incipere ... quia aliae scientiae ab ipsa dependent.⁴⁶

In the second place, logic is *instrumental* to the other sciences, providing the instruments with which they must work:

Res autem de quibus est logica non quaeruntur ad cognoscendum propter seipsas, sed ut adminiculum quoddam ad alias scientias. Et ideo logica non continetur sub speculativa philosophia quasi principalis pars, sed sicut quoddam reductum ad philosophiam speculativam, prout ministrat speculationi sua instrumenta, scilicet syllogismos et definitiones et alia huiusmodi; quibus in speculativis scientiis indigemus. Unde ... non tam est scientia quam scientiae instrumentum.⁴⁷

As instrumental, logic is subordinated in its finality to the knowledge of things, which is gained by the other sciences (“logica ordinatur ad cognitionem de rebus sumendam”).⁴⁸

Thirdly, logic is *methodological*, teaching the method to be followed in the other sciences: “Docet modum procedendi in omnibus scientiis”;⁴⁹ “Erit ergo congruus ordo addiscendi, ut primo quidem pueri logicalibus instruantur, quia logica docet modum totius philosophiae.”⁵⁰ It must be taught first because we must know the method of proceeding before we proceed, and we cannot learn both the method and the matter of a science at the same time:

Oportet quod homo instruat per quem modum in singulis scientiis sint recipienda ea quae dicuntur. Et quia non facile est quod homo simul duo capiat, sed dum ad duo attendit, neutrum capere potest; absurdum est quod homo simul quaerat scientiam et modum qui convenit scientiae. Et propter hoc debet prius addiscere logicam quam alias scientias, quia logica tradit communem modum procedendi in omnibus aliis scientiis.⁵¹

We find, then, that we have an addition to our general classification.

⁴⁴ *In I Met.*, 1, n. 32; cf. n. 33.

⁴⁵ *Ibid.*, 3, n. 57.

⁴⁶ *In De Trin.*, 6, 1, sol. 2 ad 3.

⁴⁷ *In De Trin.*, 5, 1 ad 2.

⁴⁸ *In I Perih.*, 2, n. 3.

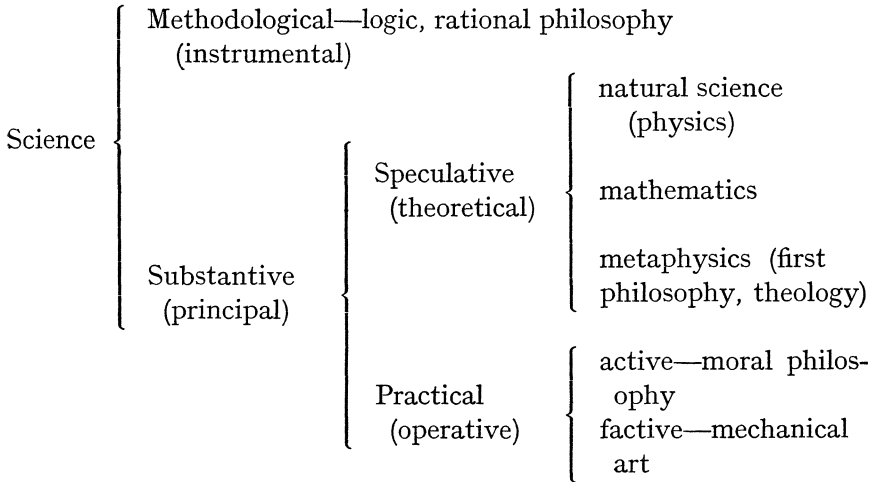
⁴⁹ *In De Trin.*, 6, 1, sol. 2 ad 3.

⁵⁰ *In VI Eth.*, 7, n. 1211.

⁵¹ *In II Met.*, 5, n. 335.

All the rest of the sciences, speculative and practical, have this in common, that they are about things, not about science itself, its methods, or its instruments, as is logic: "Sunt autem scientiae de rebus, non autem de speciebus vel de intentionibus intelligibilibus, nisi sola rationalis scientia."⁵³ Interpreting St. Thomas, therefore, we might call the other sciences *substantive* or *principal* and logic *methodological* or *instrumental*.

The addition of logic from the classification of sciences given in the *Ethics* would modify as follows the scheme of St. Thomas' usual classification:



Although logic is distinguished from all the other sciences, nevertheless this is not a hard and fast division. As has been seen, logic has a close affinity to factive science and a certain likeness to active as well. Besides this it has a special relation to speculative science. Though it is not to be classed directly as speculative, yet, because it supplies the instruments for speculation, it is so to be classed reductively: "Logica non continetur sub speculativa philosophia quasi principalis pars, sed quasi quoddam reductum ad philosophiam speculativam, prout ministrat speculationi sua instrumenta."⁵⁴ This is similar to what is said of operative habits: an art that provides instruments for another art is subalternated to that other:

⁵² *In De Trin.*, 6, 1, sol. 2 ad 3.

⁵³ *In III De An.*, 8, n. 718; cf. *C.G.* IV, 11, Dico autem: Unde et aliae scientiae sunt de rebus, et aliae de intentionibus intellectis.

⁵⁴ *In De Trin.*, 5, 1 ad 2.

Contingit autem unum habitum operativum ... sub alio esse. Sicut ars quae facit frena est sub arte equitandi. ... Et eadem ratio est de aliis artibus quae faciunt instrumenta necessaria ad equitandum. ... Et per eundem modum [continentur] aliae artes sub aliis.⁵⁵

Logic is, in fact, called a speculative art:

Cum vero dicitur: "Artium quaedam speculativae, quaedam practicae," habetur respectus ad aliquos speciales fines illarum artium, sicut si dicamus agriculturam esse artem practicam, dialecticam vero theoreticam.⁵⁶

Its operations are attributed to speculative reason: "Ratio speculativa quaedam facit, puta syllogismum, propositionem et alia huiusmodi, in quibus proceditur secundum certas et determinatas vias."⁵⁷ It is referred to the speculative order and classed as a speculative habit:

In ipsis speculabilibus est aliquid per modum cuiusdam operis, puta constructio syllogismi aut orationis congruae, aut opus numerandi vel mensurandi. Et ideo quicumque ad huiusmodi opera rationis habitus speculativi ordinantur, dicuntur per quamdam similitudinem artes, scilicet liberales, ad differentiam illarum artium quae ordinantur ad opera per corpus exercita quae sunt quodammodo serviles, inquantum corpus serviliter subditur animae, et homo secundum animam est liber. Illae vero scientiae quae ad nullum huiusmodi opus ordinantur, simpliciter scientiae dicuntur, non autem artes. Nec oportet, si liberales artes sunt nobiliores, quod magis eis conveniat ratio artis.⁵⁸

Finally, logic is explicitly called a speculative science. For, in reply to a statement that in the case of the speculative sciences inquiry and conclusion belong to the same science ("In scientiis speculativis ad eandem scientiam pertinet inquirere et determinare"), dialectics and demonstrative logic are distinguished; both are said to be rational sciences; and rational science is classed as speculative: "Etiam in scientiis speculativis alia rationalis scientia est dialectica, quae ordinatur ad inquisitionem inventivam, et alia scientia demonstrativa, quae est veritatis demonstrativa."⁵⁹

From these passages it is sufficiently evident that, at least in some sense, St. Thomas considers logic a speculative science. It would accordingly have to be placed among the speculative sciences beside natural philosophy, mathematics, and metaphysics.

It must be remembered, however, that St. Thomas also considers logic an art, and therefore a factive science; and this would make it practical; and also that he opposes it to all other sciences. Are we to

⁵⁵ *In I Eth.*, 1, n. 16.

⁵⁶ *In De Trin.*, 5, 1 ad 4.

⁵⁷ *S.T.*, II-II, 47, 2 ad 3; cf. I-II, 90, 1 ad 2 & *In De Trin.*, 5, 1 ad 3 (quoted p. 6).

⁵⁸ *S.T.*, I-II, 57, 3 ad 3.

⁵⁹ *S.T.*, II-II, 51, 2 ad 3.

conclude, then, that he contradicts himself? That does not necessarily follow.

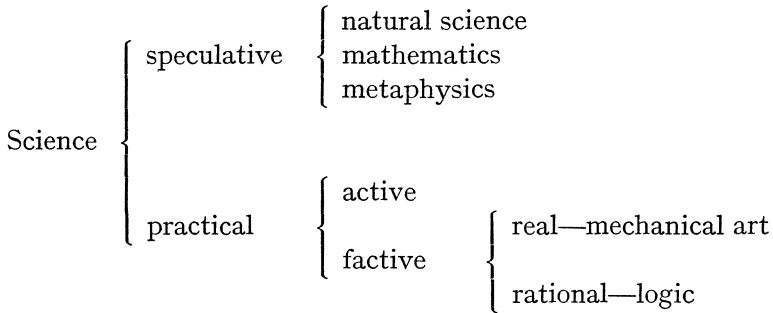
Logic can be considered from several different points of view. It is at the same time different from all other sciences in certain respects, and in other respects similar to several. It is similar in one respect to speculative sciences, and in another, to the practical. In saying that logic belongs to the speculative sciences Aquinas is careful to point out that it is speculative only reductively or in an extended sense and in such a way as to be also a sort of art. Similarly in considering it an art and factive, he says that is not strictly so, but only in a certain sense, by extension. It cannot, therefore, be classed univocally with either the speculative or the practical sciences.

If its differences from all other sciences are regarded, it must be given a place apart, as St. Thomas does in speaking of it as introductory methodological, and instrumental. Practical considerations sometimes direct attention to this point of view, as when the order in which the sciences are to be taught is under discussion.

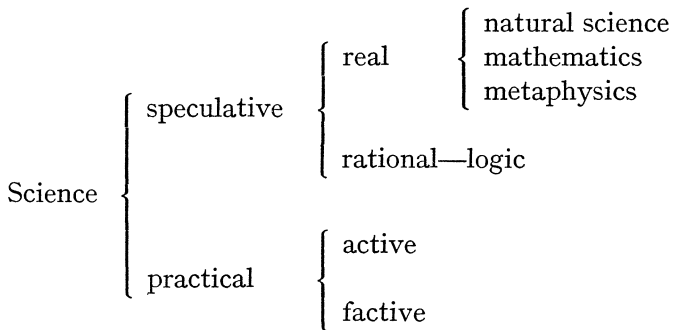
If the differences of logic from other sciences are disregarded and its similarities to them taken into account, it no longer constitutes a distinct class. According to its finality it is both practical and speculative, though of course not in the same respect or in regard to the same end; for it is the end which distinguishes the practical from the speculative. All sciences seek truth; but practical sciences do so in order to guide operations; speculative sciences seek truth for its own sake. Now logic could not have two different ends if both were on the same plane and equally ultimate; but it can if one end is subordinated to the other.⁶⁰

In its immediate finality logic seeks truth about the products of the acts of reason for a practical end, which is to guide reason in the formation of such products. Thus logic is factive; and factive science becomes twofold, one part being *real* and consisting of the mechanical arts, and the other being *rational* and constituted by logic. The scheme of the sciences then appears as follows:

⁶⁰ *De Ver.*, 13, 3 c: *Intentio autem unius non potest ferri ad multa simul, nisi forte illa multa hoc modo sint adinvicem ordinata, ut accipiantur quasi unum; sicut nec alicuius motus vel operationis possunt esse duo termini non adinvicem ordinati; cf. S.T., I-II, 12, 3 c & ad 2; 1, 3 ad 3. The ultimata end in question is not that of man as a whole (beatitude) but of the habit (logic) of a power (the intellect); for these ends are distinct and each ultimate in its own line: S.T., II-II, 23, 7 ad 3: *Scientia et ars de sui ratione important ordinem ad aliquod particulare bonum, non autem ultimum finem humanae vitae.**



The finality of logic does not, however, terminate at the formation of immanent rational products. These are formed with a view to something beyond themselves; the whole purpose in forming them is to attain truth about things; for truth is the end to which the intellect is directed: “Verum nominat id in quod tendit intellectus... Terminus cognitionis... est verum”;⁶¹ “Verum enim est bonum intellectus ad quod naturaliter ordinatur.”⁶² And thus logic, which is immediately concerned with the right order in the operations of the intellect, is ultimately ordained to the knowledge of the truth of things: “Logica ordinatur ad cognitionem de rebus sumendam.”⁶³ Since this is a speculative end, logic is ultimately speculative; and thus within speculative science a division must be made, adding to the real sciences usually included, a new category for the rational. This yields the following scheme:



Because the more remote or principal end is that upon which more proximate and secondary ends depend and by which they are deter-

⁶¹ *S.T.*, I, 16, 1 c.

⁶² *In I Phys.*, 10, n. 5; cf. *In I Perih.*, 3, n. 7; *In I Eth.*, 12, n. 139; *In VI Eth.*, 3, n. 1143.

⁶³ *In I Perig.*, 2, n. 3.

mined,⁶⁴ this classification of logic as speculative, even though only reductively and analogously, would seem to be St. Thomas' most basic solution of the problem.

DIVISIONS OF LOGIC

To clarify the relation of logic to speculative science some help can be found in certain divisions and distinctions which are made concerning logic. Three parts of logic must be distinguished; in the third part some important subdivisions must be made; account must be taken of two different kinds of logic; and the term "logic" as frequently used must be qualified.

Parts of Logic

Logic is divided into three different parts corresponding to the three acts of reason, simple apprehension, judgment, and reasoning:

Sunt autem rationis tres actus: quorum primi duo sunt rationis, secundum quod est intellectus quidam. Una enim actus intellectus est intelligentia indivisibilium sive incomplexorum, secundum quod concipit quid est res. ... Et ad hanc operationem rationis ordinatur doctrina quam tradit Aristoteles in libro *Praedicatorum*.

Secunda vero operatio intellectus est compositio vel divisio intellectus, in qua est iam verum et falsum. Et huic rationis actui deservit doctrina quam tradit Aristoteles in libro *Peri Hermeneias*.

Tertius vero actus rationis est secundum id quod est proprium rationis, scilicet discurrere ab uno in aliud, ut per id quod est notum deveniat in cognitionem ignoti. Et huic actui deserviunt reliqui libri logicae.⁶⁵

The third part, dealing with discursive reasoning, has in turn three parts of its own. The results of reasoning are compared to the works of nature: some necessarily follow upon the natural process and never fail to occur; some occur most of the time; and others are freaks arising from some defect in the principles of operation. Judicative or demonstrative logic (also called *resolutoria*) corresponds to the first kind of natural process; inventive logic or dialectics corresponds to the second; and sophistic (which may be called "illusory" logic), to the third:

⁶⁴ C.G., III, 109, Ad evidentiam: Est ordo ... in causis finalibus, ut scilicet secundarius finis a principali dependeat; cf. *In III Eth.*, 15, n. 550: Unumquodque quod est propter finem determinatur secundum proprium finem, quia ex fine sumitur ratio eorum quae sunt ad finem; *De Ver.*, 15, 2 c: Omne enim cuius esse non est nisi propter finem aliquem, habet modum sibi determinatum ex fine ad quem ordinatur. ... Omnis autem potentia animae, sive activa sive passiva, ordinatur ad actum sicut ad finem ...; unde unaquaeque potentia habet determinatum modum et speciem, secundum quod potest esse conveniens ad talem actum.

⁶⁵ *In I Post Anal.*, 1, n. 4; cf. *In I Perih.*, 1, n. 2.

Pars autem quae primo deservit processui pars *judicativa* dicitur, eo quod iudicium est cum certitudine scientiae. ... Certitudo autem iudicii, quae per resolutionem habetur, est vel ex ipsa forma syllogismi tantum, et ad hoc ordinatur liber *Priorum Analyticorum*, qui est de syllogismo simpliciter, vel etiam cum hoc ex materia, quia sumuntur propositiones per se et necessariae, et ad hoc ordinatur liber *Posteriorum Analyticorum*, qui est de syllogismo demonstrativo.

Secundo autem rationis processui deservit alia pars logicae, quae dicitur *inventiva*. Nam inventio non semper est cum certitudine. ... Per huiusmodi enim processum quandoque quidem, etsi non fiat scientia, fit tamen fides vel opinio; ... et ad hoc ordinatur ... *dialectica*. ... Quandoque vero, non fit complete fides vel opinio sed suspicio quaedam, quia non totaliter declinatur ad unam partem contradictionis, licet magis inclinetur in hanc quam in illam. Et ad hoc ordinatur rhetorica. Quandoque vero sola existimatio declinat in aliquam partem contradictionis propter aliquam repraesentationem. ... Et ad hoc ordinatur poetica. ... Omnia autem haec ad rationalem philosophiam pertinent: inducere enim ex uno in aliud rationis est.

Tertio autem processui rationis deservit pars logicae quae dicitur *sophistica*, de qua agit Aristoteles in libro *Elenchorum*.⁶⁶

In regard to this division it is to be noted that sophistics is not considered important; it is an aberration, like the generation of a monster in the processes of nature. Dialectics and demonstrative logic are much more important and much more frequently referred to.

Dialectics and Demonstrative Logic

Because of the importance of this third part of logic, which deals with reason (in Greek *λόγος*) and from which the whole science takes its name ("logic" or "rational science"), the respective characters of its important branches, dialectics and demonstrative logic, must be understood.

The two are said to be distinct sciences: "Alia rationalis scientia est dialectica, quae ordinatur ad inquisitionem inventivam, et alia scientia demonstrativa, quae est veritatis determinativa."⁶⁷ Some basis for this distinction was already indicated when the logic of reasoning was divided into demonstrative logic, dialectics, and sophistics. It was there pointed out that demonstrative logic yields certitude; dialectics, only opinion. Some difference of purpose was also implied, namely, that dialectics searches for truth or discovers it, whereas demonstrative logic establishes a truth already discovered by reducing it to its necessary rational foundations.

Between the two there is a difference in procedure and in the kind of principles used. Because dialectics searches for particular truth, and therefore does not yet possess it, it cannot start out from particular

⁶⁶ *In I Post. Anal.*, 1, n. 6.

⁶⁷ *S.T.*, II-II, 51, 2 ad 3.

principles but must use those that are general or common. Demonstrative science, on the other hand, since it presupposes the discovery of particular truth and seeks to show the necessity of rational adherence to it, makes use of proper principles, that is, principles based on the particular nature of the matter to be demonstrated:

Pars autem logicae quae demonstrativa est, etsi circa communes intentiones versetur docendo, tamen usus demonstrativae scientiae non est in procedendo ex his communibus intentionibus ad aliquid ostendendum de rebus, quae sunt subiecta aliarum scientiarum. Sed hoc dialectica facit, quia ex communibus intentionibus procedit arguendo dialecticus ad ea quae sunt aliarum scientiarum, sive sint propria sive communia, maxime tamen ad communia. Sicut argumentatur quod odium est in concupiscibili, in qua est amor, ex hoc quod contraria sunt circa idem.

Est ergo dialectica de communibus non solum quia pertractat intentiones communes rationis, quod est commune toti logicae, sed etiam quia circa communia rerum argumentatur. Quaecumque autem scientia argumentatur circa communia rerum, oportet quod argumentetur circa principia communia, quia veritas principiorum communium est manifesta ex cognitione terminorum communium, ut entis et non entis, totius et partis, et similium.⁶⁸

The distinction between the theory and the use of demonstrative science implied in the beginning of this passage will be investigated shortly. The point of interest here is the distinction of the type of principles used.

We are told that dialectics makes use of common principles or intentions and that demonstrative science does not. An illustration of argument from common principles is given. If we wish to prove that hatred is to be placed among the concupiscible passions or emotions of the soul, we could argue from the general principle that contraries belong to the same subject; but love, the contrary of hatred, is one of the concupiscible emotions; therefore hatred also is. Here the "common intention" is that of the contrary. Elsewhere common intentions are illustrated as those of genus, species, the opposite, and so on.⁶⁹ Or the common intention will be the mode of predication in general; while the "proper" intention will be essential (*per se*) predication:

Analytica, idest demonstrativa scientia, quae resolvendo ad principia per se nota *iudicativa* dicitur, est pars logicae quae etiam *dialecticam* sub se continet. Ad logicam autem communiter pertinet considerare praedicationem universaliter, secundum quod continet sub se praedicationem quae est *per se*, et quae non est per se. Sed demonstrativae scientiae propria est praedicatione per se.⁷⁰

In dialectical reasoning the middle term is taken from outside the subject and its definition; in demonstration it is proper to the subject

⁶⁸ *In I Post. Anal.*, 20, n. 5.

⁶⁹ *In De Trin.*, 6, 1, sol. 1; *In IV Met.*, 4, n. 574.

⁷⁰ *In I Post. Anal.*, 35, n. 2.

and the particular science using the demonstration: "Non autem in demonstrationibus accipitur medium assumendo extrinsecus; hoc enim esset *extraneum* medium, et non *proprium*, quod contingit in litigiosis et dialecticis syllogismis."⁷¹

In brief, dialectics, being inquisitive, proceeds from general and common principles; demonstrative logic, being judicative, proceeds from proper principles: "Dialectica, quae est inquisitiva, procedit ex communibus [principiis]; demonstrativa autem, quae est iudicativa, procedit ex propriis."⁷²

The reason why dialectics does not use proper principles is precisely that dialectics is an inquiry, and inquiry has as its aim the discovery of proper principles; when these are discovered, we no longer inquire, but already have demonstration: "Iudicium de unaquaque re fit per propria principia eius. Inquisitio autem nondum est per propria principia, quia his habitis non esset opus inquisitione, sed iam esset res inventa."⁷³ For the very reason that a dialectical discussion is an essay and a search, it must begin from principles outside the subject it is investigating: "Et ideo dicitur quod dialectica est tentativa quia tentare proprium est ex principiis extraneis procedere."⁷⁴ In both purpose and principles, therefore, dialectics differs from demonstrative science.

The difference of purpose leads to a difference of procedure. The dialectical investigator, because he is inquiring, considers both sides of a question, the pro and the con, the affirmative and the negative statement. The one who wishes to demonstrate, however, because he has already discovered the truth, proposes only one side of a contradiction as true and certain and draws a conclusion from that:

Dialecticus enim non procedit ex aliquibus principiis demonstrativis, neque assumit alteram partem contradictionis tantum, sed se habet ad utrumque (contingit enim utramque quandoque vel probabilem esse vel ex probabilibus ostendi, quae accipit dialecticus). Et propter hoc interrogat. Demonstrator autem non interrogat, quia non se habet ad opposita.⁸⁵

Dialecticus here means, of course, the one who makes use of dialectics,

⁷¹ *Ibid.*, n. 10.

⁷² *S.T.*, II-II, 51, 4 ad 2; cf. also what follows on the distinction of the doctrine and the use of logic. See also *In De Trin.*, 6, 1, sol. 1.

⁷³ *S.T.*, I-II, 57, 6 ad 3.

⁷⁴ *In IV Met.*, 4, n. 574.

⁷⁵ *In I Post. Anal.*, 20, n. 6; cf. *S.T.*, III, 9, 3 ad 2: opinio ex syllogismo dialectico causata est via ad scientiam, quae per demonstrationem acquiritur; qua tamen acquisita, potest remanere cognitio quae est per syllogismum dialecticum, quasi consequens scientiam demonstrativam, quae est per causam; quia ille qui cognoscit causam ex hoc etiam magis potest cognoscere signa probabilia, ex quibus procedit dialecticus syllogismus.—On this section see Lachance, "S. Thomas dans l'histoire de la logique," *Etudes d'histoire litt. et doct. du XIIIe s.*, I, 80-88.

just as it may mean the one who studies the theory of dialectics; but *demonstrator* means only the one who makes use of and applies demonstrative logic; it does not mean the logician, because the use of demonstrative logic does not belong to logic, but only the theory, as will presently be made clear.

Formal and Material Consideration of Reasoning

While explaining demonstrative logic in the passage presently being analyzed, St. Thomas makes another division in the logic of reasoning. It is a distinction between the *formal* and the *material* treatment of the syllogism. Since the certitude of the conclusion depends both upon the *form* or relation of premises of the syllogism and upon the *matter* or particular nature of the premises, reasoning can be considered from each of these points of view:

Certitudo autem iudicii, quae per resolutionem habetur, est vel ex ipsa *forma* syllogismi tantum, et ad hoc ordinatur liber *Priorum Analyticorum*, qui est de syllogismo simpliciter; vel etiam cum hoc ex materia, quia sumuntur propositiones per se et necessariae, et ad hoc ordinatur liber *Posteriorum Analyticorum*, qui est de syllogismo demonstrativo.⁷⁶

It is to be noted that this division is given only within the discussion of demonstrative logic or analytics and in regard to demonstration (“quae per resolutionem habetur”). Textually it is not extended to the whole of the third part of logic. It might be argued that this is done implicitly since dialectics is said to use the syllogism and to reason from premises of a certain kind (“nam syllogismus dialecticus ex probabilibus est”). From the nature of things at least, the division of material and formal would seem to be applicable to dialectics and sophistics as well as to analytics; for all of these forms of reasoning make use of the syllogism though they apply it to different kinds of principles and in different manners. Only analytics is concerned with the demonstrative syllogism, but dialectical and sophistical reasoning make use of the syllogism in general, and are necessarily interested in it both from the point of view of the form and from that of the matter. But such an extension of this division has only a very weak textual justification here. No justification at all is found in this text for its extension to the first two parts of logic dealing with simple apprehension and judgment. And nowhere else in the writings of St. Thomas, it seems, is such an application of “material and formal logic” justified.⁷⁷

⁷⁶ *In I Post. Anal.*, 1, n. 6.

⁷⁷ The question of “formal” logic will be discussed more fully in the last section of the following chapter.

Pure and Applied Logic

Of more importance in the logic of Aquinas is the distinction between the theory and the use of logic, to which allusion has already been made i.e., between *logica docens* and *logica utens*, or, as these terms may be expressed in English, pure and applied logic. In the course of a passage distinguishing the ways in which a scientific mental process is called "rational" Aquinas says:

Uno modo ... dicitur aliquis processus esse rationabilis quando aliquis utitur in aliqua scientia propositionibus quae traduntur in logica, ... prout est *docens*. ...

Alio modo dicitur processus rationalis ex termino in quo sistitur procedendo. Ultimus enim terminus ... est intellectus principiorum Quandoque autem inquisitio rationis non potest usque ad praedictum terminum perducere, sed sistitur in ipsa inquisitione. ... Et hic est alius modus quo logica utitur in scientiis demonstrativis, non quidem ut est *docens*, sed ut est *utens*.⁷⁸

The same distinction, in another passage, is applied to two parts of logic, dialectics and sophistics:

Dialectica enim potest considerari secundum quod est *docens* et secundum quod est *utens*. Secundum quod est *docens*, habet considerationem de istis intentionibus, instituens modum quo per eas procedi possit ad conclusiones in singulis scientiis probabiliter ostendendas. ... Utens vero est secundum quod modo adiuncto utitur ad concludendum aliquid probabiliter in singulis scientiis. ... Et similiter est de sophistica.⁷⁹

Pure or theoretical logic studies logical intentions and the relations in which they stand to each other; applied logic makes use of the principles of theoretical logic in actually conducting mental operations.

Only pure logic (*logica docens*) is a science, and therefore only this part of logic is speculative. Applied logic falls short of the requirements of science and is more properly an art. In speaking of dialectics St. Thomas says that it is a science in so far as it teaches the method of proceeding to probable conclusions: "et hoc demonstrative facit, et secundum hoc est scientia." But the use of the science of dialectics, proceeding as it does from probable, common and extraneous principles and leading only to opinion, cannot be a science: "et sic recedit a modo scientiae."⁸⁰ In spite of the fact that it is not a science, however, applied dialectics and the use of the dialectical procedure still belong to dialectics. The same holds true of sophistics. But in the case of demonstrative logic, only the doctrine of demonstration belongs to analytics. This, of course, is a science. The use of this doctrine, however, does not belong

⁷⁸ *In De Trin.*, 6, 1, sol. 1.

⁷⁹ *In IV Met.*, 4, n. 576.

⁸⁰ *Ibid.*

to analytics or to logic at all, but to the various particular sciences which makes use of demonstration concerning their own subject matter.

Sed in parte logicae quae dicitur demonstrativa, solum doctrina pertinet ad logicam, usus vero ad philosophiam et ad alias particulares scientias quae sunt de rebus naturae. ... Et sic apparet quod quaedam partes habent ipsam scientiam et usum sicut dialectica tentativa et sophistica; quaedam autem doctrinam et non usum, sicut demonstrativa.⁸¹

As a consequence there is a single dialectic, but there are many demonstrative sciences: "Unde et in speculativis una est dialectica inquisitiva de omnibus; scientiae autem demonstrativae, quae sunt iudicativae, sunt diversae de diversis."⁸²

From this it follows that, when logic is called a science and said to be quasi-speculative, this applies to the whole of *logica docens*: it does not apply to *logica utens*. The application of logical theory pertains to only two parts of logic, dialectics and sophistics; and in neither of them is it a science. It more nearly verifies the notion of art.

It should not be thought singular that logic considered as an art should have a speculative counterpart; for speculative science may be had of even strictly factive objects like houses if they are studied, not with a view to their making, but for simple knowledge of them:

Quando vero nullo modo est ad actum ordinabilis cognitio, tunc est semper speculativa; quod etiam dupliciter contingit. Uno modo quando cognitio est de rebus illis quae non sunt natae produci per scientiam cognoscentis, sicut nos cognoscimus naturalia; quandoque vero res cognita est quidem operabilis per scientiam, tamen non consideratur ut est operabilis; ... sicut si artifex consideret domum investigando passiones eius, genus et differentias, et huiusmodi, quae secundum esse indistincte inveniuntur in re ipsa.⁸³

If we couple this distinction of theoretical and applied logic with what was said of logic as an art, we see that in regard to its use logic is a quasi-factive science or art, and looks to the production and ordering of logical intentions; but the doctrine of logic considers these intentions statically and in their mutual relations. This theoretical or pure logic is a quasi-speculative science.

"Logic" as Meaning Dialectics

An understanding of the distinctions between dialectics and demonstrative logic and between pure and applied logic is important for a correct understanding of much that is said about logic. This is partic-

⁸¹ *Ibid.*, n. 577.

⁸² *S.T.*, I-II, 57, 6 ad 3.

⁸³ *De Ver.*, 3, 3 c.

ularly true when the term *logic* occurs in its adverbial and adjectival forms, such as *logice*, *modo logico*, *per logicas rationes*, *secundum logicam considerationem*, and *logicus*. These expressions, which rather frequently occur in the writings of St. Thomas, often need some qualification and do not refer to logic as a whole. An example is the contrast made between speaking "logically" (*logice*) and speaking "physically" (*naturaliter*):

Philosophus loquitur de communitate *naturaliter* et non *logice*. Ea vero quae habent diversum modum essendi non communicant in aliquo secundum esse quod considerat naturalis; possunt tamen communicare in aliqua communi intentione quam considerat *logicus*.⁸⁴

There is danger that we should distort the notion of logic if we should understand it, as here spoken of, to be representative of logic as a whole. To *speak logically* about something belongs to *applied*, not to theoretical logic. Demonstrative logic, the most important of the parts dealing with the third act of reason, cannot, therefore, be meant. The term *logicus* here can be taken in the unqualified sense, since the statement that "the logician *considers* a common intention" can be understood of theoretical logic. In so far, however, as this implies the *use* of a common intention in reasoning, such as was just referred to in *logice*, it could not apply to demonstrative logic, but must refer to dialectics.

This use of *logice* to mean *dialectically* is brought out clearly in the many places where it is opposed to *analytice*. A good example is the long passage in the *Posterior Analytics* where Aquinas comments upon Aristotle's argument against an infinite process in predication: the point is first established "logically" and then "analytically":

In prima parte ostendit propositum *logice*, idest per rationes communes omni syllogismo, quae accipiuntur secundum praedicata communiter sumpta; in secunda, ostendit idem *analytice*, idest per rationes proprias demonstrationi, quae accipiuntur secundum praedicata per se, quae sunt demonstrationi propria.⁸⁵

Since *logice* is opposed to *analytice*, the mode of demonstrative logic, it must necessarily be restricted to dialectics.

Express cognizance of this is taken when the argument turns from dialectical to analytical demonstration: dialectics has so far been used to prove the thesis "logically," from the manner of predicating in

⁸⁴ *De Pot.*, 7, 7 ad 1 in contr.

⁸⁵ *In I Post. Anal.*, 33, n. 1. This discussion continues through lessons 33-35. St. Thomas points out that, when the argument is "logical" or proceeds "by logical reasons", it is based upon common principles and the manner of predicating in general—the procedure belonging to dialectics.

general; now the thesis will be established "analytically," from demonstrative logic using essential (*per se*) predicates:

Hic ostendit idem *analytice*. ... Brevius et citius poterit manifestari analytice quam manifestatum sit *logice*. Ubi considerandum est quod analytica, idest demonstrativa scientia, quae resolvendo ad principia per se nota iudicativa dicitur, est pars logicae, quae etiam *dialecticam* sub se continet. Ad logicam autem communiter pertinet considerare praedicationem universaliter, secundum quod continet sub se praedicationem quae est per se, et quae non est per se. Sed demonstrativae scientiae propria est praedicatio per se. Et ideo supra *logice* probavit propositum, quia ostendit universaliter in omni genere praedicationis non esse processum in infinitum; hic autem intendit ostendere *analytice*, quia hoc probat solum in his quae praedicantur per se.⁸⁶

It is obvious that when *logice* is opposed to *analytice*, as is here done, it can refer only to dialectics. It is then used in a somewhat figurative sense since the part is designated by the name of the whole. In this case, however, it is legitimate and not misleading because (excepting sophistics, of which there can be no question here) dialectics is the only part of logic which applies the mode of reasoning which it proposes.⁸⁷

The same contraction of logic to dialectics is apparent when "logical proof" is contrasted with "demonstrative proof":

Ponit [Aristoteles] duos modos manifestandi quod quid est. Et primo, ponit modum *logicae probationis*; secundo, modum *demonstrativae probationis*. ... Nec tamen est modus probandi quod quid est *demonstrative*, sed *logice* syllogizandi; quia non sufficienter per hoc probatur quod id quod concluditur sit quod quid est illius rei de qua concluditur, sed solum quod insit ei.⁸⁸

A demonstrative proof is that kind which is taught by the science of analytics and made use of by the particular demonstrative sciences. A "logical" proof, as the term is here taken, is that kind which is both taught and employed by dialectics. Because *demonstrative* is a synonym of *analytice*, the *modus logice syllogizandi* must be that of dialectical reasoning.

⁸⁶ *Ibid.*, 35, nn. 1 & 2; cf. 34, n. 10: Hic igitur est unus modus *logice* demonstrandi propositum, qui sumitur secundum diversos modos praedicationis.

⁸⁷ For further examples see *ibid.*, 43, nn. 1, 2 & 9; 44, n. 5; *In VII Met.*, 11, n. 1536; 17, nn. 1648 & 1658. The reason why St. Thomas makes this opposition between *logice* and *analytice* is undoubtedly that he found it in the text of Aristotle. For Aristotle, however, it is not a case of using the name of a part for the whole because he did not use the noun "logic" at all (see W. D. Ross, *Aristotle*—London: Methuen, 1923—pp. 20-21) and had no name for the whole of logic as now conceived. He rather frequently uses the adverb *λογικῶς*; but this means "in the manner of dialectics" as opposed to that of analytics. See Ch. Thurot, *Etudes sur Aristote* (Paris: Durand, 1860), pp. 126-127 and appendix 3, p. 200; Th. Waitz, *Organon* (Leipzig: Hahn, 1844), pp. 353-354; K. M. Le Blond, *Logique et Méthode chez Aristote* (Paris: Vrin, 1939), p. 18, n. 1, & pp. 203-210; J. de Blic, "Un aspect remarquable de la dialectique aristotélicienne," *Gregorianum*, XI (1930), 568-577.

⁸⁸ *In II Post. Anal.*, 7, nn. 2 (prin.) & 3 (fin.).

Modus logicus is another expression in which logic usually needs to be understood in a contracted sense. An example will make this clear. Essence is to be discussed "logically"; this logical mode of discussion is appropriate for metaphysics because, like logic, metaphysics is universal:

Ideo primum dicemus de eo quod est quod quid erat esse quaedam *logice*. ... Haec scientia [metaphysica] habet quamdam affinitatem cum logica propter utriusque communitatem. Et ideo *modus logicus* huic scientiae proprius est, et ab eo convenienter incipit. Magis autem logice dicit se de eo dicturum in quantum *investigat* quid est quod quid erat esse ex modo praedicandi. Hoc enim ad logicum proprie pertinet.⁸⁹

It is here again said that the study of the manner of predicating belongs to logic as a whole. But there is question here, not of the study, but of arguing from the manner of predicating, and also of *investigating* in that way. But to investigate is the work of dialectics, *logica inquisitiva*. "In the manner of logic" accordingly means "in the manner of dialectics."

When the investigation proceeds *per logicas rationes*, it is dialectical; for it then proceeds from common principles: "Aliqui speculantur ... *per logicas rationes*. Et dicuntur hic logicae rationes, quae procedunt ex quibusdam communibus, quae pertinent ad considerationem *logicae*."⁹⁰ Arguing from common principles, which is here said to belong to "logic," has already been seen to characterize dialectics.⁹¹

Similarly, an argument conducted *secundum considerationem logicam* is dialectical. In discussing Aristotle's transition from the dialectical to the analytical treatment of a question, Aquinas says that Aristotle now applies to real beings what was said from a logical or dialectical point of view: "ut applicentur quae *secundum considerationem logicam* dicta sunt, ad res naturales existentes."⁹² The reference of this "logical consideration" back to the investigation *modo logico* and *logice* (spoken of earlier in the same paragraph) and its opposition to the application which is to be made of it to real things (thus constituting a proper ana-

⁸⁹ *In VII Met.*, 3, n. 1308; cf. *In VIII Met.*, 1, n. 1681: Postquam determinavit Philosophus in septimo de substantia *modo logico*, considerando scilicet definitionem et partes definitionis, et alia huiusmodi, quae secundum rationem considerantur; in hoc libro octavo intendit de sensibilibus substantiis determinare per propria principia, applicando ea quae superius inquisita sunt logice, ad substantias illas.—Analytic demonstration is indicated by *determinare per propria principia*.

⁹⁰ *In I Post. Anal.*, 33, n. 2; cf. 38, b. 6: Addit autem quasdam praedictarum rationum *logicas* esse; quia scilicet procedunt ex communibus principiis, quae non sunt demonstrationi propria; *In VII Met.*, 3, n. 1306: Determinat de essentia substantiarum *per rationes logicas* et communes.

⁹¹ *Supra*, pp. 32-35.

⁹² *In VIII Met.*, 1, n. 1681.

lytical demonstration), show that "logical" here means dialectical.

From these examples it is evident that the term "logic" must sometimes be understood with reservations, especially in such phrases as "to speak logically" or "to show from logical reasons." It then usually means argument from common principles, which belong to dialectics, and their actual application or use, which is proper to *logica utens*. This has no part in demonstrative logic, but does in dialectics. It is, therefore, not logic according to its most important form of reasoning, or logic as a whole, or logic taken simply, that is meant, but only that part of logic which is dialectics.

To understand the relation of logic to the other sciences, then, we must realize that there are two kinds of logic, pure and applied. Pure logic studies the instruments of thought needed by the other sciences and the method by which they will conduct their demonstration. It does this speculatively. And because by so doing it can be said to provide the instruments needed by the speculative sciences, it is placed among them; but not in full right, since the mind does not merely discover what it studies, but both makes and finds it. It is, therefore, only reductively speculative and only a quasi-speculative science. It does not itself apply its principles to the matter of the other sciences to conduct their demonstrations for them, but leaves that to those particular sciences. For this reason demonstrative logic is only theoretical and has no part in applied logic. But logic does participate in the investigations about the matter which belongs to the other sciences. It does this by starting from common principles which are extraneous to the particular science which it is aiding, and reasoning to probable conclusions. These can help the other sciences to see the way to their strict demonstration; for when the pertinence of these general reasonings to the particular matter at hand is seen and they are transferred to the proper matter of the particular demonstrative science, then a real demonstration is had. It is the part of dialectics to aid the investigation of the other sciences in this way. There are both theoretical and applied parts of dialectics. Theoretical or pure dialectics is itself a science; applied dialectics does not fulfill the requirements of science, but is rather an art.

COMPARISON OF LOGIC WITH METAPHYSICS

There are special relations of logic with metaphysics which deserve a separate investigation. In the texts sometimes it is logic as a whole

which is compared with metaphysics, sometimes dialectics and sophistics.

Similarity

First of all, there are definite points of similarity. The subject matter of logic has the same extension as that of metaphysics, which is universal: "Subiectum logicae ad omnia se extendit, de quibus ens naturae praedicatur. Unde concludit [Aristoteles] quod subiectum logicae aequiparatur subiecto philosophiae [primae]."⁹³ This is true also of dialectics and sophistics: "Dialectica autem videtur esse communis et similiter sophistica."⁹⁴ The reason for this is that both metaphysics and logic deal with what is common to all things: "Dialectica est de communibus et logica et philosophia prima."⁹⁵ Both deal with being in general:

Dialectica et sophistica cum philosophia habent similitudinem. ... Conveniunt autem in hoc quod dialectici est considerare de omnibus. ... Dialecticae materia est ens et ea quae sunt entis, de quibus etiam philosophus considerat.⁹⁶

Logicus et metaphysicus circa omnia operantur. ... Sicut enim primi philosophi est loqui de ente in communi, ita et logici; aliter non esset circa omnia eius consideratio. ... Idem subiectum erit utriusque.⁹⁷

The fact that the same subject is common to both sciences and that this is universal leads to the use of a common method for the beginning of their investigations; both start from common principles such as logic studies:

Dicetur aliquis processus esse rationabilis quando aliquis utitur in aliqua scientia propositionibus quae traduntur in logica. ... Sed hic modus procedendi non potest proprie competere alicui particulari scientiae. ... Contingit autem hoc proprie et convenienter fieri in logica et metaphysica, eo quod utraque scientia communis est et circa idem subiectum quodammodo.⁹⁸

Besides the community of subject matter and of method, which are important general likenesses, some particular parallels between logic and metaphysics are pointed out. The first of these is the study of contraries, as, for instance, to show that contrary things are treated by the same science. Both metaphysics and dialectics embrace this study within their scope:

⁹³ *In IV Met.*, 4, n. 574.

⁹⁴ *In XI Met.*, 3, n. 2204.

⁹⁵ *In I Post. Anal.*, 20, n. 5.

⁹⁶ *In IV Met.*, 4, n. 572-573.

⁹⁷ *De Nat. Gen.*, c. 3, (ed. Perrier); cf. *In VII Met.*, 3, n. 1308: Haec scientia [metaphysica] habet quamdam affinitatem cum logica propter utriusque communitatem.

⁹⁸ *In De Trin.*, 6, 1, sol. 1.

Nulla scientia demonstrat aliquid de subiecto alterius scientiae, sive sit scientiae communioris sive alterius scientiae disparatae; sicut geometria non demonstrat quod contrariorum eadem est scientia: contraria enim pertinent ad scientiam communem, scilicet ad philosophiam primam vel dialecticam.⁹⁹

Philosophi est considerare contraria. ... Opposita autem est unius scientiae considerare. Cum igitur ista scientia consideret unum et idem, aequale et simile, necesse est quod consideret opposita his, scilicet multum, alterum sive diversum, dissimile et inaequale, et quaecumque alia reducuntur ad illa.¹⁰⁰

Sed dialectici et sophistae disputant de praedictis.¹⁰¹

Another parallel between logic and metaphysics which has considerable importance for the investigation of the domain of logic, is the consideration of truth and falsity. It is said separately that truth and falsity are the concern of metaphysics and that they are the concern of logic. Metaphysics studies universal truth and is pre-eminently the science of truth:

Philosophia prima considerat universalem veritatem entium. Et ideo ad hunc philosophum pertinet considerare, quomodo se habeat homo ad veritatem cognoscendam. ... Cognitio veritatis maxime ad philosophiam primam pertinet. ... Unde ipsa est maxime scientia veritatis.¹⁰²

Under the name of wisdom metaphysics is said to be principally interested in the good of the intellect, which is truth:

Finis autem ultimus uniuscuiusque rei est qui intenditur a primo auctore vel motore ipsius. Primus autem auctor et motor universi, est intellectus. ... Oportet igitur ultimum finem universi esse bonum intellectus. Hoc autem est veritas. Oportet igitur veritatem esse ultimum finem totius universi, et circa eius considerationem principaliter sapientiam insistere.¹⁰³

Since the consideration of contraries belongs to the same science, metaphysics must consider falsity as well as truth. At the same time it is said that the study of the true and the false properly belongs to logic, which seems to be entirely devoted to this study:

Verum autem et falsum pertinent proprie ad considerationem logici.¹⁰⁴

Oportet speculari circa ens et non ens ... prout ens significat verum et non ens falsum. ... Tota enim logica videtur esse de ente et non ente sic dicto.¹⁰⁵

The attribution of this study to logic is confirmed by the fact that truth and falsity are in the mind, not in things:

⁹⁹ *In I Post. Anal.*, 15, n. 7.

¹⁰⁰ *In IV Met.*, 3, n. 567.

¹⁰¹ *Ibid.*, 4, n. 572.

¹⁰² *In II Met.*, 1, n. 273.

¹⁰³ *C.G.*, 1, 1.

¹⁰⁴ *In IV Met.*, 17, n. 736.

¹⁰⁵ *In VI Met.*, 4, n. 1233.

Verum et falsum non sunt in rebus ..., sed sunt tantum in mente, idest in intellectu.¹⁰⁶

In verum enim intelligibile fertur intellectus ut in formam, cum oporteat eo quod intelligitur, intellectum esse informatum. ... Unde ... dicitur verum esse in mente ..., cum forma sit intus.¹⁰⁷

But logic treats somehow of what occurs in the mind.

Metaphysics and logic, then, are alike in being concerned with truth and falsity as well as in having the same extension and using (at least initially) the same procedure.

Difference

Even more important than the similarities between metaphysics and logic are their differences, for very considerable light is thrown upon the nature of logic by the rather numerous texts which point out these differences.

In rather general terms it is said that the logician considers things as they are in the mind and in thought, whereas the metaphysician considers things in so far as they are beings: "Logicus autem considerat res secundum quod sunt in ratione ... Sed philosophus primus considerat de rebus secundum quod sunt entia."¹⁰⁸ This distinction is explained much more fully and with greater precision in an important text in the commentary on the fourth book of Aristotle's *Metaphysics*. After saying that dialectics and sophistics have the same extension as metaphysics, St. Thomas takes up the discussion of the differences of dialectics and logic as a whole from metaphysics. The latter is concerned with being as found in reality; logic, with a type of being that exists in reason:

Differunt autem abinvicem. ... Et hoc ideo est quia ens est duplex: ens scilicet rationis, et ens naturae. Ens autem rationis dicitur proprie de illis intentionibus quas ratio adinvenit in rebus consideratis; sicut intentio generis, speciei et similitium, quae quidem non inveniuntur in rerum natura, sed considerationem rationis consequuntur. Et huiusmodi, scilicet ens rationis, est proprie subiectum logicae. Huiusmodi autem intentiones intelligibiles, entibus naturae aequiparantur, eo quod omnia entia naturae sub consideratione rationis cadunt. Et ideo subiectum logicae ad omnia se extendit, de quibus ens naturae praedicatur. Unde concludit quod subiectum logicae aequiparatur subiecto philosophiae, quod est ens naturae.¹⁰⁹

¹⁰⁶ *Ibid.*, n. 1231; cf. n. 1240: verum et falsum, quae sunt obiecta cognitionis, sunt in mente; *In II Met.*, 2, n. 298: verum enim et falsum non est in rebus sed in mente; *In I Perih.*, 3, n. 9: veritas est solum in mente, sicut scilicet in cognoscente veritatem; 7, n. 3: sicut in subiecto est verum et falsum in mente.

¹⁰⁷ *De Ver.*, 15, 2 c (med.); cf. 1, 2 c; *S.T.*, I, 16, 1 c.

¹⁰⁸ *In VII Met.*, 13, n. 1576.

¹⁰⁹ *In IV Met.*, 4, n. 574. The whole passage, nn. 571-577, is enlightening on this question. Cf. *De Nat. Gen.*, c 3 (prin.), which is a paraphrase of this.

Although the subject of the science of logic extends to as many things, even the same things, as fall within the scope of metaphysics, there is a difference in the approach of these two sciences to the objects of their study. While metaphysics studies the things presented to it in reality and studies them in themselves, logic studies rather the intellectual views or intentions which reason, in looking at these things, forms of them in the mind.

The distinction of metaphysics from logic according to the reality of its object is given also in the beginning of the commentary on the *Ethics*. Along with natural philosophy metaphysics treats of the order of things found in nature or at least capable of being found there, whereas, logic or "rational philosophy" treats of the order set up in the acts of reason:

Ad philosophiam naturalem pertinet considerare ordinem rerum quam ratio humana considerat sed non facit; ita quod sub naturali philosophia comprehendamus et metaphysicam. Ordo autem quem ratio considerando facit in proprio actu pertinet ad rationalem philosophiam.¹¹⁰

As a "real" science metaphysics does not make its objects but discovers them ready-made in the universe and speculates about them. The objects about which logic speculates it makes or sets up in the acts of reason itself.

These objects set up by reason and called intentions are ascribed to logic as its subject and contrasted with the subject of metaphysics, which is being, in an important text found in the commentary on the *Posterior Analytics*:

Sciendum tamen est quod alia ratione dialectica est de communibus et logica et philosophia prima. Philosophia enim prima est de communibus quia eius consideratio est circa ipsas res communes, scilicet ens et partes et passiones entis. Et quia circa omnia quae in rebus sunt habet negotiari ratio (logica autem est de operationibus rationis), logica erit de his, quae communia sunt omnibus, idest de intentionibus rationis, quae ad omnia se habent. Non autem quod logica sit de ipsis rebus communibus, sicut de subiectis.¹¹¹

Here again are stated the equality of extension of the two sciences and their difference of treatment. Metaphysics deals with things themselves, according to what is common in them. Logic too deals with what is common to all things, but not with the things themselves or what is *in* them; rather with "what is common *to* them"—this is, with the intentions which reason forms of them; and since intentions can be formed of all things, they are said to be common to all.

¹¹⁰ *In I Eth.*, 1, n. 2.

¹¹¹ *In I Post. Anal.*, 20, n. 5.

In a passage in the commentary on the *Sentences* the same distinction between the reality of the subject which the metaphysician treats and the intellectual intentions with which the logician deals is made with strong emphasis on the existential import of metaphysics: "Logicus ... considerat intentiones tantum. ... [Metaphysicus et naturalis] considerant res secundum suum esse."¹¹² Metaphysics, along with the philosophy of nature, studies things according to the act of being which they exercise. This is not to be interpreted as saying that natural philosophy and metaphysics study the act of being itself. That could not be said of natural philosophy at all; and while it is true of metaphysics, even metaphysics must study the act of being through the beings which exercise it. Thus metaphysics studies things in their relation to the act of existence, whereas logic does not study things at all directly, but only the intentions which the intellect forms of things.

A very similar statement made in the *De Trinitate* puts this matter in its proper perspective: "Logicus enim considerat absolute intentiones. ... Sed naturalis et philosophus primus considerant essentias secundum quod habent esse in rebus."¹¹³ It is not said here that the natural philosopher studies the act of being, or even that the metaphysician does so; but both are said to study the essences of things as they exist in reality. This sufficiently distinguishes their field of investigation from that of the logician, who deals with intentions taken in themselves or "absolutely" and apart from the real existence of the things of which the intentions are formed.

Perhaps the strongest statement of the difference between logic and metaphysics occurs in the commentary on the seventh book of the *Metaphysics*. The province of logic is designated here, not as "intentions" now, but as the "mode of predication"; and that of metaphysics is now said to be "the existence of things": "Logicus enim considerat modum praedicandi, et non existentiam rei. ... Sed philosophus ... existentiam quaerit rerum."¹¹⁴ This text presents some difficulties of interpretation; but because it is a very important one for our question, it merits rather close study in its context.

Logic is said to be concerned with the way in which we speak of things; metaphysics, with the "existence" of things. From the context it appears, however, that *existentia rerum* does not mean here precisely *the act of being*, but rather *things in their real being* or things as they are

¹¹² *In I Sent.*, 19, 5, 2 ad 1.

¹¹³ *In De Trin.*, 6, 3 c (post med.).

¹¹⁴ *In VII Met.*, 17, n. 1658.

in reality, as was said in the words quoted from the *Sentences*: "res secundum suum esse." The general context is this: the whole book is an investigation of the meaning and definition of substance taken in the sense of essence; up to the chapter in question this investigation has been pursued *logically*, from the way in which we speak of things, especially from a consideration of accidental and essential predication. This is summed up as follows:

Philosophus in principio huius septimi promiserat se tractaturum de substantia rerum sensibilium quae est quod quid erat esse, quam logice notificavit ostendens quod ea quae per se praedicantur, pertinent ad quod quid est, ex quo nondum erat manifestum quid sit substantia, quae est quod quid erat esse.¹¹⁵

The question is then to be treated metaphysically: "Unde relinquebatur quod ipse Philosophus ostenderet quid secundum rem sit substantia, quae est quod quid erat esse." Substance in the sense of essence is to be treated *secundum rem*, that is, as it really is, and not merely as it is spoken of.

The immediate context explains the difference in treatment and in meaning of essence or quiddity when it is taken logically and when taken metaphysically. The question "*Quid est?*" is answered by the logician in terms of any one of the four causes, whether intrinsic or extrinsic; by the metaphysician it is answered only in terms of the intrinsic causes, particularly the form:

Philosophus non dixit simpliciter quod quaeratur quid est domus, sed propter quid huiusmodi [lapides et ligna] sint domus. Palam igitur est quod ista quaestio quaerit de causa.

Quae quidem causa quaesita est quod quid erat esse, logice loquendo. Logicus enim considerat modum praedicandi, et non existentiam rei. Unde quidquid responderetur ad quid est, dicit pertinere ad quod quid est; sive illud sit intrinsecum, ut materia et forma; sive sit extrinsecum, ut agens vel finis. Sed philosophus qui existentiam quaerit rerum, finem vel agentem, cum sint extrinseca, non comprehendit sub quod quid erat esse. Unde si dicamus, "Domus est aliquid prohibens a frigore et caumate," logice loquendo significatur quod quid erat esse, non autem secundum considerationem philosophi. Et ideo dicit quod hoc quod quaeritur ut causa formae in materia est quod quid erat esse, ut est dicere logice: quod tamen secundum rei veritatem et physicam considerationem in quibusdam "est cuius causa," idest finis, ut in domo aut in lecto.¹¹⁶

The logician might define a thing, and thus designate its quiddity, by naming its purpose. For the metaphysician that would not be the quiddity but the final cause, which is extrinsic to the thing; only the formal and material cause would enter into his definition of a natural thing, because only they show what the thing really is in itself.

¹¹⁵ *Ibid.*, n. 1648.

¹¹⁶ *Ibid.*, nn. 1657 & 1658.

It is clear, then, that this passage contrasts our way of speaking of things with what they really are in themselves, "secundum rei veritatem et physicam considerationem." In view of this, "existentia rerum" seems in this instance to be an elliptical expression for "res sumptae secundum existentiam suam" or some such phrase which shows that the point under consideration is not the act of existence taken by itself, but the things which exercise that act, and these precisely in so far as they have a reference to such an act of existence independently of our thought; in other words, real things, not just mentally conceived beings.¹¹⁷ This text, then, does not make any distinction between logic and metaphysics substantially different from that of the other texts quoted, though it does bring into relief some problems which will have to be examined in due time, namely, the relation of logic to existence and to truth, and the meaning of modes of predication.

From these texts it is clear that for St. Thomas, although logic is similar to metaphysics in so far as it is universal, treating of all things, it is nevertheless distinguished from metaphysics. Like the philosophy of nature, metaphysics treats of things according to the existence which they have in themselves independently of whether they are considered by the human mind or not. Logic, on the other hand, treats of things according to the way in which we speak of them or conceive them and form of them intentions which have no existence except in human thought.

¹¹⁷ Cf. the use of *esse* in a somewhat similar acceptation: "Ea vero quae habent diversum modum essendi non communicant in aliquo secundum *esse quod considerat naturalis*" (*De Pot.*, 7, 7 ad 1 in contr.). "Secundum esse" means "in the act of existence," to be sure; but the *esse* which *quod* refers back to cannot mean the act of existence simply, since the natural philosopher does not make that the subject of his study; but it must mean "things having real existence."

CHAPTER III

THE SUBJECT OF LOGIC

Any attempt to discover and delimit the domain of a science necessarily resolves itself into the determination of just what the science investigates, studies, and analyzes. But that about which a science conducts its investigation is called the *subject* of the science, as has already been explained.¹ For “that is the subject in a science whose causes and properties we seek.”² The investigation of the domain of logic, therefore, requires the accurate determining of its subject. In the texts distinguishing logic from metaphysics which have just been seen, much is said about the subject of logic. In other texts also among those already examined there are indications of what logic studies. The operations of reason, *ens rationis*, intentions, the mode of predication, and the true and the false have all been assigned to logic as the field of its endeavors. Each of these must be carefully examined to determine and delimit the domain of logic and discover exactly what St. Thomas considers to constitute the proper subject of this science.

OPERATIONS OF REASON AS THE PROPER MATTER OF LOGIC

A number of texts state that logic or “rational science” is concerned with the operations of reason:

Logica autem est de operationibus rationis.³

Ordo quem ratio considerando facit in proprio actu, pertinet ad rationalem philosophiam.⁴

Cum autem logica dicatur rationalis scientia, necesse est quod eius consideratio versetur circa ea quae pertinent ad tres ... operationes rationis.⁵

And these operations or acts are said to constitute the *proper matter* of logic:

¹ Chap. I, pp. 11-15.

² *In Met.*, Proöem. (post med.); quoted p. 12.

³ *In I Post. Anal.*, 20, n. 5.

⁴ *In I Eth.*, 1, n. 2.

⁵ *In I Perih.*, 1, n. 2.

Ars quaedam necessaria est quae sit directiva ipsius actus rationis. ... Et haec ars est logica, idest rationalis scientia. Quae non solum rationalis est ex hoc quod est secundum rationem (quod est omnibus artibus commune); sed etiam ex hoc quod est *circa ipsum actum rationis* sicut circa *propriam materiam*.⁶

Logic not only makes use of reason, as do all sciences, but it makes the acts of reason the object of its study.

The acts of the mind, with which logic is said to deal, are sometimes enumerated as "two operations of the intellect" and sometimes as "three operations of reason." Two operations of the intellect are distinguished:

Distinguit [Aristoteles] duas operationes intellectus. ... Una operationum intellectus est secundum quod intelligit indivisibilia, puta cum intelligit hominem aut bovem, aut aliquid huiusmodi incomplexorum. ... Sed in illis intelligibilibus in quibus est verum et falsum est quaedam compositio intellectuum, idest rerum intellectarum: sicut quando ex multis fit aliquid unum.⁷

The first operation is said to be a simple grasp of things; that is, by it the mind grasps simple, "indivisible," or "uncompounded" things such as a man or an ox. The second operation combines the objects thus simply grasped to form a unit out of their multiplicity. The name "composition" is here assigned to the second operation. The first is usually referred to by the name "understanding of indivisibles" (*indivisibilium intelligentia*), which becomes for practical purposes the technical term used to designate it; the second usually receives the double title of "composition and division." It is explained that the first operation grasps and knows quiddities or the *quid est* of things and that the second puts together the quiddities apprehended or dissociates them, affirming or denying their conjunction. More recent terminology designates these acts as simple apprehension and judgment respectively.

To the two acts of the intellect a third, belonging to reason as a discursive faculty, is added:

Duplex est operatio intellectus: una quidem quae dicitur indivisibilium intel-

⁶ *In I Post. Anal.*, 1, n. 1.

⁷ *In III De An.*, 11, nn. 746 & 747; cf. *In VI Met.*, 4, n. 1232: Intellectus habet duas operationes, quarum una vocatur indivisibilium intelligentia, per quam intellectus format simplices conceptiones rerum intelligendo quod quid est uniuscuiusque rei. Alia operatio est per quam componit et dividit.—*In I Sent.*, 38, 1, 3 sol.: [Est] duplex operatio intellectus: una quae dicitur a philosophis formatio qua apprehendit quidditates rerum, quae etiam dicitur indivisibilium intelligentia. Alia autem comprehendit esse rei, componendo affirmationem.—*In De Trin.*, 5, 3 c: Duplex est operatio intellectus. Una quae dicitur intelligentia indivisibilium, qua cognoscitur de unoquoque quid est. Alia vero est qua componit et dividit, scilicet enuntiationem affirmativam vel negativam formando.

ligentia, per quam scilicet intellectus apprehendit essentiam uniuscuiusque rei in seipsa; alia est operatio intellectus scilicet componentis et dividensis. Additur autem tertia operatio, scilicet ratiocinandi, secundum quod ratio procedit a notis ad inquisitionem ignotorum. Harum autem operationum prima ordinatur ad secundam: quia non potest esse compositio et divisio nisi simplicium apprehensorum. Secunda vero ordinatur ad tertiam: quia videlicet oportet quod ex aliquo vero cognito cui intellectus assentiat, procedatur ad certitudinem accipiendam de aliquibus ignotis.⁸

The third act of reason, which is called reasoning, is described as a process from the known to the unknown. The order which is pointed out among these acts is at least that of material dependence: the third needs the second as a prerequisite, and the second requires the first.

The same enumeration of the three acts of reason occurs in the discussion of the nature of logic given as an introduction to the commentary on the *Posterior Analytics*:

Sunt autem rationis tres actus: quorum primi duo sunt rationis secundum quod est intellectus quidam. Una enim actio intellectus est intelligentia indivisibilium sive incomplexorum, secundum quam concipit quid est res. Et haec operatio a quibusdam dicitur informatio intellectus sive imaginatio per intellectum. ... Secunda vero operatio intellectus est compositio vel divisio intellectus, in qua est iam verum et falsum. ... Tertius vero actus rationis est secundum id quod est proprium rationis, scilicet discurrere ab uno in aliud, ut per id quod est notum deveniat in cognitionem ignoti.⁹

Now if the acts of the mind are what logic deals with and constitute its "proper matter," some difficulties arise. How, then, does logic differ from psychology? The treatise *De Anima* is supposed to deal with the soul and its modifications or "passions," which include its operations.¹⁰ And it is not merely Aristotle's work of that name or St. Thomas' commentary on it or his *Quaestio Disputata de Anima* that is referred to when the *scientia de anima* is spoken of, but a branch of philosophy belonging to natural philosophy, and therefore quite distinct from logic.¹¹ Another difficulty that arises is that elsewhere other things are assigned to logic for its study. The reconciling of these seemingly contradictory assertions will help to clarify the relation which logic bears to the acts of reason and consequently to psychology.

⁸ *In I Perih.*, 1, n. 1.

⁹ *In I Post. Anal.*, 1, n. 4. Two operations of speculative reason are differently enumerated from the above in *In IV Sent.*, 15, 4, 1, sol. 1: Habet autem ratio duos actus, etiam secundum quod est speculativa. Primus est componere et dividere; et iste actus rationis exprimitur ore per orationem. ... Secundus actus rationis est discurrere de uno in aliud innotescendi causa; et secundum hoc syllogismus oratio quaedam dicitur.

¹⁰ *In I De An.*, 1, n. 8; 2, nn. 22 & 23; cf. *In I Perih.*, 2, n. 12; *In VI Met.*, 4, n. 1242: operatio intellectus componentis ... pertinet ad scientiam de intellectu.

¹¹ See *In I De An.*, 1, n. 1; whole of lect. 2, especially n. 23.

RATIONATE BEING AND INTENTIONS

In the text distinguishing logic from metaphysics logic was seen to be concerned with some kind of conceived being rather than with operations. It deals with *things* in a certain sense; for it studies things as they are in the human intellect: "Logicus considerat res secundum quod sunt in ratione."¹² But, as was also seen, it does not concern itself with them in so far as they exist in reality but only inasmuch as they are beings having their existence in reason: "[Est] ens in ratione de quo considerat logicus."¹³ This kind of "being in reason" is also called a "being of reason" as distinguished from natural being or "being of nature," and only the former falls within the competence of logic: "Ens est duplex: ens scilicet rationis, et ens naturae. ... Ens rationis est proprie subiectum logicae."¹⁴ The expression *ens rationis*, which is difficult to translate suitably in English, will be designated by the term *rationate being*.¹⁵

¹² *In VII Met.*, 13, n. 1576; cf. *De Nat. Gen.*, c. 3, n. 19 (ed. Perrier): *Logicus enim considerat talia secundum quod sumuntur in ratione.*

¹³ *In IV Met.*, 17, n. 736.

¹⁴ *Ibid.*, 4, n. 574.

¹⁵ The introduction of an unusual word to translate an expression for which there is hardly an adequate equivalent in English will, it is hoped, be pardoned. *Ens rationis* means an entity which has no existence independently of its being thought, whose whole existence is in reason, and which arises from the fact that reason thinks of it. We might perhaps without inconvenience translate this phrase "a being of reason" when we can use the indefinite article. When the definite article is needed, "*the* being of reason," there is danger of confusion, since the expression might also have the meaning "the act of existence exercised by reason." But in any case, the genius of the English language prefers to qualify by means of adjectives rather than of nouns in the genitive case. The problem is to find a suitable adjective. We cannot say "rational" because the expression "rational being" (with or without the article) is pre-empted in the meaning of a "being endowed with the faculty of reason." Though other Latin phrases such as *relatio rationis* or *distinctio rationis* might, without too much violence to the normal meaning of the English words, be translated as "rational relation" or "rational distinction," nevertheless with *ens* the qualifying *rationis* cannot be translated as "rational." Neither can we say "logical," because that is too specific to stand for the whole scope of being that exists in and by the intellect; and furthermore, in an investigation of "logical being" we cannot prejudice the results by assuming at the outset an equivalence that must be shown. Most other adjectives would depart too far from the root meaning of the words to be translated. "Mental being" might be used; but it has the disadvantage that in modern usage "mental" has been extended to apply to any sort of psychic phenomenon and now is not sufficiently restricted to the faculty of intellect or reason. "Mental construct" expresses the dependence of this entity upon the operation of the faculty but, besides the excessive breadth of the word "mental," has the defect of not designating this product as "being" and as exercising the act of being, which *ens rationis* does indeed exercise even though in a very special mode. "Thought-being" expresses the notion with fair accuracy, but is at best awkward in English. Considerably better is "conceptual being," which avoids the awkwardness of the last and the vagueness of the preceding; but even this lacks something of the exactness which is desirable. In its radiation it shows no affinity to "reason," which is expressed in the Latin, and in its more precise meaning would seem to apply to the first operation of the intellect, direct apprehension, without any reference to discourse, as is suggested in the Latin name.

The ratiolate beings spoken of as the subject of logic are called *intentions*. They are not real beings or in real beings as such; but the intellect in considering real beings elaborates these from what it finds there:

Ens autem rationis dicitur proprie de illis intentionibus quas ratio adinvenit in rebus consideratis; sicut intentio generis, speciei et similium, quae non inveniuntur in rerum natura, sed considerationem rationis consequuntur.¹⁶

The expression *adinvenit in rebus* causes a little trouble. It cannot mean that the intentions are "found" in things, because that is expressly denied: "non inveniuntur in rebus." But because they follow upon the view which reason has of things, it must mean that reason *adds* something to what is found there, as the composition of the verb suggests. The word *adinvenire* means approximately to invent, contrive, devise, or elaborate. It is used elsewhere in the same connection: the elaboration of intentions by the intellect.¹⁷ The troublesome expression might accordingly be translated "intentions which reason devises in considering things" or "elaborates in things which it considers"; and this means that as the intellect looks at things it finds in them the basis for the view which it forms of them.

Because no adjective entirely suitable was found among those more current, search was made among rarer words, and one was found which, with a little adaptation, seems suitable for the purpose at hand. There is a verb *ratiolate*, meaning "to reason" (for which the *Oxford English Dictionary* gives instances of use in 1644 and 1819). Although no instance of its use as an adjective is cited, there are ample grounds of analogy for such an adaptation. We have the verb "to separate" and the adjective "separate," the verb "to mediate" and the adjective "mediate," "articulate" as both verb and adjective, and a number of others common in both forms, such as moderate, precipitate, alternate, consummate, duplicate, incarnate, coordinate, and subordinate; besides many others having both forms but used less frequently in one form or the other such as adequate, concentrate, confiscate, copulate, incorporate, temperate, and vitiate. A word deserving particular notice is *sensate*, which as a verb means to feel or apprehend through a sense or the senses, and as an adjective, felt or apprehended through the senses. In all these cases both verb and adjective are derived from the perfect passive participle of the cognate Latin verb and the adjectives have fairly well preserved their perfect passive meaning. Their form indicates that they mean "in the state effected by the action of the verb." On this analogy we can use *ratiolate* as an adjective, and it will mean "apprehended by reason" or "brought about by the faculty of reason." Applied to *being* it will designate "a being constituted by reason and having its existence from the operation of reason." *Ratiolate being* is thus an apt translation of *ens rationis*. Cf. R. W. Schmidt, S. J., "The Translation of Terms like *Ens Rationis*," *Modern Schoolman*, XLI (1963-64), 73-75.

¹⁶ *In IV Met.*, 4, n. 475; cf. *De Nat. Gen.*, c. 3, n. 9 (ed. Perrier): Ens dupliciter dicitur, scilicet naturae et rationis. Ens autem rationis proprie dicitur de illis intentionibus quas ratio in rebus adinvenit; sicut est intentio generis et speciei, quae non inveniuntur in rerum natura sed sequuntur actionem rationis; et huiusmodi ens est subiectum logicae.

¹⁷ *Adinvenire intentiones*: *In I Sent.*, 2, 1, 3 sol.; 25, 1, 1 sol. — *compositionem*: *In II Sent.*, 34, 1, 1 sol. — *rationem speciei*: *De Ente et Ess.*, c. 3, n. 16 (ed. Perrier) — *ordinem*: *De Pot.*, 7, 11 c; *S.T. I*, 28, 1 ad 2 — *relationem*: *De Pot.*, 7, 11 c — *nomina and vocabula*: *S.T.*, I, 37, 1 c; *C.G.*, I, 35 — *artem*: *In VI Met.*, 1, n. 1153; *In I Post. Anal.*, 1, n. 1.

Such intentions or "works of reason" are variously illustrated. Some of the examples given are genus, species, and "the contrary"; also the definition, the proposition, and the syllogism.¹⁸

In the study which logic makes of intentions of this kind there is a double exclusiveness: first, it seems that logic is concerned with nothing else: "Logicus ... considerat intentiones tantum";¹⁹ and secondly, logic is the only science which is concerned with them: "Sunt autem scientiae de rebus, non autem de speciebus vel intentionibus intelligibilibus, nisi sola scientia rationalis."²⁰

Logic is said to be concerned with the intentions of reason which are common to all things; these form its subject:

Et quia circa omnia quae in rebus sunt habet negotiari ratio (logica autem est de operationibus rationis), logica etiam erit de his, quae communia sunt omnibus, idest de intentionibus rationis, quae ad omnes res se habent. Non autem ita quod logica sit de ipsis rebus communibus sicut de subiectis. Considerat enim logica sicut subiecta syllogismum, enuntiationem, praedicatum, et alia huiusmodi.²¹

Although it is said in this passage that logic deals with the acts of reason, *intentions* are expressly said to be its *subject*; and some of the subjects which logic treats of are enumerated as the syllogism, the proposition, and the predicate.

How can the affirmation that intentions are the subject of logic be reconciled with the statement that the acts of reason are the proper matter of logic? Are we to conclude that the intentions of genus and species, syllogisms, propositions, predicates, definitions, ratiolate being, and things as they are in the mind are really the same things as the acts of the mind? They can hardly be identical with the acts since they follow upon the acts: "considerationem rationis consequuntur"; "sequuntur actionem rationis."²² And logic is about things understood *in the second place*: "habet enim maximam difficultatem, cum sit de secundo intellectis."²³ What is understood first is the external real thing; intentions are understood afterwards: "Prima enim intellecta sunt res extra animam, in quae primo intellectus intelligenda fertur. Secunda autem intellecta dicuntur intentiones consequentes modum intelligendi."²⁴ Furthermore, intentions are products of the acts, not the acts

¹⁸ *In De Trin.*, 6, 1 c (prin.); *S.T.*, I-II, 90, 1 ad 2.

¹⁹ *In I Sent.*, 19, 5, 2 ad 1; cf. *In De Trin.*, 6, 3 c (post med.).

²⁰ *In III De An.*, 8, n. 718. Cf. chap. V, note 95.

²¹ *In I Post. Anal.*, 20, n. 5.

²² *In IV Met.*, 4, n. 574 and *De Nat. Gen.*, c. 3, n. 9 (ed. Perrier); cf. *S.T.*, I, 76, 3 ad 4: [intentiones logicae] consequuntur modum intelligendi.

²³ *In De Trin.*, 6, 1, sol. 2 ad 3.

²⁴ *De Pot.*, 7, 9 c.

themselves. They are called an *opus* of the intellect: "Aliud est intelligere rem, et aliud est intelligere ipsam intentionem intellectam, quod intellectus facit dum super suum opus reflectitur."²⁵ While *opus* might possibly bear the meaning of operation in this sentence taken by itself, it cannot have such a meaning either in its context or when taken in conjunction with what was said of logic as an art:

[Artes liberales] non solum habent cognitionem sed opus aliquod, quod est immediate ipsius rationis.²⁶

Ratio speculativa quaedam facit, puta syllogismum, propositionem et alia huiusmodi.²⁷

In operibus rationis est considerare ipsum actum rationis, qui est intelligere et ratiocinari, et aliquid per huiusmodi actum constitutum. Quod quidem in speculativa ratione primo quidem est definitio; secundo, enuntiatio; tertio vero, syllogismus vel argumentatio.²⁸

The point of these texts, as it was that of the whole discussion on logic as an art, is that there is constituted by the operation in some sense a product distinct from the operation which produces it.

Since intentions and acts cannot be identified, what is to be said of the texts which state that logic is concerned with the acts of reason? They must be examined again in order to see if they really assert that acts are the subject of logic. The first, "logica ... est de operationibus rationis," does state that logic is *concerned with* acts or treats of them in some way; but the way is not specified. It is the very same paragraph which affirms that the subjects of logic are the syllogism, the proposition, the predicate, and the like. In the statement of the *Peri Hermeneias*, "eius consideratio versetur circa ea quae *pertinent ad* tres ... operationes rationis," it is not said that acts are the subject, but merely that they are in some way connected with the subject. Even the products of acts "pertain to" the acts. When the commentary on the *Ethics* says that the "ordo quem ratio facit *in proprio actu*" belongs to rational philosophy, it is not directly the acts themselves which it says belong to logic, but the *order* in them. This is explained in the same passage: "puta cum ordinat conceptus suos adinvicem et signa conceptuum, quia sunt voces significativae"; and "[rationalis philosophiae] est considerare ordinem partium orationis adinvicem, et ordinem principiorum ad conclusiones." According to this explanation the things ordered are not the acts themselves, but concepts, terms, parts of a discourse,

²⁵ C.G., IV, 11, Dico; cf. *In De Trin.*, 6, 1 c (prin.).

²⁶ *In De Trin.*, 5, 1 ad 3.

²⁷ S.T., II-II, 47, 2 ad 3.

²⁸ S.T., I-II, 90 1 ad 2.

principles or premises, and conclusions.²⁹ It is these which the text really assigns to logic as the subject of its study.

The most important text dealing with logic and the acts of reason is contained in St. Thomas' "introduction to logic" which begins the commentary on the *Posterior Analytics*. When it refers to logic as an "ars ... directiva ipsius actus rationis," this causes no particular difficulty. Inasmuch as logic is here viewed as an art rather than as a quasi-speculative science, it is properly regarded as concerned with the operation of forming intentions rather than with the intentions as already formed. But this is not to deny that logic deals with intentions; it even implies that reason directs the act for the sake of the product; for "Ars ... dirigit [operationem animae] in factionibus";³⁰ and the operation is "proper opus."³¹ When, however, we meet in the succeeding paragraph the statement that logic is "*circa ipsum actum rationis, sicut circa propriam materiam,*" there would seem to be more difficulty in reconciling it with other assertions, such as that the subjects of logic are the syllogism, the proposition, and the predicate, or intentions of genus and species, or that its subject is *ens rationis*. There would be a contradiction here if *matter* and *subject* meant the same thing, or if a distinct matter and subject were not reconcilable.

There are reasons for concluding, however, that *subject* and *matter* do not mean the same thing in our apparently conflicting texts. When St. Thomas assigns acts as the matter of logic, he is speaking of logic as an art, and therefore as the rational ordering of operations for the formation of a distinct product: "Omnis ars est circa generationem, aut circa constitutionem et complementum operis, quod ponit tamquam finem artis, quae disponit materiam et est etiam circa speculari qualiter aliquid fiat per artem."³² An art works upon a matter and "disposes the matter" by introducing a form into it.³³ We can conclude from this, it seems, that acts of reason are what logic as an art works upon, and the quasi-products resulting from the imposition of forms upon the acts are the intentions or rationate beings.

This conclusion is confirmed by the statement made about logic in

²⁹ "Parts of speech" could refer to grammar, as a branch of "rational science"; more probably logic is meant. See chap. VIII, "The Intention of Attribution," sections "Term of the Second Operation" and "Components of the Proposition."

³⁰ *In I Met.*, 1, n. 34.

³¹ *In I De An.*, 1, n. 3.

³² *In VI Eth.*, 3, n. 1154.

³³ *In I Met.*, 1, n. 26: ... operatio ad inductionem formae; *In II Sent.*, 3, 3, 3 sol. (fin.): ... formam, quam inducit in materiam; 18, 1, 2 sol.: ab arte effluunt formae artificiales in materiam; cf. *In I Sent.*, 36, 1, 1 sol. (fin.); 38, 1, 3 ad 1; *In II Sent.*, 1, 1, 3 ad 5.

the beginning of the commentary on the *Ethics*: it is concerned with the order which reason makes in its own acts ("ordo quem ratio considerando facit in proprio actu"),³⁴ especially in view of the fact that an intention is essentially an *order* or reference set up by the intellect: "Intentio in ratione sua ordinem quemdam unius ad alterum importat. Ordo autem unius ad alterum non est nisi per intellectum, cuius est ordinare."³⁵ Though the acts of reason may be the matter of logic viewed as an art, the intentions or different sorts of order set up by reason in its acts are not the matter but the *subject* of logic as a quasi-speculative science: "et huiusmodi, scilicet ens rationis [i.e., intentiones intelligibiles], est proprie subiectum logicae."³⁶

It is true that the term "matter" may be used even in connection with a science, as was suggested in the discussion of the term "subject" in Chapter I. There it was seen that sciences are constituted and distinguished by the formal rather than the material aspect of their subjects, just as powers and habits are specified by their formal and not their material objects.³⁷ The material object is sometimes referred to as the matter.³⁸ In the same way the material aspect of the subject of a science might be called the matter of that science. Then in logic the acts of reason could be called the matter, just as a stone may be the material object of sight; but the *ratio* or formal aspect under which they would be viewed (and thus the subject of the science) would be the intentions elaborated in these acts by the work of reason.

PREDICATION AND THE TRUE AND THE FALSE

In the passages comparing and distinguishing logic and metaphysics other considerations were assigned to logic besides the acts and intentions of reason. One of these was the manner of predicating: "Logicus ... considerat modum praedicandi."³⁹ Predication is an act of reason ("... quantum ad praedicationem, quae est actus rationis"⁴⁰); but what logic is said to consider is not so much the act itself as the mode of the act or the determination which the act receives. The study of the

³⁴ *In I Eth.*, 1, n. 1; cf. n. 2.

³⁵ *In II Sent.*, 38, 1, 3 sol.

³⁶ *In IV Met.*, 4, n. 574.

³⁷ *Supra*, pp. 12-15.

³⁸ Cf. *Quodl.* III, 27 c: Cum actus recipiat speciem ab obiecto, non recipit speciem ab eo secundum *materiam* obiecti sed secundum rationem obiecti: sicut visio lapidis non recipit speciem a lapide sed a colorato, quod est per se obiectum visus.

³⁹ *In VII Met.*, 17, n. 1658.

⁴⁰ *Ibid.*, 13, n. 1576; cf. *De Nat. Gen.*, c. 3, n. 19 (ed. Perrier): ... quantum ad praedicationem, quae actum rationis dicit.

manner of predication *properly* belongs to logic: "Logice dicit [Aristoteles] se ... dicturum, in quantum investigat ... ex modo praedicandi. Hoc enim ad logicum *proprie* pertinet."⁴¹ Because logic *properly* considers this, it would appear from what was said about the proper subject of a science⁴² that the mode of predication is either a part of the proper subject of logic or another way of referring to it. There is another text which, at first glance, seems to assign to logic the study of predication itself, as an act: "Ad logicam autem communiter pertinet considerare praedicationem universaliter, secundum quod continet sub se praedicationem quae est per se et quae non est per se."⁴³ It is clear from the context, however, that, though the study of predication as an act belongs to logic in some way, it is here explicitly referred to logic according to its modes ("secundum quod ... est per se, et ... non ... per se"); that is, regarding predication logic considers whether it is essential (*per se*) or accidental (*per accidens*). The act of predicating, then, enters into the consideration of logic only under the formality of its modes.

Without going too much into detail in a matter that needs to be investigated later, we can say further that in the above text it is not evident that *praedicatio* is taken in an active sense. For abstract nouns denoting actions are frequently transferred from the active to a passive or objective signification—from the operation to that which is constituted by the operation; as in English "constitution" now most frequently does not mean the act of constituting but that which is constituted; and in Latin "quaestio" means not only the seeking but also what is sought. So *praedicatio* seems sometimes to be used of the proposition constituted by predicating as well as of the predicating itself.⁴⁴ There would then be no conflict between predication and intentions, and no contradiction in the statements assigning both as the subject of logic; for predication would be a particular kind of intention.

And even if predication is to be understood actively in the text quoted, since it is attributed to logic under the aspect of its modes, it is not hard to reconcile with intentions. For the mode of predication is the manner in which we speak of things or attribute one thing to another in thought; and intentions, as will be seen later, are the views

⁴¹ *In VII Met.*, 3, n. 1308.

⁴² Chap. I, pp. 12-15.

⁴³ *In I Post. Anal.*, 35, n. 1.

⁴⁴ *De Ente et Ess.*, c. 3, n. 17 (ed. Perrier): Praedicatio enim est quiddam quod completur per actionem intellectus componentis et dividensis; cf. *In I Post. Anal.*, 35, n. 1: ad logicam autem communiter pertinet considerare praedicationem universaliter. See also chap. VIII, p. 224 and note 94.

which reason takes of things or the way in which we conceive them. In part at least, then, the manner of predicating and intentions appear to correspond in meaning.

More difficulty is caused by another claimant to the title of the subject of logic. *The true and the false* are said to be studied by logic properly and exclusively: "Verum et falsum pertinent proprie ad considerationem logici";⁴⁵ "Tota enim logica videtur esse de ente et non ente sic dicto."⁴⁶ How is this possible since logic is not concerned with existence? "Logicus enim considerat modum praedicandi et *non existentiam rei*."⁴⁷ Even if *existentia rei* in this particular context means only "really existing things," this still gives no escape from the difficulty. If logic, studying as it does rationally being, does not consider things as really existing, even less does it consider the act of existence itself. And yet the true and the false are defined by the existence or non-existence of the thing: "Nam per esse et non esse verum et falsum definitur. Nam verum est cum dicitur esse quod est vel non esse quod non est. Falsum autem, e converso."⁴⁸ Truth in speech or in thought depends upon the existence of the thing as an effect upon a cause: "Veritas quae in anima causatur a rebus, non sequitur aestimationem animae, sed existentiam rei; ex eo enim quod res est vel non est, oratio vera vel falsa dicitur; et intellectus similiter."⁴⁹ Furthermore, it belongs to metaphysics to study the existence of things ("philosophus ... existentiam quaerit rerum"⁵⁰), or things according to their act of being ("res secundum suum esse"⁵¹), and the truth of things ("philosophia prima considerat universalem veritatem entium; ... maxime considerat veritatem"⁵²).

On the other hand, the statement is explicit that metaphysics is not concerned with the true and the false: there are in the mind, not in things; and the science which studies real things as they are outside of the mind does not investigate the principles of the kind of being which signifies the truth of propositions:

Excludit [Aristoteles] ens verum et ens per accidens a principali consideratione huius doctrinae [metaphysicae]; dicens quod compositio et divisio in quibus est

⁴⁵ *In IV Met.*, 17, n. 736.

⁴⁶ *In VI Met.*, 4, n. 1233.

⁴⁷ *In VII Met.*, 17, n. 1658.

⁴⁸ *In IV Met.*, 17, n. 736; cf. n. 740.

⁴⁹ *De Ver.*, 1, 2 ad 3; cf. *De Nat. Gen.*, c. 2, n. 8 (ed. Parrier): Veritas autem propositionis significatur per hoc verbum *est*, quae comparatur ad existentiam rei sicut effectus ad suam causam.

⁵⁰ *Ib VII Met.*, 17, n. 1658.

⁵¹ *In I Sent.*, 19, 5, 2 ad 1.

⁵² *In II Met.*, 1, nn. 273 & 291.

verum et falsum, est in mente, et non in rebus. ... Utrumque est praetermittendum; scilicet ens per accidens et ens quod significat verum.⁵³

Ostendit quod ens per accidens et ens quod significat veritatem propositionis, praetermittendum est in ista scientia [metaphysica]. ... Unde huiusmodi entis non quaeruntur principia in scientia quae considerat de ente quod est extra animam.⁵⁴

A contradiction is inescapable here if the truth referred to in either case means the same thing or if the dependence of logical truth upon the existence of real things means that logic studies this existence. It seems clear enough, however, that truth is taken in different senses. In regard to metaphysics it is *truth in things* which is meant. In the same passage as was quoted to show that metaphysics is the science of truth, this truth is spoken of as shared in by all things and caused by the cause of things, so that the science which studies the most basic causes is most true, or most properly the science of truth:

Nomen autem veritatis non est proprium alicui speciei, sed se habet communiter ad omnia entia. Unde, quia illud quod est causa veritatis est causa communicans cum effectu in nomine et ratione communi, sequitur quod illud quod est posterioribus causa ut sint vera, sit verissimum. ... [Quia] philosophia prima considerat primas causas, sequitur quod ipsa considerat ea quae sunt maxime vera. Unde ipsa est maxime scientia veritatis.⁵⁵

As spoken of here, truth is obviously taken in the first of the three meanings of truth enumerated in the *De Veritate*—not the true as it is in the intellect or the formal constituent of truth, but the foundation of truth which is found in things: “Tripliciter veritas et verum definiri invenitur. Uno modo secundum id quod praecedit rationem veritatis et in quo verum fundatur.”⁵⁶ This is not the truth which is said to be in the human mind, but the truth in things. Any speculative science seeks knowledge of the truth in this sense: “ordinatur ad solam cognitionem veritatis.”⁵⁷ To know a thing is to grasp its truth: “Scire aliquid est perfecte cognoscere ipsum, hoc est perfecte apprehendere veritatem ipsius: eadem enim sunt principia rei et veritatis ipsius.”⁵⁸ Truth is that to which the intellect tends: “verum nominat id in quod tendit intellectus. ... Terminus cognitionis est verum.”⁵⁹ Any knowledge of things is, therefore, knowledge of *truth in things*; and metaphysics, just

⁵³ *In VI Met.*, 4, nn. 1241 & 1242.

⁵⁴ *In XI Met.*, 8, n. 2283.

⁵⁵ *In II Met.*, 2, nn. 294 & 297.

⁵⁶ Q. 1, a. 1 c; see also a. 2.

⁵⁷ *In De Trin.*, 5, 1 ad 4; cf. *In XI Met.*, 7, n. 2265: in eis [scientiis speculativis] quaeritur scire propter seipsum.

⁵⁸ *In I Post. Anal.*, 4, n. 5.

⁵⁹ *S.T.*, I, 16, 1 c.

as any speculative science, is concerned with that truth. When St. Thomas says, then, that metaphysics is the science of truth or that it studies the truth, we can say of him as he says of St. Augustine in a similar question, "loquitur de veritate rei."⁶⁰

This is not to deny that the truth with which metaphysics is concerned has a reference to intellect; for it is this reference to intellect which constitutes truth and distinguishes *the true* from *being*: "Convenientiam vero entis ad intellectum exprimit hoc nomen *verum*. ... Hoc ergo est quod addit verum supra ens, scilicet conformitatem sive adaequationem rei et intellectus."⁶¹ The truth of things adds this conformity to intellect to the very being of the things themselves: "Veritas rerum existentium includit in sui ratione entitatem earum, et superaddit habitudinem adaequationis ad intellectum humanum vel divinum."⁶² As is said here, the reference by which things are said to be true may be either to the human intellect or to the divine intellect; but it is primarily and principally to the divine intellect and only secondarily to the human. For the divine intellect measures the being of the thing, and the thing by existing conforms to the divine intellect. Its truth in this respect is therefore essential to the thing. But the thing measures the human intellect, and the conformity which results is quite accidental to the thing.⁶³ Metaphysics must necessarily be concerned with the truth of things in their reference to the divine intellect since this is constitutive of their very being. It is primarily in this sense that being and the true are coextensive and convertible. A consequence of the conformity of things to the divine intellect is their intelligibility and therefore their potential conformity to created intellects.⁶⁴ With this too metaphysics is concerned, as also with the relation of conformity itself which differentiates the true from being. But the actual operation of human intellects by which they bring themselves into conformity with things, and the entities which they form within themselves as the expression of the things known are not as such within the province of "the science of being as being." Of the four kinds of truth, truth of

⁶⁰ *Ibid.*, ad 1.

⁶¹ *De Ver.*, 1, 1 c (med.).

⁶² *Ibid.*, 1, 8 c.

⁶³ *Ibid.*, 1, 2 c & 4 c: Veritas autem quae dicitur de rebus in comparatione ad intellectum humanum, est rebus quodammodo accidentalis, quia posito quod intellectus humanus non esset nec esse posset, adhuc res in sua essentia permaneret. Sed veritas quae dicitur de eis in comparatione ad intellectum divinum eis inseparabiliter comunicatur; non enim subsistere possunt nisi per intellectum divinum eas in esse producentem. Cf. *S.T.*, I, 16 2 c.

⁶⁴ *De Ver.*, 1, 3 c: [Verum dicitur] de rebus secundum quod adaequantur intellectui divino vel aptae natae sunt adaequari intellectui humano.

judgments, of definitions, of things, and of men,⁶⁵ only the third, truth in things, is directly the concern of metaphysics. The truth of men, or moral truth, is a concern of ethics. The truth of definitions is reduced to the truth of judgments and propositions, and propositions, are the concern of logic.

The truth that is spoken of in the texts assigning to logic the study of the true and the false is the truth of the judgments and propositions formed by the human intellect. Since judgment is an act of the mind, its truth is in the mind, not in things. The context of the passages cited makes this clear: “[Verum et falsum] consequuntur ... ens in ratione de quo considerat logicus: nam verum et falsum sunt in mente. ... Nam verum est cum dicitur esse quod est ... ” etc.⁶⁶ Not only is it said that the true and the false of which there is question here is in the mind, but it is held to arise when expressed: “verum est *cum dicitur* ...” That, of course, implies a proposition. And later in the same lesson the matter that has been under discussion is expressed as “veritas et falsitas propositionis.”⁶⁷

It is obvious that in the passage upon which Aquinas is commenting here, Aristotle is speaking of the human intellect, of the true and the false in the human intellect, and of the human science of logic; and that St. Thomas is keeping this same point of view. *The true* which is spoken of is a being existing in the human intellect and true because conformed to things. Its truth is subsequent to the truth of things deriving from their conformity to the divine intellect.

The context of the other passage quoted is even more explicit in referring the true and the false to judgment and the proposition in the human intellect:

Hoc autem ens quod dicitur quasi verum, et non ens quod dicitur quasi falsum, consistit circa compositionem et divisionem. ... Verum et falsum non sunt in rebus ...; sed sunt tantum in mente, idest in intellectu. ... Unde relinquitur ... quod sit circa compositionem mentis primo et principaliter; et secundario vocis, quae significat conceptionem mentis. ... Ita verum et falsum designant perfectionem cognitionum. ... Et propter hoc dicitur quod verum et falsum sunt in mente. ... Et ideo in hac sola secunda operatione intellectus est veritas et falsitas. ... Ex his igitur patet quod veritas non est in rebus, sed solum in mente, et etiam in compositione et divisione. ... Entis veri causa est ... operatio intellectus componentis et dividensis.⁶⁸

The true is, furthermore, referred to explicitly as an intention in the

⁶⁵ *Ibid.* (ad fin.).

⁶⁶ *In IV Met.*, 17, n. 736.

⁶⁷ *Ibid.*, n. 745.

⁶⁸ *In VI Met.*, 4, nn. 1223, 1231, 1232-36, 1242; see also nn. 1225, 1227, & 1230.

mind: "Verum est intentio quaedam quasi in mente existens."⁶⁹ The true with which logic is concerned is accordingly a logical intention, a rationally being, an *ens verum* expressed by the intellect, of which the whole existence is to be true and the function is to signify the truth of things; and this is the proposition, as will be explained more fully in Chapter VIII. Logic is not concerned with the meaning or formal constituent of truth itself, with the true as a transcendental convertible with being, or with the truth of things, as metaphysics views truth.

Against this distinction two difficulties can be raised. The first is that metaphysics is interested not only in the truth of things but also in the knowledge of truth from the viewpoint of knowledge, and therefore in truth as it is in the mind; for it is expressly stated that it is the business of the metaphysician to investigate man's relation to the knowledge of truth: "ad hunc philosophum pertinet considerare quomodo se habeat homo ad veritatem cognoscendam."⁷⁰

The solution of this difficulty is found in the context of the passage cited. The point at issue is the facility and difficulty of knowing the truth of things, and primarily the intelligibility of things in our regard and what kind of things we properly know. Some truth is within the grasp of all men, at least that of the first principles. The difficulty which we undeniably meet in knowing can be traced either to the things to be known, inasmuch as some of them are themselves in good measure unintelligible, or (more fundamentally) to our intellect, which is not sufficiently proportioned to certain kinds of beings, more perfect than ourselves, for it to have a proper quidditative knowledge of them.⁷¹ Now it cannot be denied that the truth of human cognition is involved in this passage. But there is still a difference in the attitude toward truth here indicated and that which is proper to logic. The concern with human knowledge in this passage is terminative or objective; that is, the question is about the object of our knowledge and the real being in which our cognition terminates. It is not about the complex expression of this thing formed within the intellect which is called a proposition and which is itself formally and necessarily either true or false. It is the true and the false in this latter sense, namely, the being formed within the intellect to express the truth of things, with which logic deals.

The second difficulty arises from the fact that even formal logical

⁶⁹ *De Malo*, 6, 1 ad 12.

⁷⁰ *In II Met.*, 1, n. 273.

⁷¹ Nn. 274-288.

truth depends upon the being and non-being of things, the study of which is excluded from logic. But it must be said that reference to the being and non-being of things cannot be excluded from logic in every sense if the explicit statements which we have seen are to be saved, and if demonstration is to be a part of logic, as is unequivocally held;⁷² for demonstration is concerned with the truth of its premises and conclusions:

Scire est finis syllogismi demonstrativi sive effectus eius, cum scire nihil aliud esse videtur quam intelligere veritatem alicuius conclusionis per demonstrationem. ... Necessse est quod demonstrativa scientia ... procedat ex propositionibus veris, primis, et immediatis.⁷³

There is, however, a difference between directly investigating a matter to analyze or establish it, and presupposing the same matter as already established in order to refer something else to it. It is not the same thing to study the being of things and, assuming their being, to refer something to these real beings. Logic does not make the existence of things the subject of its study, as metaphysics does.⁷⁴ The only concern of logic with the act of being exercised by real things is to refer its own intentions and compositions to the real things which it presupposes, accepting from metaphysics their reality and the fact that they have the act of real being. In this respect we see a certain similarity with natural philosophy, which does not study the reality of its subject but presupposes it, considering only its "passions" or properties. Logic is like this inasmuch as it presupposes the reality of things, but it differs from natural science in not studying these real things but only the relations which the mind establishes to things and among these relations themselves.⁷⁵

"FORMAL" AND "MATERIAL" LOGIC

The question of the relation of logic to truth and falsity, and consequently of its relation to the existence and non-existence of things, suggests another related question: Is logic merely formal, or is it also material? That is to say, does it entirely disregard what the things are of which it forms intentions, and consider only the order of the intentions among themselves, or do the things of which the intentions are formed also enter into its consideration? Such a distinction of "formal"

⁷² *In I Post. Anal.*, 1, n. 6.

⁷³ *Ibid.*, 4, nn. 9 & 10.

⁷⁴ *In VI Met.*, 1, n. 1151.

⁷⁵ See below, chap. VIII.

and "material" logic is sometimes made: things that are to be known are considered the *matter* of thought, and the manner and order in which the objects of thought are disposed are considered the *form* of thought. Some go so far as to say that logic properly so called, or "formal logic," completely abstracts from any relation to reality or to the contents of thought.⁷⁶ Others, somewhat more moderate and less subjectivistic, distinguish in logic two parts, one, called *formal logic*, which treats of the forms or intentions of thought, and another, called *material logic*, which takes into account besides the form of thought also its content—the things which are known and disposed.⁷⁷ The question of interest here is whether the logic of St. Thomas has these two parts, or whether he treats logic as only formal, or whether the distinction is not to be made at all.

St. Thomas seems to say that logic is only formal: "logicus et mathematicus considerant tantum res secundum principia formalia."⁷⁸ But is "formal" meant in either sense explained above? The denial to logic of all reference to reality could obviously not be intended since St. Thomas holds that logic is concerned with truth and falsity and with intentions that are at least remotely referred to the real. But what of the more moderate view? According to this, form means the mode and disposition of thought, the genera and species of concepts, propositions, and syllogisms, and the relations between them; matter means the things which are known and about which thought is exercised, concepts are had, propositions formed, and syllogisms made.

This is approximately the sense of the distinction which Aquinas makes between matter and form as applied to the syllogism:

Certitudo autem iudicii, quae per resolutionem habetur, est vel ex ipsa *forma* syllogismi tantum, et ad hoc ordinatur liber *Priorum Analyticorum*, qui est de syllogismo simpliciter; vel etiam cum hoc ex *materia*, quia sumuntur proposi-

⁷⁶ Cf. Ueberweg: "Viele (z.B. Steinthal, *Gramm., Log., und Psychol.*, Berlin, 1855, S. 146) [deuten] den Ausdruck 'formale Logik' so, als ob derselbe nothwendigerweise die Abstraction von jeder Beziehung zur Wirklichkeit involvire" (*System der Logik*, 5th ed. Bonn: Adolph Marcus, 1882, p. 4). Logic so viewed, which he says is directed only to the subjective agreement of thought with itself, he calls subjectivistically formal. It is especially those under Kantian influence who hold this view.

⁷⁷ So one of Aquinas' principal commentators, John of St. Thomas, *Ars Logica*, Praeludium Secundum, p. 5 a-b: *Materia sunt res seu objecta, quae volumus recte cognoscere. Forma autem est ipse modus seu dispositio, qua connectuntur objecta cognita, quia sine connexion nec veritas aliqua concipitur, nec ex una veritate ad aliam fit discursus et illatio.*—Part I is devoted to "formal" logic; Part II to "material" logic. In the Proömium of Part II (p. 250 a), he explains the difference between the two parts: *Expeditis in prima parte Logicae his, quae ad formam ratiocinandi et resolutionem prioristicam spectant, restat in hac secunda parte ad complementum totius artis agere de materia illius, quae pertinet ad resolutionem posterioristicam.*

⁷⁸ *De Pot.*, 6, 1 ad 11.

tiones per se et necessariae, et ad hoc ordinatur liber *Posteriorum Analyticorum*, qui est de syllogismo demonstrativo.⁷⁹

Here the form of the syllogism applies to the relation of the propositions and conclusion and is truly a form of thought; the matter of the syllogism applies to the kind of propositions related.

But this is not the meaning of "form" when St. Thomas says that logic deals with "formal principles." He does not, in the first place, say "considerant *principia formalia* tantum" but "considerant *res secundum principia formalia*." Since logic considers things, even though only from the point of view of their formal principles, it considers "matter" in the sense explained. And secondly, the parallel between mathematics and logic is against interpreting as forms of the mind the formal principles with which logic deals, because mathematics is not concerned merely with forms of the mind but with things viewed in the second kind of abstraction outlined where the speculative sciences were distinguished. But the most important and most pertinent reason against such an interpretation of "formal" is found in the context in which the statement quoted is situated.

The question under discussion in this passage⁸⁰ is whether God can produce effects in nature beyond natural causes or contrary to the ordinary course of nature. An argument is considered which seemingly shows that He cannot: nature is from God just as reason is: but God cannot operate contrary to the principles of human reason (so that genus would not be predicated of species, for instance, or that the side of a square would be equal to its diagonal); therefore, neither can He act contrary to the principles of nature.

The reply to this argument is that the impossibility attendant upon principles of reason is based on repugnance to the formal constituents of the thing in question, and therefore on internal contradiction; but impossibility in regard to natural principles is based on the potency of a particular matter. The whole reply bears quoting:

Logicus et mathematicus considerant tantum res secundum principia formalia; unde nihil est impossibile in logicis vel mathematicis nisi quod est contra rei formalem rationem. Et huiusmodi impossibile in se contradictionem claudit, et sic est per se impossibile. Naturalis autem applicat ad determinatam materiam; unde reputat impossibile etiam id quod est huic impossibile. Nihil autem prohibet Deum posse facere quae sunt inferioribus agentibus impossibilia.

Physical impossibility where there is no intrinsic contradiction is illus-

⁷⁹ *In I Post. Anal.*, 1, n. 6.

⁸⁰ *De Pot.*, 6, 1 ob. 11.

trated in the body of the same article as the regaining of sight by a blind man: "aliquam novam formam inducit rebus naturalibus quam natura inducere non potest ... huic materiae, sicut visum in caeco." It is not within the potency of the particular matter of that man to regain sight. Logic, however, is not concerned with determined matter, but only with the determination which comes from form.

The meaning of possibility and impossibility in regard to logic is explained in the commentary on the *Metaphysics*. Speaking of the meanings of potency, Aquinas says:

In logicis dicimus aliqua esse possibilis et impossibilia, non propter aliquam potentiam, sed eo quod aliquo modo sunt aut non sunt. Possibilia enim dicuntur quorum opposita contingit esse vera. Impossibilia quorum opposita non contingit esse vera. Et haec diversitas est propter habitudinem praedicati ad subiectum, quod quandoque est repugnans subiecto, sicut in impossibilibus; quandoque vero non, sicut in possibilibus.⁸¹

Logical impossibility is the repugnance of the predicate to its subject; and possibility, its compatibility. Repugnance or non-repugnance does not depend merely on a form of the mental act of predicating, that is, on the mere fact of its being a predicate to a subject, but on the *meaning* of the subject and predicate, and therefore on the *things* they refer to. For this reason *matter*, as it was defined above, is involved in meaning. But meaning depends on the "formal principles," the definition or quiddity of the thing.

Other texts help to clear up the meaning of formal principles. In a context closely parallel to the passage just discussed from the *De Potentia*, this one also examining God's power of working beyond the ordinary course of nature, we again find the teaching that logical possibility and impossibility depend on the formal principles of things and that the principles of logic are taken from these formal principles:

Cum principia quarumdam scientiarum, ut *logicae*, geometriae et arithmeticae, sumantur a solis principiis formalibus rerum, ex quibus essentia rei dependet, sequitur quod contraria horum principiorum Deus facere non possit; sicut quod genus non sit praedicabile; vel quod lineae ductae a centro ad circumferentiam non sint aequales.⁸²

Here again the formal principles in question are not those of the mind but of things. So thoroughly are they in things that the essence of the things depends upon them. This is because they are derived from the form of the thing, as appears in a passage which speaks of abstraction and the priority of universals in cognition:

⁸¹ *In IX Met.*, 1, n. 1775.

⁸² *C.G.*, II, 25, Praeterea².

Si autem consideremus ipsam naturam generis et speciei prout est in singularibus, sic quodammodo habet rationem *principii formalis* respectu singularium; nam singulare est propter materiam, ratio autem speciei sumitur a forma.⁸³

The whole purpose of this text is to show that genus and species are derived from form, not from matter. And since “formal principle” is made analogously (*quodammodo*) equivalent to the nature of the genus or species, formal principles are associated with form and not with matter (in the physical sense of matter, and not in the transferred meaning which is sometimes assigned to it in regard to logic). The notion or intelligible constituent (*ratio*) of a species is derived from the form; and that means, of course, from the form of the thing and not from some form of the mind.

That such is the meaning of the formal principles with which logic deals is made clear in another passage in which logical and physical definitions are distinguished:

Physicus [in definiendo] assignat materiam. ... Dialecticus ponit speciem et rationem. ... Una [definitio] assignat speciem et speciei rationem, et est *formalis tantum*, sicut si definiatur domus quod sit operimentum prohibens a ventis et imbribus et caumatibus.⁸⁴

The type of definition which gives the species and the intelligible basis of the species (*ratio speciei*) and is purely *formal* is proper to logic. A definition is physical if it gives only the matter, as when a house is defined as a “shelter made of stones, brick, and wood,” or if it gives the form in a determined matter, as the definition of a house as a shelter of such material, of such a pattern, for such a purpose. The next paragraph explains that the logician is interested only in the form of the thing; and only the natural philosopher studies the matter: “Illa quae considerat formam tantum non est naturalis sed *logica*. Illa autem quae est circa materiam, ignorat autem formam, nullius est nisi naturalis. Nullus enim habet considerare materiam nisi naturalis.” Logic, this makes quite clear, is not concerned with matter in the strict physical sense, as the potency of sensible being. But this is not to say that it is not concerned with “matter” in the broad sense sometimes applied to logic, as meaning “that about which” knowledge is had.

A passage in the *Sentences* discussing whether God knows singulars explains more fully what “formal principles” are:

Sed quia nos ponimus Deum immediate operantem in rebus omnibus, et ab ipso esse non solum *principia formalia* sed etiam materiam rei; ideo per essentiam

⁸³ *S.T.*, I, 85, 3 ad 4.

⁸⁴ *In I De An.*, 2, nn. 24 & 26.

suam, sicut per causam, totum quod est in re cognoscit, et formalia et materialia; unde non tantum cognoscit res secundum naturas universales, sed secundum quod sunt individuatae per materiam; sicut aedificator si per formam artis domum, quantum ad materiam et formam, per formam artis quam habet apud se cognosceret domum hanc et illam: sed quia per artem suam non inducit nisi formam, ideo ars sua est solum similitudo formae domus; unde non potest per eam cognoscere hanc domum vel illam, nisi per aliquid acceptum a sensu.⁸⁵

The whole being in question is made up of its formal and material principles (*formalia et materialia*). The material principles are the same thing as matter, as is shown by the fact that they are contrasted with formal principles just as matter is. The comparison of the formal principles to the form which an artificer introduces into the matter of his artifact, and the contrast made of them with matter show that they are considered to be the form. At the same time the formal principles are treated as equivalent to universal natures. They are not exactly the same as the form in the exclusive sense in which form is opposed to matter; but, though they include the matter of composite beings, they abstract from any particular matter and are therefore the same as the form understood in intelligible matter or taken along with its exigency for matter. This is what is elsewhere called "the form of the whole" (*forma totius*).⁸⁶ It is the essence; for the essence is compared to the particular substance as its formal part.⁸⁷

When we are told, therefore, that logic considers things only according to their formal principles, we may conclude that it is "formal" in a certain sense. Directly this would mean that logic disregards individuating matter and looks at things only from the point of view of their universal natures, quiddities, or essences, that is, under the aspect of the intelligibility deriving from their forms. There is also a second and more proper sense (which will become clearer in subsequent chapters) in which logic is formal. In dealing with the formal principles or natures of things the intellect forms certain special views, intentions, or ratio-

⁸⁵ *In I Sent.*, 36, 1, 1 sol. (fin.).

⁸⁶ *In VII Met.*, 9, n. 1469: forma totius, quae est ipsa quidditas speciei, differt a forma partis sicut totum a parte: nam quidditas speciei est composita ex materia et forma, non tamen ex hac forma et ex hac materia individua; *In IV Sent.*, 44, 1, 1, sol. 2 ad 2: et haec forma totius essentia vel quidditas dicitur; cf. *Quodl.* IX, 2 ad 4; II, 4 c; *De Ente et Ess.*, c. 2, n. 12 (ed. Perrier).

⁸⁷ *De Pot.*, 9, 1 c (med.): comparatur ergo essentia ad substantiam particularem ut pars formalis ipsius, ut humanitas ad Socratem; cf. *Quodl.* II, 4 c: suppositum signatur per totum, natura autem, sive quidditas, ut pars formalis; *C.G.*, I, 21, Item: Unde et per modum formae significatur essentia, ut puta *humanitas*; *In VII Met.*, 5, nn. 1378 & 1379: humanitas accipitur ut principium formale eius quod est *quod quid erat esse*. ... Et ideo homo significat ut totum, humanitas significat ut pars; *S.T.*, I, 3, 3 c: humanitas significatur ut pars formalis hominis, quia principia definitiva habent se formaliter respectu materiae individuantis.

nate beings about these apprehended natures. Logic is concerned with the natures of things under the aspect or formality of these intentions or rationally beings: it looks at the natures as having these forms or at the forms with which the intellect has clothed these natures. These are indeed mental forms, but by no means empty forms of the mind or forms wholly independent of things. Consequently, in Aquinas' view, logic can certainly not be said to be formal in the sense that it studies empty mental forms or totally disregards what is in the mental forms that it properly studies. And even the distinction of formal and material logic that is attributed to St. Thomas appears only in the part dealing with the third operation of the mind, reasoning, inasmuch as he says that the products of this operation, syllogisms, may be viewed either formally or materially.⁸⁸ He does not make this distinction in regard to the rest of logic or to logic as a whole, and it seems that it would not equally apply.⁸⁹

The whole of logic, even the most "material" part, the logic of demonstration, is formal in the sense that it is concerned with the formal principles of things and with the mental forms with which the intellect invests these. But not even the most formal consideration of these mental forms, intentions and rationally beings, can disregard the natures of things to which they are attached and on which they depend.

Viewed materially, the objects with which logic is concerned are the things apprehended and the mental operations by which they are

⁸⁸ *In I Post. Anal.*, 1, n. 6.

⁸⁹ The reason for this is involved in points to be examined more fully later, especially the nature of intentions, and the intentions of universality and of attribution in particular. The intentions with which the third part of logic deals, intentions of consequence, depend upon and are constituted by intentions of universality and of attribution. Since even intentions of universality are only remotely founded in reality, it is apparent that the intention of consequence is considerably farther removed from reality still. Therefore the mental or rational element increases as we recede from direct apprehension. A direct concept which abstracted from all content would be nothing, and to speak of such a thing would be meaningless. Though we can generalize about the relations of direct concepts among themselves and to things, we cannot treat these relations as independent of content; for it is the very content of the concepts, the apprehended natures, which are related. Thus even second intentions cannot be considered from a purely formal point of view. Propositions, too, since they express the relations actually perceived between concepts, cannot abstract formally from the apprehended natures thus related. Even the study of syllogisms cannot totally prescind from the meaning of their terms and premises; otherwise the relation of the terms could not be perceived. But because the immediate matter in syllogisms is propositions, and not the real natures signified in the terms which go to make up the propositions, and because propositions are rationally beings, syllogisms can be considered, to a certain extent and *partially*, from the point of view of the necessary relations of propositions and subjects and predicates, regardless of what in particular they may mean. Even here, however, such formal treatment necessarily remains incomplete until supplemented by the consideration of the kind of propositions involved and the meaning of the terms.

apprehended. Viewed formally, they are the intentions or rationally formed beings which are formed by the operations of the intellect and in which the things apprehended are considered.

These rationally formed beings and intentions founded on the quiddities and essences of things are accordingly the proper subject which the science of logic studies.

PART II

THE NATURE OF THE SUBJECT OF LOGIC

From the investigation undertaken in Part I it is clear that St. Thomas Aquinas teaches that the proper subject of logic is rationally being (*ens rationis*) or certain intentions of reason. Also given as the subject of logic were the modes of predication and the true and the false. As has already been briefly indicated and as will be shown more fully in Chapter VIII, the two last-named claimants of the logician's attention are both really intentions. And intentions themselves are not a different subject from rationally being, but in fact one and the same. Logic is said to deal with rationally being, and this kind of being is said to be an intention of reason. For a fuller understanding of Aquinas' doctrine on the subject of logic and the precise nature of this subject, it is necessary to investigate more closely what he says of rationally being and of intentions. The meaning of each term and the nature of the entity which each signifies must be culled from his scattered remarks. Finally a study must be made of the element which is common to both rationally being and intentions and is the reason for their identification.

CHAPTER IV

RATIONATE BEING

NON-BEING AND BEING IN THOUGHT

In the ninth lesson commenting on the fifth book of Aristotle's *Metaphysics*, St. Thomas distinguishes the different ways in which being is spoken of, that is to say, the different modes of being. First, accidental being (*ens per accidens*) is distinguished from essential being or being in its own right (*ens per se*). The latter kind of being is then distinguished according to three modes: (1) external, real being, (2) mental being, and (3) actual and potential being:

Distinguit [Philosophus] modum entis per se: et circa hoc tria facit. Primo distinguit ens quod est extra animam per decem praedicamenta, quod est ens perfectum. Secundo ponit alium modum entis, secundum quod est tantum in mente. ... Tertio dividit ens per potentiam et actum.¹

¹ *In V Met.*, 9, n. 889. The distinction between the first mode of being as here given, that is, being as it is divided according to the ten categories, and the second mode, or being which is only in the mind, is often made:

C.G., I, 68: Ens autem quoddam in anima est, quoddam vero in rebus extra animam. ... Ens autem in anima est quod est in voluntate vel cogitatione; III, 9 (fin.): Ens enim dupliciter dicitur. ... Uno modo secundum quod significat essentiam rei, et dividitur per decem praedicamenta. ... Alio modo secundum quod significat veritatem compositionis.

In II Sent., 34, 1. 1 sol.: Ens multipliciter dicitur. Uno modo dicitur ens quod per decem genera dividitur: et sic ens significat aliquid in natura existens, sive sit substantia, ut homo, sive accidens, ut color. Alio modo dicitur ens quod significat veritatem propositionis; prout dicitur quod affirmatio est vera quando significat esse de eo quod est; et negatio, quando significat non esse de eo quod non est.

De Pot., 7, 2 ad 1: Ens et esse dicitur dupliciter. ... Quandoque enim significat essentiam rei, sive actum essendi; quandoque vero significat veritatem propositionis, etiam in his quae esse non habent; sicut dicimus quod caecitas est, quia verum est hominem esse caecum.

S.T., I, 48, 2 ad 2: Ens dicitur dupliciter. Uno modo secundum quod significat entitatem rei, prout dividitur per decem praedicamenta, et sic convertitur cum re. Et hoc modo nulla privatio est ens. ... Alio modo dicitur ens quod significat veritatem propositionis, quae in compositione consistit, cuius nota est hoc verbum *est*. Et hoc est ens quo respondetur ad quaestionem *an est*. Et sic caecitatem dicimus esse in oculo, vel quamcumque aliam privationem.

De Ente et Ess., c. 1: Ens per se dicitur dupliciter: uno modo quod dividitur per decem genera; alio modo quod significat propositionum veritatem. Horum autem differentia est quia secundo modo potest dici ens omne illud de quo affirmativa propositio formari

The second mode of being *per se*, that which is only in the mind, is the mental or rationally being said to be the subject of logic.

It is explained later in the same lesson that being in this sense is the being of truth in a proposition, inasmuch as "to be" and "is" signify the composition of a proposition. The truth thus expressed may be founded on the real existence of something in reality; or on the other hand the whole being of what is thought of may be derived from the simple fact that it is made the object of thought. From the point of view of reality such an object of thought is non-being, but it is conceived as a sort of being:

Ex hoc enim quod aliquid in rerum natura est, sequitur veritas et falsitas in propositione, quam intellectus significat per hoc verbum *est* prout est verbalis copula. Sed quia aliquid quod est in se non ens intellectus considerat ut quoddam ens, sicut negationem et huiusmodi, ideo quandoque dicitur esse de aliquo hoc secundo modo et non primo. Dicitur enim quod caecitas est secundo modo, ex eo quod vera est propositio qua dicitur aliquid esse caecum; non tamen dicitur quod sit primo modo vera. Nam caecitas non habet aliquod esse in rebus, sed magis est privatio alicuius esse.²

What is considered by the intellect as a sort of being may not really have existence at all; and in that case it is "in itself non-being." But because it is considered by the intellect and thus exists in thought, it is at least a rationally being. Examples given here are negation and privation, which are generically the same since privation is but a species of negation. Like simple negation, privation is a denial of the presence of something; but it adds the further note of denying what should be present in a given subject, as blindness is the absence of sight in a subject that should normally have the power of seeing:

Negatio autem est duplex: quaedam simplex per quam absolute dicitur quod hoc non inest illi. Alia est negatio in genere, per quam aliquid non absolute negatur sed infra metas alicuius generis, sicut caecum dicitur non simpliciter quod non habet visum, sed infra genus animalis quod natum est habere visum. ... Negatio dicit tantum absentiam alicuius, scilicet quod removet, sine hoc quod determinat subiectum. ... Non videns enim potest dici tam chimera quam lapis quam etiam homo. Sed in privatione est quaedam natura vel substantia determinata de qua dicitur privatio: non enim omne non videns potest dici caecum, sed solum quod est natum habere visum.³

Not only from these texts but from the very notions themselves it is evident that negation and privation are forms of non-being.

potest, etiamsi illud in re nihil ponat; per quam modum privationes et negationes entia dicuntur.

¹ *In IV Met.*, 4, n. 574: Ens est duplex: ens scilicet rationis et ens naturae.

De Nat. Gen., c. 3, n. 9 (ed. Perrier): Ens dupliciter dicitur, scilicet naturae et rationis.

² *In V Met.*, 9, n. 896.

³ *In IV Met.*, 3, n. 565; cf. *S.T.*, I, 11, 1 ad 1: privatio est negatio in subiecto.

Two kinds of non-being are distinguished: one includes non-existence in its notion or definition; the other actually does not have real existence but does not include non-existence in its definition:

Aliquid dicitur non ens dupliciter. Uno modo quia non esse cadit in definitione eius, sicut caecitas dicitur non esse; et talis entis non potest concipi aliqua forma neque in intellectu neque in imaginatione; et huiusmodi non ens est malum. Alio modo, quia non invenitur in rerum natura, quamvis ipsa privatio entitatis non claudatur in eius definitione; et sic nihil prohibet imaginari non entia et eorum formas concipere.⁴

The first kind of non-being spoken of is privation, as is shown by the example used, which is blindness. Simple negation would also be included since it is an even more complete denial of being than privation, not even implying a determined subject.⁵ The second kind of non-being is a fiction, that is, anything that is spoken of or conceived which does not have real being.

If rationate being is “in itself non-being” (“quod est in se non ens”), there arises a difficulty about referring to it as being at all, because being implies existence and “rationate” implicity denies it. The word *being* is taken from the act of being or existing,⁶ and means that which has the act of being (“Ens dicitur quasi habens esse”),⁷ or whose act is to be (“Ens igitur est cuius actus est esse”).⁸ But a rationate being (*ens rationis*) by its very notion does not exist except in thought (“in sola cogitatione”).⁹

Among the modes of being (as is explained in another classification having as its basis firmness in being) the weakest is that which exists only in reason: “Praedicti modi essendi ad quatuor possunt reduci. Nam unum eorum quod est debilissimum est tantum in ratione, scilicet negatio et privatio, quam dicimus in ratione esse quia ratio de eis

⁴ *De Ver.*, 3, 4 ad 6.

⁵ Cf. *In XII Met.*, 2, n. 2437 (The point in question is what kind of non-being is meant when it is said that generation is a passage from non-being to being): Dicitur enim non ens tripliciter. Uno modo quod nullo modo est; et ex tali non ente fit generatio, quia ex nihilo nihil fit secundam naturam. Alio modo dicitur non ens ipsa privatio, quae consideratur in aliquo subiecto: et ex tali non ente fit quidem generatio, sed per accidens, inquantum scilicet generatio fit ex subiecto cui accidit privatio. Tertio modo dicitur non ens ipsa materia, quae, quantum est de se, non est ens actu sed ens potentia. Et ex tali non ente fit generatio per se. Et hoc est quod dicit, quod si aliquid non ens est ens in potentia, ex tali, scilicet non ente, fit generatio per se.

⁶ *De Ver.*, 1, 1 c & ad 3 in contr.; cf. *In I Sent.*, 8, 1, 1 sol.; *In IV Met.*, 2, n. 558.

⁷ *In XII Met.*, 1, n. 2419; cf. *In II Sent.*, 37, 1, 1 sol.: dicitur ... ens ... secundum quod habet esse.

⁸ *De Nat. Gen.*, c. 1, n. 1; cf. *Quodl.* IX, 3 c: esse dicitur actus entis inquantum est ens, id est quo denominatur ens actu in rerum natura.

⁹ *In De Div. Nom.*, V, 2, n. 655 (ed. Pera): Quintus gradus [entium] est eorum quae non sunt in rerum natura sed in sola cogitatione, quae dicuntur entia rationis, ut genus, species, opinio et huiusmodi.

negotiatum quasi de quibusdam entibus.”¹⁰ What is nothing at all in the order of reality but is treated as being by reason is called a “being of reason”: “Illud quod non est ens in rerum natura accipitur ut ens in ratione; unde negationes et privationes entia dicuntur rationis.”¹¹ Such objects of thought have a very tenuous claim upon the title of being if they have any at all. They do not even properly have essence or intelligibility of themselves: “Non entis non est aliqua quidditas vel essentia”;¹² “Non ens non habet in se unde cognoscatur, sed cognoscitur in quantum intellectus facit illud intelligibile.”¹³ How then can they even be thought of? Not only is being the first thing that is conceived by the intellect: “Illud quod primo cadit in apprehensione intellectus est ens”;¹⁴ it is the aspect under which all things are apprehended:

Illud autem quod primo intellectus concipit quasi notissimum et in quo omnes conceptiones resolvit est ens,¹⁵

... cuius intellectus includitur in omnibus quaecumque quis apprehendit;¹⁶

Intellectus autem respicit suum obiectum secundum communem rationem entis.¹⁷

Being is therefore the intellect’s formal object: “Primum autem principium formale est ens et verum universale, quod est obiectum intellectus,”¹⁸ and its proper object: “Quia secundum hoc unumquodque cognoscibile est in quantum est actu; unde ens est proprium obiectum intellectus; et sic est primum intelligibile.”¹⁹ Whatever is or can be, is intelligible and is the object of the intellect: “Est enim proprium obiectum intellectus ens intelligibile, quod quidem comprehendit omnes differentias et species entis possibles; quidquid enim esse potest, intelligi potest.”²⁰ Everything, therefore, which we grasp intellectually

¹⁰ *In IV Met.*, 1, nn. 540-43. The others modes are generation (or tendency to substance), accidents (or properties of substance), and finally substance itself.

¹¹ *S.T.*, I-II, 8, 1 ad 3.

¹² *In II Post. Anal.*, 6, n. 2.

¹³ *S.T.*, I, 16, 3 ad 2; cf. *In I Post. Anal.*, 2, n. 5: non entium enim non sunt definitiones; *In II Sent.*, 34, 1, 1 sol.: nec tamen caecitas aliquid est in rerum natura; *De Ente et Ess.*, c. 1, n. 2: potest dici ens etiamsi illud in re nihil ponat; *De Nat. Gen.*, c. 1, n. 1: etsi essentiam non habeat; *De Ver.*, 1, 5 ad 2; 8 c.

¹⁴ *De Ver.*, 21, 4 ad 4; cf. 1 c; *De Ente et Ess.*, c. 1, n. 1; *In I Sent.*, 8, 1, 3; 24, 1, 3 ad 2; 19, 5, 1 ad 2; *S.T.*, I, 11, 2 ad 4.

¹⁵ *De Ver.*, 1, 1 c.

¹⁶ *S.T.*, I-II, 94, 2 c.

¹⁷ *S.T.*, I, 79, 7 c; cf. 51, 1 c; 82, 4 ad 1; 87, 3 ad 1; 105, 4 c; I-II, 10, 1 ad 3; *C.G.*, II, 83, Adhuc⁶; *In I Sent.*, 38, 1, 4 ad 4: quidquid cognoscitur, cognoscitur ut ens.

¹⁸ *S.T.*, I-II, 9, 1 c.

¹⁹ *S.T.*, I, 5, 2 c; cf. *In De Trin.*, 5, 2 c: cum unaquaeque res sit intelligibilis secundum quod est actu ...; *In IX Met.*, 10, n. 1894: Et huius causa est, quia intellectus actus est. Et ideo ea quae intelliguntur, oportet esse actu; *S.T.*, III, 10, 3 c.

²⁰ *C.G.*, II, 98, Hoc autem.

we grasp as being: "Unde unicuique apprehenso attribuimus quod est ens."²¹

But we do speak of many things which do not exist in the order of nature, whether they are pure fictions such as unicorns and centaurs, or logical constructs such as propositions and syllogisms, or the removal of being such as negations and privations. To do so we must know such things somehow or other; and so they must be beings in some sense. We cannot know or form propositions except of being; and yet whatever we do form propositions of, whether its exist in nature or not, must somehow be said to be a being in so far as it is apprehended by the intellect:

Ens aliquomodo dicitur de non ente, secundum quod non ens est apprehensum ab intellectu; unde ... dicit Philosophus quod negatio vel privatio entis uno modo dicitur ens; unde etiam Avicenna dicit ... quod non potest formari enuntiatio nisi de ente, quia oportet illud de quo propositio formatur esse apprehensum sub intellectu; ex quo patet quod omne verum est aliquo modo ens.²²

Though we cannot speak of absolute non-being, the very fact that we do conceive and speak of what does not actually exist in nature, gives such objects existence, at least in the mind:

De eo quod nullo modo est non potest aliquid enuntiari: ad minus enim oportet quod illud de quo aliquid enuntiatur sit apprehensum; et ita habet aliquod esse ad minus in intellectu apprehendente; et ita constat quod semper veritati respondet aliquod esse; nec oportet quod semper respondeat sibi esse in re extra animam, cum ratio veritatis compleatur in ratione animae.²³

Such existence in the mind suffices for these objects of thought to be called beings.

Even negation and privation are conceived as being and are known through the positive being which they deny or remove in thought:

Inter ... prima maxime primum est ens; et ideo oportet quod positive praediceatur; negatio enim vel privatio non potest esse primum quod intellectu concipitur, cum semper quod negatur vel privatur sit de intellectu negationis et privationis.²⁴

And real non-being becomes rationate being by being thought, deriving its existence and its actual intelligibility from the operation of the intellect:

²¹ *S.T.*, I-II, 55, 4 ad 1.

²² *De Ver.*, 1, 1 ad 7. Aristotle, *Met.*, I, 2, 1003a 32 - b 10. Avicenna, *Met.*, tr. I, c. 6, fol. 72vb (Venice, 1508).

²³ *In I Sent.*, 19, 5, 1 ad 5; cf. 38, 1, 4 sol.: quidquid cognoscitur oportet esse, ad minus in ipso cognoscente.

²⁴ *De Pot.*, 9, 7 ad 6; cf. 7, 5 c (med.): Intellectus negationis semper fundatur in aliqua affirmatione.

Non ens non habet in se unde cognoscatur; sed cognoscitur in quantum intellectus facit illud cognoscibile. Unde verum fundatur in ente, in quantum non ens est quoddam ens rationis, apprehensum scilicet a ratione.²⁵

Since everything conceived by the intellect is conceived from the first as being and reduced to being, even what is non-being in reality is made to be in reason and is conceived as a sort of being (though not as being in the order of nature):

[Illud] ad quod intellectum omnem incipere et resolvere necesse est ... dicimus ens; ens namque est obiectum intellectus primum, cum nihil sciri possit nisi secundum quod est ens actu. ... Unde nec oppositum eius intelligere potest intellectus, non ens scilicet, nisi fingendo ipsum ens aliquo modo; quod cum intellectus apprehendere nititur, efficitur ens rationis.²⁶

What is conceived by the intellect has existence at least in thought, and so is being in a secondary sense. This is not to say that being in the primary sense as existing in nature may not also exist in thought; all such things may be being in the secondary sense as well. But the contrary is not true; not all that exists in thought exists in nature:

Quaecumque ergo dicuntur entia quantum ad primum modum sunt entia quantum ad secundum modum; quia omne quod habet esse naturale in rebus potest significari per propositionem affirmativam esse; ut cum dicitur "color est" vel "homo est." Non autem omnia quae sunt entia ad secundum modum sunt entia quantum ad primum; quia de privatione, ut de caecitate, formatur una affirmativa propositio cum dicitur "caecitas est"; nec tamen caecitas aliquid est in rerum natura, sed est magis alicuius entis remotio: et ideo etiam privationes et negationes dicuntur esse entia quantum ad secundum modum, sed non quantum ad primum.²⁷

Obviously objects which have existence in thought but not in reality are not beings in the same sense as those things which have real external existence. That is why two different senses of being are distinguished:

Ens per se dicitur dupliciter: uno modo, quod dividitur per decem genera; alio modo, quod significat propositionum veritatem. Horum autem differentia est, quia secundo modo potest dici ens omne illud de quo affirmativa propositio formari potest, etiamsi illud in re nihil ponat; per quem modum privationes et negationes entia dicuntur: dicimus enim quod affirmatio est opposita negationi, et quod caecitas est in oculo. Sed primo modo non potest dici ens nisi quod aliquid in re ponat. Unde primo modo caecitas et huiusmodi non sunt entia.²⁸

This distinction is of capital importance to the whole inquiry being undertaken in this work.

²⁵ *S.T.*, I, 16, 3 ad 2.

²⁶ *De Nat. Gen.*, c. 1, n. 1.

²⁷ *In II Sent.*, 34, 1, 1 sol.

²⁸ *De Ente et Ess.*, c. 1, n. 2.

POSITIVE RATIONATE BEING

From what was said in the preceding chapter it is evident that what logic is concerned with is not being in the first sense but only in the second; it does not consider things which exist in reality independently of human thought, but only those objects of thought which derive their existence from being considered and have their being, not in reality, but in the mind. But the question now to be settled is whether all such rationate beings fall within the domain of logic or only some of them.

In a text already seen a distinction was made between two kinds of non-being (from the viewpoint of external reality), which are at the same time species of rationate being:

Aliquid dicitur non ens dupliciter: uno modo quia non esse cadit in definitione eius, sicut caecitas dicitur non ens; et talis non entis non potest concipi aliqua forma neque in intellectu neque in imaginatione; alio modo, quia non invenitur in rerum natura, quamvis ipsa privatio entitatis non claudatur in eius definitione; et sic nihil prohibet imaginari non entia, et eorum formas concipere.²⁹

The first kind is defined by its non-existence since it is by definition either the complete absence of being or the absence of some particular determination of being that is expected to be present. Negation and privation make up this kind of rationate being. Into the definition of the second kind non-existence does not enter. The definition gives the intelligible determination of the being in question without saying whether it exists in reality or does not. In point of fact, however, it does not have existence in nature. The division seems to be complete since it is based on a disjunction of contradiction: having in its definition non-existence, and not having non-existence in its definition.

Is logic concerned with both of these kinds of rationate being? The first kind, it appears, must be excluded from logic. The study of negation and privation is assigned to metaphysics on the general principle that the consideration of opposites belongs to the same science. The science that deals with being as such must then deal with the negation of being, whether complete or partial. In regard to privation it is further argued that inasmuch as *the one*, which has been shown to pertain to the study of metaphysics, is grasped under the aspect of the privation of division, privation is brought under the consideration of metaphysics along with the one and its opposite, the many.³⁰ That holds true of privation as such. But particular privations, such as financial

²⁹ *De Ver.*, 3, 4 ad 6.

³⁰ *In IV Met.*, 3, n. 564.

deficits, material shortages, unemployment, anarchy, anemia, or baldness, are studied by the particular sciences that study their opposites.³¹

In the other kind of non-real being, then, it would seem, the subject of logic is to be found; it takes its place among those beings which have their existence only in thought but do not have non-existence in their definition. Since a definition is the intelligible character which the name of a thing signifies ("Definitio est ratio quam significat nomen"³²), and this type of rationally being has no negation of being in its definition, it has a positive thought-content.

The question now arises in regard to this positive rationally being whether the subject of logic is coextensive with it, or whether further restrictions and specifications must be made within it in order to assign logical being its place.

Founded in Reality

An important clarification concerning this question is made in a text of Thomas' commentary on the *Sentences* which discusses the meaning of names. Names, it is explained, designate three different kinds of things. Some of the things designated have existence independently of human thought, and others exist only in our thought; but of the latter some are founded on nothing outside thought, and others have a foundation in reality even though the conceived beings themselves are not real:

Eorum quae significantur nominibus, invenitur triplex diversitas. Quaedam enim sunt quae secundum esse totum completum sunt extra animam; et huiusmodi sunt entia completa, sicut homo et lapis. Quaedam autem sunt quae nihil habent extra animam, sicut somnia et imaginatio chimerae. Quaedam autem sunt quae habent fundamentum in re extra animam, sed complementum rationis eorum quantum ad id quod est formale est per operationem animae, ut patet in universali.³³

³¹ *In XI Met.*, 7, n. 2248: unaquaeque harum scientiarum particularium circumscribit et accipit sibi aliquod determinatum genus entis, circumscribens illud et dividens ab aliis entibus, et de illo solo determinans. Negociatur enim circa hoc genus entis quasi circa aliquod ens, sed non in quantum est ens; and *In IV Met.*, 3, n. 564: ... cum ad unam scientiam pertineat considerare opposita.

³² *In I Post. Anal.*, 4, n. 6; *In IV Mry.*, 16, n. 733; *S.T.*, I, 13, 8 ad 2. *Ratio* means "id quod apprehendit intellectus de significatione alicuius nominis." (*In I Sent.*, 2, 1, 3 sol.)

³³ *In I Sent.*, 19, 5, 1 sol.: cf. 30, 1, 3 sol.: Ratio in intellectu rerum tripliciter se habet. Quandoque enim apprehendit aliquid quod est in re secundum quod apprehenditur, ut quando apprehenditur forma lapidis. Quandoque vero apprehendit aliquid quod nullo modo in re est, ut quando quis imaginatur chimeraem vel aliquid huiusmodi. Aliquando autem apprehendit aliquid cui subest in re natura quaedam, non tamen secundum rationem qua apprehenditur; sicut patet quando apprehendit intentionem

The first of these, real being, has already been excluded from the competence of logic. From the other two, then, logic must take its subject. It must be either simply unreal, or immediately unreal but mediately real.

Against the first kind of unreal being a certain presumption immediately arises, for dreams and phantasies and purely fictitious creatures of the mind seem rather far removed from the prosaic and utilitarian definitions, propositions, and syllogisms that logic deals with. And how can there be any science of such fictions when science is supposed to be knowledge made certain by demonstration from true premises? Knowledge of what is in the mind cannot be made certain if there is no reality with which to compare it; it cannot be demonstrated if real causality cannot be shown; and it cannot be from true premises unless there is some real act of being which gives foundation to the judgment made by the intellect. While it is true that psychology gives attention to dreams, it considers them not for their objective content but as states of the soul, under which consideration they are something real falling within the competence of the philosophy of nature and of empirical science. But viewed objectively they cannot be made the subject of a science; it would rather be a game whose rules each player makes up as he goes along.

It cannot be said that, because logic, as an art, has as its purpose to guide the acts of reason, therefore it guides the production of these pure fictions; for what this art regulates is not any use whatever to which reason may be put, but the use of reason to its *due end*: "Nihil enim aliud ars esse videtur quam certa ordinatio rationis quomodo per determinata media ad debitum finem actus humani perveniant."³⁴ But the end of the intellect is to know truth: "Bonum uniuscuiusque est finis eius; et ideo cum verum sit finis intellectus, cognoscere verum est bonus actus intellectus."³⁵ And truth, which is defined as the conformity of thing and intellect,³⁶ is expressly said, in the continuation of the text under consideration, to have its foundation in reality ("habet fundamentum in re"); the act of being of the real thing is the cause of truth in the intellect: "Unde dico quod ipsum esse rei est causa veritatis secundum quod est in cognitione intellectus." Moreover, logic, as generis substantiae, quae in re est natura quaedam non determinata secundum se ad hanc vel ad illam speciem; et huic naturae apprehensae, secundum modum quo est in intellectu apprehendente, qui ex omnibus accipit unum quid commune in quibus invenitur natura illa, attribuit rationem generis, quae quidem ratio non est in re.

³⁴ *In I Post. Anal.*, 1, n. 1.

³⁵ *S.T.*, I-II, 56, 3 ad 2.

³⁶ *De Ver.*, 1, 1 c & *In I Sent.*, 19, 5, 1 sol.

an instrumental science, is ordained to the knowledge of things (“logica ordinatur ad cognitionem de rebus sumendam”).³⁷ This in itself strongly suggests that the subject of logic is not to be classed with the type of rationally being which has no foundation in reality but to be placed with the type which has a real foundation.

This suggestion is confirmed by an examination of the last-mentioned class. Its members “have a foundation in reality outside the soul; but the ultimate constitution of their intelligible character, in regard to what is formal in it, comes to it through the operation of the soul, as is evident in the universal.” The text then goes on to explain it more fully:

Humanitas enim est aliquid in re, non tamen ibi habet rationem universalis, cum non sit extra animam aliqua humanitas multis communis; sed secundum quod accipitur in intellectu, adiungitur ei per operationem intellectus intentio, secundum quam dicitur species: et similiter est de tempore, quod habet fundamentum in motu, scilicet prius et posterius ipsius motus; sed quantum ad id quod est formale in tempore, scilicet numeratio, completur per operationem intellectus numerantis. Similiter dico de veritate, quod habet fundamentum in re, sed ratio eius completur per actionem intellectus, quando scilicet apprehenditur eo modo quo est.

“Humanity” is given as an example of the universal; but its universality, it is pointed out, is not something existing formally outside the soul but is added to the apprehended nature by the operation of the intellect. Having this intention of universality, it is called a species. Two other examples are given of beings which derive their formal constitution from the operation of the intellect but are based upon reality; they are time and truth. The reference to intentions and species recalls the text seen in the preceding chapter which most clearly designated the subject of logic as *ens rationis* and intentions of reason, *sicut intentio generis, speciei et similitum*.³⁸ Secondly, the intention is here said to be added by the operation of the intellect to the nature as apprehended (“secundum quod accipitur in intellectu, adiungitur ei per operationem intellectus intentio”), just as there intention was said to follow upon reason’s consideration of the thing known (“considerationem rationis consequuntur”). The similarity can hardly be missed.

It seems clear, then, that the subject of logic is to be placed in the third class of beings as enumerated in the text under consideration; that is, it is a positive unreal being founded in reality. But some ambiguity still remains in this class because besides the intention of species we find enumerated there truth and time. From what was said

³⁷ *I Perih.*, 2, n. 3.

³⁸ *In IV Met.*, 4, n. 574.

in Chapter III about the concern which logic has for the true and the false, it does not seem too surprising to see truth here along with intentions that belong clearly to the subject of logic. But time would seem to have little to do with the timeless formal considerations of logic, or logic with the measuring of motion.

Some clarification, therefore, of the class of beings which do not exist as such in reality yet have a real foundation must be sought in order that within this class the subject of logic may be distinguished from matters with which logic is not concerned.

Remote Real Foundation

Such help and clarification is found in another passage of the *Sentences*. It is very similar to the one from Distinction 19 which has just been examined, yet sufficiently different to throw a much clearer light on this third class, remove its ambiguity, and give added confirmation to the placing of the subject of logic here. This passage is found in Distinction 2.³⁹ The point under discussion is the meaning of *ratio* and how it is said to be or not to be in a thing. First, *ratio* is defined: it is that which the intellect apprehends regarding the meaning of any noun. In those things which have a definition, it is the definition itself; and in those which are not properly defined, as the highest genera, it is the generic notion. It does not mean the concept which the intellect has of things but the intention of the concept (“significat intentionem huius conceptionis”).

The text then goes on to say that the *ratio* is said to be in reality inasmuch as there is something which corresponds to the concept: “Dicitur esse in re, in quantum in re extra animam est aliquid quod respondet conceptioni animae, sicut significatum signo.” And then three ways in which the concept stands to the external thing are distinguished: what is represented in our intellectual conception and signified by a noun can be a really existing thing, something not really existing but arising from the operation of the intellect though having a foundation in reality, and finally a pure figment of the mind without any real foundation:

Ipsa conceptio intellectus tripliciter se habet ad rem quae est extra animam. Aliquando enim hoc quod intellectus concipit est similitudo rei existentis extra animam, sicut hoc quod concipitur de hoc nomine *homo*: et talis conceptio intellectus habet fundamentum in re immediate, in quantum res ipsa, ex sua conformitate ad intellectum, facit quod intellectus sit verus, et quod nomen significans illum intellectum proprie de re dicatur.

³⁹ *In I Sent.*, 2, 1, 3 sol.

Aliquando autem hoc quod significat nomen non est similitudo rei existentis extra animam, sed est aliquid quod consequitur ex modo intelligendi rem quae est extra animam: et huiusmodi sunt intentiones quas intellectus noster adinvenit; sicut significatum huius nominis *genus* non est similitudo alicuius rei extra animam existentis; sed ex hoc quod intellectus intelligit animal ut in pluribus speciebus, attribuit ei intentionem generis; et huiusmodi intentionis, licet proximum fundamentum non sit in re sed in intellectu, tamen remotum fundamentum est res ipsa. Unde intellectus non est falsus qui has intentiones adinvenit. Et simile est de omnibus aliis qui consequuntur ex modo intelligendi, sicut est abstractio mathematicorum et huiusmodi.

Aliquando vero id quod significatur per nomen, non habet fundamentum in re, neque proximum neque remotum, sicut conceptio chimerae: quia neque est similitudo alicuius rei extra animam, neque consequitur ex modo intelligendi rem aliquam naturae: et ideo ista conceptio est falsa.

The similarity of this passage with the one from Distinction 19 previously considered is striking. In that passage the kinds of things signified by names were distinguished. Here, in Distinction 2, the question is likewise the signification of names as well as of concepts. A similar threefold division is made in both places, though the order of the second and third items is inverted. But in the latter passage there is a little difference in point of view which accounts for the difference in the first class: the founded unreal rather than the real, which was the first class in the previous passage. In Distinction 19 what is divided is "that which is signified by nouns," that is, the *significatum*. In Distinction 2, where the relation of concepts to the real is being discussed, it is the concept which is divided, and therefore the sign rather than what is signified. Accordingly, in Distinction 19 the first class embraces complete real being; and that which does not exist in external reality but has some foundation in reality is placed in the third class. Distinction 2, however, dividing concepts, which exist only in the mind, makes its first class those concepts which have a real foundation, and one that is immediate or proximate; and the second class, those which have only a remote or mediate foundation in reality.

This provides a basis for clarifying the matter referred to under the third class of the text previously studied. There, besides logical intentions, truth and time were listed as having a real foundation. The question now is what kind of foundation must be ascribed to each of these, immediate or mediate.

In regard to intentions of universality and of species there is no difficulty because it is evident that they come under the second class of Distinction 2, having a mediate real foundation. This class is explained as applying to "the intentions which our intellect devises," and it is illustrated by "what is signified under the name *genus*." That the inten-

tion of genus is an intention of universality (such as is mentioned in the third class of Distinction 19) is clear enough even from this text, which says that the intention *genus* is attributed to animal from the fact that the intellect understands animal as in many species. Finally, the doctrine of dependence of this type of being upon the intellect's mode of operation is the same in both passages: "Secundum quod accipitur in intellectu, adiungitur ei per operationem intellectus intentio" (Dist. 19); and "Est aliquid quod consequitur ex modo intelligendi rem quae est extra animam: et huiusmodi sunt intentiones quas intellectus noster adinvenit" (Dist. 2). As a consequence, the ambiguity of the text in Distinction 19 regarding the type of real foundation had by such intentions is removed in this new text: it is not proximate but only remote,

What must be said of truth and time? The truth spoken of is not "the true," in the concrete form, meaning a begin having the character of truth, but the very formal notion or character of truth in the abstract (*ratio veritatis*). This is the relation defined as the "equation of thing and intellect": "Definitur secundum id quod formaliter rationem veri perficit; et sic dicit Isaac quod 'veritas est adaequatio rei et intellectus'."⁴⁰ And this is formally in the intellect, as is said in the text from Distinction 19:

Similiter dico de veritate quod habet fundamentum in re, sed ratio eius completur per actionem intellectus. ... Et in ipsa operatione intellectus accipientis esse rei sicut est per quamdam simulationem ad ipsum, completur relatio adaequationis, in qua consistit ratio veritatis.

The question at hand, then, is where truth is to be placed according to the classification of Distinction 2: has it a mediate or an immediate foundation in the real? The concept which has an immediate foundation in reality is the likeness in the mind of something really existing outside the mind, such as *man*, which causes the intellect to be true: "Et talis conceptio intellectus habet fundamentum in re immediate, in quantum res ipsa, ex sua conformitate ad intellectum, facit quod intellectus sit verus." But if the foundation of cognition is immediate, that of truth is even more so, because truth is by its nature the first comparison of being and intellect; and the assimilation which constitutes cognition is, as it were, the effect of truth:

Convenientiam vero entis ad intellectum exprimit hoc nomen *verum*. Omnis autem cognitio perficitur per assimilationem cognoscentis ad rem cognitam, ita

⁴⁰ *De Ver.*, 1, 1 c (ad fin.). Cf. J. T. Muckle, "Isaac Israel's Definition of Truth," *Archives d'histoire doctrinale et littéraire du moyen-âge*, VIII (1933), 5-8; also *S. Bonaventurae Opera Omnia*, ed. Quaracchi, I, 707, n. 5.

quod assimilatio dicta est causa cognitionis. ... Prima ergo comparatio entis ad intellectum est ut ens intellectui correspondeat: quae quidem correspondentia, adaequatio rei et intellectus dicitur; et in hoc formaliter ratio veri perficitur. Hoc est ergo quod addit verum supra ens, scilicet conformitatem sive adaequationem rei et intellectus; ad quam conformitatem, ut dictum est, sequitur cognitio rei. Sic ergo entitas rei praecedit rationem veritatis, sed cognitio est quidam veritatis effectus.⁴¹

It is evident, then, that truth must be placed among those things whose concept has an immediate foundation in reality.⁴²

Where, now, is time to be placed? It is said to be founded in motion but to be constituted formally by the operation of the mind measuring or numbering the motion: "Illud quod est de tempore quasi materiale, fundatur in motu, scilicet prius et posterius; quod autem est formale, completur in operatione animae numerantis."⁴³ Because there is no measure without reference to the operation of one measuring, time is formally a mental construct, or a being having its existence in thought, which follows upon the motion measured:

Cum accipimus prius et posterius et numeramus ea, tunc dicimus fieri tempus: et hoc ideo, quia tempus nihil aliud est quam numerus motus secundum prius et posterius: tempus enim percipimus ... cum numeramus prius et posterius in motu. Manifestum est ergo quod tempus non est motus, sed sequitur motum secundum quod numeratur.⁴⁴

Since motion is the immediate foundation of the rationally being which is time, and motion is in the order of reality, not just in the order of thought, time has an immediate foundation in reality. It thus differs from the intention of genus or species, which has only a mediate real foundation. If time were formally constituted, not by what follows immediately upon motion, but by what followed upon the peculiar way in which it were perceived by the mind, then it would follow immediate-

⁴¹ *De Ver.*, 1, 1 c (post med.).

⁴² This is in no way contradictory to what was said in the last chapter regarding the true and the false as the subject of logic. Here there is question of truth, the formal constituent of the true by which it is distinguished from being. This is the relation of conformity of thing and intellect. The true and the false which are assigned to logic as its subject are an *ens verum* and *ens falsum* which is constituted in the intellect as a sign of the composition of what is apprehended by the intellect in regard to the thing, and indirectly as a sign of the thing itself. As a sign it is one step further removed from reality than what is signified. This sign is the proposition. It is a rationally being founded directly on the act of existence which the thing known exercises in the intellect (and this act of existence is the very expressed conformity of intellect and thing); mediately it is founded on the act of existence of the thing itself. (See chap. VIII, pp. 237-241).

⁴³ *In I Sent.*, 19, 2, 1 sol.; cf. *In II Sent.*, 12, 1, 5 ad 2: Temporis ratio aliquo modo completur ex actione animae numerantis.

⁴⁴ *In IV Phys.*, 17, n. 10; cf. 23, n. 5. tempus non habet esse extra animam nisi secundum suum indivisibile: ipsa autem totalitas temporis accipitur per ordinationem animae numerantis prius et posterius in motu.

ly upon this mode of perception and only mediately upon motion, and thus would be like logical intentions, that is, a second intention (as will be explained in the next chapter). But time is the mind's measure, not of the way in which motion *is perceived*, but of the way in which motion *is* in reality. Therefore its study does not belong to logic but to the philosophy of nature, whose business is to study its subject, mobile being ("determinando de subiecto huius scientiae, quod est ens mobile"), and the properties which follow upon the subject ("ea quae consequuntur ipsum"), among which is time.⁴⁵ Time can accordingly be eliminated from the type of rationate being which belongs to logic.

From the examination of the text from Distinction 19, which classifies beings according to their reality, it has been sufficiently established that logic is not concerned with real being (already rejected in Part I) nor with pure fictions having no foundation in reality, which are not the subject of any science. There remains as the kind of being which must be ascribed to logic for its study the third class, made up of those beings which have their existence in the intellect but have a foundation in reality. But since this has a broad scope, as is shown by the three examples brought forth—truth, time, and intentions of universality and of species,—some clarification and delimitation of this class is necessary. The somewhat parallel text of Distinction 2 has brought aid in this task. The classification there made is one of concepts and is based upon their foundation in reality. The third class, consisting of concepts of pure, unfounded fictions and already shown not to pertain to the present problem, can be disregarded. The other two classes have called for some attention. A brief examination of the previously-mentioned examples of time and of truth in its formal character has revealed that they are to be placed in the first class of rationate entities here distinguished, namely, those having an immediate foundation in the real order. The intentions of universality and of species have been seen to belong to the second class of this text, the class of rationate beings remotely founded in the real.

RATIONATE BEING AS THE SUBJECT OF LOGIC

The step from the class of rationate beings founded in reality (according to the division in the passage from Distinction 2 just examined) to the subject of logic is not a long one. As early as Part I the subject

⁴⁵ *In III Phys.*, 1, nn. 1 & 3: Quaedam autem consequuntur motum extrinsece, sicut exteriores quaedam mensurae, ut locus, et vacuum, et *tempus*.

of logic has been seen to be rationally being. The most explicit statement there made about the subject of logic is brought to mind, it has been seen, by the passage from Distinction 19 when it speaks of rationally being. But the text quoted from Distinction 2 when it discusses the same matter is even more strongly reminiscent of that statement because of its close parallel in doctrine and expression. The statement in question, made in the *Commentary on the Metaphysics*, Book IV, is this:

Ens est duplex: ens scilicet rationis et ens naturae. Ens autem rationis dicitur proprie de illis intentionibus quas ratio adinvenit in rebus consideratis; sicut intentio generis, speciei et similium, quae non inveniuntur in rerum natura sed considerationem rationis consequuntur. Et huiusmodi, scilicet ens rationis, est proprie subiectum logicae.⁴⁶

In the passage from Distinction 2 this is said:

Est aliquid quod consequitur ex modo intelligendi rem quae est extra animam: et huiusmodi sunt intentiones quas intellectus noster adinvenit ...; sed ex hoc quod intellectus intelligit animal ut in pluribus speciebus, attribuit ei intentionem generis.

The similarity of doctrine in these passages is immediately apparent; there is question of rationally being which is contrived by the intellect: it is an intention; such an intention is that of genus or species; and it is consequent upon our manner of understanding the external real thing. Even the wording is very similar: "intentiones quas intellectus noster adinvenit" closely parallels "de illis intentionibus quas ratio adinvenit," and "consequitur ex modo intelligendi rem" corresponds to "considerationem rationis consequuntur." From the close parallel of language and of doctrine in these two passages there can be no doubt that the same thing is being referred to. It is therefore the subject of logic which is being spoken of in the latter passage as well as in the former. The text from Distinction 2, however, makes this advance over that of the *Metaphysics*, that it states more explicitly what kind of foundation in reality is had by that sort of rationally being which is the subject of logic. There is indeed a real foundation, but it is remote rather than proximate.

From an examination and delimitation of the notion of *ens rationis* it has been possible to determine the subject of logic to this extent that it can be said to be that type of rationally being which has a remote foundation in the real.

In the determination of the subject of logic as so far seen Thomas has been chiefly concerned with its relation to the real order of things.

⁴⁶ *In IV Met.*, 4, n. 574.

There is another point which he makes about the nature of rationally being which throws much light upon the subject of logic. For he explains what rationally being is in itself and what is its nature—if indeed one can speak of it as having a nature at all.⁴⁷ Rationally being can be of two kinds, either a negation or a relation; and the subject of logic will be one of these.

The doctrine of the two kinds of rationally being is proposed in a succinct little treatise on the distinction of the transcendentals or first concepts: being, the one, the true, and the good. It explains how they are distinguished among themselves and how the other three are distinguished from being:

Inter ista quatuor prima, maxime primum est ens: et ideo oportet quod positive praedicetur; negatio enim vel privatio non potest esse primum quod intellectu concipitur, cum semper quod negatur vel privatur sit de intellectu negationis vel privationis. Oportet autem quod alia tria super ens addant aliquid quod ens non contrahat; si enim contraherent ens, iam non essent prima. Hoc autem esse non potest nisi addant aliquid secundum rationem tantum; hoc autem est vel negatio, quam addit unum (ut dictum est), vel relatio ad aliquid quod natum sit referri universaliter ad ens; et hoc est vel intellectus, ad quam importat relationem verum, aut appetitus, ad quam importat relationem bonum.⁴⁸

⁴⁷ Of itself it does not properly have essence or intelligibility. See p. 78.

⁴⁸ *De Pot.*, 9, 7 ad 6. This is not the reading of the common editions but is in the manuscripts. The Roman edition of 1570, Parma and Vivès, and the Marietti editions of the *Quaestiones Disputatae*, including the revised edition of 1949 (whose *De Potentia* is edited by P. M. Pession, O.P.)—all of these, instead of *vel relatio ad aliquid*, read *vel relatio, vel aliquid*. Such a reading does not make sense. According to it intellect and will would be made mere *entia rationis*; these powers in themselves (not a relation to them) would be added to being to constitute the true and the good; but then, inconsistently with the preceding statement, a relation to intellect and to will would be implied by the true and the good; and finally, relation would be mentioned without any explanation or limitation, with the implication that all relations are merely rationally. Furthermore, the doctrine of this passage would not agree with the rest of St. Thomas' teaching on the reality of intellect and will or of relations, or (what is even more directly to the point here) on the kinds of rationally being. See the next passage quoted (*De Ver.*, 21, 1 c). See also *De Ver.*, 1, 1 c (med.): the true and the good add to being a positive relative mode, which is the agreement of one being with another; "et hoc quidem non potest esse nisi accipiat aliquid quod natum sit convenire cum omni ente"; and this is the soul with its two powers, intellect and will. The reading "vel relatio ad aliquid" given here is found in the manuscripts:

MS Paris, Bibliothèque Nationale Latin 15352, p. 87vb

MS Paris, Bibliothèque Nationale Latin 15806, p. 90va

MS Paris, Bibliothèque Nationale Latin 15791, p. 269ra

MS Paris, Bibliothèque de l'Arsenal 454, p. 117rb

MS Paris, Bibliothèque Mazarine 803, p. 102ra.

Rev. R. W. Mulligan, S. J., kindly consulted these five MSS for me. They are unanimous in the reading given. Of these the first "manifestly dates from the thirteenth century" and the fourth and fifth are from the fourteenth. (E. Axters, O.P., "Pour l'état des manuscrits des *Questions Disputées* de Saint Thomas d'Aquin," *Divus Thomas* [Piacenza] XXXVIII (1935), 130, 134, 145.) The second has the questions incorrectly numbered at the top of the page so that q. 9 is marked VIII. This manuscript is listed in the catalogue as being of the thirteenth century. (L. Delisle, *Inventaire des manuscrits latins de la*

Each of the other three transcendentals adds something to the notion of being; but it cannot be something real, for that would restrict the notion of being, and what would be conceived would then be a particular kind of being—an inferior of the concept—and not coextensive with it. The concepts would then not be *first* concepts and transcendental. What is added must therefore have existence in reason only; i.e., it must be a rationally being. What is added to being by the one is a negation, namely, the negation of division.⁴⁹ The true and the good agree in this, that they add to being a relation; and it must be a relation to something that has a universal reference or proportion to being; otherwise the concepts would be restricted to a particular kind of being. Two powers of the soul, intellect and will, have this universal reference to being.⁵⁰ A relation to intellect is added to being by the true, and a relation to will by the good.

The same division of rationally being into negation and relation is even more explicitly made in another passage, and the exclusiveness of this division is insisted upon. The general context is the notion of the good and its distinction from being. Different ways of adding something to something else are pointed out, and the good is said to add to being something in the order of reason alone. The kinds of rationally being are then distinguished and applied to the transcendentals:

Id autem quod est rationis tantum non potest esse nisi duplex. Omnis enim positio absoluta aliquid in rerum natura existens significat. Sic ergo supra ens, quod est prima conceptio intellectus, unum addit id quod est rationis tantum, scilicet negationem: dicitur enim unum quasi ens indivisum. Sed verum et bonum positive dicuntur; unde non possunt addere nisi relationem quae sit rationis tantum.⁵¹

Rationally being cannot be anything but a negation or a relation. Negation is nothing positive; it is not a positing (*positio*), but rather a removal (“quia negatio dicit tantum absentiam alicuius, scilicet quod

Sorbonne conservés a la Bibliothèque impériale sous les numéros 15176-16718 du fonds latin. “Bibliothèque de l’Ecole des Chartes,” XXXI (1870), p. 25. On this passage cf. R. W. Schmidt, S.J., “An Emendation of a Reply of St. Thomas Aquinas: *De Potentia*, 9, 7 ad 6,” *The Modern Schoolman*, XXVIII (1950-51), 58-62.

⁴⁹ *De Pot.*, 9, 7 c (ad fin.): Unum vero quod convertitur cum ente non addit supra ens nisi negationem divisionis ...; est enim unum idem quod ens indivisum; *De Ver.*, 1, 1 c (med.): Negatio autem, quae est consequens omne ens absolute, est divisio; et hanc exprimit hoc nomen *unum*; nihil enim est aliud unum quam ens indivisum; *S.T.*, I, 11, 1 c; unum non addit supra ens rem aliquam sed tantum negationem divisionis.

⁵⁰ *De Ver.*, 1, 1 c (med.): Et hoc quidem non potest esse nisi accipiatur aliquid quod natum sit convenire cum omni ente. Hoc autem est anima, quae quodammodo est omnia. ... In anima autem est vis cognitiva et appetitiva. Convenientia ergo entis ad appetitum exprimit hoc nomen *bonum*. ... Convenientia vero entis ad intellectum exprimit hoc nomen *verum*.

⁵¹ *De Ver.*, 21, 1 c (med.).

removet"⁵²). The true and the good, however, differ from being by something more than a negation; they add something positive. They do not merely remove, but posit something. Therefore what they add is a *positio*; but it cannot be an absolute positing or it would have to be real, "for absolute positing signifies in every case something existing in nature." Hence it can be only a relative positing, or a relation. St. Thomas accordingly enunciates the general principle that rationate being can be only a negation or a relation.

If the subject of logic is a rationate being and rationate being can be only a negation or a relation, there can be little question with which of the two logic is concerned. Earlier in this chapter it was seen that logic does not study that kind of unreal being which has non-existence in its definition, and that the two forms of negation, simple negation and privation, make up this kind. Now the conclusion must be that the subject of logic can be only a relation. It cannot be a real relation because, as has already been established, Aquinas held the subject of logic to be a rationate being. Only a rationate relation, therefore, can fulfill the requirements.

From the investigation of what Thomas says of rationate being it is now clear that he held the subject of logic to be an *ens rationis* with a remote foundation in reality, deriving from the human manner of knowing and ordained to knowing, in itself an intention of the mind and a rationate relation. This kind of entity can hereafter justly be referred to as logical being. For further clarification of its nature two lines of investigation now lie open, intentions and relations.

⁵² *In IV Met.*, 3, n. 565.

CHAPTER V

INTENTIONS

The two notions according to which the subject of logic has been found to be defined are rationally being and intentions. The first of these has just been examined. It now remains to inquire into the second, namely, intentions. An examination of the texts reveals that Aquinas uses the term *intention* in various senses. It sometimes designates an operation or act of a faculty; sometimes it means the intelligible species of intellectual cognition; again it means the conceived term of the intellectual operation; and finally it is used in the sense of "second" or logical intention. Each of these uses of the term must be investigated in turn in order that the subject of logic may be seen to lie in the last. This procedure will not, however, be a mere process of elimination since the meaning of the logical intention depends upon the other meanings of the term.

INTENTION AS AN ACT OF WILL OR OF INTELLECT

The general notion of *intention* as explained from its etymology in the Second Part of the *Summa* is a *tendency* to something: "Intentio, sicut ipsum nomen sonat, significat in aliud tendere."¹ In the same article intention is said to be properly an act of the will: "intentio proprie est actus voluntatis." It must be remembered, however, that the subject under discussion in this part is human *action*; and action is directed to an end which is some good outside of itself, as was explained in Chapter II.² Since it is the will which moves to the end, in the field of moral action it is correct to conclude that "intention" or "tending to an end" properly belongs to the will. Although it is not with intention as an act of the will that logic is concerned, nevertheless in passages dealing with intention in that connection there are some

¹ S.T., I-II, 12, 1 c; cf. *In II Sent.*, 38, 1, 2 sol.: Intendere enim dicitur quasi in aliud tendere.

² Page 21.

enlightening remarks which apply to the notion of intention in general.

Intention is distinguished from the other operations of the will according to the different ways in which the will regards the end. If it looks at it absolutely, the operation is called willing simply, as we *will* health. If the end is regarded as actually satisfying the appetite, the operation is called fruition or enjoyment. But if the end is considered as the term to which something has been referred, the act is called *intention*. Thus we intend health not merely because we will it but because we will to arrive at it through something else:

Tertio modo consideratur finis secundum quod est terminus alicuius quod in ipsum ordinatur, et sic intentio respicit finem. Non enim solum ex hoc intendere dicimur sanitatem quia volumus eam, sed quia volumus ad eam per aliquid aliud pervenire.³

Intention, it is seen from this, looks to something as a mediated term of a tendency or operation.

All tendency implies a distance of the term from that which is tending. What constitutes the tendency as an intention, however, is not the mere distance, but the fact that the end is regarded as relative to something else, which is willed as a means to that end:

Per hoc autem quod dicitur in aliquid tendere importatur quaedam distantia illius in quod aliquid tendit; et ideo quando appetitus fertur immediate in aliquid non dicitur esse intentio illius ...: sed quando per unum quod vult in aliud pervenire nititur, illius in quod pervenire nititur dicitur esse intentio.⁴

It is of the very nature of intention, then, to imply an order or relation of one thing to another; and since it belongs to intelligence to order things, intention, even when there is question of action as opposed to mere cognition, implies an act of the intellect: "Unde intentio in ratione sua ordinem quemdam unius ad alterum importat. Ordo autem unius ad alterum non est nisi per intellectum, cuius est ordinare."

The relation of intellect and will in this moral action is more fully discussed in an article of the *De Veritate* which treats of the same question as the articles just mentioned. The difference between willing and intending is explained. To will is an act which belongs to the will according to its own nature taken in itself inasmuch as it tends to its object absolutely; to intend is an act which belongs to the will as receiving an impression or direction from a higher faculty, reason. Intending, then, always has a reference to reason: "Cum enim proprium rationis sit ordinare et conferre, quandocumque in actu voluntatis

³ S.T., I-II, 12, 1 ad 4.

⁴ *In II Sent.*, 38; 1, 3 sol.

apparet aliqua collatio vel ordinatio, talis actus erit voluntatis, non absolute sed in ordine ad rationem.”⁵ Reason proposes the ordination of things to an end, and the will tends according to this order. A two-fold reference to the end is accordingly distinguished: active reference belongs to the intellect; passive reference, to the will:

Relatio in finem activa est rationis, eius enim est referre in finem; sed relatio passiva potest esse cuiuscumque directi vel relati in finem per rationem, et sic potest esse voluntatis; et hoc modo relatio in finem pertinet ad intentionem.⁶

In speaking of moral action, St. Thomas fittingly says that intention is properly an act of the will. This is not the only connection, however, in which the term *intention* is used. It occurs frequently also in passages dealing with cognition. Intention is now said to belong to the intellect. Occasionally it is spoken of as an *act*, as when St. John Damascene’s analysis of cognition into four acts, the second of which is “intention,” is under discussion:

Omnes illi actus quos Damascenus enumerat sunt unius potentiae, scilicet intellectivae. Quae primo quidem simpliciter aliquid apprehendit, et hic actus dicitur intelligentia. Secundo vero, id quod apprehendit ordinat ad aliquid aliud cognoscendum vel operandum; et hic vocatur intentio. Dum vero persistit in inquisitione illius quod intendit, vocatur excogitatio. Dum vero id quod est excogitatum examinat ad aliqua certa, dicitur scire vel sapere; quod est phronesis vel sapientiae; nam “sapientiae est iudicare.”⁷

Though this passage is an explanation of the doctrine of Damascene it is clear that St. Thomas is not rejecting this *auctoritas* but accepting it as true. Yet we cannot conclude from this fact that he adopted this analysis as his own to make use of it for the explanation of his own positive doctrine. His approach to the problem was somewhat different; but, because he accepts the truth of this explanation, he clearly does not regard it as in any way in conflict with his own. What is said here of intention as an act of the intellect is interesting: it is the act whereby the intellects directs what is apprehended to the knowing or doing of something else. When the apprehension is directed to action, this seems to agree perfectly with St. Thomas’ doctrine of intention as an act of the will, except that the active rather than the passive reference is regarded. But “intention” is used also where there is no operation beyond that of knowing. Even here, however, it keeps its essential

⁵ *De Ver.*, 22, 13 c.

⁶ *Ibid.*, ad 4; cf. ad 10 and ad 14: ordinare est rationis, sed ordinari potest esse voluntatis; et sic intentio ordinationem importat.

⁷ *S.T.*, I, 79, 10 ad 3. St. John Damascene. *De Fide Orthodoxa*, II, 22 (Migne, *P.G.*, 94, 941).

notion of being ordained to something beyond. By it the intellect is extended beyond its activity to the object.

Though the use of the term *intention* to designate the *act* of the intellect is not frequent in passages where St. Thomas speaks for himself, it does occur. He himself calls attention to two different meanings that *intention* can have, the act of the intellect in regarding something outside itself and the meaning or intelligible character of that which is regarded: "Cum dicitur, 'Finis est prior in intentione,' intentio sumitur pro actu mentis, qui est intendere. Cum autem comparamus intentionem boni et veri, intentio sumitur pro ratione quam significat definitio."⁸ There might be some question whether, when intention is said to be an *actus mentis*, *mens* means the intellect or the whole soul. If the whole soul is meant, the act of any one of its faculties would be an act of the soul; and the first meaning of intention distinguished here might refer to the intention of the will rather than to any act of the intellect. But although *mens* can mean *soul*, it properly means intellect; and if extended to mean soul, it denominates the soul from the intellect:

Et ideo nomen mentis hoc modo dicitur in anima sicut et nomen intellectus. ... Et sic mens, prout in ea est imago [divina], nominat potentiam animae et non essentiam; vel si nominat essentiam, hoc non est nisi in quantum ab ea fluit talis potentia.⁹

In some passages where it is clear enough that intention belongs to the intellect, it is not very clear from the context whether it refers to an intellectual act or to something else, such as a property of the act or what is expressed in the act of cognition. When it is said, for instance, that every cognitive power requires for cognition an intention, that might mean either the act of paying attention to the object or a representation of the object:

Vis cognoscitiva non cognoscit aliquid actu nisi adsit intentio. ... Multa igitur ad quae simul intentio fertur non simul intuemur. Quae autem oportet sub una intentione cadere, oportet simul esse intellecta: qui enim comparisonem duorum considerat, intentionem ad utrumque dirigit et simul intuetur utrumque.¹⁰

Here intention seems to mean chiefly an act of attention. In another passage dealing with the same question, the simultaneous cognition of many things, the meaning seems to be about the same:

⁸ *De Ver.*, 21, 3 ad 5.

⁹ *Ibid.*, 10, 1 c (prin. & fin.); cf. A. Gardeil, O.P., "Le mens d'après S. Augustin et S. Thomas d'Aquin," *Rev. des sciences philosophiques et théologiques*, XIII (1924) 145-161.

¹⁰ *C.G.*, I, 55. A similar use is found in *In I Sent.*, 3, 4, 5 sol.: ad talem enim cognitionem non sufficit praesentia rei quolibet modo; sed oportet ut sit ibi in ratione obiecti, et exigitur intentio cognoscentis.

Ad actum cuiuslibet cognoscitivae potentiae requiritur intentio. ... Intentio autem unius non potest ferri ad multa simul, nisi forte illa multa hoc modo sint adinvicem ordinata ut accipiantur quasi unum.¹¹

Intention seems here, however, to be distinguished in some way from the act of knowing, since it is required for the act, apparently as a condition or a quality of the act. It can still be understood as "attention"; not, however, as the act of applying the faculty, but rather as the direction given that application.

INTENTION AS INTELLIGIBLE SPECIES

In other passages the distinction of the act of knowing and of the intention is somewhat sharper, as when the intention is said to be received into the soul:

Operatio animae intellectivae in rem quam cognoscit et diligit, est operatio non activa sed receptiva; et ideo non oportet quod coniungatur ei essentialiter, sed quod intentio illius recipiatur in ipsa anima.¹²

Vis apprehensiva ... cognoscit eam [rem] secundum intentionem rei quam in se habet vel recipit secundum proprium modum.¹³

Intention can hardly mean an intellective act in this case since it is called "the intention of the thing" and is said to be received. It is unnecessary to stop here to call attention to the limitations which Aquinas elsewhere puts upon this receptivity of the intellect and see the activity which he also assigns to it. It is enough at present merely to note that this text seems to make the intention an intelligible determination or a likeness.

Other texts speak of the intention explicitly as the received likeness or species of the thing:

Duplex est passio. Una quae sequitur actionem naturae; quando scilicet species agentis recipitur in patiente secundum esse materiale, sicut quando aqua calefit ab igne. Alia quae sequitur actionem quae est per modum animae; quando scilicet species agentis recipitur in patiente secundum esse spirituale, ut intentio quaedam; secundum quem modum res habet esse in anima, sicut species lapidis recipitur in pupilla: et talis passio semper est ad perfectionem patientis.¹⁴

Though the example is drawn from sensation, what is said of intention is asserted in regard to cognition in general and therefore applies to intellect as well as to sense. Here the intention is made the "species" of the thing.

¹¹ *De Ver.*, 13, 3 c.

¹² *In I Sent.*, 15, 5, 3 ad 4.

¹³ *S.T.*, I-II, 27, 2 c; cf. ad 3; *In I Sent.*, 34, 3, 1 ad 1: in cognitione naturali ex speciebus a sensu acceptis intentiones universales accipimus per lumen intellectus agentis; *De Ver.*, 11, 1 ad 4 & 11.

¹⁴ *In II Sent.*, 19, 1, 3 ad 1.

In at least one place the intention is explicitly identified with *species intelligibilis*: "Commentator dicit quod 'intellectus intelligitur per intentionem in eo, sicut alia intelligibilla': quae quidem intentio nihil aliud est quam species intelligibilis."¹⁵ It might be said that Aquinas is merely interpreting the words of Averroes here and is not adopting as his own the use of the word intention in this meaning as the intelligible species of the thing. But there is no indication in the text that he is dissatisfied with such a use of the term; and the preceding texts quoted, where he is speaking of his own, are sufficiently close in meaning to indicate that he does give to intention as one of its meanings that of intelligible species.¹⁶

Because the right understanding of both cognition and logical intentions requires some comprehension of the intelligible species, a brief glance must be taken at the nature and role of this type of intention. The intelligible species is explained to be the likeness or form of the essence of the thing known: "Species intelligibilis est similitudo ipsius essentiae rei, et est quodammodo ipsa quidditas et natura rei secundum esse intelligibile, non secundum esse naturale prout est in rebus."¹⁷ All cognition requires and is effected by the assimilation of the knower and the known, by which the knower becomes like the thing known: "Omnis cognitio est per assimilationem cognoscentis ad cognitum."¹⁸ Assimilation in general can be of two kinds according to the type of likeness which is produced. The likeness can be either an agreement in nature or a conformity by representation or intention: "Similitudo aliquorum duorum ad invicem potest dupliciter attendi. Uno modo secundum convenientiam in ipsa natura. ... Alio modo quantum ad representationem; et haec similitudo requiritur cognoscentis ad cognitum."¹⁹ The

¹⁵ *De Ver.*, 10, 8 c (post med.). The reading *intelligitur* is from the Leonine MS furnished to the translators of *Truth*; the editions have *intelligit*. Averroes, *In III De An.* comm. 16 (on chap. 4, 430a 3).

¹⁶ There are other texts where *intentio intelligibilis* is interchanged with *species intelligibilis*; e.g. *S.T.*, I, 85, 1 ad 4; *In I Sent.*, 1, 5, 2 ad 4; *De Ver.*, 10, 8 c (fin.); 11, 1 ad 14; *In III De An.*, 8, n. 718. In *De Ver.*, 11, 1 ad 4 it means species, and *ibid.*, ad 11 it is interchanged with *forma intelligibilis*. But it means logical intention: *In De Sensu*, 15, n. 213; *In IV Met.*, 4, n. 574; *In III De An.*, 8, n. 718.

¹⁷ *Quodl.* VIII, 4 c; cf. *De Ver.*, 8, 7 ad 4: similitudo rei quae est in intellectu est similitudo directe essentiae eius; *S.T.*, I, 14, 12 c: species intelligibilis intellectus nostri est similitudo rei quantum ad naturam speciei; 85, 2 ad 2.

¹⁸ *De Ver.*, 8, 5 c; cf. *C.G.*, I, 65, Item²: Cognitio autem omnis fit per assimilationem cognoscentis et cogniti; *S.T.*, I, 12, 9 ad 1; *De Ver.*, 1, 1 c (ad fin.); 8, 1 ad 7.

¹⁹ *De Ver.*, 2, 3, ad 9; cf. a. 5 ad 5 & ad 7; 13 ad 1; 8, 1 c (med.); 11 ad 3. See also *C.G.*, II, 46, Item: Similitudo autem unius invenitur in altero dupliciter: uno modo quantum ad esse naturae, sicut similitudo caloris ignis est in re calefacta per ignem; alio modo secundum cognitionem, sicut similitudo ignis est in visu vel tactu; cf. *S.T.*, I, 85, 8 ad 3.

conformity required by cognition is not that of nature but rather is intentional: "Cognitio fit per assimilationem, non quidem naturae sed intentionis. Non enim lapis est in anima ... sed species lapidis."²⁰

For cognition, therefore, an intentional likening of the knower to the known is needed. Since likeness is agreement or communication in form ("cum similitudo attendatur secundum convenientiam vel communicationem in forma ..."²¹), the form of the thing known must in some way inform the intellect of the knower. But because the likeness required for cognition is not one of nature but of representation, it is not the physical form, numerically identical with the one informing the matter of the material object, which will inform the knowing intellect, but merely a representation of the essence according to its formal features. It will be by a formal likeness, not by physical identity, that the assimilation of cognition is effected:

Requiritur ad cognoscendum ut similitudo rei cognitae sit in cognoscente, quasi quaedam forma ipsius.²²

Unde similitudo rei intellectae, quae est species intelligibilis, est forma secundum quam intellectus intelligit.²³

Et per hunc modum dicitur quod intellectum in actu est intellectus in actu, inquantum similitudo rei intellectae est forma intellectus.²⁴

The thing which is known has its own being through its form. In the same way it has being in the intellect through the form which represents it there; and cognition follows this form in the intellect as the real being of the thing follows its form:

Sicut res habet esse per propriam formam, ita virtus cognoscitiva habet cognoscere per similitudinem rei cognitae. ... Sicut autem sensus informatur directe similitudine propriorum sensibilium, ita intellectus informatur similitudine quidditatis rei.²⁵

Cum quaelibet cognitio perficiatur per hoc quod similitudo rei cognitae est in cognoscente; sicut perfectio rei cognitae consistit in hoc quod habet talem formam

²⁰ *De Malo*, 16, 8 ad 10; cf. *In II De An.*, 12, n. 377: cognitio autem omnis fit per hoc quod cognitum est aliquo modo in cognoscente, scilicet secundum similitudinem. Nam cognoscens in actu est ipsum cognitum in actu; also *In I De An.*, 4, n. 43; *In III De An.*, 13, n. 789.

²¹ *S.T.*, I, 4, 3 c; cf. *De Ver.*, 8, 8 c (prin.): similitudo autem inter aliqua duo est secundum convenientiam in forma.

²² *S.T.*, I, 88, 1 ad 2; cf. 75, 5 c: cognoscitur unumquodque sicut forma eius est in cognoscente; *De Ver.*, 2, 6 c.

²³ *S.T.*, I, 85, 2 c.

²⁴ *Ibid.*, ad 1; cf. *In III De An.*, 13, n. 789: Non autem anima est ipsae res ..., quia lapis non est in anima sed species lapidis. Et per hunc modum dicitur intellectus in actu esse ipsum intellectum in actu, inquantum species intellecti est species intellectus in actu.

²⁵ *S.T.*, I, 17, 3 c.

per quam est res talis, ita perfectio cognitionis consistit in hoc, quod habet similitudinem formae praedictae.²⁶

Sicut enim esse consequitur formam, ita intelligere sequitur speciem intelligibilem.²⁷

Just as form is the principle of the actual being of the thing, so a form, the likeness of the thing, is the principle of cognition:

Nihil autem cognoscitur secundum quod est potentia tantum, sed secundum quod est actu: unde et forma est principium cognitionis rei quae per eam fit actu: similiter autem potentia cognoscitiva fit actu cognoscens per speciem aliquam.²⁸

The species or form is both the informing principle of the knowing power and the principle determining the act of knowing to be knowledge of the particular thing whose likeness it is.

The species is thus seen to have a double relation, one to the knower and the faculty by which he knows, another to the thing of which it is the likeness. As a form having an accidental act of being in the knower, it gives him an accidental perfection, which is the act of knowing. From its relation to the external thing it is the principle which determines the act to a definite object:

Omnis cognitio est secundum aliquam formam quae est in cognoscente principium cognitionis. Forma autem huiusmodi potest considerari dupliciter: uno modo secundum esse quod habet in cognoscente; alio modo secundum respectum quem habet ad rem cuius est similitudo. Secundum quidem primum respectum facit cognoscentem actu cognoscere; secundum respectum secundum determinat cognitionem ad aliquod cognoscibile determinatum.²⁹

Because the cognition of a thing depends upon the determination of the knowing power by the form of that thing, and this is accomplished by the species in its representational or intentional aspect, it is from the relation which the likeness has to the thing rather than from the existence which this likeness exercises in the power, that it is to be considered the principle of knowledge of the thing:

Similitudo enim in vi cognoscitiva existens non est principium cognitionis rei secundum esse quod habet in potentia cognoscitiva sed secundum relationem quam habet ad rem cognitam; et inde est quod non per modum quo similitudo

²⁶ *In VI Met.*, 4, n. 1234.

²⁷ *S.T.*, I, 14, 4 c.

²⁸ *C.G.*, II, 98 (prin.); cf. *C.G.*, I, 46: Species enim intelligibilis principium formale est intellectualis operationis: sicut forma cuiuslibet agentis principium est propriae operationis. ... Per speciem intelligibilem fit intellectus intelligens actu: sicut per speciem sensibilem sensus actu sentiens. Comparatur igitur species intelligibilis ad intellectum sicut actus ad potentiam.

²⁹ *De Ver.*, 10, 4 c; cf. 2, 5 ad 16; 3, 2 ad 5. For the perfection added to the knower by knowing, see *In III Sent.*, 27, 1, 4 sol.; *De Ver.*, 2, 2 c; *In IX Met.*, 8, n. 1865.

habet esse in cognoscente, res cognoscitur, sed per modum quo similitudo in intellectu existens est repraesentiva rei.³⁰

What has been expressed of knowledge in general is verified, of course, of intellectual knowledge. Then the power in question is the intellect; the likeness is the intelligible species; and the act is understanding.

In intellectual knowledge what the species represents and the intellect understands is the quiddity, nature, or essence of the thing.³¹ The species thus represents the thing according to its intelligibility: "Intelligibile enim in unaquaque re est quidditas";³² "Natura dicitur omne illud quod intellectu quocumque modo capi potest. Non enim res est intelligibilis nisi per definitionem et essentiam suam."³³ Inasmuch, therefore, as the intellect, through the likeness of the thing which informs it, is determined by the intelligible character of the thing, and so is formally or "intentionally" identified with the thing known, the knower knows the thing in itself:

Omnis intelligibilis species per quam intelligitur quidditas vel essentia alicuius rei, comprehendit in repraesentando rem illam.³⁴

Cognoscere res per earum similitudines in cognoscente existentes est cognoscere ea in seipsis, seu in propriis naturis.³⁵

Not only is the information of the intellect by the quidditative or intelligible likeness of the thing known absolutely necessary for intellectual knowledge, but an understanding of this role of the intelligible species, which is sometimes referred to as an intention (usually *intentio intelligibilis*), is highly important in order to understand the other meanings of the term *intention*.

³⁰ *De Ver.*, 2, 5 ad 17; cf. *S.T.*, I, 79, 10 ad 3: Id quod apprehendit [intellectus] ordinat ad aliquid aliud cognoscendum ..., et hic [actus] vocatur intentio.—We see verified here what was said of the general notion of intention: Unde intentio in ratione sua ordinem quamdem unius ad alterum importat (*In II Sent.*, 38, 1, 3 sol.).

³¹ *Quodl.* VIII, 4 c (post med.): species intelligibilis est similitudo ipsius essentiae rei, et est quodammodo ipsa quidditas et natura rei secundum esse intelligibile.

Quiddity—*S.T.*, I, 17, 3 c & ad 1; *In III De An.*, 8, n. 717; n. 718: quod intellectus intelligit est quidditas quae est in rebus; *S.T.*, I, 84, 7 c; 85, 5 c & ad 3; 6 c; 8 c; 88, 3 c; *Comp. Theol.*, I, 85 (ed. Verardo, n. 155), Primo; *De Ver.*, 1, 12 c; *C.G.*, III, 41, Quod; *In I Perih.*, 3, n. 3.

Nature—*S.T.*, I, 14, 12 c; 85, 1 ad 4; 84, 7 c; 8 c; 87, 2 ad 2; *De Ver.*, 8, 7 ad 4.

Essence—*De Ver.*, 8, 7 ad 4 (ult.): obiectum intellectus est quod quid est, idest ipsa essentia rei ...; et sic similitudo rei quae est in intellectu, est similitudo directe essentiae eius; *De Ver.*, 10, 4 ad 1; *In I Perih.*, 3, n. 3; 10, n. 5. And many other places for each, especially regarding the object of the intellect.

³² *In I De An.*, 8, n. 116.

³³ *De Ente et Ess.*, c. 1, n. 3 (ed. Perrier).

³⁴ *C.G.*, III, 49, Praeterea.

³⁵ *S.T.*, I, 12, 9 c.

INTENTIO INTELLECTA

The use of the term *intention* to mean the intelligible species is comparatively rare and seems to be looked upon by Aquinas as a less proper use than the remaining two, designating the *intentio intellecta* or “internal word” and the logical intention.

Two important chapters of the *Contra Gentiles* explain the notion of the *intentio intellecta*.¹⁶ The first does so by contrast with the intelligible species; the second explains this intention in itself. The explanation given in these places can be supplemented by other passages which do not speak of the intention by that name but explain the same notion or some aspects of it in other terms. Two points especially, which are suggested in the two chapters of the *Contra Gentiles*, must be thus supplemented for the study of logical intentions. They are first, the relations of the conceived intention to the intellect and to the thing known, and secondly, the objective significance of this intention.

Distinguished from Intelligible Species

Chapter 53 of the first book of the *Contra Gentiles* when first mentioning intentions uses the term without qualification. There is no possibility, however, of understanding intention here as the intelligible species because the whole intent of the chapter is expressly to distinguish the intention of which it speaks from the species.

First the function of the intelligible species is explained:

Res exterior intellecta a nobis in intellectu nostro non existit secundum propriam naturam, sed oportet quod species eius sit in intellectu nostro, per quam fit intellectus in actu. Non autem ita quod ipsum intelligere sit actio transiens in intellectum, sicut calefactio transit in calefactum, sed manet in intelligente: sed habet relationem ad rem quae intelligitur, ex eo quod species praedicta, quae est principium intellectualis operationis ut forma, est similitudo eius.

Then a further stage of the intellective operation is pointed out: the intellect forms an “intention” of the thing: “Ulterius autem considerandum est quod intellectus, per speciem rei formatus, intelligendo format in seipso quamdam intentionem rei intellectae, quae est ratio ipsius quam significat definitio.”³⁷ It will be noted that what is formed by the intellect subsequently to its being informed by the species, is here called “intention” simply, and yet cannot be the same as the species which

¹⁶ I, 53 and IV, 11.

³⁷ Cf. *De Spir. Creat.*, 9 ad 6: Res intellecta non se habet ad intellectum possibilem ut species intelligibilis qua intellectus possibilis sit actu; sed illa species se habet ut principium formale quod intellectus intelligit. Intellectum autem, sive res intellecta, se habet ut constitutum vel formatum per operationem intellectus; *Quodl.* V, 9.

elsewhere occasionally receives the same name. It is said to be the *ratio* or intelligible character of the thing as grasped by the mind; it is that which the name of a thing means or its definition signifies.³⁸

The necessity of such an intention is shown from two reasons: the thing can be known when absent (and therefore when the intellect is not actually deriving its form from the thing through sense impressions and imagination), and it is known as abstracted from the conditions of matter:

Et hoc quidem necessarium est: eo quod intellectus intelligit indifferenter rem absentem et rem praesentem, in quo cum imaginatione convenit; sed intellectus hoc amplius habet, quod etiam intelligit rem ut separatam a conditionibus materialibus, sine quibus in rerum natura non existit; et hoc non posset esse nisi intellectus sibi intentionem praedictam formaret.

The first reason for the existence of a formed intellectual intention is not apodictical. It argues only the need of some representational form when the thing is absent. But this argument applies equally well to the phantasm and proves nothing beyond it; for, supposing the existence of a phantasm, the absent thing is still presented to the knower. The second reason given goes beyond this and argues for a specifically intellectual intention in which to regard the thing; for the thing is known independently of the particular material conditions which it has in reality; and no phantasm or other form not itself strictly immaterial could so present the object.

The text then goes on to affirm the distinction of this intention from the intelligible species.

Haec autem intentio intellecta, cum sit quasi terminus intelligibilis operationis, est aliud a specie intelligibili quae facit intellectum in actu, quam oportet considerari ut intelligibilis operationis principium: licet utrumque sit rei intellectae similitudo.

The intention is here given its specific name, *intentio intellecta*, which distinguishes it from the other sorts of intention. From the intelligible species, which informs the intellect and reduces it to act, it is distinguished as the term is distinguished from the principle of the intellectual operation. The intention as well as the species is a likeness of the thing, but in a somewhat different way: it is not just a form received but a representation actively formed or expressed. And because what is thus fashioned in the intellect is a likeness of the thing according to its essence or intelligible character, the intellect which fashions it knows the thing represented:

³⁸ Cf. pp. 82 & 85-86, and *In I Sent.*, 2, 1, 3 sol., which is quoted there.

Per hoc enim quod species intelligibilis, quae est forma intellectus et intelligendi principium, est similitudo rei exterioris, sequitur quod intellectus intentionem formet illi rei similem: quia quale est unumquodque, talia operatur. Et ex hoc quod intentio intellecta est similis alicui rei, sequitur quod intellectus, formando huiusmodi intentionem, rem illam intelligat.

The explanation of the *intentio intellecta* here given clarifies some other passages which use the term *intention* without qualification and without any clear indication of the exact sense in which it is taken. From what is here said they are seen evidently to mean the "understood intention." For example, the intellect is said to become the thing known through an intention:

In intellectu in habitu sunt similitudines intelligibilium ut dispositiones; sed quando sunt actu intellectae, sunt in eo ut formae perficientes, et tunc intellectus fit omnino res intellecta; et hoc contingit per intentionem, quae coniungit intellectum intelligibili.³⁹

There is implied here some distinction between the perfecting forms and the intention which joins the intellect to the thing known. "Intention" cannot, therefore, mean the intelligible species, since these are the perfecting forms; but it must mean the likeness of the thing which is formed by the intellect.

Intentio Intellecta Explained

The second of the chapters from the *Contra Gentiles* mentioned above gives a detailed discussion of the nature and function of the *intentio intellecta*.⁴⁰ Among the various kinds of beings, this passage recalls, those which have life are higher and more noble than the inanimate; and among living things the highest are intelligent beings, which have the power of reflecting upon themselves and knowing themselves. The human intellect has this power even though, being the lowest among intelligences, it must derive the beginning of its act from the outside. Its intention, then, is not entirely intrinsic. The meaning of *intentio intellecta* is then explained:

Dico autem *intentionem intellectam* id quod intellectus in seipso concipit de re intellecta. Quae quidem in nobis neque est ipsa res quae intelligitur, neque est ipsa substantia intellectus; sed est quaedam similitudo concepta in intellectu de re intellecta, quam voces exteriores significant; unde et ipsa intentio *verbum interius* nominatur, quod est exteriori verbo significatum.⁴¹

³⁹ *Quodl.* VII, 2 (post med.).

⁴⁰ IV, 11.

⁴¹ Paulo post pr.: Dico; cf. *De Ver.*, 4, 1; *De Pot.*, 9, 5 c; *S.T.*, I, 27, 1 ad 2; a. 2; 34, 1; 3 c.

The understood intention is said to be a likeness of the thing known which is conceived within the intellect. It is not the thing itself in its physical reality (though this does not at all deny the intentional identity with the thing); nor is it the intellect itself, in a physical sense (though, again, this admits of the formal identification of the intellect and this intention). What is meant by conceiving will have to be examined shortly. Some light, however, is immediately thrown upon the question when the intention is called a *word* and identified with the *internal word* of cognition: it is what is formed to express the intelligible content of the thing known. The meaning of an external word is the nature or formal character of the thing; but this meaning is mediate, because what is directly signified is what the mind conceives about the thing.⁴² The external word is but a sign of the internal word or conceived intention.

The text goes on to explain the distinction of the intention from the thing and from the intellect:

Et quidem quod praedicta intentio non sit in nobis res intellecta, inde apparet quod aliud est intelligere rem et aliud est intelligere ipsam intentionem intellectam, quod intellectus facit dum super suum opus reflectitur: unde et aliae scientiae sunt de rebus et aliae de intentionibus intellectis. Quod autem intentio intellecta non sit ipse intellectus in nobis ex hoc patet quod esse intentionis intellectae in ipso intelligi consistit: non autem intellectus nostri, cuius esse non est suum intelligere.

Either the thing known or the intention which we have formed of the thing can be made the object of our intellection. Since the intention is a likeness of the thing, once it is formed the thing is directly known. Then we can reflect, turning back upon the intention itself, and thus know it. These two acts of understanding are distinct, and therefore the objects specifying them are also distinct; that is, the intention is not the thing of which it is the intention. The distinction of the intention from the intellect is shown from the difference in their acts of existence. For the intention, *to be* is simply *to be understood*; it has no being other than that. For the intellect, however, the act by which the intention is understood is not its essential act; it is merely an accidental operation, inasmuch as the intellect as an operative power exists even when not performing this particular act.

A little further on in the same chapter the intention is said to be identical with the object: "Intellectum autem in intelligente est inten-

⁴² Cf. *De Pot.*, 9, 5 c: vox exterior significat conceptum intellectus quo mediante significat rem; also *In I Perih.*, 10, n. 2; *S.T.*, I, 13, 1 c; 34, 1 c; *In VI Met.*, 4, n. 1224; *De Ver.*, 9, 4 c (ad fin.).

tio intellecta et verbum.”⁴³ It is intentionally (though not physically) identified with the thing known. This is later explained by an example: the internal word or intention of *man* is not absolutely identical with the real man, but only in a certain way, *as understood*: “Verbum enim hominis non potest dici simpliciter et absolute homo, sed secundum quid, scilicet *homo intellectus*: unde haec falsa esset, ‘homo est verbum’; sed haec vera potest esse, ‘homo intellectus est verbum.’”⁴⁴

The intention or internal word proceeds from the intellect as the intelligible term of its operation:

Est autem de ratione interioris verbi quod est intentio intellecta quod procedat ab intelligente secundum suum intelligere, cum sit quasi terminus intellectualis operationis: intellectus enim intelligendo concipit et format intentionem sive rationem intellectam, quae est interius verbum.⁴⁵

Though to understand is not the same thing as to form the intention or conceive the word, still by understanding the knower does conceive the term of his knowing. The term or word thus conceived is called a concept from comparison with natural conception or generation. As long as the offspring remains within the maternal womb, it is said to be conceived. The conception of the internal word corresponds to that of the material offspring inasmuch as the word remains within the intellect conceiving. It is more like parturition or birth, however, inasmuch as the word has an existence distinct from that of the conceiver. Yet intellectual conception differs from both natural conception and natural parturition in that it occurs without motion or succession: there is no gradual development and finally separation; but it either is or is not; and when it is, it is all at once in its full perfection and distinct from the conceiving intellect:

Considerandum est etiam quod id quod generatur, quamdiu in generante manet, dicitur esse *conceptum*. ... Nam proles, quamdiu concepta est et in utero clauditur, nondum habet ultimam perfectionem, ut per se subsistat a generante, secundum locum distinctum: unde oportet quod in corporali generatione animalium aliud sit genitae prolis *conceptio*, atque aliud *partus* ipsius, secundum quem etiam loco separatur proles genita a generante, ab utero generantis egrediens. ... Conceptio autem et partus intelligibilis verbi non est cum motu nec cum successione: unde simul dum concipitur est; et simul dum parturitur, distinctum est; sicut quod illuminatur, simul dum illuminatur, illuminatum est, eo quod in illuminatione successio nulla est.⁴⁶

⁴³ Ante med.: Hoc autem; cf. *De Ver.*, 4, 1 c; unde verbum interius est ipsum interius intellectum.

⁴⁴ Paulo ante med.: Cum autem.

⁴⁵ Med.: Et quamvis.

⁴⁶ Ad fin.: Considerandum.

Although a number of deep and very difficult psychological and metaphysical problems regarding intellectual conception and the nature of the term of immanent operation are left unexplained in the passages which have just been examined, it is beyond the purpose and scope of the present investigation to enter into them here. The concern of this study is with the logical intention, not directly with the internal word or direct intention. And for an understanding of the logical intention the explanation of *intentio intellecta* already given will suffice. That it is an immanent term of the process of knowing and that it is a representation or likeness within the intellect of the thing known is clear from the texts studied.

There are, however, two further points regarding the *intentio intellecta* of interest to this inquiry. The first of these is the relations of the intention to the intellect and to the thing known; the second is the objective significance of the intention. Each is worthy of a little additional attention.

Twofold Relation of the Intention

As was pointed out in the texts above, the conceived intention is an accident of the intellect because its act of existence is distinct from that of the intellect: "Hic autem mentis nostrae conceptus non est ipsa mentis nostrae essentia, sed est quoddam accidens ei, quia nec intelligere nostrum est ipsum esse intellectus."⁴⁷ It is a peculiar kind of accident, however, since it not only perfects the intellect in which it inheres, but also represents an extraneous being.

As an accidental form perfecting the form of man, his soul, the understood intention is a quality; but it is a quality which implies a relation, since it is not only an accidental form of the soul but it is also a likeness of the thing known:

In relativis autem nominibus invenimus quod quaedam nomina imponuntur ad significandum respectus ipsos, sicut hoc nomen *similitudo*; quaedam vero ad significandum aliquid ad quod sequitur respectus, sicut hoc nomen *scientia* imponitur ad significandum qualitatem quamdam quam sequitur quidam respectus, ... similiter etiam hoc nomen *verbum* imponitur ad significandum aliquid absolutum cum aliquo respectu adiuncto.⁴⁸

⁴⁷ *De Rationibus Fidei*, c. 3, n. 958 (ed. Verardo). This work appears in the Parma edition under the title *Declaratio Quorundam Articulorum Contra Graecos, Armenos, et Saracenos*; but *De Rationibus Fidei* is the title more often used and has the advantages of being less unwieldy and less likely to be confused with other works. Cf. *De Pot.*, 8, 1 c.

⁴⁸ *De Ver.*, 4, 5 c; cf. 21, 6 c; *In I Sent.*, 30, 1, 2 sol. See also *De Ver.*, 2, 5 ad 16: Relatio quae importatur nomine scientiae designat dependentiam nostrae scientiae a scibili.—In the context of the passage quoted *verbum* is applied to God; but it is explicit-

As a form the intention has a relation only to the intellect in which it inheres; but as a likeness it has a relation to the thing which it represents:

Idea ... secundum proprietatem vocabuli forma dicitur; quod si rem attendamus, idea est ratio rei vel similitudo. Invenimus autem in quibusdam formis duplicem respectum: unum ad id quod secundum eas formatur, sicut scientia respicit scibile; hic tamen respectus non est omni formae communis sicut primus. Hoc igitur nomen *forma* importat solum primum respectum; et inde est quod forma semper notat habitudinem causae; est enim forma quodammodo causa eius quod secundum ipsam formatur; sive formatio fiat per modum inhaerentiae, sicut in formis intrinsecis, sive per modum imitationis, ut in formis exemplaribus; sed similitudo et ratio respectum etiam secundum habent, ex quo non competit eis habitudo causae.⁴⁹

Since the intention has its existence from its relation to the intellect and stands to the intellect as accident to subject, its act of existence is to inhere, its *esse* is *inesse*; whereas, when viewed from its relation to the external thing, its whole intelligible character is to be a likeness, that is, to be a relation:

Notitia ... dupliciter potest considerari: vel secundum quod comparatur ad cognoscentem, et sic inest cognoscenti sicut accidens in subiecto ...; vel secundum quod comparatur ad cognoscibile, et ex hac parte non habet quod *insit* sed quod *ad aliud* sit.⁵⁰

ly said to agree with such words as *science* in signifying a consequent relation. In God, of course, the word is not a quality, whereas the word of the human intellect is a quality, as is science. The word *science* itself is not always used in the strict sense of a certain cognition derived from demonstration, but it also used for knowledge or cognition in general, so long as it is intellectual. See *S.T.*, III, 9, 1 c: Scientiam enim hic large accipimus pro qualibet cognitione intellectus humani; *De Ver.*, 11, 1 ob. 11: Scientia nihil aliud est quam descriptio rerum in anima, cum scientia esse dicatur assimilatio scientis ad scitum; *De Pot.*, 7, 5 c (post med.): Quodcumque autem intellectus per suam formam intelligibilem alicui rei assimilatur, tunc illud quod concipit et enuntiat secundum illam intelligibilem speciem verificatur de re illa cui per suam speciem similatur: nam *scientia* est assimilatio ad rem scitam; *De Ver.*, 2, 3 ad 19: Verbum illud ["nihil est in intellectu quod non sit prius in sensu"] est intelligendum de intellectu nostro, qui a rebus scientiam accipit; 5 ad 16 (*scientia* interchanged with *cognitio*); 1 ob. 9 & ad 9 (*scientia* and *scire* taken for complete cognition, without specifying origin from demonstration); *S.T.*, I, 85, 3 c: actus autem completus ad quem pervenit intellectus est scientia completa.—See also *De Ver.*, 3, 3 c, quoted next in text. Moreover, although *scientia* most properly signifies habitual knowledge, it sometimes is used for actual knowledge. An obvious case is God's "science" (e.g., *De Ver.*, 2, 1 ad 7). But even of human knowledge science is sometimes spoken as of actual (e.g., *De Ver.*, 3, 3 c [med.]: de his habet quidem scientiam in actu; 2, 5 c: [astrologus] sciret eam [eclipsim]nunc esse vel non esse).—Whether it is taken as habitual or actual, however, does not matter in the question at hand. See also what is said, in the second note following, of *notitia*, with which *scientia* is sometimes coupled (e.g., *In X Met.*, 1, n. 1930).

⁴⁹ *De Ver.*, 3, 3 c (post med.). As is explained immediately, although an *idea* is properly only actual practical science, it is used broadly (*communiter*) of the likeness (i.e., the *intentio intellecta*) of speculative cognition. The same double relation is affirmed of *science*: Scientia enim, in quantum scientia, refertur ad scibile; sed in quantum est accidens vel forma, refertur ad scientem (*De Pot.*, 7, 4 ad 9).

⁵⁰ *Quodl.* VII, 4 c. *Notitia* is a broad word for knowledge. It is said here to have four

The intention, then, is both an inhering quality and a relation. Objectively considered it is a likeness; and likeness is a relation of agreement in form⁵¹ or of oneness in quality.⁵² The form or species received into the intellect is at once the accidental quality of the intellect and the essential quality of the thing known.⁵³ To the accidental perfecting of the intellect by this form and quality, there follows the relation of likeness to the external thing expressed by the intellect in act.⁵⁴ Considered as a relation of the expressed form, this must be an essential relation because it is not something accessory to the form, as would be an accidental relation, but is really identified with this form, which is the same form, quidditatively identical, in the intellect and in the thing according to the full intelligibility which both have in that act.⁵⁵ It is at once the form of the intellect and of the thing known; and is therefore similar to the thing known according to its whole intelligible being.

The essential relation of the form in the mind to the thing is the *truth* of the concept. Reverting to the distinction of the being and the reference of the concept, we can say that it has a double grounding: that of its act of being, which is founded on the intellect, and that of its truth, which is founded on the thing known:

Aliquid dicitur fundari vel radicari in aliquo metaphorice, ex quo firmitatem habet. Rationes autem intellectae habent duplicem firmitatem: scilicet firmitatem sui esse, et hanc habent ab intellectu, sicut alia accidentia a suis subiectis; et firmitatem suae veritatis, et hanc habent ex re cui conformantur.⁵⁶

By reason of this essential relation of the intention the intellect itself

meanings: "Notitia quatuor modis accipi potest. Primo pro ipsa natura cognoscitiva; secundo pro potentia cognoscitiva; tertio pro habitu cognoscitivo; quarto pro ipso cognitionis actu." The text quoted is not applied to the first sense of the word, but to all the other three. These senses must at least include the concept or term of cognition (cf. *De Ver.*, 10, 2 c, on memory as *notitia praeteritorum*: "Nomen memoriae potest extendi ad notitiam qua ... cognoscitur ... obiectum de quo etiam prius est notitia habita"). It is sometimes identified with the internal word (e.g., *S.T.*, I, 34, 1 ad 2: "Cum ergo dicitur quod verbum est notitia, non accipitur notitia pro actu intellectus cognoscentis vel pro aliquo eius habitu, sed pro eo quod intellectus concipit cognoscendo").

⁵¹ *S.T.*, I, 4, 3 c; cf. *De Ver.*, 8, 8 c (prin.): similitudo autem inter aliqua duo est secundum convenientiam in forma.

⁵² *In X Met.*, 4, n. 2006.

⁵³ The expression "essential quality" is used, *In I Perih.*, 10, n. 10. Accidental and "substantial" quality are contrasted, *In V Met.*, 22, n. 1581. Cf. *S.T.*, I-II, 49, 2 c; *In V Met.*, 16, nn. 996 & 997; *In I Sent.*, 22, 1, 1 ad 3.

⁵⁴ *De Pot.*, 7, 9 ad 4: Aliquid dicitur simile secundum qualitatem causaliter, secundum similitudinem formaliter.

⁵⁵ *De Ver.*, 4, 1 ad 9: Interius verbum significat omne illud quod intelligi potest ...; et ideo omne intellectum ... potest verbum interius dici. See also p. 102.

⁵⁶ *In I Sent.*, 2, 1, 3 ad 5. *Ratio intellecta* means the same thing as concept or *verbum*: "rationes sive conceptiones" (*ibid.*, ad 6), and "intellectus enim intelligendo concipit et format intentionem sive rationem intellectam, quae est interius verbum" (*C.G.*, IV, 11, Et quamvis).

stands conformed to the thing, and therefore in the relation of truth.

Objective Significance of the Intention

Of the two aspects of the conceived intention, the one formal, as perfecting the intellect, the other objective, as representing or signifying the thing, it is the latter which more directly concerns logic.⁵⁷ It is necessary to understand, then, just what the intention represents regarding the thing known. Is the real thing represented according to all the conditions and determinations which it has as it exists outside the intellect, or only according to some of them? If not according to all, then just what is it about the real thing which is represented?

In studying any being one may consider either the act of being which it exercises or the formal character (*ratio*) which makes it what it is: "In quolibet autem ente est duo considerare: scilicet ipsam rationem speciei, et esse ipsum quo aliquid subsistit in specie illa."⁵⁸ The *ratio* of a thing is its quiddity, essence, or nature viewed precisely as intelligible, that is, as capable of being grasped by the intellect or reason, and constituting the foundation for concepts that may be formed of it. One may speak either of *the* intelligible character of the thing or of *an* intelligible character. In the first case it means the quiddity viewed adequately and expressed by the definition of the thing; and in the second case it means some formal or intelligible feature of the thing, whether accidental or essential, or some constituent note of the essence or quiddity itself.⁵⁹

The *ratio intellecta* or intelligible aspect of the thing which is understood, considered *as* understood, is the intention or concept taken objectively: "Intellectus enim intelligendo concipit et format intentionem, sive rationem intellectam, quae est interius verbum."⁶⁰ This

⁵⁷ See below, "Second Intentions," pp. 122-129, especially 126-127.

⁵⁸ *De Ver.*, 21, 1 c (post med.).

⁵⁹ It signifies form *ex parte rei*, being more objective than *scientia* or *idea* (*In I Sent.*, 36, 2, 2 ad 4); coupled with quiddity (*In III Sent.*, 8, 5, 2 sol.); it is that which is signified by a noun (*In I Sent.*, 2, 1, 3 sol.; *C.G.*, I, 11: Eodem enim modo necesse est poni rem et nominis rationem); it is the definition (*In I Sent.*, 33, 1, 1 ad 3; *In IV Met.*, 16, n. 733; *S.T.*, I, 13, 8 ad 2) as signifying the quiddity (*In VII Met.*, 12, n. 1537; *In V Met.*, 7, n. 864.) Definition signifies quiddity (*In VII Met.*, 11, n. 1528) adequately (*De Ver.*, 2, 1 ad 9: intellectus ... definit ... quando concipit aliquam formam de ipsa re quae per omnia ipsi rei respondet). But not every *ratio* is a definition (*In VII Met.*, 3, n. 1325; 4, n. 1339); one thing or form can have many *rationes* (*De Pot.*, 7, 6 c & ad 4-6; *De Ver.*, 8, 4 ad 1; *S.T.*, I, 13, 4 c & ad 1-3) according to the different ways in which it is understood (*ibid.* & *De Ver.*, 2, 1 c, ad fin.).

⁶⁰ *C.G.*, IV, 11, Et quamvis; cf. *C.G.*, I, 53, Ulterius: intellectus ... format in seipso quamdam intentionem rei intellectae, quae est ratio ipsius quam significat definitio; *C.G.*, II, 75, Ad 2: Id vero quod intelligitur est ipsa ratio rerum existentium extra animam.

conceived intention, as objective, is the thing which is understood and considered as understood: "Omne autem intellectum in quantum intellectum oportet esse in intelligente. ... Intellectum autem in intelligente est intentio intellecta et verbum."⁶¹ Whether the thing known is a substance or an accident, and whether it is grasped adequately or not, the intention viewed objectively is a *res intellecta*, that is, the thing known precisely as known; and since the thing is apprehended according to its quiddity, essence, or nature, the intention is also a *natura intellecta*.⁶²

The nature which is known can be looked at in three ways: as it exists in a real, singular thing, as it is in the soul, or merely according to its intelligible content:

Triplex est alicuius naturae consideratio. Una prout consideratur secundum esse quod habet in singularibus; sicut natura lapidis in hoc lapide et in illo lapide. Alia vero est consideratio alicuius naturae secundum esse suum intelligibile; sicut natura lapidis consideratur prout est in intellectu. Tertia vero est consideratio naturae absoluta, prout abstrahit ab utroque esse; secundum quam considerationem consideratur natura lapidis, vel cuiuscumque alterius, quantum ad ea tantum quae per se competunt tali naturae.⁶³

The last manner of considering the nature, called its "absolute consideration," merits particular attention. This takes into account nothing but what belongs to the very notion of the thing and is necessary for the understanding of it—in other words, whatever goes into its definition. It is not concerned with the manner in which the nature exists or how that manner of existing affects our understanding of it. The nature

⁶¹ *C.G.*, IV, 11, Hoc autem.

⁶² *De Pot.*, 7, 6 c (med.): Sicut est quaedam conceptio intellectus vel ratio cui respondet res ipsa quae ext extra animam; ita est quaedam conceptio vel ratio cui respondet *res intellecta* secundum quod huiusmodi; sicut rationi hominis vel conceptioni hominis respondet res extra animam: rationi vero vel conceptioni generis aut speciei respondet solum *res intellecta*; *In I Perih.*, 10, n. 9: Intentiones format intellectus attribuens eas *naturae intellectae* secundum quod comparat ipsam ad res quae sunt extra animam; *De Ente et Ess.*, c. 3, n. 16 (ed. Perrier): *Natura intellecta* ... comparatur ad res extra animam; *C.G.*, IV, 11, Cum autem (ad fin.) (speaking of the concept of man): *homo intellectus* est verbum.

⁶³ *Quodl.* VIII, 1, c; cf. *De Nat. Gen.*, c. 3, n. 17 (ed Perrier): Natura enim cuius est subterni intentioni universalitatis, sicut natura animalis, tripliciter considerari potest. Uno modo absolute et secundum se; et sic nihil sibi convenit nisi quod est de intellectu eius. ... Alio modo potest considerari haec natura prout est recepta in aliquo singulari sui generis. ... Tertio modo potest considerari haec natura prout est in anima; et quia omne quod est in anima est abstractum ab omni divisione et diversitate materiali, attribuitur isti naturae, ratione uniformitatis quam habet ad omnia, ratio universalis quod est unum in multis.

For St. Thomas' dependence upon Avicenna in this doctrine of the absolute natura (especially Avicenna, *Metaph.*, tr. V, c. 1), see M.-D. Roland-Gosselin, O.P., *Le "De Ente et Essentia" de S. Thomas d'Aquin* (Kain, 1926), p. 24, note 1 ff., and p. 150, note 2. See also Gilson, "Avicenne et le point de départ de Duns-Scot," *Archives d'histoire doctrinale et littéraire du moyen-âge*, II (1927), 129-132, for the doctrine of Avicenna.

is said to be considered "absolutely." But what is absolute stands by itself; it is "set free" (as the etymology of the word indicates) from the admixture of anything else or from ties to anything not itself. In this case it is intellectual abstraction which so sets the nature free. The intellect considers only *what* the thing is, its quiddity or *ratio* regarded by itself. The nature so considered is the "formal principle" which was discussed at the end of Chapter III and according to which logic was said to consider things.

This agrees with the general principle seen before, that in regard to any being one has to consider its intelligible character and its act of existence. In the *De Ente et Essentia* St. Thomas examines from these two points of view the nature of a thing known:

Natura vel essentia [secundum quod significatur per modum totius] potest dupliciter considerari. Uno modo, secundum rationem propriam, et haec est absoluta consideratio ipsius; et hoc modo nihil est verum de ea nisi quod convenit sibi secundum quod huiusmodi: unde quidquid aliorum sibi attribuitur, falsa est attributio. ... Unde si quaeratur utrum ista natura sic considerata possit dici una vel plures, neutrum concedendum est, quia utrumque est extra intellectum [eius]. ... Alio modo consideratur secundum esse quod habet in hoc vel in illo; et sic de ea praedicatur per accidens, ratione eius in quo est, sicut dicitur quod homo est albus quia Socrates est albus, quamvis hoc non conveniat homini in eo quod est homo.⁶⁴

According to the absolute consideration of the nature, nothing can be attributed to it which is not implied in its definition. When its act of being is considered, then accidental determinations can be attributed to it by reason of the subject in which that nature is found. This has a double importance for logic, first for the understanding of what logic treats of, and secondly for the understanding of predication about things, one of the particular points that logic studies. The latter depends upon the existence of the real subject in which the nature is found; the former, upon the existence of the nature in the mind. For the nature exercises a twofold act of existence, one real, in things, and the other

⁶⁴ Cap. 3, n. 14 (ed. Perrier); cf. *De Pot.*, 9, 9 ad 2: Dupliciter aliquid potest esse naturae alicuius. Uno modo secundum quod absolute consideratur. ... Alio modo pertinet aliquid ad naturam secundum quod consideratur in aliquo supposito; 9, 1 c: Natura enim communis est quam significat definitio indicans quid est res; unde ipsa natura communis, essentia vel quidditas dicitur. Quidquid ergo est in re ad naturam communem pertinens, sub significatione essentiae continetur; non autem quidquid est in substantia particulari est huiusmodi; *In De Trin.*, 5, 2 c (ad fin.): Possunt ergo huiusmodi rationes sic abstractae considerari dupliciter. Uno modo secundum se, et sic considerantur sine motu et materia signata, et hoc non invenitur in eis nisi secundum esse quod habent in intellectu. Alio modo secundum quod comparantur ad res quarum sunt rationes; quae quidem res sunt in materia et motu. Et sic sunt principia cognoscendi illa, quia omnis res cognoscitur per suam formam.

intentional, in the mind: "Haec autem natura habet duplex esse: unum in singularibus, aliud in anima; et secundum utrumque consequuntur dictam naturam accidentia."⁶⁵ In so far as the understood nature has real existence in singular things, certain real accidents will follow it and be predicable of the subject having it. In so far as it has intentional existence in the intellect, certain logical accidents will follow it from the manner in which it is understood. For the act of being of the understood nature as such is *to be understood* ("Esse intentionis intellectae in ipso intelligi consistit ..., cum intentionis intellectae esse sit ipsum intelligi"⁶⁶), and logical intentions follow the manner of understanding.

KNOWLEDGE OF THE INTENTION

Because through the conceived intention or concept the nature of the thing known has intentional existence in the intellect, that nature can be known; and the concept, as expressing the transcendental relation of truth between the intellect and the thing, is a medium of conformity and of cognition:

Conceptio intellectus est media inter intellectum et rem intellectam, quia ea mediante operatio intellectus pertingit ad rem: et ideo conceptio intellectus non solum est id quod intellectum est, sed etiam id quo res intelligitur; ut sic id quod intelligitur possit dici et res ipsa et conceptio intellectus: et similiter id quod dicitur potest dici et res quae dicitur per verbum et verbum ipsum.⁶⁷

The function of the concept is to lead to knowledge of the thing, and it does this in virtue of its being a likeness of its quiddity. It is accordingly that "by which" the thing is known. Inasmuch as it is intentionally identical with the thing as known, it is itself the thing known. Looked at in this way, however, it is not distinct from the thing but one and the same. But there is another way in which it can be viewed and in which it is distinct from the thing, namely, as having an act of existence of its own in the mind. In that case it is known by a distinct act of understanding, which is one of reflection upon the intellectual act and the media implied in it: "Aliud est intelligere rem, et aliud est intelligere ipsam intentionem intellectam, quod intellectus facit dum super sum opus reflectitur: unde et aliae scientiae sunt de rebus, et aliae de intentionibus intellectis."⁶⁸ This follows naturally from the nature of any active power, which by its nature is determined to its object. In

⁶⁵ *De Ente et Ess.*, c. 3, n. 15.

⁶⁶ *C.G.*, IV, 11, Dico (fin.) & Cum autem (med.).

⁶⁷ *De Ver.*, 4, 2 ad 5.

⁶⁸ *C.G.*, IV, 11, Dico.

addition to this determination the powers of the soul have a certain power of reflection or turning back upon themselves, and through this they can know their acts and media:

Cuiuslibet potentiae animae virtus est determinata ad obiectum suum; unde et eius actio *primo et principaliter* in obiectum tendit. In ea vero *quibus* in obiectum tendit, non potest nisi per quamdam reditionem, sicut videmus quod visus primo dirigitur in colorem, et in actum visionis suae non dirigitur nisi per quamdam reditionem, dum videndo colorem videt se videre.⁶⁹

The intention of the faculty is directed first of all to its object; and only in the second place and by consequence of its first intention is there any intention of itself and its own principles and instruments.

In a sense faculty such as sight, this power of reflection is very imperfect and its return incomplete. It is principally in this respect that intellect differs from sense and surpasses it, because its return upon self is complete:

Sed ista reditio incomplete quidem est in sensu, complete autem in intellectu, qui reditione completa redit ad cognoscendum essentiam suam.⁷⁰

Est igitur supremus et perfectus gradus vitae qui est secundum intellectum: nam intellectus in seipsum reflectitur, et seipsum intelligere potest.⁷¹

For the intellect to know itself and its own act it must therefore first know something else:

In omnibus potentiis quae possunt converti in suos actus, prius oportet quod actus illius potentiae feratur in obiectum aliud, et postmodum feratur in suum actum. Si enim intellectus intelligit se intelligere, prius oportet poni quod intelligat rem aliquam, et consequenter quod intelligat se intelligere: nam ipsum intelligere quod intellectus intelligit, alicuius obiecti est.⁷²

Our intellect's knowledge of its own act and of the principles of that act is accordingly consequent upon the knowledge of some external thing. This is because the human intellect, being the lowest and most imperfect in the scale of spiritual beings, is dependent upon external, even material, things for the initiation of its act: "Nam intellectus humanus, etsi seipsum cognoscere possit, tamen primum suae cognitionis initium

⁶⁹ *De Ver.*, 10, 9 c (med.).

⁷⁰ *Ibid.*

⁷¹ *C.G.*, IV, 11, Est igitur.

⁷² *C.G.*, III, 26, Praeterea; cf. *De Ver.*, 10, 8 c (prin.): Nullus autem percipit se intelligere nisi ex hoc quod aliquid intelligit; quia prius est intelligere aliquid quam intelligere se intelligere; et ideo pervenit anima ad actualiter percipiendum se esse per illud quod intelligit vel sentit; *S.T.*, I, 14, 2 ad 3: Unde intellectus noster possibilis non potest habere intelligibilem operationem nisi in quantum perficitur per speciem intelligibilem alicuius. Et sic intelligit seipsum per speciem intelligibilem sicut et alia; manifestum est autem quod ex eo quod cognoscit intelligibile intelligit ipsum suum intelligere, et per actum cognoscit potentiam intellectivam.

ab extrinseco sumit: quia non est intelligere sine phantasmate."⁷³

When the act is initiated by the reception of an intelligible species from the phantasm, it is led by this species first to the knowledge of the thing of which the species is the likeness, then to the knowledge of its own act, and finally to the principles of that act:

Intellectus autem noster in statu viae hoc modo comparatur ad phantasmata sicut visus ad colores ...: non quidem ut cognoscat ipsa phantasmata ut visus cognoscit colores, sed ut cognoscat ea quorum sunt phantasmata. Unde actio intellectus nostri primo tendit in ea quae per phantasmata apprehenduntur, et deinde redit ad actum suum cognoscendum; et ulterius in species et habitus et potentias et essentiam ipsius mentis. Non enim comparantur ad intellectum ut obiecta prima, sed ut ea quibus in obiectum feratur.⁷⁴

From the actual knowledge of the thing the specified act is known; and from the specified act, the species which gives it its specification, the power of the soul thus able to be determined and to act, and the properties and essence of the soul itself are known. What is of interest in the present study of the intention is the knowledge which we have of the intelligible species. It is in the first instance a means of understanding, being the formal principle by which the intellect understands, and only by reflective examination of the act does it become the object of knowledge itself:

Species intelligibilis se habet ad intellectum ut quo intelligit intellectus. ... Sed quia intellectus supra seipsum reflectitur, secundum eandem reflexionem intelligit et suum intelligere et speciem qua intelligit. Et sic species intellecta secundo est id quod intelligitur. Sed id quod intelligitur primo est res cuius species intelligibilis est similitudo.⁷⁵

⁷³ C.G., IV, 11, Est igitur; cf. *In II Met.*, 1, n. 285; S.T., I, 79, 2 c (ad fin.).

⁷⁴ *De Ver.*, 10, 9 c (med.). Cf. S.T., I, 87, 3 c: Est autem alius intellectus, scilicet humanus, qui nec est suum intelligere, nec sui intelligere est obiectum primum ipsa eius essentia, sed aliquid extrinsecum, scilicet natura materialis rei. Et ideo id quod primo cognoscitur ab intellectu humano est huiusmodi obiectum; et secundo cognoscitur ipse actus quo cognoscitur obiectum; et per actum cognoscitur ipsa intellectus, cuius est perfectio ipsum intelligere. Et ideo Philosophus dicit quod obiecta praecognoscuntur actibus, et actus potentiis. (Aristotle. *De Anima*, II, 4, 415a 18.)

In II De An., 6, n. 308: Intellectus possibilis noster cognoscit seipsum per speciem intelligibilem, ... non autem intuendo essentiam suam directe. Et ideo oportet quod in cognitionem procedamus ab his quae sunt magis extrinseca, a quibus abstrahuntur species intelligibiles, per quas intellectus intelligit seipsum; ut scilicet per obiecta cognoscamus actus, et per actus potentias, et per potentias essentiam animae. Si autem directe essentiam suam cognosceret anima per seipsam, esset contrarius ordo servandus in animae cognitione; quia quanto aliquid esset propinquius essentiae animae, tanto prius cognosceretur ab ea.

Comp. Theol., I, 85 (ad fin.): Intellectus intelligens per eas [species intelligibiles] suum obiectum reflectitur supra seipsum, intelligendo ipsum suum intelligere et speciem qua intelligit.

⁷⁵ S.T., I, 85, 2 c; cf. *De Spir. Creat.*, 9 ad 6: Illa species se habet ut principium formale quo intellectus intelligit; *Quodl.* V, 9 ad 1; *In III De An.*, 8, n. 718: Non enim se habet ad intellectum sicut quod intelligitur sed sicut quo intelligitur; C.G., II, 75, Licet: Licet

When the species is made the object of knowledge, it can be known in two ways, according to the two aspects of the intellectual likeness which Aquinas points out in the texts seen above distinguishing the existence of the likeness in the intellect and its reference to the thing it represents:

Potest enim intellectus converti ad speciem quam apud se habet, dupliciter: aut considerando ipsam secundum quod est ens quoddam in intellectu; et sic cognoscit de ea quod est intelligibile vel universale vel aliquid huiusmodi: aut secundum quod est similitudo rei: et sic intellectus consideratio non sistit in specie, sed per speciem transit in rem cuius similitudo est; sicut oculus per speciem quae est in pupilla videt lapidem: et est simile de imagine lapidea, quae potest considerari secundum quod est res quaedam vel similitudo rei.⁷⁶

The species can be studied, then, either as a being in itself having its own act of existence, its own nature, and properties; or it can be studied precisely as a representation of the thing, just as a statue can be studied for what it is or for what it represents.

In either case, however, the study is reflective, attaining the species only subsequently to attaining the thing which it represents. And in every case the received species and the intention are something in the mind only and not in external reality: "In omnibus autem intentionibus hoc communiter verum est, quod intentiones ipsae non sunt in rebus sed in anima tantum."⁷⁷ But they do have a basis in reality, the basis being the nature of the thing which is represented or to which the intention is referred: "Sed habent aliquid in re respondens, scilicet naturam, cui intellectus huiusmodi intentiones attribuit."

KINDS OF INTENTIONS

Now this brings the inquiry back to what was said about the subject of logic as a rationate being, and especially to the second of the two important texts from the *Sentences* discussed there. Concepts (*conceptiones*) were distinguished according to their foundation in reality: some have a real foundation and some do not; of those founded in reality some have an immediate real foundation, and for some it is only remote. The subject of logic, it was seen, has to be of the last kind, a rationate

autem dixerimus quod species intelligibilis in intellectu recepta non sit quod intelligitur; non tamen remouetur quin per reflexionem quamdam intellectus seipsum intelligat, et suum intelligere, et speciem qua intelligit; cf. ad 2.

⁷⁶ *In II Sent.*, 12, 1, 3 ad 5. Although the context is about angelic knowledge, what is said here is asserted of intellect in general; and it agrees with the doctrine of the texts referred to.

⁷⁷ *In I Sent.*, 33, 1, 1 ad 3.

being remotely founded in the real. But most of what has been said of the *intentio intellecta* or *verbum interius* fits the description of the concept with an immediate real foundation:

Aliquando enim hoc quod intellectus concipit est similitudo rei existentis extra animam, sicut hoc quod concipitur de hoc nomine *homo*; et talis conceptio intellectus habet fundamentum in re immediate, in quantum res ipsa, ex sua conformitate ad intellectum, facit quod intellectus sit verus et quod nomen significans illum intellectum proprie de re dicatur.⁷⁸

“What the intellect conceives” is a concept, internal word, or intention. This is, as has been seen, a “likeness” in the intellect “of a thing existing outside the soul.” The real external thing which is known, by the fact that it is conformed to the intellect (that is, informed by the same form) and thus makes the intellect (in act) true, is here ascribed as the immediate real foundation of the concept. The noun which signifies the concept or understanding of the thing (“illum intellectum”), is properly applied because of the formal identity of concept and thing. Thus the noun “man” signifies the concept of man and, because of the truth of the concept, the real man.

The concept which logic studies is not of this kind. It is not directly a likeness of the external thing; and as a consequence its truth is not directly founded on the ontological truth of the thing, but in some way upon the concept of the thing as it is in the mind: “Aliquando autem hoc quod significat nomen non est similitudo rei existentis extra animam, sed est aliquid quod consequitur ex modo intelligendi rem quae est extra animam.” Its foundation in the real thing is therefore mediated by the direct concept, of which it is itself an intention or concept; and since the logical intention is a likeness of the direct concept, which is in turn a likeness of the external object, the logical intention is mediately a likeness or intention of the real thing. Consequently, its foundation, though not immediately and proximately in the real, is nevertheless remotely and mediately there: “Et huiusmodi intentionis, licet proximum fundamentum non sit in re sed in intellectu, tamen *remotum fundamentum* est in re ipsa.”

The distinction of immediately and mediately founded concepts is well brought out in a reply of the *De Potentia*:

Intellectui respondent aliquid in re dupliciter. Uno modo immediate, quando videlicet intellectus concipit formam rei alicuius extra animam existentis, ut

⁷⁸ *In I Sent.*, 2, 1, 3 sol. See pp. 85-87. Cf. also *In I Sent.*, 30, 1, 3 sol.: Ratio in intellectu rerum tripliciter se habet. Quandoque enim apprehendit aliquid quod est in re secundum quod apprehenditur, ut quando apprehenditur forma lapidis.

hominis vel lapidis. Alio modo mediate, quando videlicet aliquid sequitur actum intelligendi et intellectus reflexus supra ipsum considerat illud. Unde res respondet illi considerationi intellectus mediate, idest mediante intelligentia rei.⁷⁹

One concept is immediately the concept of an external thing; the other is in some sense a concept of the direct concept, for it is an intention of the state of that concept (viewed according to what it represents) in the intellect, or of the understanding which the intellect has of the thing. This second concept or intention is "something which follows" that understanding. It presupposes a reflection upon the act of understanding and the concept or term of that act, and is itself an expressed term of cognition (that is, an intention) of the direct act and concept; not exactly of the whole process or of the whole intelligible character of the concept, but of some aspect of that concept and act. That this mediated intention is the one with which logic is concerned is evident from the illustration used in this same text:

Verbi gratia, intellectus intelligit naturam animalis in homine, in equo, et multis aliis speciebus: ex hoc sequitur quod intelligit eam ut genus. Huic intellectui quo intellectus intelligit genus non respondet aliqua res extra immediate quae sit genus; sed intelligentiae ex qua consequitur ista intentio respondet aliqua res.

The intention of genus is one of the examples which St. Thomas most frequently uses to illustrate the subject of logic. Furthermore, when he says that this intention does not correspond immediately to an external thing, he is equivalently saying that it is a rationally being, as the subject of logic has been found to be. And in affirming that it has a foundation in reality none the less, he is denying that it is pure fiction. The investigation of the notion of intention has thus led to the same conclusion as the study of rationally being. It is again seen that the subject of logic is a rationally being or intention remotely founded in reality.

By the same token the direct intention of the external thing is excluded as the subject of logic. The fact that so much of the discussion has centered upon the intelligible species (sometimes referred to as the intelligible intention) and the direct concept or internal word (also

⁷⁹ Q 1, a. 1 ad 10; cf. *In I Sent.*, 2, 1, 3 sol.: sicut significatum huius nominis *genus* non est similitudo alicuius rei extra animam existentis; sed ex hoc quod intellectus intelligit animal ut in pluribus speciebus, attribuit ei intentionem generis; et huiusmodi intentionis, licet proximum fundamentum non sit in re sed in intellectu, tamen remotum fundamentum est res ipsa; 30, 1, 3 sol.: sicut patet quando apprehendit intentionem generis substantiae, quae in re est natura quaedam non determinata secundum se ad hanc vel ad illam speciem; et huic naturae apprehensae, secundum modum quo est in intellectu apprehendente, qui ex omnibus accipit unum quid commune in quibus invenitur natura illa, attribuit rationem generis, quae quidem ratio non est in re.

called the understood intention) does not, however, mean that this discussion was irrelevant or unnecessary, or that it has served only for the purposes of elimination. A mediated intention can certainly not be understood unless the intention which mediates it is understood; for it is a concept of some aspect of the direct intention and derived from reflection upon this intention and from an understanding of it.

Before the mediated intention is examined in more detail, it is well to note that the conceived intention or expressed term of knowledge is not restricted to the first of the three acts of reason, simple apprehension. Judgment and reasoning also have their termini, and these termini also verify the notion of intention. There are, therefore, simple conceptions and complex conceptions, just as there are simple and complex expressions:

Voces enim incomplexae neque verum neque falsum significant; sed voces complexae, per affirmationem aut negationem veritatem aut falsitatem habent. ... Et cum voces sint signa intellectuum, similiter dicendum est de conceptionibus intellectus. Quae enim sunt simplices, non habent veritatem neque falsitatem, sed solum illae quae sunt complexae per affirmationem vel negationem.⁸⁰

The simple or uncompounded conception is called simple because it is the expressed term of the first act of the mind, which grasps uncompounded quidditative forms and is for this reason called "the understanding of indivisibles" (*indivisibilium intelligentia*). Not expressing one thing of another, it does not have formal truth. When simple quidditative forms are compounded by predicating one conceived term of another, there is conceived a complex term called an enunciation:

Hoc ergo est primo et per se intellectum, quod intellectus in seipso concipit de re intellecta, sive illud sit definitio sive enuntiatio, secundum quod ponuntur duae operationes intellectus in III *de Anima*. Hoc autem sic ab intellectu conceptum dicitur verbum interius, hoc enim est quod significatur per vocem; non enim vox exterior significat ipsum intellectum, aut formam ipsius intelligibilem, aut ipsum intelligere; sed conceptum intellectus quo mediante significat rem; ut cum dico "homo," vel "homo est animal."⁸¹

The conceived intention is thus seen to be either a definition (which is the intention of a simple quiddity) or a proposition (the intention of a

⁸⁰ *In VI Met.*, 4, n. 1223 & 1224; cf. *De Ver.*, 11, 1 c: Similiter etiam dicendum est de scientiae acquisitione: quod praeexistunt in nobis quaedam scientiarum semina, scilicet primae *conceptiones* intellectus, quae statim lumine intellectus agentis cognoscuntur per species a sensibilibus abstractas, sive sint *complexa*, ut dignitates, sive *incomplexa*, sicut ratio entis, et unius, et huiusmodi, quae statim intellectus apprehendit. Cf. *In I Perih.*, 4, n. 9: Sed oratio significat ipsam *conceptionem compositam*; cf. 5, nn. 16-17; 7, n. 2.

⁸¹ *De Pot.*, 9, 5 c (med.). In the sentence immediately preceding the words quoted, what is understood "whether a definition or an enunciation" (as is said here) is referred to as an *intelligendi terminus*. The reference to Aristotle is *De An.*, III, 6, 430 a 26-28.

complex of quiddities, one in the other as in its subject). This is a point of doctrine of capital importance in the epistemology of St. Thomas and frequently taught by him.⁸²

The term intention even extends beyond the simple concept and the proposition to take in the construct of the act of reasoning, the syllogism:

Quandoque autem *ratio* est nomen intentionis, sive secundum quod significat definitionem rei prout ratio est definitio, sive prout ratio dicitur *argumentatio*.⁸³

Verbum intellectus nostri ... est id ad quod operatio intellectus nostri terminatur, quod est ipsum intellectum, quod dicitur conceptio intellectus; sive sit conceptio significabilis per vocem incomplexam, ut accidit quando intellectus format quidditates rerum; sive per vocem complexam, quod accidit quando intellectus componit et dividit. Omne autem intellectum in nobis est aliquid realiter progrediens ab altero; vel sicut progrediuntur a principiis *conceptiones conclusionum*, vel sicut conceptiones quidditatum rerum posteriorum a quidditatibus priorum: vel saltem sicut conceptio actualis ab habituali cognitione.⁸⁴

An intellectual word or conception is formed of quiddities, or of compositions and divisions, or of the conclusions of reasoning processes; and all of these are "what is understood." Explicitly referred to as intentions are definition and "argumentation." Clearly the latter is a term or intention of the third operation of the human intellect, reason-

⁸² E.g., *De Pot.*, 8, 1 c (med.): Praedicta conceptio consideratur ut terminus actionis, et quasi quoddam per ipsam constitutum. Intellectus enim sua actione format rei definitionem, vel etiam propositionem affirmativam seu negativam. Haec autem conceptio intellectus in bonis proprie verbum dicitur.

De Ver., 4, 2 c: Verbum intellectus nostri ... est id ad quod operatio intellectus nostri terminatur, quod est ipsum intellectum, quod dicitur conceptio intellectus; sive sit conceptio significabilis per vocem incomplexam, ut accidit quando intellectus format quidditates rerum; sive per vocem complexam, quod accidit quando intellectus componit et dividit.

De Spir. Creat., 9 ad 6: Intellectum autem, sive res intellecta, se habet ut constitutum vel formatum per operationem intellectus: sive hoc sit quidditas simplex, sive sit compositio et divisio propositionis.

Quodl. V, 9 c: Procedit autem aliquid ab intellectu, in quantum est constitutum per operationem ipsius. Est autem duplex operatio intellectus. ... Una quidem quae vocatur indivisibilem intelligentia, per quam intellectus format in seipso definitionem vel conceptum alicuius incomplexi. Alia autem operatio est intellectus componentis et dividit, secundum quam format enuntiationem. Et utrumque istorum per operationem intellectus constitutorum vocatur verbum cordis, quorum primum significatur per terminum incomplexum, secundum vero per orationem.

S.T., I, 85, 2 ad 3: Et utraque haec operatio [immutatio et formatio] coniungitur in intellectu. Nam primo quidem consideratur passio intellectus possibilis secundum quod informatur specie intelligibili. Qua quidem formatus format secundo vel definitionem vel divisionem vel compositionem, quae per vocem significatur. Unde ratio quam significat nomen est definitio, et enuntiatio significat compositionem et divisionem intellectus. Non ergo voces significat ipsas species intelligibiles sed ea quae intellectus sibi forma ad iudicandum de rebus exterioribus.

In I Perih., 7, n. 5: Per enuntiativam orationem significatur ipse mensis conceptus. ... [Oratio] enuntiativa ... significat id quod mens de rebus concipit.

⁸³ *In I Sent.*, 33, 1, 1 ad 3.

⁸⁴ *De Ver.*, 4, 2 c (med.).

ing. It is expressly identified with the syllogism in a reply of the *Summa* which speaks of a conceived intention for each of the three acts of reason (though here not under the name "conceived intention" but only under that of "something constituted"):

In operibus rationis est considerare ipsum actum rationis, qui est intelligere et ratiocinari, et aliquid per huiusmodi actum constitutum. Quod quidem in speculativa ratione primo quidem est definitio; secundo, enuntiatio; tertio vero, syllogismus vel argumentatio.⁸⁵

Each of these intentions, it will be seen, enters into the consideration of logic.

SECOND INTENTIONS

The intention which is the conceived term of intellection is called the *intentio intellecta*. By this is meant both that it is the intention of what is understood, and that it is formally identified with the *res intellecta*. But something may be understood in either of two ways, primarily or consequently: "Intellectus dupliciter aliquid intelligit, scilicet primo, et ex consequenti."⁸⁶ What is understood in the first place is the real thing existing outside the soul; the secondary objects of understanding are intentions which follow upon the manner in which the primary objects are understood:

Prima enim intellecta sunt res extra animam, in quae primo intellectus intelligenda fertur. Secunda autem intellecta dicuntur intentiones consequentes modum intelligendi: hoc enim secundo intellectus intelligit in quantum reflectitur super seipsum, intelligens se intelligere et modum quo intelligit.⁸⁷

That anything can be understood in the second place at all presupposes the power of reflection on the part of the intellect. And any reflex understanding of the intellectual act or of the power or of oneself would constitute a new intention of "something understood secondarily." But it is not the intention of oneself or of the intellect or of the act of understanding or even of the direct intention itself as known by simple reflection which is called a *secundum intellectum* here, but "an intention which follows the manner of understanding."⁸⁸ It is with

⁸⁵ *S.T.*, I-II, 90, 1 ad 2.

⁸⁶ *Quodl.* VII, 2 c (prin.).

⁸⁷ *De Pot.*, 7, 9 c (prin.).

⁸⁸ Cf. *In I Sent.*, 2, 1, 3 sol. (quoted pp. 85-86): aliquid quod consequitur ex modo intelligendi rem; 30, 1, 3 sol.: secundum modum quo est in intellectu apprehendente; *De Pot.*, 1, 1 ad 10: aliquid sequitur actum intelligendi; *S.T.*, I, 76, 3 ad 4: [intentiones logicae] consequuntur modum intelligendi; *De Nat. Gen.*, c. 3, n. 9: [intentiones] sequuntur actionem rationis; *In IV Met.*, 4, n. 574: considerationem rationis consequuntur.

“things understood secondarily” in this sense that logic is concerned (“Logica ... habet ... maximam difficultatem, cum sit de secundo intellectis”).⁸⁹

It can also be said that logic considers “second intentions” because the *secunda intellecta* are sometimes referred to by that name.⁹⁰

⁸⁹ *In De Trin.*, 6, 1, sol. 2 ad 3.

⁹⁰ The terms *first* and *second intention* seem to occur in the writings of St. Thomas only in conjunction with the word “noun” to distinguish “nouns of first intention” from “nouns of second intention.” Almost the only occurrences I have found are in a context distinguishing the terms individual, singular, particular, supposit, person, hypostasis, and real thing:

In I Sent., 23, 1, 3 col. (ante med.): Individuum dupliciter potest significari: vel per nomen *secundae intentionis*, sicut hoc nomen “individuum” vel “singulare,” quod non significat rem singularem sed *intentionem* singularitatis; vel nomen *primae intentionis*, quod significat *rem* cui convenit intentio particularitatis.

In I Sent., 26, 1, 1 ad 3: Individuum substantiae dicitur dupliciter: vel ex eo quod substat naturae, vel ex eo quod substat accidentibus et proprietatibus; et quantum ad utrumque potest significari per nomen *primae intentionis*, vel per nomen *secundae intentionis*. Per nomen *primae* impositionis significatur ut substat naturae, hoc nomine “res naturae”; et per nomen *secundae* impositionis, hoc nomine quod est “suppositum.” Similiter in quantum substat proprietati, significatur nomine *primae* impositionis, quod est nomen “hypostasis” vel “personae,” et nomine *secundae* impositionis, quod est singulare, ut “individuum.”

De Nat. Gen., c. 5, n. 35 (ed. Perrier): Nomina *primae intentionis* sunt quae rebus sunt imposita absolute mediante conceptione qua fertur intellectus super ipsam rem in se, ut homo vel lapis; nomina autem *secundae intentionis* sunt illa quae imponuntur rebus non secundum quod in se sunt, sed secundum quod subsunt intentioni quam intellectus facit in eis, ut cum dicitur: “homo est species,” “animal est genus.” Cf. *S.T.*, I, 41, 1 ad 2; *De Unione Verbi*, a. 2 c.

An alternative expression, already met in the second text quoted, is “noun of first or second imposition”:

In III Sent., 6, 1, 1, sol. 1: Cum omne particulare habeat respectum ad naturam communem et ad proprietates, potest secundum utrumque respectum nominari, tum per nomen *primae impositionis*, tum per nomen *secundae intentionis*. Hoc autem nomen “res naturae” est nomen *primae impositionis*, significans particulare per respectum ad naturam communem; hoc vero nomen “suppositum” est nomen *secundae impositionis*, significans ipsam habitudinem particularis ad naturam communem, in quantum subsistit in ea; “particulare” vero, in quantum exceditur ab ea. Sed quia accidentia consequuntur naturam; ideo omne nomen designans particulare secundum respectum ad proprietates, designat etiam ipsum respectum ad naturam communem. Hoc ergo potest fieri dupliciter: vel per nomen *primae impositionis*; et sic est “hypostasis” communiter in omnibus substantiis, “persona” vero in omnibus rationalibus; vel per nomen *secundae impositionis*, et sic est “individuum” in quantum est individuum in se, “singulare” vero in quantum est divisum ab aliis; unde singulare est idem quod divisum. Est etiam alia differentia attendenda inter ista: quia quaedam istorum significant communiter particulare in quolibet genere, sicut “particulare,” “individuum,” “singulare”; quaedam vero tantum particulare in genere substantiae, sicut “res naturae,” “suppositum,” “hypostasis,” et “persona.” ... Quamvis haec albedo vel haec manus dicatur individuum vel singulare, non tamen potest dici hypostasis, suppositum, vel res naturae.

In I Sent., 2, 1, 3 sol. (prin.): Nec tamen hoc nomen *ratio* significat ipsam conceptionem, quia hoc significatur per nomen ... rei; sed significat intentionem huius conceptionis, sicut et hoc nomen definitio, et alia nomina *secundae impositionis*.

First-intention nouns signify the thing, because the concept which mediates their meaning is one of first intention, representing directly the external real thing. Second-intention nouns signify an intention of the way in which the thing is conceived (rather than the direct concept of the thing) or a relation to the conceived natura (“ipsam habitu-

Any reflex knowledge might be called a second intention in a way, since it is had after the direct knowledge and as a consequence of it. But the reflex knowledge sought by psychology must be distinguished from that of logic. Simple reflection upon the intention as being in the intellect and perfecting it would belong to psychology.⁹¹ The "science of the soul" studies the soul and its properties (*passiones*).⁹² And natural philosophy, of which psychology is a part,⁹³ considers things as they are in reality ("[metaphysicus et naturalis] considerant res secundum suum esse").⁹⁴ The intelligible species and the concept are studied by the psychologist according to the act of existence which they exercise in the soul ("secundum esse quod habet in cognoscente"), where they are accidents and inhering qualities.⁹⁵

Logic is not concerned with the intention from the point of view of the subject in which it inheres, but from that of the thing which it represents and with which it is intentionally identified; that is, logic considers its relation of likeness, and looks at the concept in so far as it is *ad aliud*.⁹⁶ It is in the very notion of intention that it should imply a relation of one thing to another: "Intentio in ratione sua ordinem quemdam unius ad alterum importat."⁹⁷

It is not, however, this relation of likeness, taken simply, which logic studies. That is a cognitive relation, the very formal constituent

dinem ... ad naturam communem"). Cf. *S.T.*, I, 29, 1 ob. 3: homo enim est nomen rei, et species est nomen intentionis.

⁹¹ An example of the difference is seen in *S.T.*, I, 85, 2. In the body of the article the function of the intelligible species as a medium of cognition ("ut quo intelligit intellectus") is distinguished from that as the object of reflex knowledge ("secundario est id quod intelligitur"). This would be psychological reflection. In the reply to the second objection a distinction is made in regard to the universal between the abstracted nature and the universality itself. Such a reflection ("intentio universalitatis") is proper to logic.

⁹² *In I De An.*, 1, n. 8; 2, n. 23.

⁹³ *Ibid.*, 2, n. 23: Physici est considerare de anima; cf. *In VI Met.*, 1, n. 1155: [Intellectus] aliquo modo cadit sub consideratione naturalis philosophiae: n. 1159: Et propter hoc etiam de anima quaedam speculatur naturalis.

⁹⁴ *In I Sent.*, 19, 5, 2 ad 1.

⁹⁵ *De Ver.*, 10, 4 c; 2, 5 ad 17. Natural philosophy studies the intelligible species: "universalia enim, de quibus sunt scientiae, sunt quae cognoscuntur per species intelligibiles, non ipsae species intelligibiles; de quibus non sunt scientiae omnes, sed physica et metaphysica" (*Q.D. de An.*, 2 ad 5). The same is said in *C.G.*, II, 75 according to the Parma (p. 128 a, bot.) and Vives (p. 203 b) editions: "nulla scientia de eis [speciebus existentibus in intellectu possibili] aliquod considerat nisi naturalis et metaphysica"; but the Leonine (ed. man., p. 179 b, med.) has "rationalis et metaphysica," which would agree with *In III De An.*, 8, n. 178 (ed. Pirotta): "Sunt autem scientiae de rebus, non autem de speciebus, vel intentionibus intelligibilibus, nisi sola scientia rationalis"; and with *In I De Caelo*, 2, n. 2 (ed. Leon): "Consideratio naturalis versatur circa materiam, consideratio autem logicae circa rationem et speciem."

⁹⁶ Pp. 109-110, especially *Quodl.* VII, 4 c.

⁹⁷ *In II Sent.*, 38, 1, 3 sol.

of truth itself; and as such it is studied by metaphysics, particularly the metaphysics of knowledge.⁹⁸

During the inquiry into the objective significance of the direct intention it was found that what is represented in the intellect is the intelligible character or nature of the thing known, and that it is apprehended absolutely, "according to its absolute consideration," without taking into account its mode of existence. Though it is apprehended absolutely, the nature not only does in fact exist, but it has two different modes of existence, one in real singular things, the other in the soul. Now, upon its direct apprehension, two different kinds of reflection can follow according to the two different relations of the intention, to the thing known and to the knower. One reflection will bear upon the provenance of the intention, the other upon its state in the intellect. By a reflection upon the phantasm from which the intelligible species has been derived, the intellect can know the singular in which the nature is found:

Mens singulare cognoscit per quamdam reflexionem, prout scilicet mens cognoscendo obiectum suum, quod est aliqua natura universalis, redit in cognitionem sui actus, et ulterius in speciem quae est actus sui principium, et ulterius in phantasma a quo species est abstracta; et sic aliquam cognitionem de singulari accipit.⁹⁹

When a sensible thing is present, though it is not intellectually known directly in its singularity, it is known by a reflection upon the phantasm and this is the natural completion of the intellective act. It will be seen that this is the consideration of the nature according to the act of existence which it exercises in the real, external thing. The metaphysics of knowledge is concerned with the correspondence of the nature understood and the nature existing in real things.

Other sciences will study the accidents that follow upon the real existence of this nature; for according to each mode of existence accidents follow: "Haec etiam natura habet duplex esse: unum in singula-

⁹⁸ *In II Met.*, 1, n. 273: ad hunc philosophum [primum] pertinet considerare quomodo se habeat homo ad veritatem cognoscendam.

⁹⁹ *De Ver.*, 10, 5 c; cf. 2, 6 c (prin. & fin.): Intellectus noster, per se loquendo, singularia non cognoscat, sed universalia tantum. Omnis enim forma, in quantum huiusmodi, universalis est; nisi forte sit forma subsistens, quae, ex hoc ipso quod subsistit, incommunicabilis est. Sed per accidens contingit quod intellectus noster singulare cognoscit. ... In quantum ergo intellectus noster, per similitudinem quam accipit a phantasmate, reflectitur in ipsum phantasma a quo speciem abstrahit, quod est similitudo particularis, habet quamdam cognitionem de singulari secundum continuationem quamdam intellectus ad imaginationem; *S.T.*, I, 86, 1 c: Intellectus noster directe non est cognoscitivus nisi universalium. Indirecte autem et quasi per quamdam reflexionem potest cognoscere singulare, quia, ... etiam postquam species intelligibiles abstraxerit, non potest secundum eas actu intelligere nisi convertendo se ad phantasmata, in quibus species intelligibiles intelligit.

ribus, aliud in anima; et secundum utrumque consequuntur dictam naturam accidentia.”¹⁰⁰ Logic will study the accidents that follow upon the existence of this nature in the soul.

Although the nature directly known is *de facto* universal, it is not, however, known *as* universal in the direct act; for it is first known absolutely. Knowledge of its universality follows upon the second kind of reflection, which adverts to the act of existence which that nature has in the intellect and to what follows upon its existence there. Since its act of existence in the intellect is *to be understood* (its *esse* is *intelligi*),¹⁰¹ its manner of being is its manner of being understood; and what follows upon its act of being is the same as what follows upon the intellect’s manner of understanding. This is the explanation of the logical intention which has already been met a number of times. Logic is accordingly concerned with what happens to the absolute nature as a result of its being in the intellect.

This does not contradict the distinction already made between logic and psychology. Though both consider the form which is in the intellect, psychology looks at it as perfecting the knower, as something which happens to the intellect; logic looks rather at what happens to this form or absolute nature. In the one case the subject is the soul and the received form is the accident; in the other case the understood form is the subject and the properties which belong to it as a result of being understood are the accidents. This is not to say that the nature itself is the *subject* of the science of logic; but rather the properties which that nature has from the manner in which it exists in the intellect are the subject of this science. The nature, however, is *their* subject. The apparent confusion here between the nature as the subject of the properties and the properties of the nature as the subject of the science of logic will be disposed of in the next chapter, which is to treat of the subject of logic as a relation.

The fact that accidents are made a subject (whose properties or proper accidents are in turn studied) does not involve a contradiction, since the same entity is not a subject and an accident in respect to the same thing: “Cum enim accidentia quodam ordine ad substantiam referantur, non est inconueniens id quod est accidens in respectu ad aliquid esse etiam subiectum in respectu alterius.”¹⁰² As an example a

¹⁰⁰ *De Ente et Ess.*, c. 3, n. 15 (ed. Perrier).

¹⁰¹ See p. 114.

¹⁰² *In I Post Anal.*, 2, n. 5; cf. *In I Sent.*, 3, 4, 3 ad 2: Accidens non potest esse per se subiectum accidentis, sed subiectum mediante uno accidente subiicitur alteri; propter quod dicitur superficies esse subiectum coloris.

surface is taken. It is an accident of a material substance, but it is the subject of such further accidents as color. In sciences a similar situation may occur. Some, such as metaphysics and the philosophy of nature, have substances as their subject. Others, such as the moral sciences and logic, have as their subject accidents of real beings; yet these accidents are treated as subjects of properties: "In illis autem scientiis quae sunt de aliquibus accidentibus, nihil prohibet id quod recipitur ut subiectum respectu alicuius passionis accipi etiam ut passionem respectu anterioris subiecti."

Logic considers the properties of the understood nature which belong to it inasmuch as it is understood; that is to say, the properties which it has as a result of the manner in which the intellect understands it. These properties it makes its subject. They are called *intentions*, the ways in which the intellect looks at the nature which is in it by virtue of its operation of understanding and conceiving. Logic is concerned with the nature under the aspect of these intentions which follow its existence in the intellect and not under that of the existence which it has in external reality: "Logicus ... considerat intentiones tantum" and not "res secundum suum esse."¹⁰³ But the aspect under which a science considers things constitutes its subject.¹⁰⁴ It is therefore the intentions which follow the manner of understanding which constitute the subject of logic.

What the manner of understanding is, and what particular intentions follow the manner of each of the three acts of reason will be examined in the final three chapters. Here it is sufficient to point out that the abstractive apprehension of quiddities in the first act of understanding gives rise to the intention of universality and its particular kinds; the composition of judgment in the second act gives rise to the intention of attribution; and the discursive process from one thing to another in the third act founds the intention of consequence.

In common with all intentions, these logical intentions exist only in the soul, or more specifically, in the intellect; but they are founded upon a nature which exists in things and are attributed by the intellect to that nature:

In omnibus autem intentionibus hoc communiter verum est, quod intentiones ipsae non sunt in rebus sed in anima tantum, sed habent aliquid in re respondens, scilicet naturam, cui intellectus huiusmodi intentiones attribuit; sicut intentio

¹⁰³ *In I Sent.*, 19, 5, 2 ad 1.

¹⁰⁴ See chap. I, pp. 12-15 and chap. III, p. 57.

generis non est in asino, sed natura animalis, cui per intellectum haec intentio attribuitur.¹⁰⁵

It is not, however, to the nature as existing in real things but to it as understood that they are attributed: "Huiusmodi enim intentiones format intellectus attribuens eas naturae intellectae."¹⁰⁶ For there is nothing in reality directly corresponding to logical intentions such as those of genus and species:

Sunt autem quaedam rationes quibus in re intellecta nihil respondet; sed ea quorum sunt huiusmodi rationes intellectus non attribuit rebus prout in seipsis sunt, sed solum prout intellectae sunt; sicut patet in ratione generis et speciei et aliarum intentionum intellectualium: nam nihil est in rebus quae sunt extra animam, cuius similitudo sit ratio generis vel speciei.¹⁰⁷

If the intellect attributed these intentions to the nature according to its real existence in some singular things or thing, it would be false; but since it attributes them to the nature as it is in the soul, there is no falsity:

Nec tamen intellectus est falsus: quia ea quorum sunt istae rationes, scilicet genus et species, non attribuit rebus secundum quod sunt extra animam, sed solum secundum quod sunt in intellectu. Ex hoc enim quod intellectus in seipsum reflectitur, sicut intelligit res existentes extra animam, ita intelligit eas esse intellectas: et sic, sicut est quaedam conceptio intellectus vel ratio cui respondet res ipsa quae est extra animam, ita est quaedam conceptio vel ratio cui respondet res intellecta secundum quod huiusmodi; sicut rationi hominis vel conceptioni hominis respondet res extra animam; rationi vero vel conceptioni generis aut speciei respondet solum res intellecta.

These logical intentions are really accidents of the nature or thing which is known. Logic, then, considers accidents of being. This is expressly said of two parts of logic, dialectics and sophistics: "Dialectica ... et similiter sophistica ... considerant accidentia entibus, scilicet intentiones, et rationes generis et speciei, et alia huiusmodi."¹⁰⁸ These accidents are not, however, considered as accidents of being *as being*, for that study belongs to metaphysics, but rather as accidents of being *as known*. This belongs to logic, the "rational science." Thus the intention of species "happens to" human nature, not as taken absolutely or according to its real external existence, but only as it exists in the intellect in knowledge:

Relinquitur ergo quod ratio speciei accadat naturae humanae secundum illud esse quod habet in intellectu. ... Sic ergo patet qualiter essentia vel natura se habet ad rationem speciei: quia ratio speciei non est de his quae conveniunt ei

¹⁰⁵ *In I Sent.*, 33, 1, 1 ad 3.

¹⁰⁶ *In I Perih.*, 10, n. 9.

¹⁰⁷ *De Pot.*, 7, 6 c (ante med.).

¹⁰⁸ *In XI Met.*, 3, n. 2204.

secundum suam absolutam considerationem, neque secundum esse quod habet extra animam, ut albedo vel nigredo; sed est de accidentibus quae consequuntur eam secundum esse quod habet in intellectu: et per hunc modum convenit sibi ratio generis vel differentiae.¹⁰⁹

Similarly the intention of attribution is an accident of the thing to which something is attributed, because the thing *happens* to have something predicated of it: "Accidit autem unicuique rei quod aliquid de ipsa vere affirmatur intellectu vel voce. Nam res non refertur ad scientiam sed e converso."¹¹⁰

Now it is not difficult to see that such accidents or logical intentions of the understood nature are rationate beings, as the subject of logic must be. The subject of which they are accidents is the direct intention, the *natura intellecta*, which does not as such have being in reality but, in so far as it is affected by these intentions, has its existence only in the mind. Even less, then, do the intentions themselves have being in reality, since they are another step removed from the real, being accidents of a non-real subject and intentions of an intention.

And yet their contact with reality must not be overlooked. If they are intentions of an intention, they look to that which itself looks to and mirrors the real. And if they are accidents of a subject, they pertain to a nature which is verified in reality. Thus it is again seen that, though the proximate foundation of logical intentions is only in the mind, they have a foundation in the real; and though this foundation is remote and mediate, it is real none the less.

¹⁰⁹ *De Ente et Ess.*, c. 3, nn. 16 & 17 (ed. Perrier).

¹¹⁰ *In V Met.*, 9, n. 896; cf. *De Nat. Gen.*, c. 2, n. 8 (ed. Perrier): Et hoc ideo est quia accidit rei quod de ea aliquid dicatur vere per intellectum, cum res non referatur ad scientiam sed e converso.

CHAPTER VI

RELATIONS

RATIONATE BEINGS AND LOGICAL INTENTIONS AS RELATIVE

The investigations of the two preceding chapters have both involved the discussion of relations. The subject of logic in the teaching of St. Thomas, as has been seen, is rationate being; and rationate being can be only a negation or a relation. Since the subject of logic is not just negative but something positive, it must be a relation. Intentions, similarly, are essentially relative. Basically intention means “tendency to something else” as to its term,¹ and “implies the ordination of one thing to another.”² Applied to the intellect, *intention* occasionally means the act of the intellect to become its object; somewhat more often it means the received form by which this tendency of assimilation is accomplished; but most often intention is used in the sense of “understood intention,” internal word, or concept, which is the internally expressed likeness of the intellect to its object—the internal term of its tendency. This concept has a relation to the intellect, which it informs and perfects, and another relation to the thing known. This latter relation is that of likeness or similitude, by which the concept is essentially constituted as the epistemic relation between the intellect and the thing known. The direct concept or first intention is therefore essentially a relation to the real. The reflex concept or second intention is an intention of an intention, and should accordingly be a relation of the intellect’s relation to the real. It must necessarily, then, be farther removed from reality itself.

This logical intention, as has been seen, is an accident of the conceived nature. In view of the fact that it must also be a rationate being, there arises the problem of where this logical intention could fit among the nine accidents enumerated in the categories of being. But just to recall the categories suggests a difficulty, because “being as it is divided

¹ *S.T.*, I-II, 12, 1 c & ad 4; see pp. 94-95.

² *In II Sent.*, 38, 1, 3 sol.

according to the ten categories" is opposed to that being which has its existence in the soul; it designates something existing in nature: "In nullo enim praedicamento ponitur aliquid nisi res extra animam existens. Nam ens rationis dividitur contra ens divisum per decem praedicamenta."³ It would therefore seem that all nine of the accidents must be real being and that no rationally being could find a place among them.

There is, however, an exception. One of the ten categories does not have to be real because it does not of its very notion posit anything in reality but merely a regard *to something*:

Omnia alia genera, in quantum huiusmodi, aliquid ponant in rerum natura (quantitas enim ex hoc ipso quod quantitas est, aliquid dicit); sola relatio non habet, ex hoc quod est huiusmodi, quod aliquid ponat in rerum natura, quia non praedicat *aliquid* sed *ad aliquid*. Unde quaedam inveniuntur relationes quae nihil in rerum natura ponunt sed in ratione tantum.⁴

This does not mean that relations are never real and that they never add any accidental reality to the substance in which they are found. If no relations were real, relation could not be listed among the categories: "Si autem relatio non esset in rebus extra animam non poneretur *ad aliquid* unum genus praedicamenti."⁵ But it does mean that a relation is not real, or even an accident, by the very fact that it is a relation. From the notion of relation we cannot conclude that it inheres in a subject as an accident must. For it is of the very notion of an accident, as such, to inhere in a subject:

Inter novem genera quae continentur sub accidente, quaedam significantur secundum rationem accidentis; *ratio enim accidentis est inesse*; et ideo illa dico quae significantur ut inhaerentia alteri, sicut quantitas et qualitas; quantitas enim significatur ut alicuius in quo est, et similiter qualitas.⁶

If something is designated or predicated as an accident, then it must inhere; but relation is not designated as an accident, for it is not signified as *something belonging to* its subject, but as looking to something outside the subject: "*Ad aliquid* vero non significatur secundum rationem accidentis: non enim significatur ut aliquid eius in quo est, sed ut *ad id* quod *extra* est." An enlightening example is used to illustrate the difference: knowledge is someone's knowledge of something; as being

³ *De Pot.*, 7, 9 c; and see chap. IV, p. 81 and note 1.

⁴ *De Ver.*, 1, 5 ad 16; cf. *Quodl.* I, 2 c; IX, 4; S.T., I, 28, 1 c.

⁵ *De Pot.*, 7, 9 c; cf. *In I Sent.*, 26, 2, 1 sol.: Nihil quod est ens tantum in anima in genere determinato collocatur.

⁶ *De Pot.*, 8, 2 c (prin.).

someone's it is an accident; as being *of something* it is a relation: "Scientia, in quantum est relatio, non est scientis, sed scibilis."⁷

Even though relation is not designated as an accident, it may be an accident nevertheless, and inhere in a real subject:

Nihil prohibet aliquid esse inhaerens quod tamen non significatur ut inhaerens; sicut etiam actio non significatur ut *in* agente, sed ut *ab* agente, et tamen constat actionem esse in agente. Et similiter, licet *ad aliquid* non significetur ut inhaerens, tamen oportet ut sit inhaerens. Et hoc quando relatio est res aliqua; quando vero est secundum rationem tantum, tunc non est inhaerens.⁸

Thus even when a relation is actually inherent, we must distinguish what belongs to it in so far as it is an accident, and what belongs to it precisely as a relation. As an accident it is inherent in a subject and dependent upon it; as a relation it is just an ordination to something else:

Ipsa relatio, quae nihil est aliud quam ordo unius creaturae ad aliam, aliud habet in quantum est accidens et aliud in quantum est relatio vel ordo. In quantum enim accidens est, habet quod sit in subiecto, non autem in quantum est relatio vel ordo; sed solum quod ad aliud sit quasi in aliud transiens, et quodammodo rei relatae assistens. Et ita relatio est aliquid inhaerens, licet non ex hoc ipso quod est relatio.⁹

Relation is not alone, however, among the accidents in having this twofold aspect. A comparable distinction can be made for each of the others as well. Though they have in common the general notion of accident with its formal constituent of inherence, yet each one has its own peculiar nature by which it is a distinct kind of determination of substance:

In unoquoque novem praedicamentorum duo invenio; scilicet rationem accidentis et rationem propriam illius generis, sicut quantitatis vel qualitatis. Ratio autem accidentis imperfectionem continet: quia esse accidentis est inesse et dependere, et compositionem facere cum subiecto per consequens. ... Si autem consideremus propriam rationem cuiuslibet generis, quodlibet aliorum generum praeter ad aliquid importat imperfectionem; quantitas enim habet propriam rationem in comparatione ad subiectum; est enim quantitas mensura substantiae, qualitas dispositio substantiae, et sic patet in omnibus aliis.¹⁰

The formal character of each one of the accidental categories can be

⁷ Compare this with the doctrine on the intention with its two aspects as perfecting the knower and representing the real thing, pp. 108-110, 117.

⁸ *De Pot.*, 8, 2 c (ad fin.).

⁹ *Ibid.*, 7, 9 ad 7.

¹⁰ *In I Sent.*, 8, 4, 3 sol.; cf. *S.T.*, I, 28, 2 c: In quolibet novem generum accidentis est duo considerare. Quorum unum est *esse* quod competit unicuique ipsorum secundum quod est accidens. Et hoc communiter in omnibus est inesse subiecto, accidentis enim esse est inesse. Aliud quod potest considerari in unoquoque est propria *ratio* uniuscuiusque illorum generum.

distinguished from that which it has as an accident. As an accident it is defined by its proper manner of existing. As a particular genus it has an intelligible character of its own according to the manner in which it modifies something else. But all except relation, because their very notion involves *something in* a subject, cannot be adequately distinguished from their accidental mode of being.

THE NOTION OF RELATION

The distinction between the particular formal character which the categories have as distinct genera and the common character which they have from their manner of existing as accidents, recalls a statement met before, that in regard to all beings we may consider their intelligible character (*ratio*) and their act of existing (*esse*).¹¹ This is applied to accidents generally, and is of particular importance in regard to relations; for only on the basis of this distinction can we predicate relations of rationally being:

In relatione, sicut in omnibus accidentibus, est duo considerare: scilicet *esse* suum, secundum quod ponit aliquid in ipso, prout est accidens; et *rationem* suam, secundum quam ad aliud refertur, ex qua in genere determinato collocatur; et ex hac ratione non habet quod ponat aliquid in eo de quo dicatur; sicut omnes aliae formae absolutae ex ipsa sua ratione habent quod aliquid in eo de quo dicuntur ponant. Et ideo inveniuntur quaedam relationes nihil ponentes in eo de quo dicuntur.¹²

An attempt must be made to discover just what the nature or intelligible character (*ratio*) of relation is. The very simplicity of the notion makes it hard to grasp. Being one of the primary genera, it cannot be properly defined, since a definition consists of genus and specific difference.¹³ There is no higher genus to which it can be reduced. We can only give approximate synonyms or equivalent expressions or extrinsic descriptions. As one of the categories or predicaments of being, it is distinguished from the others by a particular way in which we make predications of beings. We may predicate something as being what the

¹¹ *De Ver.*, 21, 1 c (post med.), quoted p. 111; cf. *De Pot.*, 8, 2 ad 11: Ratio autem non significat *esse* sed *esse quid*, idest *quid* aliquid est.

¹² *In I Sent.*, 26, 2, 1 sol.; cf. 33, 1, 1 sol.; *S.T.*, I, 28, 2 c: in aliis quidem generibus a relatione, utpote quantitate et qualitate, etiam propria ratio generis accipitur secundum comparisonem ad subiectum; nam quantitas dicitur mensura substantiae, qualitas vero dispositio substantiae. Sed ratio propria relationis non accipitur secundum comparisonem ad illud in quo est, sed secundum comparisonem ad aliquid extra.

¹³ *In V Met.*, 8, n. 877: Nam nihil proprie definitur nisi species, cum omnis definitio ex genere et differentia constet. Et si aliquod genus definitur, hoc est in quantum est species; *C.G.*, I, 35, Ex quo: omnis definitio est ex genere et differentiis; *Comp. Theol.*, I, 26; *In I Post. Anal.*, 27, n. 9; *In I Perih.*, 12, n. 8; cf. *In VII Met.*, 12, nn. 1542 & 1549.

subject is; and thus we have substance. Or we may predicate something as being in the subject; and that either absolutely or not:

Secundo modo ut praedicatum sumatur secundum quod inest subiecto: quod quidem praedicatum vel inest ei per se et absolute, ut consequens materiam, et sic est quantitas; vel ut consequens formam, et sic est qualitas; vel inest ei non absolute, sed *in respectu ad aliud*, et sic est *ad aliquid*.¹⁴

The category of relation or *ad aliquid* is predicated of something not as a purely intrinsic determination but *in respect to something else*. This is why it is given the name *πρός τι* or *ad aliquid—to something*; for that is its distinctive character, its *ratio*: “Propria relationis ratio consistit in eo quod est ad alterum.”¹⁵ If a relation is in something, that comes to it, as has been seen, from its being an accident, not directly from its distinctive nature.

The term used obliquely in the above description of the categories to distinguish between relation and quantity and quality is sometimes used directly to express the formal character of relation; it is said to consist in a *respect* to something else: “De ratione autem relationis est *respectus* unius ad alterum”;¹⁶ “In relatione [sunt] duo, scilicet relationis *respectus*, quo ad alterum refertur, in quo consistit relationis *ratio*; et iterum ipsum esse relationis, quod habet secundum quod in aliqua re fundatur.”¹⁷ This is an attempt to express by an approximate synonym transferred from a physical reality an intangible metaphysical concept. Respect is derived from the physical operation of seeing; and means a *look* or *regard*. The latter frequently appears in the referential expression “in regard to,” which is a variant of “with respect to.” Originally respect meant a “look back,” but it was broadened to mean a “look over or towards.” Thus the related being has, in addition to its essential nature, an added perfection by which it “looks to” something beyond itself.

The same effort to explain the nature of relation from the physical order is seen in the word “relation” itself and its cognate verb “to refer.” The first meaning of *referre* is “to carry back”; and the noun *relatio*, derived from the past participle of this verb, *relatum*, means a “bearing

¹⁴ *In V Met.*, 8, nn. 890-892.

¹⁵ *C.G.*, IV, 14, n. 7, c; cf. *S.T.*, I, 30, 1 ad 3: relationes praedicantur de aliquo ut ad alterum; et sic compositionem in ipso de quo dicuntur non important.

¹⁶ *S.T.*, I, 28, 3 c.

¹⁷ *In I Sent.*, 33, 1, 1 sol.; cf. *Quodl.* I, 2 c: Sed relationes non habent quod sint res ex ratione *respectus* ad alterum; *S.T.*, I, 28, 1 c: Ea vero quae dicuntur ad aliquid significant secundum propriam rationem solum respectum ad aliud.—For the use of *respectus* as a synonym of relation see *De Ver.*, 4, 5, where it is used thirty-three times in that sense in the one article.

back." Applied to thought, the verb means to carry the thought of one thing over to that of another. The thing of which the concept is carried over to something else is said "to be referred." And this need not be restricted to thought only, for there is found a reason in things why the thought of one is extended to that of another. This is some bearing of one thing upon another, some ordination of the thing to something else. The thing, then, is said to be referred in the sense that it is so in itself, even independently of our thought. The fact of a thing's being thus "carried over" is accordingly given as the *ratio* of relation:

In relatione, sicut in omnibus accidentibus, est duo considerare: scilicet esse suum, secundum quod ponit aliquid in ipso, prout est accidens: et *rationem* suam, secundum quam ad aliud refertur ex qua in genere determinato collocatur.¹⁸

Secundum *rationem* suam non habet quod sit aliquid sed solum quod ad aliud referatur.¹⁹

Ad aliquid autem, etiam secundum rationem generis, non importat aliquam dependentiam ad subiectum; immo refertur ad aliquid extra.²⁰

Although the original meaning of *referrere* has greatly receded as the verb is used of relatives, it is not entirely lost. This appears from a much bolder expression which Aquinas draws from physical motion in order to convey the elusive meaning of relation. He speaks of the related thing *passing over* to that to which it is related:

In quantum enim accidens est, habet quod sit in subiecto: non autem in quantum est relatio vel ordo; sed solum quod sit quasi in aliud *transiens* et quodammodo rei relatae assistens ...; quia sua *ratio* non perficitur prout est in subiecto sed prout *transit* in aliud.²¹

Relatio autem non significat ... ut in subiecto manens, sed ut *in transitu* quodam ad aliud.²²

This does not, of course, mean a physical passing or locomotion,²³ but rather that openness of the related thing to its term which causes the thought of the perceiver to pass from one to the other.²⁴

A term with more psychological overtones used to explain relation is

¹⁸ *In I Sent.*, 26, 2, 1 sol.

¹⁹ *Ibid.*, 20, 1, 1 sol.; cf. *In IV Sent.*, 27, 1, 1, q1a. 1, Sed contra: relatio est secundum quam aliqua adinvicem referuntur.

²⁰ *In I Sent.*, 8, 4, 3 sol.; cf. *In V Met.*, 17, n. 1026: Unumquodque dicitur relative ex hoc quod ipsum ad aliud refertur.

²¹ *De Pot.*, 7, 9 ad 7.

²² *Ibid.*, a. 8 c.

²³ *Ibid.*; cf. *In V Phys.*, 3, nn. 7 & 8.

²⁴ Other similar terms used are *inclination* and *tendency*—*S.T.*, I, 28, 1 c: respectus aliquando est in ipsa natura rerum; utpote quando aliquae res secundum suam naturam adinvicem ordinatae sunt et invicem inclinationem habent; a. 2 c: [relationes] quasi significantes respectum quodammodo contingentem ipsam rem relata, prout ab ea *tendit* in alterum.

comparatio: "Ratio propria relationis non accipitur secundum comparisonem ad illud in quo est, sed secundum *comparationem* ad aliquid extra."²⁵ Though the first meaning that this word suggests to the modern mind is that of "comparison," an act of reason comparing the subject to its term, the original Latin meaning is more objective. *Comparare* means to dispose one thing in connection with another (in its primary sense, physically, and only secondarily in thought); and *comparatio* is either the act by which this is accomplished or the resulting state. Here it is the state of being connected with another or oriented to that other.

More metaphysical terms are also used. One is *habitus*. It is taken from *habere*, "to have"; but its meaning is more directly from the reflexive form *se habere*, "to have or bear oneself" in a particular way or condition. *Habitus* then means "the way in which a thing bears itself or stands," "its state or condition." When it is followed by *ad*, it takes on the meaning of "bearing in regard to another." Relation is accordingly the manner in which one thing bears itself or stands with respect to another: "Ipsae res naturalem ordinem et *habitudinem* habent adinvicem";²⁶ "Relativa quaedam sunt imposita ad significandum ipsas *habitudines* relativas. ... Quaedam vero sunt imposita ad significandum res quas consequuntur quaedam *habitudines*."²⁷ Another is *ordo*. This seems to be St. Thomas' most mature and philosophical expression of the nature of relation. By it he explains real relations: "Cum enim relatio quae est in rebus consistat in ordine quodam unius rei ad aliam, oportet tot modis huiusmodi relationes esse quot modis contingit unam rem ad aliam ordinari."²⁸ A real relation consists in the order of one real

²⁵ *S.T.*, I, 28, 2 c; and see other occurrences in the same article, where *comparatio* is used as a synonym of *relatio* or *respectus*. Cf. 1 ad 1. In *In V Met.*, 17, n. 1015 the expression "*comparatio* numeri ad unitatem" is used; in n. 1016 "*relatio* numeri ad unitatem"; then in n. 1017 in a reference back to the previous expression "*comparatio* numeri ad unitatem" is again used. *Comparatur* also is used as a synonym of *refertur*: *S.T.*, I, 28, 1 ad 4; *De Pot.*, 7, 10 c (med.); homo comparatur ad columnam ut dexter; ad 5: scientia Dei aliter comparatur ad res quam scientia nostra, etc.—For a fuller discussion of *comparatio* in this context see P. Hoenen, *Reality and Judgment*, trans. by H. Tiblier (Chicago: Regnery, 1952), pp. 324-326.

²⁶ *S.T.*, I, 13, 7 c; and see other occurrences in the same article. Elsewhere also *habitus* and *relatio* are frequently interchanged; e.g., *De Pot.*, 7, 8 ad 5; 9 ob. 5 & ad 5; 10 ob. 9 & ad 9.

²⁷ *S.T.*, I, 13, 7 ad 1; cf. *De Pot.*, 7, 8 ad 4: opponitur filius patri ... propter rationem habitudinis ad ipsum; *S.T.*, I, 28, 1 ad 1: Voluit [Boethius] quod relatio ... non praedicaretur per modum inhaerentis *secundum propriam relationis rationem*, sed magis per modum *ad aliud se habentis*; *In III Phys.*, 1, n. 6: relatio ... consistit tantum in hoc quod est *ad aliud se habere*.

²⁸ *In V Met.*, 17, n. 1004; cf. *De Pot.*, 7, 9 ad 7: ipsa relatio ... nihil est aliud quam *ordo* unius creaturae ad aliam; 10 c: cum relatio realis consistat in *ordine* unius rei ad aliam, ...

thing to another. But order is not restricted to real relations. Our understanding must begin from them, for all other modes of being are understood from real being. Other modes are known by their deficiency from the real and actual. In regard to relations, all, the purely rationally as well as the real, have order as their formal constituent. Whereas a real relation is an order of two real things, a rationally relation is an order of two concepts: "Sicut realis relatio consistit in ordine rei ad rem, ita relatio rationis consistit in ordine intellectuum."²⁹ A quasi definition of relation as such would accordingly be *ordo unius ad aliud*—the order of one entity to another.³⁰ Order is, of course, not taken here in the concrete sense of the individuals on one level of a hierarchy taken collectively, but in the abstract sense of "ordination";³¹ and this not in the active sense, meaning the operation of putting things into order, a determined bearing to one another, but in a formal sense, as the very bearing or standing which one thing has to another.

From this formal character of relation as the ordination (or respect) of one thing to another it is easy to see what its elements are. First, there are the two distinct terms related, which can be called the "extremes"; the one being the subject, *that which* is related, the other being the term, *that to which* the subject is related. Speaking of order in general, Aquinas points out three requirements: priority, distinction, and a reason or basis:

Ordo in ratione sua includit tria: scilicet rationem prioris et posterioris. ... Includit etiam distinctionem, quia non est ordo aliquorum nisi distinctorum. Sed hoc magis presupponit nomen ordinis quam significat. Includit etiam tertio rationem ordinis, ex qua etiam ordo speciem trahit.³²

Order presupposes multiplicity and therefore distinction of members.³³ For relation there must be two.³⁴ Among these there is a certain *before* and *after*.³⁵ In relation the subject is considered first, as that from

²⁹ *De Pot.*, 7, 11 c.

³⁰ *Ibid.*, 10 c: ratio ordinis unius ad alterum.

³¹ *In II Sent.*, 9, 1, 1 ad 2: Ordo potest sumi dupliciter: vel secundum quod nominat unum gradum tantum, sicut qui sunt unius gradus dicuntur unius ordinis; et sic ordo est pars hierarchiae; vel secundum quod nominat relationem quae est inter diversos gradus, ut ordo dicatur *ipsa ordinatio*; et sic sumitur quasi *abstracte*, et sic ponitur in definitione hierarchiae, primo autem modo sumitur concrete ut dicatur ordo unus gradus ordinatus; cf. *S.T.*, I, 108, 2 ad 1.

³² *In I Sent.*, 20, 1, 3 sol. 1.

³³ *De Pot.*, 10, 3 c: ordo absque distinctione non est; 7, 11 c; *In XII Met.*, 12, n. 2637; *In De Div. Nom.*, IV, 1, n. 283 (ed. Pera); *C.G.*, II, 39, Adhuc².

³⁴ *In I Sent.*, 30, 1, 1 sol.: relatio secundum actum exigit duo extrema in actu existere; 26, 2, 3 ad 4: relationes quibus non subest aliqua realis distinctio in re quae refertur non est relatio realis; *S.T.*, I 13, 7 c: ... cum relatio requirat duo extrema, ...

³⁵ *S.T.*, II-II, 26, 1 c; 6 c; I, 42 3 c; I-II, 87, 1 c; *Quodl.* V, 19 c.

which the relation starts; and the term is considered second, as that in which the relation terminates. Thus relation is essentially *directional*. Though we sometimes speak of a relation as *between* two things, more properly it is *of something to something*.

Although a multiplicity of members is required for order and their distinction is preserved within it, order does not leave them separate and unconnected. It is a gathering together or agreement (*convenientia*)³⁶ and communication or association (*communicantia*).³⁷ By it many are joined into one: "Quaecumque continentur sub aliquo ordine sunt quodammodo unum."³⁸ Thus it is a form of unity which respects and keeps the individuality and multiplicity of its members—an inferior type or low grade of unity, granted, but a form of unity nevertheless.³⁹ A relation, being an order of two, is accordingly a form of junction or union of the subject to the term.

There must be a reason why the subject is joined to the term. This is the basis or foundation of the relation, and constitutes, in addition to the two extremes, the third element of the relation. It is that *according to which* or *by reason of which* the subject looks to the term, and is said to be the cause of the relation: "Relatio fundatur in aliquo sicut in causa,"⁴⁰ because the relation depends upon it for its very existence and reality: "esse ... habet secundum quod in aliqua re fundatur";⁴¹ "Habet autem relation quod sit aliquid reale ex eo quod relationem causat."⁴²

The relation then stands to its foundation as effect to cause. But nothing can be the cause of itself. An effect must therefore be distinct from its cause,⁴³ and a relation must be something distinct from its

³⁶ *In De Div. Nom.*, IV, 1, n. 283 (ed. Pera).

³⁷ *In XII Met.*, 12, n. 2637.

³⁸ *S.T.*, I-II, 87, 1 c; cf. I, 47, 3 c: ipse ordo ... unitatem ... manifestat.

³⁹ *C.G.*, II, 58, Praeterea: esse unum secundum ordinem non est esse unum simpliciter, cum unitas ordinis sit minima unitatum.

⁴⁰ *In IV Sent.*, 27, 1, 1, sol. 1 ad 3; cf. *In I Sent.*, 2, expos. textus ad 2: Relationes fundantur super aliquid quod est causa earum in subiecto.

⁴¹ *In I Sent.*, 33, 1, 1 sol.; cf. *Quodl.* IX, 4 ad 3: oportet quod habeat esse relationis ... ex causa respectus.

⁴² *Quodl.* IX, 4 c; cf. *Quodl.* I, 2 c: relatio habet quod sit res naturae ex sua causa; *In I Sent.*, 26, 2, 2 ad 4: relatio non habet esse naturale nisi ex hoc quod habet fundamentum in re; cf. ad 3. A fuller examination of the conditions for the reality of relations will be made later, in the section on rationally relations.

⁴³ This is St. Thomas' doctrine, more often presupposed than expressly stated. But it is made sufficiently explicit: *S.T.*, I, 33, 1 ad 1: Hoc nomen causae videtur importare diversitatem substantiae et dependentiam alicuius ab altero; *De Pot.*, 10, 1 ad 8: Nomen causae significat aliquid in essentia *diversum* [ab effectu]; *In V Met.*, 1, n. 751: Hoc nomen *causa* importat influxum quemdam ad esse causati; *In II Phys.*, 10, n. 15: ... cum causa sit ad quam sequitur esse *alterius*; *De Malo*, 3, 3 ad 3: proprie causa dicitur ad quam ex necessitate sequitur aliquid.

foundation. This is already implicit in the doctrine of the ten categories, which are held to be genera of real being.⁴⁴ There would not be ten different genera of real being if these genera were not distinct from each other. Relation must therefore be distinct from the other kinds of being; and since the foundation of a relation is not itself a relation but something else, something absolute,⁴⁵ the relation, not being absolute but relative, must be distinct from it. This conclusion is further strengthened by St. Thomas' insistence that some relations are real. There would be little point in this insistence if he were not speaking of relations precisely as relations and as distinct from other kinds of being, absolute being, including the foundation. Were a relation identified with its foundation and St. Thomas meant only that the relation had the reality of its foundation, it would suffice merely to point out that quantity or quality or action or passion is real. But he refers to the distinct reality of the relation.

Even though Aquinas does not often state explicitly that a relation when real is really distinct from its foundation, he does so on occasion: "Actiones et passionibus, in quantum motum implicant, *aliud* sunt a relationibus quae ex actionibus et passionibus consequuntur";⁴⁶ "In creaturis aequalitas non est una quantitas plurium sed relatio consequens talem unitatem."⁴⁷ And he distinguishes the type of existence that a relation has from that of other types of being, not only substance but other kinds of accidents, saying that the existence of relation is the most unsubstantial and weakest of all: "Relatio habet esse debilissimum."⁴⁸ Now if relation is farther removed from substance than the other categories of being and has, even when real, a weaker act of existing, then it must be distinct from the beings of the other categories even when one of these serves as its foundation. Moreover, the existence

⁴⁴ See chap. IV, p. 75 and note 1, and this chapter (VI), p. 131 and notes 3-6. The scheme of division of the categories is explained *In V Met.*, 9, nn. 889-92 and *In III Phys.*, 5, n. 15.

⁴⁵ *De Ver.*, 27, 4 s.c. 4: Relatio autem semper fundatur super aliquid absolutum; *C.G.*, IV, 10, n. 7, a: Nam relatio non potest esse absque aliquo absoluto ...; oportet quod habeat aliquod absolutum in quo fundetur.

⁴⁶ *S.T.*, I, 41, 1 ad 2.

⁴⁷ *In I Sent.*, 31, 1, 1 ad 3 (following the reading which Capreolus [*Defensiones Theologiae*, ed. Paban-Pègues, II, 319a] had before him: *consequens*—which fits the context—instead of *includens*, given in Mandonnet and Parma. See Krempel, *La doctrine de la relation*, p. 257.).

⁴⁸ *De Pot.*, 8, 1 ad 4; cf. 9, 7 c: relatio est debilioris esse inter omnia praedicamenta; *In XII Met.*, 4, n. 2457: ea quae sunt ad aliquid remotiora videntur esse a substantia quam alia genera, ex eo quod sunt debilioris esse. Unde et substantiae inhaerent mediantibus aliis generibus; *In I Sent.*, 8, 4, 3 ob. 4 and ad 4; 26, 2, 2 ad 2; ens minimum, scilicet relatio; *De Ver.*, 27, 4 s.c. 5: relativum habet esse debilissimum; *In III Phys.*, 1, n. 6 (quoted p. 141).

of relation is weaker and most imperfect because relation presupposes and depends upon the existence of the other categories for its own existence:

Relatio realiter substantiae adveniens et postremum et imperfectissimum esse habet: postremum quidem, quia non solum praeexigit esse substantiae sed etiam aliorum accidentium ex quibus causatur relatio, sicut unum in quantitate causat aequalitatem et unum in qualitate similitudinem; imperfectissimum autem, quia propria relationis ratio consistit in eo quod est ad alterum; unde esse eius proprium quod substantiae addit non solum dependent ab esse substantiae sed etiam ab esse alicuius exterioris.⁴⁹

But if the existence of relation presupposes and depends upon the existence of beings of other categories, it cannot be identified with their existence and the relation itself cannot be identified with those beings, even when they serve as the foundation and cause of the relation.

FOUNDATIONS AND KINDS OF RELATIONS

Founded on Accidents

What kinds of being can be the foundation of relations? Since the foundation is the reason why the subject is related to the term, it must be in the subject and have existence there. But a being that exists and inheres in another is an accident. The foundation of a relation, then, must be some accident. This is further borne out by the fact that a relation is the most unsubstantial sort of being and its existence is the weakest and farthest removed from that of substance. It must therefore depend upon the existence of some other accident and through the mediation of this accident inhere in the substance:

Cum relatio habeat debilissimum esse, quia consistit tantum in hoc quod est ad aliud se habere, oportet quod super aliquod aliud accidens fundetur, quia perfectiora accidentia sunt propinquiora substantiae, et eis mediantibus alia accidentia insunt.⁵⁰

Various accidents are named as the foundation of relation, especially quantity, quality, and action and passion:

Relationes fundantur super aliquid quod est causa ipsarum in subiecto, sicut aequalitas supra quantitatem, et dominium supra potestatem. ... Similitudo enim significat relationem causatam ex unitate qualitatis, quae relatio requirit distincta supposita; est enim similitudo rerum differentium eadem qualitas.⁵¹

⁴⁹ C.G., IV, 14, n. 7, c; cf. *In XII Met.*, 4, n. 2457 (in note 48). For the whole question of the distinction of the relation from its foundation see Krempel, *La doctrine de la relation*, pp. 255-271.

⁵⁰ *In III Phys.*, 1, n. 6.

⁵¹ *In I Sent.*, 2, exp. text., ad 2; cf. *In II Sent.*, 1, 1, 5 ad 8: similitudo unius ad alter-

In other places two foundations are mentioned explicitly, quantity and the conjugates, action and passion; but room is still left for others. In some instances the others are added in a general way after the two principal foundations are named in particular:

Relatio non habet esse naturale nisi ex hoc quod habet fundamentum in re, et ex hoc collocatur in genere; inde est quod differentiae relationum essentiales sumuntur secundum differentias aliorum entium, ut patet ex Philosopho, V *Metaphysicorum*, ubi dicit quod quaedam fundantur supra quantitates, et quaedam supra actionem, et sic de aliis.⁵²

Or quantity and action are said to be the *principal* foundations:

Maxime autem super duo fundatur relatio quae habent ordinem ad aliud, scilicet super quantitatem et actionem: nam quantitas potest esse mensura etiam alicuius exterioris; agens autem transfundit actionem suam in aliud. Relationes igitur quaedam fundantur super quantitatem; et praecipue super numerum, cui competit prima ratio mensurae, ut patet in duplo et dimidio, multiplici et submultiplici, et in aliis huiusmodi. Idem etiam et simile et aequale fundantur super unitatem, quae est principium numeri. Aliae autem relationes fundantur super actionem et passionem: vel secundum hoc quod est egisse, sicut pater refertur ad filium quia genuit; vel secundum potestatem agendi, sicut dominus ad servum quia potest eum coercere.⁵³

Quantity serves to refer one thing to another because, in addition to its primary and absolute function by which it is the intrinsic measure of the substance in which it inheres,⁵⁴ it is capable of being applied to an external thing as a measure. The quantity of one thing can serve as the measure of something else, as when it is said to be twice as big as another thing, or as a foot is applied repeatedly to the floor of a room

rum sequitur alterationem in qualitate supra quam fundatur relatio; *In IV Sent.*, 27, 1, 1, sol. 1 ad 3: relatio fundatur in aliquo sicut in causa, ut similitudo in qualitate.

⁵² *In I Sent.*, 26, 2, 2 ad 4. (The place in Aristotle is *Met.* A, 15, 1020b 26-32.) In the *sic de aliis* Thomas is including other foundations besides quantity and action. Whether he intended this to take in quality (mentioned in *In III Phys.*, 1 and *In I Sent.*, 2, as quoted above) is not certain; but there is no doubt that he intended to include the substantial nature itself as a foundation ("Relationes autem habentes fundamentum in natura rei ..."); and "essence" and "principles of substance" are made parallel to nature. Several Distinctions later *essence* is made a foundation: *In I Sent.*, 33, 1, 1 sol.: "ipsum esse ... habet secundum quod in aliqua re fundatur, vel quantitate, vel essentia, vel aliquo huiusmodi." Relations founded in the very essence or nature of the thing related would be what later Scholastics have called "transcendental relations," which are not contingent accidents and not really distinct from the substance but a necessary concomitant relative aspect of the thing by reason of its very nature.

⁵³ *In III Phys.*, 1, n. 6.

⁵⁴ Cf. *In I Sent.*, 8, 4, 3 sol.: est enim quantitas mensura substantiae; *De Ente et Ess.*, c. 6, n. 32 (ed. Perrier): dicitur quantitas ex eo quod est mensura substantiae; *In III Phys.*, 5, n. 15 (med.): mensura autem quaedam est extrinseca et quaedam intrinseca. Intrinseca quidem sicut propria longitudo uniuscuiusque et latitudo et profunditas: ab his ergo denominatur aliquid sicut ab intrinseco inhaerente; unde pertinet ad praedicamentum quantitatis; *S.T.*, I, 28 2 c: quantitas dicitur mensura substantiae; *In V Met.*, 15, n. 986: magnitudo ... est mensura intrinseca.

to compute its length. The quantity of the foot thus becomes a measure of other things. And because it measures by repeated application, number (which belongs to discrete quantity) arises; and the foot is made the unit, the *one* which is repeated to establish number. Thus unity, the principle of all number, is a form of quantity.⁵⁵ Upon unity are founded various relations. A typical example is that of equality, which is founded upon unity in quantity.⁵⁶ Other relations which are not evidently quantitative are also founded upon numerical unity. The relation of likeness is mentioned in the text just quoted; for likeness, as Aquinas frequently says, is based upon unity in quality.⁵⁷ Another relation founded upon unity mentioned in the text above and frequently spoken of elsewhere is that of identity; for identity is unity in substance.⁵⁸

Besides quantity and number the other chief basis of relations mentioned in the above quotation is action, along with its correlative, passion. A relation can arise from an action going on here and now (an instance presupposed but not mentioned),⁵⁹ from a past action, or merely from the habitual power to act or to be acted upon in a given way.

Though quality is not, in the text quoted, explicitly excluded as an independent foundation, this is done by Saint Thomas in his *Commentary on the Metaphysics* in the passage alluded to in the preceding text, as also in the continuation of the last. He explains that quality does not constitute a separate foundation but is reduced either to action and passion or to quantity:

Qualitas autem rei, in quantum huiusmodi, non respicit nisi subiectum in quo est. Unde secundum ipsam una res non ordinatur ad aliam, nisi secundum quod qualitas accipit rationem potentiae passivae vel activae, prout est principium

⁵⁵ Cf. *In III Sent.*, 5, 1, 1, sol. 1: unum reducitur ad genus quantitatis quasi principium quantitatis discretæ; *In X Met.*, 2, nn. 1938-39; *In V Met.*, 8, n. 875; *S.T.*, I, 85, 8 ad 2.

⁵⁶ *S.T.*, I, 39, 8 c: aequalitas autem importat unitatem in respectu ad alterum; nam aequale est quod habet unam quantitatem cum alio; *In III Sent.*, 5, 1, 1, sol. 1; *C.G.*, IV, 24, Hoc enim (med.): aequale significat unum in quantitate; *In IV met.*, 2, n. 561; 11, n. 907; *In V Met.*, 17, n. 1022.

⁵⁷ *C.G.*, IV, 24, Hoc enim (med.): simile ... significat unum in qualitate; *In V Met.*, 11, n. 907; 12, n. 918: unum in qualitate facit simile; 17, n. 1022: dicuntur secundum unitatem ... similia quorum qualitas est una; *In X Met.*, 4, n. 2006; *In III Sent.*, 5, 1, 1, sol. 1: supra ipsam [quantitatem discretam] fundatur ... similitudo secundum quod est unum in qualitate.

⁵⁸ *In V Met.*, 11, n. 912: identitas est unitas vel unio; n. 907: idem ... est unum in substantia; 17, n. 1022: eadem sunt quorum substantia est una; *In X Met.*, 4, n. 2002; n. 2016; *In III Sent.*, 5, 1, 1, sol. 1: supra ipsam [quantitatem discretam] fundatur identitas secundum quod est unum in substantia.

⁵⁹ Cf. *In V Met.*, 17, n. 1023: huiusmodi relativa sunt relativa dupliciter. Uno modo secundum potentiam activam et passivam; et secundo modo secundum actus harum potentialium, qui sunt agere et pati.

actionis vel passionis. Vel ratione quantitatis, vel alicuius ad quantitatem pertinentis; sicut dicitur aliquid albius alio, vel sicut dicitur simile, quod habet unam aliquam qualitatem.⁶⁰

As a basis of relation quality is reduced to action and passion inasmuch as it is consequent upon form and is itself an accidental form, and form is the principle of activity. Certain qualities are called active or passive because they are directly dispositions of the substance to act or be acted upon.⁶¹ Or this foundation is reduced to quantity either by reason of intensity, the *more* or *less* of quality (as one being is whiter or harder or wiser than another), or by reason of its unity in the relation of likeness. A little later in the same lesson this latter reason for reducing qualitative relations to quantity is explained more fully. The relation of likeness or similitude is based upon quantity because it means unity in quality, and unity is the principle of number, the measure of discrete quantity: "Similia [sunt] quorum qualitas est una. ... Cum autem unum sit principium numeri et mensura, patet etiam quod haec dicuntur ad aliquid 'secundum numerum,' idest secundum aliquid ad genus numeri pertinens."⁶²

In an earlier work Thomas says even more explicitly that unity is reduced to quantity:

Unum autem reducit ad genus quantitatis quasi principium quantitatis discretarum. Et supra ipsam fundatur identitas, secundum quod est unum in substantia; aequalitas, secundum quod est unum in quantitate; similitudo, secundum quod est unum in qualitate.⁶³

Thus not only are relations of equality quantitative, but so also—reductively—are those of identity and likeness.

Three Foundations?

In the same lesson of the *Commentary on the Metaphysics* in which he

⁶⁰ *Ibid.*, n. 1005.

⁶¹ *C.G.*, IV, 63, Inter: Qualitates sunt actionum et passionum principium; *S.T.*, I-II, 49, 2 c: Proprie enim qualitas importat quemdam modum substantiae. ... Modus autem sive determinatio subiecti secundum actionem et passionem attenditur in secunda et tertia specie qualitatis; *In VII Phys.*, 5, n. 2: [quarta species qualitatis] est qualitas circa quantitatem, scilicet forma et figura; ... [prima species qualitatis] continet sub se habitus et dispositiones. ... [In tertia specie] sunt qualitates sensibiles. ... [Secunda species] est potentia vel impotentia naturalis; cf. *S.T.*, I-II, 110, 3 ob. 3; *ibid.*, 50, 1 ad 3: qualitates tertiae speciei sunt ut in fieri et ut in motu; unde dicuntur passiones vel passibiles qualitates; *In I De Gen.*, 8, n. 5: formae autem quae sunt per se sensu perceptibiles sunt qualitates tertiae speciei, quae ob id dicuntur passibiles quia sensibus ingerunt passiones; *De Pot.*, 2, 2 c: Philosophus ponit potentiam [activam et passivam] ... in genere ... qualitatis.

⁶² *In V Met.*, 17, n. 1022.

⁶³ *In III Sent.*, 5, 1, 1, sol. 1.

reduces qualitative relations to the foundations of quantity or action Thomas, following Aristotle, adds a third sort of relation, that of measure and thing measured. Measure is not taken in a quantitative sense here, for relations based upon quantitative measure have quantity as their foundation; but it is taken as the proportion between a thing known and the knowledge had about it. Thus three kinds of relations are apparently here distinguished, those of number and quantity, of action and passion, and of measure:

Ponit ergo [Philosophus] tres modos eorum quae ad aliquid dicuntur: quorum primus est secundum numerum et quantitatem. ... Secundus modus est prout aliqua dicuntur secundum actionem et passionem vel potentiam activam et passivam. ... Tertius modus est secundum quod mensurabile dicitur ad mensuram. Accipitur autem hic mensura et mensurabile non secundum quantitatem ..., sed secundum mensurationem esse et veritatis. Veritas enim scientiae mensuratur a scibili.⁶⁴

The third sort of relation has this peculiarity, that it is not mutual and not really found in both extremes. Knowledge is really related to the thing known, but the thing known is not really related to the knowledge. Though it is *said to be* related, there is no relation in it; a relation is merely attributed to it. Knowledge is related to the thing known "by the measuring of existence and truth" ("secundum mensurationem esse et veritatis"); for the conformity which constitutes truth and measures knowledge and makes it what it is, depends upon the existence of the thing known. Thus the very existence of knowledge depends upon the existence of that to which it is related ("Ordinatur autem una res ad aliam ... secundum esse, prout esse unius rei dependent ab alia").⁶⁵ The thing known, however, except in the case of practical knowledge,⁶⁶ does not depend upon the knowledge had of it. Its relation to knowledge is therefore not real but merely an attributed one.

In his whole discussion of this third type of relation Thomas does not seem to be entirely consistent in his point of view but sometimes speaks of the relation of the measure to what is measured and sometimes

⁶⁴ *In V Met.*, 17, nn. 1001-3. In regard to this lesson, against John of St. Thomas who holds that three species of predicamental relations are here being distinguished (*Cursus Philosophicus, Ars Logica*, P. II, q. 17, a. 3—ed. Reiser, p. 584), E. Marmy argues that the first two are predicamental and the third is transcendental ("Examen d'une division traditionnelle: la relation prédicamentale," *Divus Thomas* [Freiburg], XXI [1943], 307-322). Krempel, who rejects transcendental relations as the doctrine of St. Thomas (*La doctrine de la relation*, pp. 73-75, 170-179, 645-670), holds that the intent of this passage is primarily to distinguish, not foundations and their consequent species, but rather mutual (reciprocally real) and non-mutual or mixed relations (real on one side and ratiolate on the other) (pp. 195-202).

⁶⁵ *In V Met.*, 17, n. 1004.

⁶⁶ *In X Met.*, 2, n. 1959; *De Ver.*, 1, 2 c; *In I Perih.*, 3, n. 7.

of the inverse relation—that of what is measured to its measure. It is accordingly not absolutely clear from this passage whether he considers as distinctive of this third type of relation the fact that it is not really in the thing which is said to be relative (as is true of the measure and its attributed relation to what is measured, and of the thing known and its relation to knowledge), or the fact that the thing related is entirely dependent in its very existence upon the term of its relation (as is true of knowledge), or that there is such a correspondence between the two sets of relations.

It is of some consequence to determine if Thomas intends here to distinguish a third species of foundation specifically distinct from the other two, for relations are distinguished according to their foundations. The species of the foundation determines the species of the relation.⁶⁷

Exclusively Quantity and Action-Passion

The passage from the *Commentary on the Metaphysics* is the only one in which St. Thomas gives measure as distinctive of a third type of relation, and presumably as a third foundation. There are, however, a number of passages in which he says that there are two foundations of relation, quantity and action-passion, and that these are the only ones. For instance:

Omnis autem relatio ... fundatur vel supra quantitatem, aut reducitur ad genus quantitatis, aut supra actionem et passionem.⁶⁸

Relatio omnis fundatur vel supra quantitatem, ut duplum et dimidium; vel supra actionem et passionem, ut faciens et factum, pater et filius, dominus et servus, et huiusmodi.⁶⁹

⁶⁷ *In I Sent.*, 26, 2, 2 ad 4: Relatio non habet esse naturale nisi ex hoc quod habet fundamentum in re, et ex hoc collocatur in genere; inde est quod differentiae relationum essentielles sumuntur secundum differentias aliorum entium.—The same is clearly implied in several other passages where the point directly under discussion is the numerical distinction of relations. Relations can be identical or diverse either specifically or numerically. When in different subjects, a relation is numerically multiplied; when based upon different foundations, it is specifically or numerically diversified according as the foundations are specifically or only numerically distinguished. *In IV Sent.*, 27, 1, 1, sol. 1 ad 3: relatio fundatur in aliquo sicut in causa, ut similitudo in qualitate; et in aliquo sicut in subiecto, ut in ipsis similibus; et ex utraque parte potest attendi unitas et diversitas ipsius; *In I Sent.*, 27, 1, 1 sol. & ad 2; *Quodl.* IX, 4 c; *Quodl.* I, 2 c: relatio habet quod sit res naturae ex sua causa, per quam una res naturalem ordinem habet ad alterum. ... Ex eodem autem habet aliquid quod sit ens et quod sit unum; et ideo contingit quod est una relatio realis tantum propter unitatem causae.—The discussion could be supplemented by the passages in which Thomas discusses the various sorts of unity and diversity: numerical, specific, generic, and analogical; e.g., *In V Met.*, 7, 8, & 12; *In X Met.*, 1; *C.G.*, III, 92, Sed: Diversitas enim formalis induceret diversitatem secundum speciem; diversitas autem materialis inducit diversitatem secundum numerum.

⁶⁸ *In III Sent.*, 5, 1, 1, sol. 1.

⁶⁹ *S.T.*, I, 28, 4 c. There are some places in which Thomas names only two bases of

The exclusivity of quantity and action-passion as the basis of relation is insisted upon in a passage which excludes quality and substance :

Ordinatur autem una res ad aliam vel secundum quantitatem, vel secundum virtutem activam seu passivam. Ex his enim solum duobus attenditur aliquid in uno, respectu extrinseci. Mensuratur enim aliquid non solum a quantitate intrinseca, sed etiam ab extrinseca. Per virtutem etiam activam unumquodque agit in alterum, et per passivam patitur ab altero; per substantiam autem et qualitatem ordinatur aliquid ad seipsum tantum, non ad alterum, nisi per accidens; scilicet secundum quod qualitas vel forma substantialis aut materia habet rationem virtutis activae vel passivae, et secundum quod in eis consideratur aliqua ratio quantitatis, prout unum in substantia facit idem, et unum in qualitate simile, et numerus, sive multitudo, dissimile et diversum in eisdem, et dissimile secundum quod aliquid magis vel minus altero consideratur: sic enim albius aliquid altero dicitur.⁷⁰

Here quantity and action-passion are said to be the two bases of relation, and the only ones. Quantity is not considered as a mere determination of the substance (its intrinsic measure) but as that according to which the substance is measured by another. Measure is here taken in its proper sense as applying to quantity, and not in the extended or analogical sense by which it is spoken of in regard to the other categories.⁷¹ The correlative categories of action and passion are here referred to, not so much from the point of view of the actual acting or undergoing, as from that of their capacities or principles, the active and passive powers. Substance and quality are explicitly excluded as the

relation but does not say that they are exclusive: *De Ente et Ess.*, c. 6, n. 32 (ed. Perrier): principium relationis est actio et passio et quantitas; *In III Sent.*, 8, 1, 5 sol.: Sunt ergo quaedam relationes quae fundantur super quantitatem, sicut aequalitas, quae fundatur super unum in quantitate. ... Aliae vero relationes fundantur super actionem et passionem; *C.G.*, IV, 24, Hoc etiam: Nam relativa opposita vel supra quantitatem fundantur, ut duplum et dimidium; vel supra actionem et passionem, ut dominus et servus, movens et motum, pater et filius.—This last passage is important because, although these two foundations are not said expressly to be the only ones, the whole force of the argument in the chapter (on the kind of relation to be found in God in the procession of the Holy Spirit) rests upon the supposition that there are no other foundations; for it is an argument by elimination. A similar line of argument is found briefly put in *De Pot.*, 8, 1 c (ante med.): Cum realis relatio intelligi non possit nisi consequens quantitatem vel actionem seu passionem, oportet quod aliquo istorum modorum ponamus in Deo relationem esse. Cf. E. Marmy, *loc. cit.* (in note 64).

⁷⁰ *De Pot.*, 7, 9 c.

⁷¹ *In I Sent.*, 8, 4, 2 ad 3: mensura proprie dicitur in quantitibus: dicitur enim mensura illud per quod innotescit quantitas rei. ... Exinde transumptum est nomen mensurae ad alia genera; *In X Met.*, 2, n. 1938: Cum ratio unius sit indivisibile esse, id autem quod est aliquo modo indivisibile in quolibet genere sit mensura, maxime dicitur in hoc quod est esse primam mensuram cuiuslibet generis. Et hoc maxime proprie dicitur in quantitate, et inde derivatur ad alia genera ratio mensurae. Mensura autem nihil aliud est quam id quo quantitas rei cognoscitur; n. 1939: ratio mensurae primo invenitur in discreta quantitate, quae est numerus; n. 1960: de ratione unius est quod sit mensura. Et hoc maxime proprium est prout est in quantitate; deinde in qualitate et in aliis generibus.

bases of relations in a proper sense and by reason of themselves, for in themselves they are absolute. If they are sometimes spoken of as founding relations, this is only *per accidens*—by reason of something else. The double grounds on which quality can thus serve as a basis *per accidens* are the two mentioned: quantity and action or passion; for not only may quality be reduced to quantity by reason of greater or lesser intensity, or by reason of unity when there is question of likeness, but it may also play the role of an active or passive power and thus be reduced to action or passion. Substance is similarly reduced either to quantity, by reason of unity in the relation of identity, or to action and passion, by reason of the remote principles of activity and passivity in the substance, form and matter respectively.

Lest any lingering doubt remain about the other categories which follow action and passion in Aristotle's list—when, where, posture, and accoutrement—Thomas excludes them as the basis of relation in the same general passage in which mentions measure as well as quantity and action-passion.⁷² They rather follow relation and depend upon it than serve as its cause and principle.

Thus St. Thomas affirms both by elimination and by direct statement the exclusiveness of quantity and action-passion as the foundations of relation.

What, then, becomes of Aristotle's third basis of relation, measure, which Aquinas apparently accepts? And what is to be said of the passage in which it is proposed? Has Thomas unwittingly contradicted himself? Did he change his mind and abandon an earlier doctrine? Did he merely expound the doctrine of Aristotle without subscribing to it himself? Or can the differences be reconciled?

It can be assumed that no intelligent person would knowingly contradict himself on a purely theoretical matter. That Thomas did not do so unwittingly is too clear from the fact that in many of the very passages in which he admits only two foundations for relation he nevertheless alludes to the very place in which Aristotle seems to expound three.⁷³ He certainly was not ignorant of what Aristotle said in the passage he cites.

If Thomas changed his mind and abandoned an earlier doctrine, it could not have been the threefold classification which was early and was abandoned; for the *Commentary on the Metaphysics* is certainly

⁷² *In V Met.*, 17, n. 1005.

⁷³ E.g., *De Pot.*, 7, 9 c; *S.T.*, I, 28, 4 c; *In III Sent.*, 5, 1, 1, sol. 1; *De Ente et Ess.*, c. 6, n. 32 (ed. Perrier).

later than some of the works in which the twofold classification is proposed as exclusive.⁷⁴ On the other hand, there are serious reasons against saying that Thomas first held the doctrine of two foundations and later abandoned this for that of three. Not only is there no indication in the exposition of Aristotle's text that Thomas is correcting or in any way departing from a former opinion of his own and one which elsewhere he seems to regard as commonly received; but also this passage seems to have been written earlier than several in which he firmly holds the exclusiveness of the two foundations.⁷⁵

⁷⁴ The earliest date now assigned for the *Metaphysics* by serious scholars of the chronology of Thomas' works is 1265. In an early catalogue of his works by Tolomeo of Lucca it is assigned to 1265-1267. But there are strong reasons for holding that it was not completed before the end of 1271 or sometime in 1272. See A. Mansion, "Date de quelques commentaires de saint Thomas sur Aristote," in *Studia Mediaevalia in honorem A.R.P. Raymundi J. Martin, O.P.* (Bruges: De Tempel, 1948), 283-287; and Grabmann, *Die Werke des hl. Thomas von Aquin*, 3rd ed. (Münster: Aschendorff, 1949), 281-284. It seems likely that the work was originally composed in large part between the dates given by Tolomeo of Lucca, but later revised, at least for the changing and addition of some references, and probably the addition of the commentary on the last two books, between the end of 1270 and the beginning of 1272. See D. Salman, O.P., "Saint Thomas et les traductions latines des Métaphysiques d'Aristote," *Archives d'histoire doctrinale et littéraire du moyen-âge*, VIII (1932), 120; also Mansion, *op. cit.*, p. 287; and Grabmann, *op. cit.*, p. 283.

The *De Ente et Essentia* was completed before 1256, probably between 1254 and 1256. See A. A. Maurer, C.S.B., *On Being and Essence by St. Thomas Aquinas* (Toronto: Pontifical Institute of Mediaeval Studies, 1949), p. 7; and M-D Roland-Gosselin, O.P., *Le "De Ente et Essentia" de S. Thomas d'Aquin* (Bibliothèque Thomiste, VIII; Le Saulchoir, 1926), p. xxvi.

The *Commentary on the Sentences* also dates from 1254-1256. It seems fairly certain that there were two redactions of Book I, the second dating from about 1265, which we may have in the current editions. It also seems likely that there were two redactions of Book III but that the editions contain the earlier. See A. Hayen, S.J., "Saint Thomas a-t-il édité deux fois son commentaire sur le livre des Sentences?" *Recherches de théologie ancienne et médiévale*, IX (1937), 219-236. Book IV may well date from the first half of 1257. See A. R. Motte, "La chronologie relative du Quodlibet VII et du commentaire sur le IVe Livre des Sentences," *Bulletin Thomiste*, VIII (1931-1933), *Notes et Communications*, I (1931), 29*-45*; and "La date extrême du commentaire de S. Thomas sur les Sentences," *ibid.*, 49*-61*. The statements quoted in the text above from the *Sentences*, however, are from Book III, and therefore not later than 1256.

The *Summa Contra Gentiles* was not written before 1258 and may have been in the writing as late as 1264, as Tolomeo of Lucca says. See A. R. Motte "Note sur la date du *Contra Gentiles*," *Revue Thomiste*, XLVI (n.s. XXI) (1938), 806-809; and P. Synave, O.P., "La révélation des vérités naturelles d'après S. Thomas d'Aquin," *Mélanges Mandonnet* (Paris: Vrin, 1930), I, 362-365.

All of these works, then, (at least in the parts quoted) are prior to the *Commentary on the Metaphysics*.

⁷⁵ The two-foundation doctrine is found in the *De Potentia* and in Part I of the *Summa*. The former dates from 1265-68. See P. Glorieux, "Les questions disputées de S. Thomas d'Aquin et leur suite chronologique," *Recherches de théologie ancienne et médiévale*, IV (1932), 5-33 (especially 23-25 & 32-33). The latter dates from 1266-67. See P. Glorieux, "Pour la chronologie de la Somme," *Mélanges de science religieuse*, II (1945), 59-98; also M. Grabmann, *Introduction to the Theological Summa of St. Thomas*, trans. by J. S. Zybura (St. Louis: Herder, 1930), pp. 21-25. If for the whole *Commentary on the Metaphysics* the extreme date is taken, this work is certainly later than the *De Potentia* and the *Summa*, Part I. But in view of the date given for it by Tolomeo of Lucca and other

Though Thomas' primary intention in the commentaries on the works of Aristotle is to expound Aristotle's meaning independently of whether the position there adopted is Thomas' own or not, it would be too easy a way out of the difficulty to say that Thomas is not here assenting to Aristotle's doctrine. Not only does he not in any way indicate dissent, but in explaining Aristotle's division he seems positively to accept the doctrine, using his own extension of Aristotle's metaphysics to give a reason for this division.⁷⁶

The fact must not be overlooked, however, that the triple division of relations is found only in a commentary upon Aristotle, and the explicit statements of an exhaustive twofold division are found in passages where Thomas is speaking for himself, even though here too he frequently refers to Aristotle. In the commentary he necessarily adopts Aristotle's point of view, which may not be exactly the same as that which he would (and in fact does) adopt when speaking independently. Aristotle is speaking directly of a division of relative terms rather than of relations, as Thomas suggests.⁷⁷ Yet, because Aristotle is speaking of these relative terms precisely under the formality of being related, Thomas recognizes that their formal aspect is itself involved, and soon transfers the discussion to relations themselves.⁷⁸ The question remains, however, whether the division which Aristotle is making and Thomas

indications (See Mansion, "Date de quelques commentaires ..." and the other studies cited in note 74), one seems hardly justified in putting this whole commentary at a late date. The data of the problem at its present stage are best taken care of by assuming a first draft during Thomas' stay in Rome, 1265-67, and later revisions (with perhaps additions) after 1270. The reasons demanding these later revisions are chiefly citations of Greek commentators upon Aristotle not available to Thomas in Latin earlier, and his knowledge of the existence of Book K (XI), causing the number by which each of the following books is cited to be increased by one. There is nothing to indicate that the exposition of the earlier books was not substantially in the present form by 1267. The doctrine of a third class of relations determined by measure belongs to the substance of Lesson 17 of the commentary on Book V. Since this comes before the middle of the complete commentary, it is likely that the matter was treated and this lesson composed well before Thomas' departure from Rome (in August, 1267), or sometime in 1266. This would put it earlier than *De Pot.*, q. 7 (placed by Glorieux, *op. cit.*, p. 23, at Viterbo in 1267-68) and Part I of the *Summa*, or at the latest contemporary with these. It seems highly improbable, therefore, that Thomas' exposition of the third kind of relation, based on measure, came after his statements of the exclusiveness of the other two bases in *Summa* I and *De Pot.*, 7, 9, or that he there abandoned the latter doctrine.

⁷⁶ *In V Met.*, 17, n. 1004.

⁷⁷ *Ibid.*, n. 1001: Ponit ergo tres modos eorum quae ad aliquid dicuntur.—To point out the viewpoint, however, is not a sufficient solution of the difficulty, as Father Kossel seems to regard it (Clifford G. Kossel, S.J., "St. Thomas's Theory of the Causes of Relations," *The Modern Schoolman*, XXV [1947-48], 154); for Thomas quickly shifts to a discussion of relations themselves.

⁷⁸ *In V Met.*, 17, n. 1004: Cum enim relatio quae est in rebus consistat in ordine quodam unius rei ad aliam, oportet tot modis huiusmodi relationes esse, quot modis contingit unam rem ad aliam ordinari; n. 1026: Prosequitur de tertio modo relationum.

is apparently accepting is, in Thomas' opinion, one of the formal species of relations, and therefore also a division of the different species of foundations or causes, or whether some other classification is being followed.

Mutual and Non-Mutual, Real and Rationate Relations

The classification is not expressed in terms of species but of *modes*—the ways in which relatives are spoken of. And *mode* has a broader meaning than *species* in the strict sense. It means any kind of determination or qualification whether substantial or accidental, intrinsic or extrinsic, in the line of essence or in that of existence;⁷⁹ whereas *species* properly refers to the determination which comes from an intrinsic essential form.⁸⁰

The relations which are here distinguished into their different modes are real relations ("relatio quae est in rebus").⁸¹ Although the principle of differentiation and classification is not altogether clear and fluctuates somewhat in Thomas' exposition, it nevertheless seems to be principally the reciprocity or mutualness of relations in regard to their reality. Thus in the first enumeration of the three modes of relation—"according to quantity," "according to action and passion," and "according to the measurable and measure"—he points out that relations of the last mode are not mutual; for the measure is not really related to the measurable, but the measurable is really related to the measure.⁸² Another point concerning reciprocity which Thomas may have had in mind but does not indicate very clearly is a difference between the first and the second mode in reciprocity of the species and denomination of the relations. In the first mode (quantitative relations) there is to be found reciprocity not only in reality and existence but also in species and denomination. Relations of equality or inequality work both ways: A is equal (or unequal) to B, and B is equal (or unequal) to A. In the second mode, however, though there is reciprocity in reality, there is

⁷⁹ *De Prop. Mod.* (prin.): Est autem modus determinatio adiacens rei, quae quidem fit per adiectionem nominis adiectivi quod determinat substantiam, ut cum dicitur "homo est albus"; vel per adverbium quod determinat verbum [ut cum dicitur "homo currit bene"]; *In IV Sent.*, 16, 3, 1, sol. 2 ad 4: modus rei est in ipsa re consequens substantiam eius; *De Ver.*, 21, 6 ad 5; cum creaturae essentialia et accidentalia sit receptum, sic modus non solum invenitur in accidentalibus sed in substantialibus.

⁸⁰ *S.T.*, I-II, 82, 3 c: unumquodque habet speciem a sua forma; cf. 63, 1 c: unumquodque habet speciem secundum suam formam; 18, 2 c; 23, 1 c: Diversitas speciei consequitur diversitatem formae in eadem materia; I, 76, 1 c: Sortitur autem unumquodque speciem per propriam formam; *In V Met.*, 2, n. 764: forma intrinseca rei ... dicitur species.

⁸¹ N. 1004.

⁸² *In V Met.*, 17, nn. 1001-3.

not in species and denomination; for the fire heats the pot but the pot does not heat the fire, and fatherhood is in a father with regard to his son but not in the son with regard to his father.⁸³

In continuing his exposition of this classification Thomas seems to shift his point of view from reciprocity to that of the foundations or causes of relations. A thing may have an ordination to something else "according to" or "by reason of" existence, active or passive power, or quantity.⁸⁴ Even if Thomas intends here to enumerate the foundations or causes of relation, there remains the question whether from each of them there results a distinct formal species, because one of the causes is existence ("ordinatur secundum esse") and existence is not the form of anything. The third mode of relation is, therefore, not distinguished by a distinct species of form had by the subject but by its dependence for its own existence upon the existence of something else or by the dependence of the other member upon its existence. In the former instance the relation would be real. In the latter instance it would be merely rationate. But since existence is not a specifying form inhering in the subject, taken by itself it would not seem to be in the strict sense a foundation of relation or to cause a distinct species of relation. It is perhaps for this reason that Thomas later in the same lesson returns to the original viewpoint of reciprocity.

After exposing at some length the various sub-species of quantitative and of active and passive relations, Thomas passes on to those of the third mode and points out the basis of its distinction from the preceding two. In both of these a thing is called relative because it is referred to something else; but in relations of non-quantitative measure something is called relative because something else is referred to it. In the first two modes the subject is really related and a real relation is had. The

⁸³ *In I Sent.*, 27, 1, 1 ad 2: in utroque extremorum est una relatio differens ab alia in quibusdam secundum speciem, sicut in illis quae diversis nominibus utrinque nominantur, ut paternitas et filiatio; et in quibusdam non differunt specie sed numero tantum, sicut quando utrinque est unum nomen, ut in similitudine et aequalitate; et tunc relatio quae est in uno sicut in subiecto est in alio sicut in termino, et e converso; *S.T.*, I, 32, 2 c: duae relationes non sunt diversae secundum speciem si ex opposito una relatio eis correspondeat.—Symmetrical relations (reciprocal in species) are called *relationes aequiparantiae*: *In I Sent.*, 48, 1, 1, ob. 4: relatio aequiparantiae [est relatio] ponens similem habitudinem in utroque extremorum; *In III Sent.*, 5, 1, 1, sol. 1 ad 2; *De Ver.*, 23, 7 ad 11; *S.T.*, III, 2, 8 c. Relations of inequality, though as such symmetrical, have subspecies that are asymmetrical, as those of double and half, larger and smaller.

⁸⁴ N. 1004: Ordinatur autem una res ad aliam vel secundum esse, prout esse unius rei dependet ab alia, et sic est tertius modus. Vel secundum virtutem activam et passivam, secundum quod una res ab alia recipit vel alteri confert aliquid; et sic est secundum modus. Vel secundum quod quantitas unius rei potest mensurari per aliam; et sic est primus modus.—In the next paragraph Thomas speaks expressly of causing a relation ("relationem causare").

relations can, moreover, be reversed and still remain real. In the third mode, however, though one of the terms is called relative because it is itself related to the other term, and its relation is real, nevertheless the other term is not related to the first, and it is merely said to be related for the extrinsic reason that something else is related to it. Its relation is accordingly not real but merely rationally. Knowledge, depending for its very existence upon the thing known, is really related to it; but the thing known neither depends upon the knowledge had of it, nor is it really related as a result.⁸⁵ Relations of the third mode are, therefore, not mutual or reciprocal in their reality.

It is from this point of view that Thomas frequently elsewhere refers to the passage from the *Metaphysics*. He cites it as distinguishing real relations from non-real (or "relations of reason"), or mutual relations (i.e., mutually real) from those which are not mutual. In the *De Veritate* speaking of the relation which the good adds to being, he argues that it cannot be real but must be rationally, and says:

Illa autem relatio, secundum Philosophum in V *Metaphysicorum*, dicitur esse rationis tantum, secundum quam dicitur referri id quod non dependet ad id ad quod refertur sed e converso, cum ipsa relatio quaedam dependentia sit, sicut patet in scientia et scibili, sensu et sensibili. Scientia enim dependet a scibili, sed non e converso: unde relatio qua scientia refertur ad scibile est realis; relatio vero qua scibile refertur ad scientiam est rationis tantum: dicitur enim scibile referri, secundum Philosophum, non quia ipsum referatur, sed quia aliud refertur ad ipsum. Et ita est in omnibus aliis quae se habent ut mensura et mensuratum vel perfectivum et perfectibile.⁸⁶

⁸⁵ Nn. 1026-27.

⁸⁶ *De Ver.*, 21, 1 c; cf. *In I Sent.*, 8, 4, 1 ad 3: Contingit enim, ut dicit Philosophus V *Metaph.*, aliquid dici relative, non quod ipsum referatur, sed quia aliquid refertur ad ipsum; sicut est in omnibus quorum unum dependet ab altero et non e contrario; sicut scibile non est relativum nisi quia scientia refertur ad ipsum; scibile enim non dependet a scientia sed e converso. Sed quia intellectus noster non potest accipere relationem in uno relativorum quin intelligatur in illo ad quod refertur, ideo ponit relationem quamdam circa ipsum scibile, et significat ipsum relative. Unde illa relatio quae significatur in scibili non est realiter in ipso sed secundum rationem tantum; in scientia autem realiter; *C.G.*, II, 12, Item: Comparatur igitur ... scibile ad scientiam nostram, quod eius mensura est: nam "ex eo quod res est vel non est, opinio est oratio vera vel false est," secundum Philosophum in *Praedicamentis* [5, 4b 7-10]. Scibile autem licet ad scientiam relative dicatur, tamen relatio secundum rem in scibili non est, sed in scientia tantum: unde secundum Philosophum, in V *Metaph.*, scibile dicitur relative, "non quia ipsum referatur, sed quia aliud refertur ad ipsum"—Three passages in the *Summa* where the text of the *Metaphysics* is not mentioned are sufficiently close to show that Thomas had it in mind: *S.T.*, I, 6, 4 c: nihil prohibet in his quae relationem important, aliquid ex extrinseco denominari; sicut aliquid denominatur locatum a loco et mensuratum a mensura; 37, 2 c: cum res communiter denominentur a suis formis, sicut album ab albedine, et homo a humanitate; omne illud a quo aliquid denominatur, quantum ad hoc habet habitudinem formae. ... Contingit autem aliquid denominari per id quod ab ipso procedit non solum sicut agens actione, sed etiam sicut ipso termino actionis, qui est effectus, quando ipse effectus in intellectu actionis includitur; I-II, 7, 2 ad 1: In his autem quae ad aliquid dicuntur, denominatur aliquid non solum ab eo quod inest,

The general context here shows that Thomas' interest in the passage which he cites bears upon the distinction between real and non-real relations; and in his discussion of it that of mutual and non-mutual relations is necessarily involved.

In other places a more elaborate analysis of the passage is made. In a text already cited from Book III of the *Sentences*, where the place in the *Metaphysics* is twice explicitly mentioned, all relations are said to be founded upon action and passion or upon quantity and what is reduced to quantity. The relations directly under discussion are those of the modes of unity—identity, equality, and likeness—and that of union. After the former are explained to be quantitative, and union to be a relation of action and passion, Thomas discusses the way in which relations of either species arise:

Relationum autem tam harum quam illarum—quaedam innascuntur ex motu utriusque; et tunc oportet quod illae relationes sint realiter in utroque extremorum, sicut paternitas et huiusmodi—quaedam autem innascuntur ex motu unius sine immutatione alterius, quod accidit in his quorum unum dependet ad alterum et non e converso, sicut scientia ad scitum; et in talibus relatio est secundum rem in eo quod dependet ad alterum, in altero vero est secundum rationem tantum.⁸⁷

For a relation to come into being there must be some motion or change. In the case of some relations the change is in both members, and these are as a consequence mutually real. In others there is a change in only one of the two members; and in this case the relation will be real in one direction and only rationally in the opposite direction. This principle is then applied to a special case of union, the Incarnation, where the relation is not mutual.

Here again the sense which Thomas attributes to the passage of the *Metaphysics* is a distinction between mutual and non-mutual relations, and not a distinction of formal species of relations corresponding to different species of causes.

In the *De Potentia* also the same interpretation is given in a more extended fashion.⁸⁸ Although *Metaphysics* V is not mentioned in the body of the article in question, it is quite evident that Thomas has the passage in mind because he refers to it explicitly in the *Sed contra*.⁸⁹

sed etiam ab eo quod extrinsecus adiacet: ut patet in dextro et sinistro, aequali et inaequali, et similibus.

⁸⁷ *In III Sent.*, 5, 1, 1, sol. 1.

⁸⁸ *De Pot.*, 7, 10 c.

⁸⁹ Second argument. Although Thomas sometimes disagrees with the *Sed contra* arguments as well as with those preceding, and answers the one set as well as the other (e.g., *De Pot.*, 7, 7), there can be little doubt about his acceptance of the *Sed contra* argument in question here, because he gives no answer to it.

The context, the non-reality of relations to His creatures attributed to God, demands a distinction between real and non-real relations and also one between mutually real and non-mutual relations. These distinctions are made: "Cum relatio realis consistat in ordine unius rei ad rem aliam, ut dictum est, in illis tantum mutua realis relatio invenitur in quibus ex utraque parte est eadem ratio ordinis unius ad alterum." Such mutual reality, Thomas continues, is found in all relations based upon quantity. But the same is not true of those based upon action and passion. In these the reality may be on the side of only one of the terms, for the motion or change involved in action and passion is not always real in both members. The patient must always undergo a change and, thus depending upon the agent and perfected by it, have a real ordination to it; but the agent need not be in any way perfected by the change in the patient, and thus need have no real ordination to it:

Quaedam vero sunt ad quae quidem alia ordinantur et non e converso, quia sunt omnino extrinseca ab illo genere actionum vel virtutum quas consequitur talis ordo; sicut patet quod scientia refertur ad scibile, quia sciens, per actum intelligibilem, ordinem habet ad rem scitam quae est extra animam. Ipsa vero res quae est extra animam omnino non attingitur a tali actu, cum actus intellectus non sit transiens in exteriorem materiam mutandam; unde et ipsa res quae est extra animam omnino est extra genus intelligibile. Et propter hoc relatio quae consequitur actum intellectus non potest esse in ea. Et similis ratio est de sensu et sensibili.

The example used is the same as that used by Aristotle in the *Metaphysics* in the passage in question. It is the case of knowledge, whether intellectual or sensitive. The knowledge is really related to the thing known, but what is known has no real relation to the knowledge.

It is therefore amply clear, both from the explicit reference and from the doctrine proposed, that Thomas is explaining Aristotle's distinction of relations set forth in *Metaphysics* V. But it must be noted that the non-mutual relations are not here treated as a distinct formal species based upon a distinct species of cause; but they are considered to be based upon action and passion, though in a somewhat extended sense.⁹⁰

⁹⁰ In their strictest sense action and passion are categories of accidental being and imply change and transient action. *S.T.*, I, 91, 1 ob. 1: actio est unum de decem generibus; *C.G.*, II, 9: actio unum inter novem praedicamenta accidentis nominatur; *S.T.*, I, 41, 1 ad 2: actio secundum primam nominis impositionem, importat originem motus: sicut enim motus, prout est in mobili ab aliquo, dicitur *passio*; ita origo ipsius motus, secundum quod incipit ab alio et terminatur in id quod movetur, vocatur *actio*; *In I Sent.*, 8, 4, 3 ad 3: Actio, secundum quod est praedicamentum, dicit aliquid fluens ab agente, et cum motu; *De Ver.*, 8, 6 c: Duplex est actio: una quae procedit in rem exteriorem, quam transmutat: et haec est sicut illuminare, quae etiam proprie actio nominatur; (cf. *In I Sent.*, 40, 1, 1 ad 1—in a part given by the Parma edition but not included in the text by Mandonnet nor, according to the latter, found in the old manuscripts—: Operatio enim agentis quaedam est ut transiens in effectum, et haec proprie actio vel passio dicitur); *In II De An.*, 11, n. 365: Passio enim proprie dicta videtur importare quoddam

This seems to have been St. Thomas' authentic interpretation of the passage from *Metaphysics* V throughout his life. Not only is it contained in works written prior to his *Commentary*, namely, the *Sentences*, the *De Veritate*, and the *Contra Gentiles*; but it is also suggested by statements in Parts I and I-II of the *Summa*, and is developed at some length in the *De Potentia*—all of which are probably at least contemporary with that part of the *Commentary* and seem to be later. But should any persisting uncertainty about the chronology throw doubt upon the validity of the above interpretation for the time of the composition of the commentary on Book V of the *Metaphysics*, the *Commentary* itself suffices to justify the interpretation given. In his eight lesson on Book X, speaking of the relation of the one and the many, Thomas refers back to the passage in Book V. He says:

Supra enim in quinto dictum est, quod dupliciter dicuntur aliqua esse ad aliquid. Quaedam namque referuntur adinvicem ex aequo, sicut dominus et servus, pater et filius, magnum et parvum; et haec dicit esse ad aliquid ut contraria; et sunt ad aliquid secundum seipsa; quia utrumque eorum secundum hoc ipsum quod est ad alterum dicitur. Alia vero sunt ad aliquid non ex aequo; sed unum eorum dicitur ad aliquid, non quod ipsum referatur, sed quia aliquid refertur ad ipsum, sicut in scientia et scibili contingit. Scibile enim dicitur relative, non quia ipsum refertur ad scientiam, sed quia scientia refertur ad ipsum. Et sic patet quod huiusmodi non sunt relativa secundum se, quia scibile non secundum hoc ipsum quod est, ad alterum dicitur, sed magis aliud dicitur ad ipsum.⁹¹

Now it is perfectly obvious here that the distinction which he finds in the passage of Book V is one of a difference in reality and mutualness. And beyond any doubt this passage is subsequent to the text in Book V and reveals Thomas' interpretation of that text sometime later. This interpretation clearly does not in any way go counter to the texts in which Thomas says that there are only two foundations for relations: quantity and action or passion. Since it speaks of a different classification of relations, it rather supplements those texts. And since even Thomas' direct commentary on the passage in question bears this interpretation, that passage must not be viewed as canceling out another opinion on the species of causes of relations or in any way contradicting it, but rather as complementing that opinion with a discussion of mutual reality.

decrementum patientis in quantum vincitur ab agente; *In V Met.*, 14, n. 958: Proprie enim pati dicitur quod recipit aliquid cum sui transmutatione ab eo quod est ei naturale; *In II Sent.*, 19, 1, 3 sol.: proprie dicitur pati secundum quod passio sequitur alterationem qua aliquid transmutatur ab eo quod est sibi secundum naturam.

⁹¹ *In X Met.*, 8, nn. 2087-88 (reading *quod est* with Parma instead of *quid est* with Cathala and Spiazzi in the first *hoc ipsum quod est* and inserting *secundum* before this latter phrase both times for sense).

The relation involved in knowledge has already been seen in the preceding chapter to be the one of likeness.⁹² The knower is related to the thing known by means of a likeness; and the knowledge itself, taken objectively as the conceived intention or concept, it itself a likeness. But likeness is a relation: "Similitudo est relation quaedam."⁹³ Considered in itself, knowledge is primarily something absolute, a quality of the knower, as has been seen.⁹⁴ Yet because it is the form of something else in the knower, it is by its very nature also relative.

Essentially and Attributively Relative Terms

Two kinds of relative terms are distinguished. One directly and essentially signifies something as relative to something else (*relativum secundum esse*). The other directly signifies something as having a determination or form in itself, which, however, implies a relation to something else, and is said to be "attributively relative" (*relativum secundum dici*).

Relativa quaedam sunt imposita ad significandum ipsas habitudines relativas, ut "dominus," "servus," "pater" et "filius" et huiusmodi: et haec dicuntur relativa *secundum esse*. Quaedam vero sunt imposita ad significandas res quas consequuntur quaedam habitudines, sicut movens et motum, caput et capitatum et alia huiusmodi: quae dicuntur relativa *secundum dici*.⁹⁵

Aliquando enim nomen imponitur ad significandum ipsam habitudinem; sicut hoc nomen "dominus," et huiusmodi, quae sunt relativa *secundum esse*. ... Aliquando autem nomen imponitur ad significandum illud supra quod fundatur habitudo, sicut hoc nomen "scientia," qualitatem quam consequitur respectus quidam ad scibile; unde ista talia non sunt relativa secundum esse sed solum *secundum dici*. Unde ista principaliter dant intelligere rem alterius praedicamenti, et ex consequenti important relationem.⁹⁶

The word *esse* in the expression *relativum secundum esse* does not mean existence but *essence* or *quiddity*—a usage borrowed from Aristotle and Boethius.⁹⁷ Knowledge, then, primarily signifying a perfection of the

⁹² See pp. 98-102; 104-110, especially 108-110.

⁹³ C.G., II, 11.

⁹⁴ Chap. V, pp. 108-110.

⁹⁵ S.T., I, 13, 7 ad 1.

⁹⁶ *In I Sent.*, 30, 1, 2 sol.; cf. a. 3 ad 4; 33, 1, 1 ob. 1 & ad 1; *In II Sent.*, 1, 1, 5 ad 8; *De Ver.*, 4, 5 ob. 2 & ad 2; 21, 6 c; *De Pot.*, 7, 10 ad 11.

⁹⁷ *In I Sent.*, 33, 1, 1 ad 1: relationes istae [divinae] non sunt tantum secundum dici ad aliquid, sed etiam secundum esse. Sed sciendum quod *esse* dicitur tripliciter. Uno modo dicitur esse ipsa *quidditas* vel *natura* rei, sicut dicitur quod definitio est oratio significans quid est esse; definitio enim quidditatem rei significat. ... Dico igitur quod cum dicitur: "Ad aliquid sunt quorum esse est ad aliud se habere," intelligitur de esse quod est quidditas rei, quae definitione significatur; quia ipsa natura relationis per quam constituitur in tali genere est ad aliud referri. (The whole reply should be consulted.) Cf. *In III Sent.*, 6, 2, 2 sol.: Aliquando tamen *esse* sumitur pro *essentia* secundum quam res est; 8, 1, 5 ad 2: Philosophus non accipit *esse* secundum quod dicitur

knower but, by reason of all that it is, implying a relation to the thing known, is attributively relative.

The terminology used here must not be confused with that used by Thomas in his commentary on Aristotle's statement about relatives in *Metaphysics* V. When he there says that some things are related to other things *secundum esse*, by *esse* he means existence, since the very existence of the things called relative in this sense depends upon the existence of the beings to which they are referred. The being itself is not directly designated as relative but as absolute. It is therefore not "essentially relative" (*relativum secundum esse*) but rather "attributively relative" (*relativum secundum dici*). A *relativum secundum esse*, however, is directly signified as relative, and in finite beings is an accidental but absolute determination of a substance. Cause and effect, agent and patient, for example, are correlative terms. They are relative, but not primarily and directly. What they directly signify is not properly in the category of relation but rather in the categories of action and passion. Yet they imply a relation which is not something over and above them and accidental to them. Knowledge also is not a *relativum secundum esse* but a *relativum secundum dici*, because what is designated by the term is not primarily something relative but something absolute, in this case a quality; and this remains true even though of its very nature and according to all that it is (and so "transcendentally" in the terminology of modern Scholastics) it is related to the thing known. In the sense of the *Commentary on the Metaphysics*, however, it would be related *secundum esse* because wholly dependent upon the thing known for its existence, whereas in the present division it is a *relativum secundum dici*.

When the knowledge is taken by itself in its relation to the thing known, it does not have a relation distinct from itself but is itself relative, a quality whose very essence is to be relative. When, however, the relation of the knower to the thing known is considered, knowledge

actus entis ... sed accipit esse pro *quidditate* vel *ratione* quam significat definitio; *In IV Met.*, 7, n. 618: esse hominem vel esse homini sive hominis hic accipitur pro *quod quid est* hominis; *In VII Met.*, 3, n. 1310: per hoc quod dicit "hoc esse" vel "huic esse" intelligit [Aristoteles] *quod quid erat esse* illius rei; sicut "homini esse" vel "hominem esse" intelligit id quod pertinet ad *quod quid est* homo; *Quodl.* IX, 4 ad 3: *esse* ponitur pro *ratione*.

Aristotle—See Bonitz, *Index Aristotelicus* (in *Aristoteles Graece et Latine*, ed. I Bekker. Berlin: Prussian Academy, 1831, vol. VI) s.v. *είναι* n. 5, p. 221a.

Boethius—*Quomodo Substantiae* (in *The Theological Tractates*, ed. H. F. Stewart and E. K. Rand. London: Heinemann; New York: Putnam, 1926) pp. 38-51, especially 40-46. Also *In Porphyrii Isagogen Commentarium* II, lib. IV, c. 14 (in Migne, *Patrologia Latina*, 64, col. 129 D): *Quid est autem esse rei nihil aliud nisi diffinitio*.

is something accidental and adds to the knower a relation of likeness or conformity to the thing known, as has been seen.

Knowledge may also be considered as an act or habit of the knower.⁹⁸ In this case it is accidental, but the relation involved in it is based upon action or passion. It comes from the action of the knower but not from any action or passion of the part of the thing known:

Relatio enim scientiae ad scibile consequitur actionem scientis, non autem actionem scibilis; scibile enim eodem modo se habet, quantum in se est, et quando intelligitur et quando non intelligitur.⁹⁹

Scientia refertur ad scibile, quia sciens, per actum intelligibilem, ordinem habet ad rem scitam quae est extra animam. Ipsa vero res quae est extra animam omnino non attingitur a tali actu, cum actus intellectus non sit transiens in exteriorem materiam mutandam.¹⁰⁰

Unde [scibile vel sensibile] non dicitur relative propter aliquid quod sit ex eorum parte ... sed solum propter actionem aliorum, quae tamen in ipsa non terminantur. ... Sed videre et intelligere et huiusmodi actiones ... manent in agentibus et non transeunt in res passas; unde visibile et scibile non patitur aliquid ex hoc quod intelligitur vel videtur.¹⁰¹

Now, clearly, action as used here is taken in a somewhat extended sense, as was said above; for action and passion, when taken strictly, as predicaments and as the foundation for predicamental relations, are transient, the action producing an effect in something outside the agent, and the passion being the undergoing of a change through the loss of one form and the acquisition of another. Cognition, however, is immanent, remaining within the knower and in no way affecting the thing known.¹⁰² With this extension of the notion of action, the relation involved in knowing is said to be based upon action: "Quaedam nomina important ... relationem quae consequitur actionem non transeuntem in exteriorem effectum sed manentem in agente, ut scire et velle."¹⁰³

Not only in actual knowledge but also in habitual knowledge the relation involved is based upon action; for habits are known from and

⁹⁸ Said of *notitia*: *Quodl.* VII, 4 c (quoted Chap. V, n. 50). *Notitia* (as applied to the intellect; for it is broad enough to apply also to sense) means the same as *scientia*: *notitia mentis nihil aliud esse videtur quam scientia (ibid., sed contra)*.—Said of *scientia*: *S.T.*, I, 13, 7 ad 6: *Scientia [dicitur] secundum habitum vel secundum actum.*

⁹⁹ *C.G.*, IV, 14, n. 7, b.

¹⁰⁰ *De Pot.*, 7, 10 c; cf. 8, 1 ad 3.

¹⁰¹ *In V Met.*, 17, n. 1027; cf. *In IX Met.*, 2, nn. 1787-88; 9, nn. 1862-65.

¹⁰² For the distinction of transient and immanent operation see *In I Sent.*, 40, 1, 1 ad 1; *De Ver.*, 8, 6 c; 7 ad 2 (ult.); *C.G.*, I, 100, *Amplius*; II, 1; *S.T.*, I, 14, 2 c; 18, 3 ad 1; 54, 1 ad 3; 2 c; 56, 1 c; *De Pot.*, 10, 1 c; *In IX Met.*, 2, n. 1788; 8, n. 1862-65. In practically all of these passages cognition, either sensitive or intellectual, is given as an example of immanent operation, and in most of them the distinction is brought in precisely for the purpose of clarifying the nature of knowledge.

¹⁰³ *S.T.*, I, 34, 3 ad 2.

specified by their acts.¹⁰⁴ The same thing must therefore be said of habitual knowledge as of the act of knowing: it is relative by reason of action. For the action or operation that founds a relation need not be a present action going on here and now but may be a past action or a future one or a capacity for action:

Aliae vero relationes fundantur super actionem et passionem: vel secundum ipsum actum, sicut calefaciens dicitur ad calefactum; vel secundum hoc quod est *egisse*, sicut pater refertur ad filium quia genuit; vel secundum potentiam agendi, sicut dominus ad servum quia potest eum coercere.¹⁰⁵

Eorum relativorum quae dicuntur secundum potentiam activam et passivam attenditur diversitas secundum diversa tempora. Quaedam enim horum dicuntur relative secundum tempus praeteritum, sicut quod fecit ad illud quod factum est; ut pater ad filium quia ille genuerit, iste genitus est; quae differunt secundum fecisse et passum esse. Quaedam vero secundum tempus futurum, sicut facturus refertur ad faciendum.¹⁰⁶

Habitual knowledge would then be founded upon action or operation from two different points of view. It would be founded upon past operation because it resulted from it, and it would be founded upon future operation because it is a disposition and aptitude for future operation—that of actual knowledge.

Knowledge, accordingly, in its direct epistemic relationship and considered as a first intention, is attributively related (*secundum dici*) to the thing known because it is directly in the category of quality and only consequentially or derivatively relative. Its relation is founded both upon quantity, inasmuch as knowledge involves likeness, and even more upon action-passion, not only present but also past and future. The relation between the knowledge and the thing known, however, is a non-mutual relation: though our human knowledge is really related to its object, the object is only rationally related to the knowledge.

¹⁰⁴ *S.T.*, II-II, 4, 1 c: Cum habitus cognoscantur per actus et actus per obiecta, ... debet definiri [habitus] per proprium actum in comparatione ad proprium obiectum; 58, 1 c: [habitus] per actum specificatur; habitus enim ad actum dicitur; ad 1: Est autem consuetum quod apud auctores habitus per actus definiuntur; *C.G.*, IV, 12, Ipsum: in nobis omnes habitus per actus manifestantur; *In III Sent.*, 33, 1, 1, sol. 1: potentiae et habitus, qui ordinantur ad actus sicut ad ultimam perfectionem, oportet quod secundum actus diversos distinguantur; *De Virt. in Com.*, 12 ad 5: habitus formaliter secundum actus distinguuntur.

¹⁰⁵ *In III Phys.*, 1, n. 6; cf. *In IV Sent.*, 41, 1, 1, sol. 2: Sunt autem quaedam relationes quae habent pro causa actionem vel passionem aut motum, ut in *V Metaphysicorum* dicitur. Quarum quaedam causantur ex motu in quantum aliquid movetur actu, sicut ipsa relatio quae est moventis et moti. Quaedam autem in quantum habent aptitudinem ad motum, sicut motivum et mobile, dominus et servus. Quaedam autem ex hoc quod aliquid prius motum est, sicut pater et filius non ex hoc quod est generari nunc ad invicem dicuntur sed ex hoc quod est generatum esse. (Reading *motivum et mobile* with Leonine *Summa Theologiae*, Supplementum, 55, 2 c, where Parma has *motum et mobile*.)

¹⁰⁶ *In V Met.*, 17, n. 1025.

Hence the importance, for any study of knowledge, of Aristotle's distinction of relatives into those mutually related and those not mutually related. For logic, however, the passages in which distinction is made are important because it is here that rationally related relations are introduced.

RATIONALLY RELATED RELATIONS

The nature of rationally related relations must necessarily be understood from the nature of relation in general. Relation, as has been seen, is a regard or orientation of its subject to something else, and is constituted of three elements: subject, term, and foundation. Not only the species of the relation but also its existence and reality (supposing certain other conditions) depend upon the foundation and are determined by it.

In many of the texts already seen which explain the nature of relation, a difference between relation and the other accidents is mentioned. Only relation can be a rationally related being because the other accidents all posit something in the subject, and therefore are real. This comes not only from their act of existence (*esse*), which, belonging to them as accidents, is to inhere in the subject (*inesse*), but even from their own distinctive nature (*ratio*) as a genus; for of its very nature quantity posits a measure of the substance according to its matter and quality posits a disposition of the substance according to its form.¹⁰⁷ Both are in the substance *per se et absolute*;¹⁰⁸ therefore they are something real in the substance or otherwise they are nothing. Since their very *ratio* requires their reality, it would be pure contradiction to speak of rationally related quality or quantity ("quantitas vel qualitas *rationis*"), meaning that they keep their *ratio* in reason but do not exist in reality. Not so, however, with relation:

Relationes differunt in hoc ab omnibus aliis rerum generibus, quia ea quae sunt aliorum generum ex ipsa ratione sui habent quod sint res naturae, sicut quantitates ex ratione quantitatis, et qualitates ex ratione qualitatis; sed relationes non habent quod sint res naturae ex ratione respectus ad alterum. Inveniuntur enim quidam respectus qui non sunt reales sed rationales tantum.¹⁰⁹

¹⁰⁷ *De Ente et Ess.*, c. 6, n. 32 (ed. Perrier); *S.T.*, I, 28, 2 c. For quantity as a measure of substance, see above, note 54. For the fact that quantity follows matter and quality follows form: *In V Met.*, 9, n. 892; *In III Phys.*, 5, n. 15.

¹⁰⁸ *In V Met.*, 9, n. 892.

¹⁰⁹ *Quodl.* I, 2 c: cf. *De Ver.*, 1, 5 ad 16: Cum omnia alia genera in quantum huiusmodi aliquid ponant in rerum natura (quantitas enim, ex hoc ipso quod quantitas est, aliquid dicit), sola relatio non habet ex hoc quod est huiusmodi quod aliquid ponat in rerum natura, quia non predicat aliquid sed ad aliquid; *S.T.*, I, 28, 1 c: solum in his quae dicuntur ad aliquid inveniuntur aliqua secundum rationem tantum et non secundum rem. Quod non est in aliis generibus, quia alia genera, ut quantitas et qualitas, secundum propriam rationem significant aliquid alicui inhaerens.

A quality that is not the quality of *some thing* cannot be conceived and has no intelligibility (*ratio*); but a *respect*, an *outlook*, can belong either to things or to the mind, and still be intelligible. The intelligible character (*ratio*) of relation is therefore independent of its existence in things.

It is because of this that there are some relations which are relations in reason only and not in reality:

Relatio alio modo dicitur esse aliquid quam alia entia. In aliis enim entibus unumquodque dicitur dupliciter esse: et quantum ad esse suum, et quantum ad rationem quidditatis suae; sicut sapientia secundum esse suum aliquid ponit in subiecto, et similiter secundum rationem suam ponit naturam quamdam in genere qualitatis. Sed relatio est aliquid secundum esse suum quod habet in subiecto; sed secundum rationem suam non habet quod sit aliquid sed solum quod ad aliud referatur; unde secundum rationem suam non ponit aliquid in subiecto: propter quod Boethius dicit quod relativa nihil praedicant de eo de quo dicuntur. Inde etiam est quod invenitur aliquid relatum in quo est tantum relatio rationis, et non ponitur ibi aliquid secundum rem, sicut scibile refertur ad scientiam.¹¹⁰

The relation is said to have existence or to be something according to the existence that it has in the subject. If it has no real existence in the subject, the relation cannot be real; and if it has real existence in the subject, it is real.

Two extremes, however, a term as well as a subject, must still be presupposed. This means that for a real relation there must be a real distinction between the subject and the term: "Relatio realis distinctionem rerum requirit."¹¹¹ Otherwise the relation will not be *ad aliud*, and there will be in reality only one extreme, even though in thought it may be regarded as two. And since a real distinctionem can be had only between real things, the distinct term must itself also be real if the relation is to be real; for the existence of the relation depends upon both extremes:

Propria relationis ratio consistit in eo quod est ad alterum: unde esse eius proprium quod substantiae superaddit non solum dependet ab esse substantiae sed etiam ab esse alicuius exterioris.¹¹²

¹¹⁰ *In I Sent.*, 20, 1, 1 sol. (For Boethius: *De Trinitate*, c. 5 [Migne, PL 64, 1254 A].) Cf. *In I Sent.*, 26, 2, 1 sol.; 30, 1, 1 sol.: Ea quae absolute dicuntur, secundum proprias rationes ponunt in eo aliquid in quo dicuntur, ut quantitas et qualitas et huiusmodi. ... Sed relatio secundum rationem suam non habet quod ponat aliquid in eo de quo dicitur, sed ponit tantum habitudinem ad aliud; unde invenitur aliqua relatio non realiter existens in eo de quo dicitur; *S.T.*, I, 28, 1 c: Ea vero quae dicuntur ad aliquid significant secundum propriam rationem solum respectum ad aliud. Qui quidem respectus aliquando est in ipsa natura rerum. ... Aliquando vero respectus significatus per ea quae dicuntur ad aliquid est tantum in ipsa apprehensione rationis conferentis unum alteri, et tunc est relatio rationis tantum.

¹¹¹ *De Ver.*, 2, 2 ad 3; and see above, notes 34 & 33.

¹¹² *C.G.*, IV, 14, n. 7, c.

Relatio secundum actum exigit duo extrema in actu existere.¹¹³

A real relation, then, requires two real extremes that are really distinct.

Besides two real and really distinct extremes there must be a real cause or foundation:

Relatio habet quod sit res naturae ex sua causa, per quam una res naturalem ordinem habet ad alteram; qui quidem ordo naturalis et realis est ipsis ipsa relatio.¹¹⁴

Habet autem relatio quod sit aliquid reale ex eo quod relationem causat. Cum enim in aliquo invenitur aliquid reale per quod ad alterum dependeat et comparetur, tunc dicimus realiter comparari vel dependere vel referri; sicut aequalitas relatio realis ponitur ex virtute quantitatis quae aequalitatem causat.¹¹⁵

Such a real foundation clearly presupposes real extremes; for there can be no quantity except in some real thing, and there cannot be action and passion without something to act and something to be acted upon. As is suggested in the above text, a real accidental relation is a sort of dependence of one thing upon another. This is true in only a very extended sense when applied to quantitative relations, but more literally so in relations based upon action and passion. It can be said in general, however, that wherever a real dependence is found, there a real relation exists:

Ibi enim est realis relatio ubi realiter aliquid dependet ab altero, vel simpliciter vel secundum quid. Et propter hoc scientiae est realis relatio ad scibile, non autem e converso, sed secundum rationem tantum.¹¹⁶

The dependence referred to is that of the subject upon the term. This constitutes a real foundation. But since the foundation is the cause of the relation, there is also a sort of dependence or consequence of the relation upon the foundation. Whenever the relation follows upon something that belongs to the subject (that is, something which the subject has in reality and which is not merely attributed to the subject in thought), then the relation is real:

Omnis enim relatio quae consequitur propriam operationem alicuius rei aut potentiam aut quantitatem aut aliquid huiusmodi realiter in eo existit: aliter enim esset in solo intellectu, sicut apparet in scientia et scibili.¹¹⁷

¹¹³ *In I Sent.*, 30, 1, 1 sol.; cf. 26, 2, 3 ad 4.

¹¹⁴ *Quodl.* I, 2 c; cf. *Comp. Theol.*, I, 212, n. 421 (ed. Verardo): relatio ex causa sua habet quod sit res quaedam; *In I Sent.*, 33, 1, 1 sol.: [esse] habet secundum quod in aliqua re fundatur.

¹¹⁵ *Quodl.* IX, 4 c.

¹¹⁶ *De Pot.*, 7, 1 ad 9.

¹¹⁷ *C.G.*, IV, 14, n. 7, b. In this passage as in many others where the same example of the non-mutual relation of science is spoken of, there is a certain confusion between science as the *subject* of a relation to the object, and science as itself a *relation* between

This is illustrated by the frequently used example of science. As a relation of the knower to the known, it is real because consequent upon the operation of the knower; but as a relation of the thing known to the knower, it is only rationate because there is no real action of the thing known:

Relatio enim scientiae ad scibile consequitur actionem scientis, non autem actionem scibilis; scibile enim eodem modo se habet, quantum in se est, et quando intelligitur et quando non intelligitur: et ideo relatio in sciente realiter est, in scibili autem secundum intellectum tantum: dicitur enim quod intelligitur scibile ad scientiam relative ex eo quod scientia refertur ad ipsum.

It is evident, then, that there are certain requirements which must be met if a relation is to be real. Its elements must be real and duly disposed. That is to say, it must have a real subject, a real term really distinct from the subject, and a real foundation in the subject. If reality is lacking in any one of these, the relation is not real; it does not have existence in the order of real things. Since its intelligible nature is separable from its real existence, the relation is not destroyed by a defect of reality; its *ratio* remains; it may be thought of, and then it is a rationate relation (*relatio rationis*).

There are four ways in which a relation may be lacking in reality and be rationate only: (1) if there is no real foundation in the subject, (2) if there is no real diversity of the extremes, (3) if one of the extremes is not real, and (4) if one of the extremes considered as related is itself a relation:

Et hoc contingit quatuor modis, scilicet quod sint relationes rationis, et non rei. *Uno modo* ... quando relatio non habet aliquid in rei natura supra quod fundetur: et inde est quod quandoque contingit quod relatio realiter est in uno et non in altero; quia in uno habet motum quamdam supra quem fundatur, quem non habet in alio. ... *Secundo modo* quando relatio non habet aliquam realem diversitatem inter extrema, sicut relatio identitatis; et ideo hoc nihil ponit secundum

the knower and the object. See *De Pot.*, 7, 10 c: scientia refertur ad scibile, quia sciens, per actum intelligibilem, ordinem habet ad rem scitam, quae est extra animam. Ipsa vero res quae est extra animam omnino non attingitur a tali actu; 8, 1 ad 3: Tunc enim est relatio realis ex parte alterius quando relatio consequitur per id quod est ex uno et non per id quod est ex alio, sicut patet in scibili et scientia; huiusmodi enim relationes causantur per actum scientis, non per aliquid scibilis (reading *scibilis* for *scibile* of editions, for sense); *In III Sent.*, 8, 1, 5 ad 5: Respectus scientiae ad scientem et ad scibile non est unius rationis; sed respectus eius ad scientem inest ei ex hoc quod est accidens; respectus autem eius ad scibile inest ei ex hoc quod scientia est. Unde si referretur in quantum est scientia ad utrumque, oporteret quod essent respectus diversi secundum speciem; *In V Met.*, 9, n. 896: res non refertur ad scientiam sed e converso (cf. *De Nat. Gen.*, c. 2, n. 8—ed. Perrier); *In V Met.*, 17, nn. 1003 & 1028; *De Ver.*, 1, 5 ad 16: sicut scientia dependet a scibili, sed non e converso; 21, 1 c; *S.T.*, I, 13, 7. Part of this difficulty comes from the fact that science is not a relation *secundum esse* but *secundum dici*, not primarily and essentially a relation but something else (as here, a *quality*) upon which a relation follows. See *De Pot.*, 7, 10 ad 11; *De Ver.*, 4, 5 c; 21, 6 c; *In I Sent.*, 30, 1, 2 sol.

rem, sed solum secundum rationem, ut cum dicitur "idem eidem idem." *Tertio modo* quando designatur relatio aliqua entis ad non ens, ut cum dicitur quod nos sumus priores illis qui futuri sunt: ista enim prioritas non est aliqua relatio secundum rem sed solum secundum rationem: quia relatio realis exigit utrumque extremorum in actu. *Quarto modo* quando ponitur relatio relationis: ipsa enim relatio per seipsam refertur, non per aliam relationem. Unde in creaturis paternitas non coniungitur subiecto per aliquam relationem mediam.¹¹⁸

The first way in which a relation is not real but rationally is by defect of its foundation; the next three are by defect of the extremes. The defect of foundation is discussed in the same passage just before the words quoted. An example of real relation given is that of equality, founded on quantity; another is that of right and left as applied to animals, where the relation has a foundation in the diversity of powers of the animal. But when right and left are applied to something inanimate, such as a pillar or a street, there is no real relation because there is no real foundation in the subject. The foundation for this extrinsic denomination is in some animal, from whom the diversity of position is transferred to the pillar or street.¹¹⁹ When the foundation is not real or not in the subject, the relation can be only one of reason.

One defect in the extremes may be their lack of distinction, such as we have in the relation of identity: one thing is viewed as two and compared to itself. This can be done by the intellect and is sufficient to constitute a rationally relation; but because there are not really two things to be related to one another, the relation cannot be real. Again, if one of the extremes is non-being or non-existent, the relation cannot be real, because here too there are not two terms in reality but only one. But since the intellect can look at non-being as if it were, and by that fact give it existence in the intellect, there can be a rational relation in which non-being is one of the extremes. And this "non-being" can be

¹¹⁸ *In I Sent.*, 26, 2, 1 sol. The same four ways are enumerated, though in a different order, in *De Ver.*, 1, 5 ad 16: Quaedam inveniuntur relationes quae nihil in rerum natura ponunt sed in ratione tantum; quod quidem quadrupliciter contingit. ... Uno modo, quando aliquid ad seipsum refertur, ut cum dicimus idem eidem; si enim haec relatio aliquid in rerum natura poneret additum ei quod dicitur idem, esset in infinitum procedere in rebus, quia ipsa relatio per quam aliqua res diceretur eadem, esset eadem sibi per aliam relationem, et sic in infinitum. Secundo, quando ipsa relatio ad aliquid refertur. Non enim potest dici quod paternitas referatur ad subiectum suum per aliam relationem mediam, quia illa etiam media relatio indigeret alia media relatione, et sic in infinitum. Unde illa relatio quae significatur in comparatione paternitatis ad subiectum non dicitur in rerum natura sed in ratione tantum. Tertio, quando unum relativorum pendet ex altero et non e converso, sicut scientia dependet a scibili et non e converso; unde relatio scientiae ad scibile est aliquid in rerum natura, non relatio scibilis ad scientiam, sed ratione tantum. Quarto, quando ens comparatur ad non ens; ut cum dicimus quod nos sumus priores his qui futuri sunt post nos; alias sequeretur quod possent esse infinitae relationes in eodem, si generatio in infinitum procederet in futurum.

¹¹⁹ Cf. *De Pot.*, 7, 10 c.

taken in various senses. It could be taken as absolute; as, e.g., if we were to say, "Being is more intelligible than non-being." It could be a rationally being such as the species man, compared to the real men in the world. Or it could be a real being when looked at in one way, but unreal when considered from another point of view. Future men, used as an example in the text, if viewed absolutely, are in the real order, not just in the order of thought; but when looked at from the point of view of the present time, they are not, and so are non-beings from that viewpoint.

The fourth manner in which a relation falls short of being real is not so immediately deducible from the elements of a relation as the preceding three. But like the second and third, it too is a defect in the extremes. When a relation, even a real relation, is one of the terms of a relation, the second relation cannot be real because there are not two *things (res)* which are compared. The relation itself is not an *aliquid* but only an *ad aliquid*. Things are related; but relation is not a thing. When we say that a relation is *real*, we do not mean that it is a thing but that it belongs to real things. A real relation is a *respect* or *bearing* of real things themselves and not merely of the mind, but it is not itself a thing. It is *of something to something*; but not *something*. Therefore it cannot itself be related except in thought. Furthermore (and this is the point which St. Thomas insists upon), a relation does not *have* a respect to something else but it *is*, by its very nature, a respect. There is no question of joining it to its subject in reality because it is merely the manner in which the subject itself stands in regard to something else. While in thought we can look upon a relation as a "something" and consequently relate it to something else, we cannot without falsity affirm that it *has* a relation to its subject or to its term. This would involve us in an absurd infinite series; for each new relation would in turn have a relation to its extremes, and so on *ad infinitum*: "Non enim potest dici quod paternitas referatur ad subiectum suum per aliam relationem mediam, quia illa etiam media relatio indigeret alia media relatione, et sic in infinitum."¹²⁰ In regard to rationally relations, however, nothing prevents a potential infinity, since the relations are not affirmed as in things but only as thinkable, and in thought only potentially, for they are never all there actually.¹²¹

¹²⁰ *De Ver.*, 1, 5 ad 16; cf. *In V Met.*, 17, n. 1028 and 20, n. 1063, for a further development of the argument that a relation of a relation is not real.

¹²¹ *In II Sent.*, 1, 1, 2 ad 5: huiusmodi relationes quae secundum rationem tantum sunt non est impossibile in infinitum multiplicari; *S.T.*, I, 28, 4 ad 2: in nobis relationes intelligibiles in infinitum multiplicantur, quia alio actu intelligit homo lapidem, et alio

LOGICAL RELATIONS

The subject of logic, as indicated earlier, is somehow a relation and not a real being. It must then be a rationally related relation. But it remains to inquire whether any and every rationally related relation properly falls within the domain of logic.

Some light is thrown upon this question in a passage which analyzes the reality and unreality of relations with reference to their extremes. It is a study of the mutualness of relations. Because there are two extremes, and relations in either direction can be considered between them, three combinations result: (1) both relations are rationally related only; (2) both are real; and (3) one is real and one is rationally related:

Cum relatio requirat duo extrema, tripliciter se habere potest ad hoc quod sit res naturae et rationis. Quandoque enim ex utraque parte est res rationis tantum; quando scilicet ordo vel habitudo non potest esse inter aliqua nisi secundum apprehensionem rationis tantum. ... Quaedam vero relationes sunt quantum ad utrumque extremum res naturae; quando scilicet est habitudo inter aliqua duo secundum aliquid realiter conveniens utrique. ... Quandoque vero relatio in uno extremorum est res naturae et in altero est res rationis tantum. Et hoc contingit quandocumque duo extrema non sunt unius ordinis.¹²²

The first class is of particular interest to logic. It is that of mutual rationally related relations, in which "there cannot be an order and bearing between the extremes except according to the apprehension of reason." Three examples are given. The first is the relation of identity; the second, that between a being and non-being; the third, relations which follow upon the act of reason:

... utpote cum dicimus "idem eidem idem." Nam secundum quod ratio apprehendit bis aliquod unum, statuit illud ut duo; et sic apprehendit quamdam habitudinem ipsius ad seipsum. Et similiter est de omnibus relationibus quae sunt inter ens et non ens, quas format ratio in quantum apprehendit non ens ut quoddam extremum. Et idem est de omnibus relationibus quae consequuntur actum rationis, ut genus et species, et huiusmodi.¹²³

It should be noted that all of these types of mutual rationally related relations are "according to the apprehension of reason"; otherwise they would

actu intelligit se intelligere, et alio etiam intelligit hoc intelligere; et sic in infinitum multiplicantur actus intelligendi, et per consequens relationes intellectae; I-II, 1, 4 ob. 2 & ad 2; *In V Met.*, 11, n. 912: Non est autem possibile in rebus in infinitum procedere. Sed in his quae sunt secundum intellectum nihil prohibet; *De Ver.*, 2, 9 ad 4; 3, 8 ad 1.

¹²² *S.T.*, I, 13, 7 c. This text must be read carefully. It is not the reality of the extremes which is in question, but of the relations between them. In the second and third classes both extremes are real, but in the third the foundation is in one only. In the first class, both, one, or neither of the extremes may be real. In the examples given, there is in the first really only one term; in the second, one real and one unreal term; in the third, either one unreal and one real or both unreal.

¹²³ *Ibid.*

not be rationally; but only the last "follows upon the act of reason." This is the same expression which was met referring to the objective second intentions, to mediately founded rationally being, and to the subject of logic. And the examples fit into the same pattern: "genus and species and the like." These logical intentions, then, are mutual rationally relations following upon the act of reason.

If the subject of logic is a rationally being, as has been seen, since it is not a negation or privation but something positive, as was also seen,¹²⁴ then it can be only a rationally relation:

Solum in his quae dicuntur ad aliquid inveniuntur aliqua secundum rationem tantum et non secundum rem. Quod non est in aliis generibus, quia alia genera, ut quantitas et qualitas, secundum propriam rationem significant aliquid alicui inhaerens. Ea vero quae dicuntur ad aliquid significant secundum propriam rationem solum respectum ad aliud. Qui quidem respectus aliquando est in ipsa natura rerum; utpote quando aliquae res secundum suam naturam adinvicem ordinatae sunt, et invicem inclinationem habent. Et huiusmodi relationes oportet esse reales. ... Aliquando vero respectus significatus per ea quae dicuntur ad aliquid est tantum in ipsa apprehensione rationis conferentis unum alteri, et tunc est relatio rationis tantum; sicut cum comparat ratio hominem animali, ut speciem ad genus.¹²⁵

The limitation of rationally being to relation in this text is made universally: whatever is rationally (and, by unexpressed assumption, positive) must be a relation. Since all being is, by supposition, to be found in one of the ten categories, and relation is the only one of the categories that will admit of existence in thought only and not in reality, rationally being can be only a relation. The distinction between real and rationally relations made here again contributes in itself no new light on the subject. But the expression of the rationally relation is slightly different from what has been met previously: "it is only in the very apprehension of reason comparing one thing to the other." And the example given, though brief, is informative: "as when reason compares man to animal, as species to genus." Species and genus are, of course, logical intentions. "Man" and "animal" are accordingly to be taken, not in their real, but in their logical supposition; it is not a real man which is compared to a real animal, but the *apprehended nature*, man, precisely as apprehended, which is compared to the apprehended nature, animal. In other words, intentions, not real individuals are compared. The "comparison" (taken not in an active sense as the act of comparing, but objectively as the way in which the natures themselves stand to one another) is the rationally relation.

¹²⁴ Pp. 81-82.

¹²⁵ S.T., I, 28, 1 c.

This is cleared up and reinforced in one of the replies in the same article. Two different kinds of relations which follow upon the operation of the intellect are distinguished, and one is said to be rationally, the other real. The latter is the relation of the internal word to the intellect from which it proceeds; since the word is produced by the operation of the intellect, there can be no relation between the word and the intellect except as consequent upon the operation. But this relation is real as between effect and cause. The other relation consequent upon the intellectual operation, this one rationally, is "in the things understood themselves":

Relationes quae consequuntur solam operationem intellectus in ipsis rebus intellectis sunt relationes rationis tantum, quia scilicet eas ratio adinvenit inter duas res intellectas. Sed relationes quae consequuntur operationem intellectus, quae sunt inter verbum intellectualiter procedens et illud a quo procedit, non sunt relationes rationis tantum sed rei; quia et ipse intellectus et ratio est quaedam res, et comparatur realiter ad id quod procedit intelligibiliter, sicut res corporalis ad id quod procedit corporaliter.¹²⁶

The rationally relation which follows upon the act of understanding is *in the things understood*. This does not mean in the external thing which happens to be known, but in the thing precisely *as known*, that is, in the objective concept. Such relations are attributed by the intellect to the nature as apprehended. They are the relations which reason "devises" (*adinvenit*) between two things as understood—between two apprehended natures. The word *adinvenit* is the one which was found used in a number of the most explicit texts dealing with the logical intention and the quasi-factive operation of reason in producing it.

In the most important single text on the logical relation¹²⁷ Aquinas describes this relation in the terms just seen: it is between concepts. Two different kinds of rationally relation are again distinguished; the first is invented by the intellect (*ordo adinventus*), the second follows the act of knowing by a certain necessity. The article is particularly interested in the second kind and goes into it at greater length than the first, whereas it is the first kind which particularly concerns logic. Nevertheless, because the whole article has a bearing upon the question of the subject of logic and the contrast of the second kind with the first throws added light upon it, the whole article is worth quoting and analyzing. First, rationally relations are distinguished from real, then the first of the two kinds of the former is discussed:

¹²⁶ Ad 4.

¹²⁷ *De Pot.*, 7, 11 c.

Sicut realis ratio consistit in ordine rei ad rem, ita ratio rationis consistit in ordine intellectuum; quod quidem dupliciter potest contingere. Uno modo secundum quod iste ordo est adinventus per intellectum, et attributus ei quod relative dicitur; et huiusmodi sunt relationes quae attribuuntur ab intellectu rebus intellectis prout sunt intellectae, sicut ratio generis et speciei; has enim relationes ratio advenit considerando ordinem eius quod est in intellectu ad res quae sunt extra, vel etiam ordinem intellectuum ad invicem.

Then the second kind, comprising relations consequent upon the manner of understanding, is distinguished and illustrated:

Alio modo secundum quod huiusmodi relationes consequuntur modum intelligendi, videlicet quod intellectus intelligit aliquid in ordine ad aliud; licet illum ordinem intellectus non adveniat, sed magis ex quadam necessitate consequatur modum intelligendi. Et huiusmodi relationes intellectus non attribuit ei quod est in intellectu, sed ei quod est in re. Et hoc quidem contingit secundum quod aliqua non habentia secundum se ordinem, ordinate intelliguntur; licet intellectus non intelligat ea habere ordinem, quia sic esset falsus. Ad hoc autem quod aliqua habeant ordinem, oportet quod utrumque sit ens, et utrumque distinctum (quia eiusdem ad seipsum non est ordo) et utrumque ordinabile ad aliud. Quandoque autem intellectus accipit aliqua duo ut entia quorum alterum tantum vel neutrum est ens; sicut cum accipit duo futura, vel unum praesens et aliud futurum, et intelligit unum cum ordine ad aliud, dicens alterum esse prius altero; unde istae relationes sunt rationis tantum, utpote modum intelligendi consequentes. Quandoque vero accipit unum ut duo, et intelligit ea cum quodam ordine, sicut cum dicitur aliquid esse idem sibi; et sic talis ratio est rationis tantum. Quandoque vero accipit aliqua duo ut ordinabilia adinvicem inter quae non est ordo medius, immo alterum ipsorum essentialiter est ordo; sicut cum dicit relationem accidere subiecto; unde talis ratio relationis ad quoddam aliud rationis est tantum. Quandoque vero accipit aliquid cum ordine ad aliud in quantum est terminus ordinis alterius ad ipsum, licet ipsum non ordinetur ad aliud; sicut accipiendo scibile ut terminum ordinis scientiae ad ipsum, et sic cum quodam ordine ad scientiam, nomen scibilis relative significat; et est ratio rationis tantum.

All rationally relations consist in an order, not of real thing to real thing, as do real relations, but of concept to concept (*intellectus*).¹²⁸ This relation can be contrived, as it were artificially, by the intellect and attributed to things known precisely as known; or it can arise naturally in the intellect from the extremes which the intellect considers. Though the things related do not themselves have an order, the

¹²⁸ *Intellectus* is frequently used in the sense of concept, particularly in the early works. In the commentary on the *De Anima conceptio, conceptus*, and *verbum interius* cannot, I believe, be found; and *intentio* rarely. The word used for concept is *intellectus*. See *De Ver.*, 17, 1 c: hoc nomen intellectus significat rem intellectam, sicut nomina dicuntur significare intellectus; *In III De An.*, 11, n. 747: [in propositionibus] est iam quaedam compositio intellectuum, idest rerum intellectarum; *S.T.*, I, 17, 3 c: compositio intellectuum est in intellectu; *ibid.*, 13, 1 c & *In VI Met.*, 4, n. 1224: voces sunt signa intellectuum; *In I Perih.*, 10, n. 2: nomen autem est vox significativa ad placitum simplicis intellectus, quod est similitudo rei; *De Ente et Ess.*, c. 2, n. 10 (ed. Perrier): Intellectus enim animalis est sine determinatione specialis formae etc.; *De Nat. Gen.*, c. 3, n. 17 (ed. Perrier): de intellectu animalis est corpus animatum sensibile.

intellect understands them according to an order and attributes this order to the extremes, not now *as understood* but as they are in themselves. The intellect does not understand them to have this order but, aware of what it is doing, considers them *as if* they in fact did. For to *have* an order things must be real and the relation must be real. But in this case there is a defect of reality in the extremes. The examples are familiar: (1) being to non-being or non-being to non-being, as present things to future, or future to future; (2) a thing to itself, as in the relation of identity; and (3) relation to subject. In the last instance the extremes are not in reality orderable but are thought of as such. A fourth instance, also familiar, is given. But it has a defect in the foundation rather than in the extremes and so is rationally from one side only. This is the relation of thing known to knowledge.

The first kind of rationally relation, which directly concerns the investigation in hand, is also an *ordo intellectuum*, and even more properly than the second kind; for this is regarded not as an order of things but precisely as an order of concepts. And although the concepts are objective concepts, *res intellectae*, the order of the *res intellectae* is not considered as belonging to them under the formality of *res*, but as attributed to them under the formality of *intellectae* (“attribuuntur ab intellectu rebus intellectis *prout sunt intellectae*”). It is not the natures as absolute or as if they had some real existence, but the natures as conceived and having conditions imposed by this conception.

These relations are contrived by reason (“has enim relationes ratio adinvenit”) by attending to the order of the nature which is in the intellect either to real external things or to other natures as they are in the intellect (“considerando ordinem eius quod est in intellectu ad res quae sunt extra, vel etiam ordinem intellectuum adinvicem”). That it is a rationally relation, and therefore a rationally being (*ens rationis*), is clear not only from its being classified as such, but also from the fact that at least one of the extremes is not a real thing but a concept. The subject of the relation, the *natura intellecta* as *intellecta*, can have its being only in the intellect; and therefore, by defect of reality in the subject, the relation cannot be real.

That such relations pertain to logic was equivalently affirmed in some of the texts explaining logical relations. Not only are these relations contrived (*adinventae*) by the intellect, as logical intentions are, and follow upon the operation of the intellect as logical intentions do, but genus and species are given as examples. One of the texts seen which speak of genus and species might be interpreted as meaning that

genus and species are just the extremes, and that the rationally relation is between them ("sicut cum comparat ratio hominem animali, ut speciem ad genus"¹²⁹). But in the other text it is clear that species and genus are themselves relations of reason ("Et idem est de omnibus relationibus quae consequuntur actum rationis, ut genus et species et huiusmodi"¹³⁰). Such relations, therefore, which follow upon the act of understanding, are devised by the intellect, and are relations of objective concept to real thing or to objective concept, may rightly be called *logical* relations.

From what has been said it should already be clear that logical intentions are such relations. They are spoken of in the same way; both follow upon the act of understanding; both are devised by reason; genus and species, which are logical intentions, are also logical relations. Intentions in general are essentially relations, as has been seen: "Intentio in ratione sua ordinem quemdam unius ad alterum importat. Ordo autem unius ad alterum non est nisi per intellectum, cuius est ordinare."¹³¹ The direct intention is an order, a real relation, of the intellect to the thing known. The reflex intention is an intention of the direct intention, and hence a relation of a relation; and such a relation, it has been seen, can only be rationally.

It will be made even more apparent that logical intentions are rationally relations when the intentions proper to each of the three acts of reason are examined in the next three chapters. Meanwhile a brief inspection of some of the texts already seen which indicate the subject of logic will throw further light on the bearing of relations upon logical being and logical intentions.

The passage at the beginning of the *Commentary on the Ethics* which distinguished a separate domain for "rational philosophy" designates it as the *order* which reason makes in its own act:

Alius autem est ordo quem ratio considerando facit in proprio actu, puta cum ordinat conceptus suos adinvicem, et signa conceptuum, quia sunt voces significativae. ... Ordo autem quem ratio considerando facit in proprio actu pertinet ad rationalem philosophiam, cuius est considerare ordinem partium orationis adinvicem et ordinem principiorum adinvicem et ad conclusiones.¹³²

Since order is a relation,¹³³ logic studies the relations in reason's own

¹²⁹ *S.T.*, I, 28, 1 c.

¹³⁰ *S.T.*, I, 13, 7 c.

¹³¹ *In II Sent.*, 38, 1, 3 sol.

¹³² *In I Eth.*, 1, nn. 1 & 2.

¹³³ *De Ver.*, 27, 3 s.c. 4: ordo relatio quaedam est; *De Pot.*, 7, 9 c: hic autem ordo relatio quaedam est; *S.T.*, I, 116, 2 ad 3.

acts; and these relations are not found there ready-made, but reason makes them (*facit*). And it does this by considering—but considering what? It is not primarily the order, the relation, itself, because an order must be the order of something; and if it is in its own act, there must be an object for that act to be exercised upon or it cannot exist. What reason considers in the first instance is the real things mentioned just before the words quoted: “Est quidem ordo quem ratio non facit sed solum considerat, sicut est ordo rerum naturalium.” By considering real things first of all it can form concepts of these, and then it has the concepts which it can order. Reflexively it can then know the concepts, and in considering these it orders them and at the same time knows the order which it is establishing. For “it is the proper function of reason to establish order” and “to know order.”¹³⁴ It is this order, these relations, which are the subject which logic studies.

These relations are illustrated first by the relation of concept to concept. In the second set of examples the first relation is that of attribution or predicability, the order of the parts of a sentence to each other; that is, the relation of subject and predicate, either actual or potential. The relation mentioned as the final example is that of consequence, the order of premises to each other and to conclusions. Such relations are the order which “pertains to rational philosophy” and which it considers as its subject.

A relation omitted among the above examples, and understandably, since the list makes no pretense at being complete, but which nevertheless is in reason’s own act, is the relation of concepts to external things. It is mentioned in a passage of the commentary on the *Peri Hermeneias* quoted in part when intentions were being considered: “Huiusmodi enim intentiones [universales] format intellectus attribuens eas naturae intellectae, secundum quod comparat ipsam ad res quae sunt extra animam.”¹³⁵ The known nature is the direct intention. When the intellect compares this nature to the real external things, it forms a relation, and this relation is the intention of universality which it attributes to the nature as known.

In the light of the investigation of logical relations so far made and of the two texts just examined a fuller meaning appears in a passage

¹³⁴ *De Ver.*, 22, 13 c: cum enim proprium rationis sit ordinare et conferre; ad 14: ordinare est rationis; 6, 1 c (med.): solius rationis est dirigere vel ordinare; *S.T.*, II-II, 58, 4 ad 3: ratio ordinat in alterum; *In I Eth.*, 1, n. 1: sapientia est potissima perfectio rationis, cuius proprium est cognoscere ordinem. Cf. *In II Sent.*, 38, 1, 3 sol. (quoted just above): ordo autem unius ad alterum non est nisi per intellectum, cuius est ordinare.

¹³⁵ *In I Perih.*, 10, n. 9.

of the commentary on the *Posterior Analytics* which was found to be rather explicit in regard to the subject of logic:

Quia circa omnia quae in rebus sunt habet negotiari ratio (logica autem est de operationibus rationis), logica etiam erit de his quae communia sunt omnibus, idest de *intentionibus* rationis, quae ad omnes res se habent. Non autem ita quod logica sit de ipsis rebus communibus sicut de subiectis. Considerat enim logica sicut subiecta *sylogismum, enuntiationem, praedicatum*, aut aliquid huiusmodi.¹³⁶

Here intentions are given as the subject of logic; and the syllogism, the proposition, and the predicate are named as examples. But the syllogism is that relation of premises among themselves and to the conclusion that the *Ethics* speaks of; the proposition is one of the "relations of concepts among themselves" and is an *oratio*, which is an "order or relation of its parts"; and the predicate is a concept as referred to another. Thus the intentions given here correspond to the relations assigned to logic in the passage of the *Ethics*.

The most explicit passage of all regarding the subject of logic was found to be the one from the commentary on the fourth book of the *Metaphysics*:

Ens est duplex: ens scilicet rationis et ens naturae. Ens autem rationis dicitur proprie de illis intentionibus quas ratio adinvenit in rebus consideratis; sicut intentio generis, speciei et similium, quae quidem non inveniuntur in rerum natura sed considerationem rationis consequuntur. Et huiusmodi, scilicet ens rationis, est proprie subiectum logicae.¹³⁷

The proper subject of logic (which is what has been under investigation these many pages) is said to be rationally being and intentions. The intentions are devised by reason (*ratio adinvenit*) in the things considered (*in rebus consideratis*). These latter are the *res intellectae*, the apprehended natures or concepts viewed objectively, to which the intentions and relations are attributed.¹³⁸ The intentions "follow upon the consideration of reason"; for when reason reflects upon the manner in which the absolute nature of the thing known is within the intellect, it also sees how it may be related to the things and to other concepts and this devises these relations or intentions, which it attributes to the nature as it is in the intellect. Examples of intentions offered are genus and species, which were found to be relations. And such intentions are said to be rationally beings. But it was found that, if a rationally being

¹³⁶ *In I Post. Anal.*, 20, n. 5.

¹³⁷ *In IV Met.*, 4, n. 574.

¹³⁸ Cf. *S.T.*, I, 28, 1 ad 4: Relationes quae consequuntur solam operationem intellectus *in ipsis rebus intellectis*, sunt relationes rationis tantum, quia scilicet eas *ratio adinvenit* inter duas res intellectas.

is to be anything positive and not a mere negation, it can be only a relation of reason. This, then, is the proper subject of the science of logic: the ratiolate relations of concepts (whether simple or complex) to external things or to other concepts, which reason elaborates consequently upon its consideration of real things and attributes to the natures which it has conceived from these real things, but in view of the state which these natures have from being in the intellect and being known.

PART III

THE INTENTIONS OF THE THREE ACTS OF REASON

Because logical intentions and relations follow upon the human manner of knowing, logic is concerned with the acts of human reason. As was observed in Chapter III, this concern does not imply that we study these acts as the subject of the science of logic. The subject is the intentions and relations which follow upon these acts. But since the direct concern of logic is these intentions, the same science must also be concerned indirectly with the modes of knowing which determine them—not so much with knowing as an active process as with the conditions and determinations which that process sets upon the contents of our thought when we look at them precisely as in thought. For this reason a fuller understanding of what these intentions and relations are requires at least a brief examination of each of the three acts of human thought, simple apprehension, judgment, and reasoning, to see what its mode of knowing is, what this implies regarding the thought content, and consequently what is the logical intention proper to each of these modes of knowing. Since the intention is essentially a relation, this study will involve an examination of the elements of the relation, its subject, its term, and especially its foundation, as well as the consequent formality of the relation itself.

Since it is not the intention of this investigation to evolve a complete treatise on logic from the writings of St. Thomas Aquinas but merely to discover and delimit the domain of logic, determining what its subject is and explaining this subject, it will not be necessary in this final part to determine all the kinds and species of intention pertaining to each act of reason; a brief inquiry into each of the three kinds of intention taken generically will suffice. Even this much is undertaken more to illustrate and further explain what the logical intention (the *genus subiectum* of the science of logic) is, than to explain each kind of intention for its own sake.

CHAPTER VII

THE INTENTION OF UNIVERSALITY¹

The first of the three acts of reason is "the understanding of indivisibles" (*indivisibilium intelligentia*) or simple apprehension. As already seen, by this act the intellect apprehends the intelligible character (*ratio*), quiddity, nature, or essence of the object in an *absolute* manner: "Una duarum operationum intellectus est indivisibilium intelligentia: in quantum scilicet intellectus intelligit absolute cuiusque rei quidditatem sive essentiam per seipsam, puta quid est homo vel quid album vel quid aliud huiusmodi."² It is now necessary to examine more fully the meaning of the statement that the quiddity of a thing is grasped by itself (*per seipsam*) or absolutely.

ABSTRACTION

If one is to understand human cognition at all, it is highly important to recognize the limitations and imperfections of the human intellect and of human nature itself. Man is not a pure spirit, but has a material body, and in knowing makes use of bodily organs. Though his cognition is not limited to the sensible and does rise to the intellectual and immaterial level, it never entirely escapes certain limitations imposed by the material conditions in which the immaterial faculty must operate.

Though we have intelligence, we rank as the lowest and most imperfect in the scale of intelligent beings; and our intellect suffers the limitations of its extrinsic dependence upon a body and bodily organs; being in a body, but not operating as the form of a bodily organ, it is by nature suited to the immaterial cognition of material things and must draw all its knowledge from them:

¹ This chapter has a close affinity with chap. V, "Intentions," and will presuppose much of what is said there, especially in the sections on "Intelligible Species," "*Intentio Intellecta*," and "Knowledge of the Intention."

² *In I Perih.*, 3, n. 3 (for *indivisibilium intelligentia* in Aristotle see *De Anima*, III, c. 6); cf. *In III De An.*, 11, nn. 746, 752-59; *In X Met.*, 1, nn. 1929-30, 1933-36; *In IV Met.*, 6, n. 605; *In VI Met.*, 4, n. 1232; *In I Sent.*, 19, 5, 1 ad 7; *In De Trin.*, 5, 3 c; *De Spir. Creat.*, 9 ad 6; *In I Phys.*, 1, nn. 6-11; *In I Post. Anal.*, 1, n. 4; 4, n. 16.

Cum anima humana sit ultima in ordine substantiarum intellectivarum, minime participat de virtute intellectiva; et sicut ipsa quidem secundum naturam est actus corporis, eius autem intellectiva potentia non est actus organi corporalis, ita habet naturalem aptitudinem ad cognoscendum corporalium et sensibilibus veritatem, quae sunt minus cognoscibilia secundum suam naturam propter eorum materialitatem, sed tamen cognosci possunt per abstractionem sensibilibus a phantasmatibus. Et quia hic modus cognoscendi veritatem convenit naturae humanae animae secundum quod est forma talis corporis (quae autem sunt naturalia semper manent), impossibile est quod anima humana huiusmodi corpori unita cognoscat de veritate rerum nisi quantum potest elevari per ea quae abstrahendo a phantasmatibus intelligit.³

The object proportioned to the nature of our intellect is thus seen to be the truth of material and sensible things, which, by reason of their materiality are not knowable as they exist. They can become intelligible only by abstraction from that materiality. Our intellect, therefore, necessarily apprehends by abstracting from phantasms.

This follows from the fact that the object of a power is proportioned to that power's nature. Among cognitive powers we can distinguish three levels or grades: sense, operating in matter; pure spirits entirely free from matter in their being, their operation, and their object; and human cognition, which stands midway between. Because it operates in matter, which is the principle of individuation, sense knows only particulars. Pure spirits know immaterial things in an immaterial manner. The human intellect, being immaterial and yet the faculty of a soul informing a material body, properly knows forms existing individuated in matter, but not as they are in such matter.⁴

Although in a material body, the human intellect itself is nevertheless immaterial: "Est forma omnino immaterialis."⁵ On the general principle that reception always takes place according to the mode of the receiver ("Quod enim recipitur in aliquo recipitur in eo secundum

³ *In II Met.*, 1, n. 285. For the soul (or human intellect) as the lowest of intellectual substances see *De Spir. Creat.*, 2 c (fin.); *De Malo*, 16, 10 ad 2; *In II Sent.*, 3, 1, 6 sol.; 3 ad 1; *In III Sent.*, 31, 2, 4 sol.; *De Ver.*, 5, 8 c; *C.G.*, II, 68, Hoc autem; III, 81, Inter; *Q.D. de An.*, 18 c; *Comp. Theol.*, I, 79, n. 139 (ed. Verardo). For the derivation of intellectual knowledge from sensibles see *De Ver.*, 2, 5 & 6; 8, 11 c; 10, 6 c; *Quodl.* VII, 3 c; VIII, 3 c; *In III De An.*, 8; *Q.D. de An.*, 1 c; 2 ad 5 & 15; 4 c; 8 c; 13 c; 15 c; *S.T.*, I, 76, 1; 84, 1 & 6-7; 85, 1-2; 86, 1; *Comp. Theol.*, I, 81-82.

⁴ *S.T.*, I, 85, 1 c.

⁵ *In XII Met.*, 11, n. 2624; cf. *De Ver.*, 5, 10 c; intellectus est vis immaterialis; *In II De An.*, 12, n. 377; intellectus vero est virtus immaterialis; *De Unit. Intel.*, c. 3, n. 83 (ed. Keeler); remanet quod anima, quantum ad intellectivam potentiam, sit immaterialis; *S.T.*, I, 7, 2 ad 2; intellectus est forma non in materia; *Q.D. de An.*, 14 c; principium intellectivum quo homo intelligit habet esse elevatum supra corpus; *Comp. Theol.*, I, 75; Ex hoc enim aliquid intellectuale est quod immune est a materia; 79; oportet quod sit aliqua substantia incorporea per quam homo intelligat.—The reasons for holding the immateriality of the intellect are given *C.G.*, II, 49 & 50; *S.T.*, I, 75, aa. 1, 2, & 5; *Comp. Theol.*, I, 79.

modum recipientis”⁶), the form of the thing known must be received into the intellect according to the intellect’s own mode of existence, that is, immaterially:

Manifestum est enim quod omne quod recipitur in aliquo recipitur in eo per modum recipientis. Sic autem cognoscitur unumquodque sicut forma est in cognoscente.⁷

Oportet materialia cognita in cognoscente existere non materialiter sed magis immaterialiter.⁸

Intellectus animae humanae habet naturam acquirendi cognitionem immaterialem ex cognitione materialium, quae est per sensum.⁹

But sensible matter is the principle of division, limitation, and individuation:

Per materiam autem determinatur forma rei ad aliquid unum.¹⁰

Omnis autem forma de se communis est; ... sed individuatio formae est ex materia, per quam forma contrahitur ad hoc determinatum.¹¹

Materia est principium diversitatis secundum numerum, prout subest dimensionibus interminatis.¹²

Individuatio autem naturae communis in rebus corporalibus et materialibus est ex materia corporali sub determinatis dimensionibus contenta.¹³

If the form or quiddity of the thing known is received into the intellect without individuating matter, it is present there “absolutely,” as “set free” from the restriction and individuation imposed upon it in its real, concrete existence in things; it is not there as in this or that particular thing but in itself, according to its own intelligible character: “Anima

⁶ *S.T.*, I, 79, 6 c; 84, 1 c; 89, 4 c; III, 11, 5 c; *In I Sent.*, 8, 5, 3 sol.; *In III Sent.*, 13, 1, 2, sol. 2; *C.G.*, I, 43, Amplius¹; II, 50, Praeterea; 73, Item⁴; 74, Amplius; 79, Item²; *De Pot.*, 7, 10 ad 10; *De Spir. Creat.*, 9 ob. 16; *Quodl.* VII, 1 c.

⁷ *S.T.*, I, 75, 5 c.

⁸ *S.T.*, I, 84, 2 c; cf. II-II, 1, 2 c (also I, 12, 4 c): Cognita sunt in cognoscente secundum modum cognoscentis; I, 85, 5 ad 3: Similitudo rei recipitur in intellectu secundum modum intellectus, et non secundum modum rei.

⁹ *Q.D. de An.*, 1 c (ad. fin.).

¹⁰ *S.T.*, I, 84, 2 c.

¹¹ *Quodl.* VII, 3 c; cf. *In VII Met.*, 15, n. 1626.

¹² *In De Trin.*, 4, 2 c; cf. 5, 3 ad 3. (The former article is St. Thomas’ most extended single treatment of individuation by matter.)

¹³ *In II De An.*, 12, n. 377; cf. *De Ente et Ess.*, c. 2, nn. 6, 11, 12 (ed. Perrier); *De Ver.*, 2, 6 ad 1; 10, 5 c; *C.G.*, IV, 65, Habet; *In V Met.*, 8, n. 876; *In VII Met.*, 11, n. 1535; *In XII Met.*, 10, n. 2595; *De Malo*, 16, 1 ad 18; *Quodl.* VII, 10 c; *De Spir. Creat.*, 5 ad 8 & 9; *S.T.*, III, 77, 2 c; *De Prin. Indiv.*, ad fin., nn. 5-7 (ed. Perrier).

autem intellectiva cognoscit rem aliquam in sua natura absolute, puta lapidem in quantum est lapis absolute. Est igitur forma lapidis absolute secundum propriam rationem formalem in anima intellectiva."¹⁴

This "absolute" grasping of the quiddity, this "setting free" from the individuating and material conditions in which that quiddity exists in reality, is abstraction:

Cognoscere vero id quod est in materia individuali non prout est in tali materia est abstrahere formam a materia individuali, quam repraesentant phantasmata. Et ideo necesse est dicere quod intellectus noster intelligit materialia abstrahendo a phantasmatibus, et per materialia sic considerata in immaterialium aliqualem cognitionem devenimus.¹⁵

Being free of the limitation and unintelligibility of matter, the form or quiddity becomes intelligible: "Species enim rerum intellectarum fiunt intelligibiles actu per hoc quod a materia individuali abstrahantur";¹⁶ "Immunitas enim materiae confert esse intelligibile."¹⁷

It is not the singularity, as such, of the material thing that stands in the way of its being grasped by the intellect, but its materiality:

Singulare non repugnat intelligibilitati in quantum est singulare sed in quantum est materiale.¹⁸

Ex hoc enim aliquid est intellectum in actu quod est immateriale, non autem ex hoc quod est universale; sed magis universale habet quod sit intelligibile per hoc quod est abstractum a principiis materialibus individuantibus.¹⁹

But inasmuch as the singularity of material things comes not from their form but from their matter, their singularity is tied up with their materiality, and hence with their unintelligibility. As a consequence, when by abstraction the form is freed of its individuating material conditions, and is "absolute," it is no longer singular but such that it can represent any of the individuals of its own species. The abstracted form of man does not represent John or James, Peter or Paul, but man

¹⁴ *S.T.*, I, 75, 5 c; cf. ad 1: intellectus recipit formas absolutas.

¹⁵ *S.T.*, I, 85, 1 c.

¹⁶ *C.G.*, II, 50, Amplius; cf. I, 44, Item¹: Formae fiunt intellectae in actu per abstractionem a materia.

¹⁷ *C.G.*, II, 91, Item¹; cf. 98, Si autem: Immunitas enim a materia facit aliquid esse per se intelligibile; *S.T.*, I, 79, 3 c: ex hoc est aliquid intelligibile actu quod est immateriale. ... Oportet igitur ponere aliquam virtutem ex parte intellectus quae faceret intelligibilia in actu per abstractionem specierum a conditionibus materialibus.

¹⁸ *S.T.*, I, 86, 1 ad 3; cf. *De Prin. Indiv.*, n. 2 (ed. Perrier): Materia vero impedit intellectum, singulare vero non. ... Singularitas non impedit cognitionem sed materialitas; *C.G.*, II, 75, Hoc propter: Non enim hoc quod est esse individuum repugnat ei quod est esse intelligibile actu. ... Sed id quod repugnat intelligibilitati est materialitas; *De Spir. Creat.*, 9 ad 15; *Q.D. de An.*, 3 ad 17; 17 ad 5; *Comp. Theol.*, I, 85, Secundo, n. 155 (ed. Verardo).

¹⁹ *Q.D. de An.*, 5 ad 2.

absolutely; it contains whatever is essential to man and no more. This is the same for all individual men; it is common to all: "Natura in se considerata communis est."²⁰

THE UNIVERSAL

The community of the nature apprehended is not a formal community deriving from the nature itself taken according to its absolute consideration, because that is neither singular nor common: "Unde si quaeratur utrum ista natura sic considerata possit dici una vel plures, neutrum concedendum est: quia utrumque est extra intellectum [eius], et utrumque potest sibi accidere."²¹ In itself the absolute nature is only potentially one or many. But the nature in question is in fact apprehended by the intellect and therefore *de facto* under the conditions imposed upon it by its existence in the soul (though the consideration of these conditions by the intellect is not yet under discussion). For the intellect, by receiving the form immaterially, frees it from its individuation and renders it common and universal: "Quod autem commune est agitur per intellectum. Intellectus enim facit universalitatem in rebus."²² The intellect apprehends only universally: "Est enim sensus particularium, intellectus vero universalium";²³ "Id quod cognoscit sensus materialiter et concrete, quod est cognoscere singulare directe, hoc cognoscit immaterialiter et abstracte, quod est cognoscere universale."²⁴

The whole argument thus far is well summed up in the commentary on the *De Anima*:

Sensus est virtus in organo corporali; intellectus vero est virtus immaterialis quae non est actus alicuius organi corporalis. Unumquodque autem recipitur in aliquo per modum sui. Cognitio autem omnis fit per hoc quod cognitum est aliquo

²⁰ *De Pot.*, 9, 2 ad 1; cf. 1 c: Natura enim communis est quam significat definitio indicans quid est res.

²¹ *De Ente et Ess.*, c. 3, n. 14 (ed. Perrier).

²² *De Nat. Gen.*, c. 3, n. 14 (ed. Perrier); cf. *De Ente et Ess.*, c. 3, n. 16 (ed. Perrier): intellectus est qui agit universalitatem in rebus; *De Spir. Creat.*, 10 ad 14: universale, quod facit intellectus agens, est unum in omnibus a quibus ipsum abstrahitur; *De Nat. Acc.*, nn. 1 & 8 (ed. Perrier).

²³ *In II De An.*, 5, n. 284; cf. *S.T.*, I, 59, 1 ad 1; 12, 4 c; I-II, 17, 7 c: Apprehensio autem imaginationis, cum sit particularis, regulatur ab apprehensione rationis, quae est universalis; *C.G.*, II, 66, Adhuc: Sensus non est cognoscitivus nisi singularium. ... Intellectus autem est cognoscitivus universalium; *De Ver.*, 10, 5 c; 22, 4 ad 4; *In I Met.*, 2, nn. 45-46; *De Subst. Sep.*, c. 14, n. 82 (ed. Perrier): homo singularia quidem cognoscit per sensum, universalia per intellectum.

²⁴ *S.T.*, I, 86, 1 ad 4; cf. 1 c: Quod autem a materia individuali abstrahitur est universale. Unde intellectus noster directe non est cognoscitivus nisi universalium; 84, 1 c: Intellectus intelligit universaliter; 85, 1 ad 5; Intellectus noster ... abstrahit species intelligibiles a phantasmatis in quantum considerat naturas rerum in universali; I-II, 29, 6 c: universale fit per abstractionem a materia individuali.

modo in cognoscente, scilicet secundum similitudinem. Nam cognoscens in actu est ipsum cognitum in actu. Oportet igitur quod sensus corporaliter et materialiter recipiat similitudinem rei quae sentitur. Intellectus autem recipit similitudinem eius quod intelligitur incorporaliter et immaterialiter. Individuatio autem naturae communis in rebus corporalibus et materialibus est ex materia corporali sub determinatis dimensionibus contenta: universale autem est per abstractionem ab huiusmodi materia et materialibus conditionibus individuantibus. Manifestum est igitur quod similitudo rei recepta in sensu repraesentat rem secundum quod est singularis; recepta autem in intellectu repraesentat rem secundum rationem universalis naturae: et inde est, quod sensus cognoscit singularia, intellectus vero universalia; et horum sunt scientiae.²⁵

When the universality which the intellect effects is said to be *in things* ("agit universalitatem in rebus"), this does not, of course, mean that the universal as such exists formally in concrete things. The doctrine is clear and often repeated that universals as such exist only in the soul: "Universalia, secundum quod sunt universalia, non sunt nisi in anima."²⁶ What is meant is that the nature, which becomes universal by the intellectual apprehension, has real existence in things:

Ipsae autem naturae quibus accidit intentio universalitatis sunt in rebus.²⁷

Nam intellectus immaterialiter cognoscit materialia; et similiter naturas rerum, quae singulariter in rebus existunt, intellectus cognoscit universaliter, id est absque consideratione principiorum et accidentium individualium.²⁸

To call a universal the nature which is apprehended, is to speak of the universal from the viewpoint of its foundation: "Huic ergo intellectui quo intellectus intelligit genus non respondet aliqua res extra immediate quae sit genus: sed intelligentiae, ex qua consequitur ista intentio, respondet aliqua res."²⁹ The nature which is apprehended is

²⁵ *In II De An.*, 12, n. 377. A parallel passage is found in *S.T.*, I, 12, 4 c: Ea igitur quae non habent esse nisi in materia individuali, cognoscere est nobis connaturale, eo quod anima nostra, per quam cognoscimus, est forma alicuius materiae. Quae tamen habet duas virtutes cognoscitivas. Unam, quae est actus alicuius corporei organi. Et huic connaturale est cognoscere res secundum quod sunt in materia individuali; unde sensus non cognoscit nisi singularia. Alia vero virtus cognoscitiva eius est intellectus, qui non est actus alicuius organi corporalis. Unde per intellectum connaturale est nobis cognoscere naturas, quae quidem non habent esse nisi in materia individuali, non tamen secundum quod sunt in materia individuali, sed secundum quod abstrahuntur ab ea per considerationem intellectus. Unde secundum intellectum possumus cognoscere huiusmodi res in universali.

²⁶ *In II De An.*, 12, n. 380; cf. *C.G.*, I, 44, Ahuc¹: Forma autem per modum universalium non invenitur nisi in intellectu; Amplius²: Secundum communitatem suae rationis ... formae esse non possunt nisi intellectae, cum non inveniatur aliqua forma in sua universalitate nisi in intellectu. *De Nat. Gen.*, c. 3, n. 14 (ed. Perrier): In re igitur nihil est commune multis; *In VII Met.*, 13, n. 1571: Homo communis non est aliqua substantia in rerum natura.

²⁷ *In II De An.*, 12, n. 380.

²⁸ *In III Met.*, 9, n. 446.

²⁹ *De Pot.*, 1, 1 ad 10.

de facto universal; and this is the point of view from which the universal has so far been spoken of, not from that of the universal taken formally and known as universal. A distinction is accordingly to be made between the nature which in fact underlies the intention of universality but is merely considered in itself, and the same nature considered as being universal, that is, precisely as underlying the intention of universality:

Universale dupliciter potest accipi. Uno modo pro ipsa natura cui intellectus attribuit intentionem universalitatis: et sic universalialia, ut genera et species, substantias rerum significant, ut praedicantur in quid. Animal enim significat substantiam eius de quo praedicatur, et homo similiter. Alio modo potest accipi universale in quantum est universale, et secundum quod consideratur animal vel homo ut unum in multis.³⁰

The nature taken in itself is the absolute nature which was considered sufficiently in Chapter V. It is the universal considered materially only—as *that which* is universal but not *as* universal. When it is considered as the universal formally (which means that it is viewed *as* universal and taken along with the intention of universality which is imposed upon it), then it is no longer considered in itself, but according to the manner of existence which it has in the soul inasmuch as it is abstracted from singulars and is applicable to many:

Ista autem natura cui advenit intentio universalitatis, puta natura hominis, habet duplex esse: unum quidem materiale, secundum quod est in materia naturali: aliud autem immateriale, secundum quod est in intellectu. Secundum igitur quod habet esse in materia naturali non potest ei advenire intentio universalitatis, quia per materiam individuatur. Advenit igitur universalitatis intentio secundum quod abstrahitur a materia individuali. ... Relinquitur igitur quod natura humana non habet esse praeter principia individuantia nisi tantum in intellectu.³¹

Under the intention of universality the nature is looked at not merely as having its own intelligible determinations, but as having a certain mode of being as well. It is viewed as being one and common (“De ratione universalis est unitas et communitas”), as corresponding to all the individuals which have the same intelligible determinations (“ut sit unum quid omnibus conveniens”), and as being one likeness represent-

³⁰ *In VII Met.*, 13, n. 1570; cf. *De Nat. Gen.*, c. 3, n. 14 (ed. Perrier); *In II De An.*, 12, n. 378; *S.T.*, I, 85, 2 ad 2; 3 ad 1; I-II, 29, 6 c: De universali dupliciter contingit loqui: uno modo secundum quod subest intentioni universalitatis; alio modo, dicitur de natura cui talis intentio attribuitur; alia est enim consideratio hominis universalis, et alia hominis in eo quod homo.

³¹ *In II De An.*, 12, n. 378; cf. *S.T.*, I, 14, 12 c: Species autem intelligibilis intellectus nostri est similitudo rei quantum ad naturam speciei quae est participabilis a particularibus infinitis.

ing many ("sed haberet rationem communitatis secundum quod esset commune repraesentativum plurium").³² Thus it is regarded as one deriving from many: "Sic enim solum est *unum de multis*, prout intelligitur praeter principia quibus unum in multa dividitur."³³ It is one over and above the many:

Quod quidem universale dicitur esse ... *unum praeter multa*, non quidem secundum esse sed secundum considerationem intellectus, qui considerat naturam aliquam, puta hominis, non respiciendo ad Socratem et Platonem. Quod etsi secundum considerationem intellectus sit unum praeter multa, tamen secundum esse est in omnibus singularibus unum et idem, non quidem numero, quasi sit eadem humanitas numero omnium hominum, sed secundum rationem speciei.³⁴

At the same time it is applicable to many and existing in many: "Illud quod est commune est simul apud multa. Hoc enim est ratio communis ut de multis praedicetur et *in multis* existat."³⁵

It is not, however, exactly the actual existence of the one form in many or its actual attribution to many which the intellect considers in this logical reflection, but rather its aptness to be in many: "Universale est commune multis; hoc enim dicitur universale quod natum est multis inesse et de multis praedicari. ... Universale est quod natum est pluribus inesse, non autem quod pluribus inest."³⁶ The universal is of such a nature ("natum est") that it can be in many distinct subjects. In other words, the nature as apprehended is seen to be a set of intelligible notes not only of this or of that particular individual but also of many others, which it can therefore represent.

The first sense in which the universal is said to be *in things*, as just explained, is that the form which is in the intellect as universal has its real existence in things. That is to take the universal materially, not formally. There is also a second sense in which it can be said to be in things, even if the universal is taken as formal; but then it is not in the real external things but rather in things *as known* (*in ipsius rebus intellectis*); and this is to say that the formal universal is in the objective direct intention. In the study of ratiolate relations made in Chapter VI it was found that some are in things known consequent upon the operation of the intellect: "Relationes quae consequuntur solam opera-

³² *De Ente et Ess.*, c. 3, nn. 15 & 16 (ed. Perrier); cf. *De Spir. Creat.*, 9 ad 16: Ratio universalitatis, quae consistit in communitate et abstractione sequitur solum modum intelligendi [non existendi].

³³ *In II De An.*, 12, n. 380.

³⁴ *In II Post. Anal.*, 20, n. 11 (med.).

³⁵ *In VII Met.*, 16, n. 1641.

³⁶ *In VII Met.*, 13, nn. 1572 & 1574; cf. *In I Perih.*, 10, n. 7: Universale ... est natum in pluribus inveniri.

tionem intellectus *in ipsis rebus intellectis*, sunt relationes rationis tantum."³⁷ If "things" are taken as "things known," it can be said that even the formal universal is "in things," and not directly in the mind. For it is not attributed to the soul or to the intellect as such but to the thing or nature which is in the intellect according to the mode of existence which it has there.

Logical relations were said to be attributed to things which are known, precisely as known: "Et huiusmodi sunt relationes quae attribuantur ab intellectu rebus intellectis prout sunt intellectae, sicut relatio generis et speciei."³⁸ The relations given as examples are formal universals, genus and species. In the same way logical intentions or characters (*rationes*) are attributed to things inasmuch as they are known: "Ea quorum sunt istae rationes, scilicet genus et species, non attribuit [intellectus] rebus secundum quod sunt extra animam sed solum secundum quod sunt in intellectu."³⁹ The intention of universality too is attributed to the thing or nature as apprehended: "Intellectus attribuit intentionem universalitatis naturae apprehensae, quam non habet in rebus extra animam."⁴⁰ The same was found also in the texts which distinguish two senses of the universal: it is the nature either with or without the intention of universality, but in either case it is the apprehended nature to which the intention is attributed: "natura cui intellectus attribuit intentionem universalitatis."⁴¹

THE INTENTION OF UNIVERSALITY

As has already been indicated, it is necessary to distinguish not only the material universal and the formal universal, but even, within the formal universal, the nature which is universal and the universality which it has in thought, or the intention of universality. This distinction is made in a reply which, though long, is of sufficient importance for a study of the subject of logic to justify its quotation:

Cum dicitur "intellectum in actu," duo importantur, scilicet res quae intelligitur, et hoc quod est ipsum intelligi. Et similiter cum dicitur "universale abstractum," duo intelliguntur, scilicet ipsa natura rei, et abstractio seu universalitas. Ipsa igitur natura cui accidit vel intelligi vel abstrahi vel intentio universalitatis, non est nisi in singularibus; sed hoc ipsum quod est intelligi vel abstrahi vel intentio universalitatis est in intellectu.

³⁷ *S.T.*, I, 28, 1, ad 4.

³⁸ *De Pot.*, 7, 11 c; quoted p. 169.

³⁹ *Ibid.*, a. 6 c (ante med.); quoted p. 128.

⁴⁰ *In I Sent.*, 39, 2, 2 sol. (ante med.).

⁴¹ *In VII Met.*, 13, n. 1570; also other places cited in note 30.

Et hoc possumus videre per simile in sensu. Visus enim videt colorem pomi sine eius odore. Si ergo quaeratur ubi sit color qui videtur sine odore, manifestum est quod color qui videtur non est nisi in pomo; sed quod sit sine odore perceptus, hoc accidit ei ex parte visus, in quantum in visu est similitudo coloris et non odoris.

Similiter humanitas quae intelligitur non est nisi in hoc vel in illo homine; sed quod humanitas apprehendatur sine individualibus conditionibus, quod est ipsum abstrahi ad quod sequitur intentio universalitatis, accidit humanitati secundum quod percipitur ab intellectu, in quo est similitudo naturae speciei et non individualium principiorum.⁴²

The direct objective intention (*intellectum in actu*) is not just the thing which is known (*res quae intelligitur*) nor is it just the act by which it is known and exists in the intellect (*ipsum intelligi*), but is, as it were, a composite of the two (*res intellecta*). As such it is an absolute nature indifferent to existence in one or many. But since it cannot exist as an intention or absolute nature except in the mind, it is *de facto* abstract and universal (*abstractum universale*). In the apprehended nature, then, the nature which is apprehended can be distinguished from the mode of its apprehension. As a concept or objective intention its act of existing is to be understood (*intelligi*),⁴³ and as having that act of existing by the first act of the human intellect, simple apprehension, its being understood is to be abstracted (*abstrahi*). But to be abstracted is the same as to be universal (at least materially). It need only be adverted to by the intellect to be made formally universal in a second intention, the intention of universality. For by reflection the intellect knows the manner in which the nature is known and the mode of existence which it exercises in the intellect as a consequence and its state of abstraction there. It knows the abstracted nature as applicable to many individuals. The quidditative form of man, for instance, is known to be apprehended by the intellect without the individual conditions of matter (“quod humanitas apprehendatur sine individualibus conditionibus”), and this is to exist as abstracted (“quod est ipsum abstrahi”). The mode of existence which it has as a result is one of universality; and this is adverted to by a logical reflection in a second intention of the intellect (“sequitur intentio universalitatis”). This intention of universality is an accident of the form or nature as known (“accidit humanitati secundum quod percipitur ab intellectu”).

The intention of universality, since it is a logical intention, is, of course, a rationally being, an objective second intention mediately founded in the real, and a rationally relation. This follows necessarily

⁴² S.T., I, 85, 2 ad 2.

⁴³ See above, pp. 106 and 114.

from what has been seen of logical being in general. It is not necessary to demonstrate it in particular here. It will suffice to call attention to a few points, and especially to examine the nature of the logical relation by an analysis of its elements.

As a logical intention universality has its immediate foundation in the intellect and a mediate foundation in the real. The immediate foundation is, of course, the direct intention or objective concept, which is the known nature as known. Its remote foundation in the real is the same nature, not now as known but as existing in reality. This was found explicitly said regarding logical intentions generally, but primarily of the intention of universality, as is shown by the example used, genus:

Aliquando autem hoc quod significat nomen non est similitudo rei existentis extra animam, sed est aliquid quod consequitur ex modo intelligendi rem quae est extra animam: et huiusmodi sunt intentiones quas intellectus noster adinvenit; sicut significatum huius nominis *genus* non est similitudo alicuius rei extra animam existentis; sed ex hoc quod intellectus intelligit animal ut in pluribus speciebus, attribuit ei intentionem generis; et huiusmodi intentionis licet proximum fundamentum non sit in re sed in intellectu, tamen remotum fundamentum est res ipsa. Unde intellectus non est falsus qui has intentiones adinvenit.⁴⁴

It will be noted again that this intention follows upon the manner of understanding but is not itself produced by the direct act in which it is understood; otherwise it would not be distinguished from the first intention. But the first intention is effected by abstractive apprehension, which is simply the act of abstraction. Something more than this, then, is needed for the second intention. Furthermore, the first intention is abstract. Mere abstractness, then, even if adverted to reflectively, is not sufficient to constitute the intention of universality. By looking at the understood nature in itself we can see that it is not under any material conditions; but this does not reveal it to us *ut in pluribus*. For that, a comparison of the abstracted nature to *the many* in which it may be found is necessary. Comparison is, of course, active reference. With this reference as an act logic is not directly concerned; but it is concerned with the passive or objective reference that is set up by that act, the relation itself of the one form that is apprehended to the many inferiors in which it may be found.

It is not the mere form as a form of the intellect, or a consideration of its existence there, which gives the universality. Under that aspect, as was seen in Chapter V, on intentions, it is referred only to the intellect; it informs the intellect as an accident and thus is a particular

⁴⁴ *In I Sent.*, 2, 1, 3 sol.

quality of a particular intellect. But it is not only the form of the intellect in which it inheres; it is also the form of the thing which it represents or "intends"; and as the form of that thing it is its intention or likeness. Under this aspect it has a reference to the thing. Being the form of the thing, it is necessarily in formal agreement with that thing and thus has a "transcendental" relation of likeness to it. It is from this point of view that the concept is universal; for by reflection it is seen to represent or to be the form of not only one thing but many:

Forma quae est recepta in intellectu potest dupliciter considerari: vel per comparisonem ad rem cuius est similitudo et sic habet universalitatem; non enim est similitudo hominis secundum condiciones individuantes, sed secundum naturam communem: vel per comparisonem ad intellectum in quo habet esse, et sic est quid individuatum quemadmodum intellectus.⁴⁵

This same doctrine of the relative aspect of the universal and its formal constitution by a comparison or relation is expressed even more fully and pointedly in the *De Ente et Essentia*:

Relinquitur ergo quod ratio speciei accidat naturae humanae secundum illud esse quod habet in intellectu. Ipsa enim natura humana habet esse in intellectu abstractum ab omnibus individuantibus, et ideo habet *rationem uniformem ad omnia individua* quae sunt extra animam, prout aequaliter est *similitudo omnium* et inducens in cognitionem omnium in quantum sunt homines.

Et ex hoc quod talem *relationem* habet *ad omnia individua*, intellectus adinvenit rationem speciei et attribuit sibi ...; intellectus [enim] est qui agit universalitatem in rebus. ...

Unde quamvis haec *natura intellecta habeat rationem universalis secundum quod comparatur ad res extra animam*, quia est una similitudo omnium; tamen secundum quod habet esse in hoc intellectu vel in illo, est quaedam species intellecta particularis. ... Non est *universalitas* illius formae secundum hoc esse quod habet in intellectu, sed *secundum quod refertur ad res* ut similitudo rerum.⁴⁶

This passage leaves little doubt that Aquinas held that universality is a property of the nature as known, and that it consists in a relation to many individuals or inferiors.

What the subject of this relation is, is also clear from this passage as well as from those seen above in which it is said that the intellect attributes the intention of universality to the known nature or apprehended form; for it is the nature as understood which is referred to the many things. Hence it is the apprehended nature which is the subject of the relation; and that is the same as saying that it is the direct intention taken objectively which is related.

The term or terms of this relation are also sufficiently evident; for

⁴⁵ *In II Sent.*, 3, 1, 2 ad 3.

⁴⁶ C. 3, n. 16 (ed. Perrier).

the understood nature is compared to the external things of which it is a likeness:

Quandoque enim attribuitur ei [universali] sic considerato [secundum esse quod habet in intellectu] aliquid quod pertinet ad solam operationem intellectus, ut si dicatur quod homo est praedicabile de multis, sive universale, sive species. Huiusmodi enim intentiones format intellectus attribuens eas naturae intellectae secundum quod *comparat ipsam ad res quae sunt extra animam*.⁴⁷

The nature is compared to real external things, but not exactly as real and external; for the reality of the thing to which the concept corresponds is not the concern of logic but rather of metaphysics or of epistemology. In the passage quoted from the *De Ente et Essentia*, where the same expression was used ("natura intellecta ... comparatur ad res quae sunt extra animam"), it was also said that the nature has a relation to *individuals* ("relationem habet ad omnia individua"). It is rather as individuals or singulars than as real things that the universal looks to its term; and *individual* and *singular* are nouns of *second intention* rather than of first intention, such as "real thing," for they signify the thing under the intention of singularity:

Individuum dupliciter potest significari: vel per nomen *secundae intentionis*, sicut hoc nomen *individuum* vel *singulare*, quod non significat rem singularem sed intentionem singularitatis; vel nomen primae intentionis, quod significat rem cui convenit intentio particularitatis.⁴⁸

Moreover, the universal need not be referred to real things directly at all, but may be compared to other universals which are, however, less universal and are subordinated to the first. A generic universal may be compared to real things as expressing their nature in an indeterminate way, or it may be compared to species as containing many species subordinated to itself: "Ex hoc quod intellectus intelligit animal *ut in pluribus speciebus* attribuit ei intentionem generis."⁴⁹ Besides expressing the known nature in the mode of substance, genus adds a relation to its inferiors: "Ratio generis addit ordinem ad contenta sub eo; qui quidem ordo importatur in uniformitate eius ad inferiora exteriora. Hanc autem

⁴⁷ *In I Pevih.*, 10, n. 9.

⁴⁸ *In I Sent.*, 23, 1, 3 sol. (ante med.); cf. 26, 1, 1 ad 3: Per nomen primae impositionis [individuum substantiae] significatur ut substat naturae hoc nomine "res naturae"; et per nomen secundae impositionis hoc nomine quod est "suppositum"; *In III Sent.*, 6, 1, 1, sol. 1: Hoc enim nomen "res naturae" est nomen primae impositionis significans particulare per respectum ad naturam communem. Hoc vero nomen "suppositum" est nomen secundae impositionis significans ipsam habitudinem particularis ad naturam communem in quantum subsistit in ea; "particulare" vero in quantum exceditur ab ea.

⁴⁹ *In I Sent.*, 2, 1, 3 sol. (ante med.).

uniformitatem habet per actum intellectus."⁵⁰ Since it is not only real things which are contained under the intention of genus but also universal intentions of these, namely, species, the term of the relation of universality can more aptly be called *inferiors* than *things*; for this designation is applicable in all intentions of universality: "Intellectus apprehendit ut unum id in quo omnia inferiora conveniunt."⁵¹

The term of the relation of universality can accordingly be either real external things or other concepts. But even the real things when compared to the universal nature are not viewed precisely as real but as having a certain manner of possessing the common nature. They are not conceived expressly as things but as individuals or singulars or particulars, that is, under the intention of individuality or singularity or particularity. It can rightly be said, therefore, that in either case the term of the relation is the nature under a less universal intention and so is an *inferior* of the universalized nature.

Because the apprehended nature is related to many inferiors, it might be questioned whether there is one relation of universality or whether there are not rather as many relations as there are terms. But in spite of the many terms, this relation remains one relation still, because the multiplication of terms does not multiply the relation; only the multiplication of the subject or of the foundation does that: "Unitas enim relationis vel eius pluralitas non attenditur secundum terminos sed secundum causam vel subiectum."⁵² A thing equal to many things has only one relation of equality; a son has only one relation of sonship to both father and mother; a teacher has one relation to many pupils, and a master to many servants. Hence the logical intention of universality, though terminating in many, is nevertheless a single intention because it is the relation of one nature according to the one manner of existing in the intellect: "Intellectus perfectus per formam potest simul ferri in diversa ad quae se extendit repraesentatio illius formae; et erunt multae intentiones ex parte eius in quod fertur intellectus, sed una ex unitate intellectus et formae."⁵³ Although universality may be regarded as many relations if we consider the relation of the inferiors to the concept in the intellect, from the standpoint of the one apprehended nature it is just one relation with many terms.

⁵⁰ *De Nat. Gen.*, c. 5, n. 28 (ed. Perrier); cf. *In I Post. Anal.*, 42, n. 6: de ratione generis est quod contineat sub se species.

⁵¹ *In X Met.*, 1, n. 1930.

⁵² *S.T.*, III, 35, 5 c; cf. *Quodl.* I, 2 c; IX, 4 c; *In III Sent.*, 8, 1, 5 sol. & ad 4; 21, 1, 1, sol. 2 ad 5.

⁵³ *De Ver.*, 8, 4 ad 2 in contr.

The foundation, which plays such an important role in determining the unity or plurality as well as the reality and species of the relation, remains to be examined. Because the logical intention follows upon the manner of understanding, and the manner of understanding with which the intention of universality is concerned is abstraction, the abstractive act of the intellect might in a true sense be called its foundation. If there were question of a real relation, this could not be done, because the foundation must be in the subject; it is that in the subject according to which it is compared to the term. Here the subject of the relation is the apprehended nature, and the activity in question is not that of this nature. But since the relation under consideration is logical, and therefore not real but rationally, the foundation need not be in the subject, any more than it is in the relation of the thing known to the knowledge of the knower. The foundation in this latter instance is the operation of the knower and not some activity of the thing known. When, however, the intimate nature of the relation of universality is considered and this relation is seen to be one of likeness or formal unity, it becomes apparent that the same form must be found in both subject and term ("similitudo autem inter aliqua duo est secundum convenientiam in forma"⁵⁴), and in such a way as to be comparable. That is equivalent to saying that the form must be in both in such a way as to let its sameness appear. What reveals the sameness of the nature in the intellect and in the inferiors to which that nature is compared, is the manner in which that nature exists in the intellect—as abstracted from all individuating conditions. Its abstractness lets it appear as free of all differentiation or of limitation to this or that, and as suited to apply to this or that or the other uniformly or without difference. For the suitability to represent many, and the uniformity of the nature as regards all individuals is the formal effect of the abstractness: "Et ideo habet rationem uniformem ad omnia individua."⁵⁵ This uniformity makes possible the comparison of the one nature to many inferiors and formally founds the relation:

Propter uniformitatem rationis inventam in intentione quae fit propter remotiorem a materialibus conditionibus et omni diversitate, est unum in multis: sic enim homines sunt unus homo et unum animal.⁵⁶

Ratio generis addit ordinem ad contenta sub eo; qui quidem ordo importatur in uniformitate eius ad inferiora exteriora. Hanc autem uniformitatem habet per actum intellectus.⁵⁷

⁵⁴ *Ibid.*, 8 c.

⁵⁵ *De Ente et Ess.*, c. 3, n. 16 (ed. Perrier)—quoted p. 188.

⁵⁶ *De Nat. Gen.*, c. 3, n. 14 (ed. Perrier).

⁵⁷ *Ibid.*, c. 5, n. 28.

The abstractness and uniformity come to the nature from the act of the intellect, which is abstractive apprehension. Because of this uniformity the apprehended nature has an order or relation to its inferiors. But from the uniformity alone, it has it only fundamentally, not formally; for the act of the intellect by which the nature is abstracted is not comparative but absolute. The relation arises only with another act of the intellect, one of the second order or of second intention, which is reflective and comparative, by which the one nature is referred to many inferiors: "Non est universalitas illius formae secundum hoc esse quod habet in intellectu, sed secundum quod refertur ad res ut similitudo rerum."⁵⁸ Thus the nature is seen to be equally representative of all its inferiors ("prout aequaliter est similitudo omnium") and as *one in many*.

The immediate foundation of the relation of universality is the abstractness or uniformity of the apprehended nature; or, as we may also say, it is the nature according to the mode of existence which it has in the intellect. This is not really distinct from the apprehended nature which is the subject of the relation. But in rationally relations a real distinction of subject and foundation is not required. There is at the same time a remote foundation in the real, as was brought out regarding the logical intention.⁵⁹ This is the same nature as it exists in real things; for it founds the objective first intention which in turn founds the second intention according to its manner of existing in the mind. This second intention is a relation of that apprehended nature to its inferiors, whether real things (as individuals) or other less universal concepts.

That the relation which constitutes the intention of universality is not real but only rationally according to the doctrine of St. Thomas is clear both from his direct statements and from the explanations which he gives of its nature. The intention of universality is a second intention, and second intentions are two stages removed from reality. The examples most frequently used are the intentions of genus and species.⁶⁰ These same examples recur in the discussion of logical relations in Chapter VI.⁶¹ One passage in particular which was quoted extensively there bears repeating in part here. It distinguishes rationally from real relations, and in explaining rationally relations gives as an example the relation of genus and species: "Aliquando vero respectus significatus per ea quae dicuntur ad aliquid est tantum in ipsa apprehensione ra-

⁵⁸ *De Ente et Ess.*, c. 3, n. 16.

⁵⁹ Chap. V, sections on "Kinds of Intentions" and "Second Intentions," pp. 117-129.

⁶⁰ Pp. 119, 128-129, and notes 79 and 90 (*De Nat. Gen.*; S.T.)

⁶¹ Pp. 166-174. See especially pp. 166, 167, 169, 171, and 173.

tionis conferentis unum alteri, et tunc est relatio rationis tantum; sicut cum comparat ratio hominem animali ut speciem ad genus."⁶² This comparison or relationship is found in the intention of a genus, which is the most typical case of the intention of universality.

An analysis of the relation of universality on the basis of the requirements for real relations reveals that it falls short of being a real relation on several counts.

The subject of this relation, taken under the precise aspect according to which it is the subject, cannot have existence outside the mind. It is the nature of many real things but viewed under the conditions which it has as a result of being in the intellect: it is one, and it has this unity because it is in a state of abstraction, without formal differences or individuating conditions. The subject therefore is not real.

The foundation naturally cannot be real if the subject in which it is supposed to inhere is not real. In the present case the foundation is the abstractness and unity of the apprehended nature. Because they result from the operation of the mind, they obviously cannot have existence independently of the mind. And this foundation, moreover, is not really distinct from the subject. Or if a somewhat more remote foundation is taken, the act of abstracting, this foundation, though real, is not in the subject of the relation but elsewhere.

Though the term or terms of this relation, the many inferiors, seem at first to be real, a closer inspection reveals that even these, under the formality which they have as terms of the relation, are not in the real order. First of all, the inferiors may be species rather than individuals; and species are logical rather than real beings. But even when individual real beings are taken as the inferiors, it is not exactly as real beings but rather as singulars or particulars; that is, they are viewed under the intention of singularity or particularity, and these intentions are directly in the order of thought rather than of things.

In almost all ways, then, in which a relation fails to be real the relation of universality also fails. The elements of the relation—the subject, the term, and the foundation—are all unreal or logical. The foundation, the state of abstract unity, is not really distinct from the subject, the abstracted nature. Or if the foundation is considered to be something

⁶² *S.T.*, I, 28, 1 c; cf. *De Pot.*, 7, 11 c: *relatio rationis consistit in ordine intellectuum; quod quidem dupliciter potest contingere. Uno modo secundum quod iste ordo est adinventus per intellectum et attributus ei quod relative dicitur; et huiusmodi sunt relationes quae attribuuntur ab intellectu rebus intellectis prout sunt intellectae, sicut relatio generis et speciei; has enim relationes ratio adinvenit considerando ordinem eius quod est in intellectu ad res quae sunt extra vel etiam ordinem intellectuum adinvicem.*

real, the operation of abstracting, then the foundation is not in the subject of the relation. Only the question of the distinction of the subject and the term is left. Because they are not real, they clearly cannot be really distinct. But should they be regarded as identical?

IDENTITY OR LIKENESS?

That raises a final question about the exact nature of the relation of universality. It has been referred to several times above as a relation of likeness. But could it not more properly be called a relation of identity?⁶³ St. Thomas himself seems never to have raised this question or to have given an explicit answer to it. In so far as he has an answer it is only implicit in statements about somewhat different points.

He does call a universal (at least taken fundamentally, as the abstracted nature) a likeness: "Natura intellecta habet rationem universalis secundum quod comparatur ad res quae sunt extra animam quia est una *similitudo* omnium. ... Est universalitas illius formae ... secundum quod refertur ad res ut *similitudo* rerum."⁶⁴ But this does not say directly that the intention of universality is a relation of likeness.

A distinction to which Thomas does not call attention must be made regarding the term "likeness" (*similitudo*); for it has two different though related meanings. Most properly it means the relation of likeness. In its strictest sense it is a relation based on unity in quality.⁶⁵ But it is also taken more broadly as any unity or agreement in form or nature.⁶⁶ Frequently, however, "likeness" does not refer to a relation but rather to a representation or image, as when a portrait is said to be a likeness of its subject. This is the meaning of likeness when it is said that cognition requires a likeness of the thing known in the knower.⁶⁷ Though this might at first glance be taken as a relation of likeness, the context and other statements make clear that what is meant is a form which represents the thing known.⁶⁸ This is the meaning too when a

⁶³ Held by Henry B. Veatch, *Intentional Logic*, chap. IV, A, § 11, "Universals as relations of identity" (p. 113), and Francis H. Parker and Henry B. Veatch, *Logic as a Human Instrument*, 4-1, "Concepts as Relations of Identity" (pp. 55-57).

⁶⁴ *De Ente et Ess.*, c. 3, n. 16 (ed. Perrier).

⁶⁵ *In I Sent.*, 2, 1, exp. text., ad 2; *S.T.*, I, 93, 9 c.

⁶⁶ *De Ver.*, 8, 8 c; 2, 3 ad 9; *S.T.*, I, 4, 3 c.

⁶⁷ *In I De An.*, 4, n. 43: cognitio fit per similitudinem rei cognitae in cognoscente; *In II De An.*, 12, n. 377: Cognitio autem omnis fit per hoc quod cognitum est aliquo modo in cognoscente, scilicet secundum similitudinem; *In VI met.*, 4, n. 1234: Quaelibet cognitio perficitur per hoc quod similitudo rei cognitae est in cognoscente.

⁶⁸ *De Ver.*, 2, 6 c: Similitudo autem cogniti ... est principium cognitionis ...; et ideo oportet ut quaelibet cognitio sit per modum formae quae est in cognoscente; *S.T.*, I, 17, 3 c: sicut res habet esse per propriam formam, ita virtus cognoscitiva habet cognoscere per similitudinem rei cognitae... cuius similitudine informatur; 88, 1 ad 2.

sensible or intelligible species or an *intentio intellecta*, conception, mental word, or idea is called a likeness.

The two meanings, though distinct, are closely associated—so much so that St. Thomas sometimes uses them both in the same brief passage and almost seems to confuse them.⁶⁹ In the one case the likeness *is* a relation; in the other it *has* a relation. Both are relative; but the first, the relation of likeness, is “essentially relative” (a *relativum secundum esse*), whereas the second, the representative form, is only “attributively relative” (a *relativum secundum dici*). The latter is directly an absolute, in the category of quality, which nevertheless connotes a relation; for the form in the knower is the form of the object and necessarily points to it and is related to it. The connoted relation would seem to be a relation of likeness, that is, of unity in form.

From a purely formal point of view there is identity between the thing known and the knower, for the form of the thing known is the form of the knower. In the actual knowing the knower is identified with the thing known (“cognoscens in actu est ipsum cognitum in actu”),⁷⁰ sense is identified with the sensible object (“sensus in actu est sensibilis in actu”),⁷¹ and the intellect is identified with the intelligible object (“intellectus in actu est intelligibilis in actu”),⁷² because knower, sense, and intellect have the same form as thing known, sensible object, and intelligible object. This identity is not in the physical order, according to the existence which that form has in either the thing or the knower. The form in the thing known has its own existence there, and the form in the knower has a distinct act of existence. But just from the point of view of the formal notes or traits there is identity: the same formal notes are in both the thing known and the knower.

Identity in general means unity in substance.⁷³ In its primary sense substance means a subsistent individual or supposit, which is accordingly called a “first substance”; in a secondary usage substance means

⁶⁹ E.g., *S.T.*, I, 88, 1 ad 2 *similitudo naturae non est ratio sufficiens ad cognitionem. ... Sed requiritur ad cognoscendum ut sit similitudo rei cognitae in cognoscente quasi quaedam forma ipsius.*—In the first instance *similitudo* means the relation of likeness; in the second, a representative form.

⁷⁰ *In II De An.*, 12, n. 377.

⁷¹ *S.T.*, I, 14, 2 c; 55, 1 ad 2; 87, 1 ad 3; *C.G.*, I, 51, Adhuc; II, 101, Quia; *In III De An.*, 2, nn. 590, 592.

⁷² *S.T.*, I, 14, 2 c; 55, 1 ad 2, 87, 1 ad 3; *C.G.*, I, 51, Adhuc; 55, Intellectus; II, 74, Quod; 99, Cum autem; 101, Quia; *In III De An.*, 9, n. 724; 12, n. 784; 13, n. 789.

⁷³ *In V Met.*, 17, n. 1022: *Eadem sunt quorum substantia est una*; 11, n. 907: *Idem ... est unum autem in substantia*; cf. *In De Div. Nom.*, IV, 6, n. 361 (ed. Pera): *unum autem in substantia facit idem*; *In V Met.*, 11, n. 912: *Identitas est unitas vel unio*; *In X Met.*, 4, n. 2007: *Ubi est unitas substantiae non dicitur similitudo vel aequalitas sed identitas.*

the nature or quiddity, which is universal, and from this point of view is called a "second substance."⁷⁴ According to the primary meaning of substance identity would then mean unity in supposit or a numerical and material unity.⁷⁵ Now it is obvious that the relation of universality could not be a relation of identity in this sense; for the nature in the intellect and in the many inferiors are not numerically one, one individual substance, or one supposit. But there is a broader sense of identity based upon the secondary meaning of substance as a nature or quiddity. Identity then means unity in nature or definition, as when things are said to be specifically or generically the same.⁷⁶ This sense of identity, if any, would be the one applicable to the relation of universality; for the apprehended nature or form agrees specifically or generically with the nature or form of the inferiors; that is, this nature or form is the same as their nature or form.

But when there is identity, not in supposit and in number, but in nature or form, this is very close to likeness in its broader sense, which is unity in form or nature. If identity and likeness in that case are to be distinguished at all, the extremes of the relation must be examined very carefully to see if they are simply the bare forms or natures themselves or distinct subjects of the forms or natures. If the forms or natures are compared and they are found to be simply the same (in purely formal determinations), then this would be a relation of identity. But if things that *have* these forms or natures are compared, then the relation is one of likeness.

The nature in the intellect is compared with the many individual subjects of this nature which constitute the inferiors of the universal. The basis of this comparison is their nature; yet they are not taken as pure natures but rather as supposits (if the universal in question is in the category of substance) or as individuals, singulars, or particulars (in any category). In this case there is more implied in the terms of the relation than in its subject. A supposit is regarded as a whole and a

⁷⁴ *In VII Met.*, 2, nn. 1273-75; *In V Met.*, 10, n. 903; *In X Met.*, 3, n. 1979: substantia dicitur dupliciter: uno modo suppositum in genere substantiae, quod dicitur substantia prima et hypostasis; alio modo quod quid est, quod etiam dicitur natura rei; *C.G.*, IV, 49, Quod autem²; *S.T.*, I, 29, 2 ad 2: nomen substantiae ... secundum proprietatem significationis respondet hypostasi; III, 2, 6 ad 3; *De Pot.*, 9, 1 c; *In I Sent.*, 23, 1, 1 sol.: nomen substantiae primo et principaliter convenit particularibus substantiis.

⁷⁵ *In I Sent.*, 19, 1, 1 ad 2: identitas ponit unitatem in essentia secundum numerum. ... Ideo identitas nullam importat distinctionem in supposito sed magis unitatem; 4, 1, 3 ad 3: idem significat unitatem in substantia; et praeter hoc ... importat unitatem suppositi.

⁷⁶ *In V Met.*, 11, n. 912; *In X Met.*, 4, nn. 2002-5; *In III Phys.*, 5, n. 11; *In VII Phys.*, 8, n. 9; *S.T.*, I, 28, 1 ad 2; III, 50, 5 ad 2.

nature as its formal part: "suppositum significatur ut totum, habens naturam sicut partem formalem et perfectivam sui."⁷⁷ In composite beings, then, the nature or essence is not identical with the supposit or subject: "Et ideo in rebus ex materia et forma compositis essentia non est omnino idem quod subiectum."⁷⁸ Consequently there cannot be a relation of identity between the nature and its subjects.

A difficulty arises, however, from the fact that in the passages in question the nature or essence is taken abstractly rather than concretely: as "humanity" rather than as "man";⁷⁹ whereas a universal is a nature or essence taken concretely and as a whole rather than as a part—not as "humanity" but as "man"—since a part cannot be predicated of a whole but only a whole of a whole:

Quia pars non praedicatur de toto, hinc est quod "humanitas" nec de homine nec de Socrate praedicatur. ... Essentiam hominis significat hoc nomen "homo" ... ut totum, inquantum scilicet non praescindit designationem materiae sed implicite continet eam et indistincte, sicut dictum est quod genus continet differentiam; et ideo praedicatur hoc nomen "homo" de individuis; sed hoc nomen "humanitas" significat eam ut partem, ... unde de individuis hominis non praedicatur.⁸⁰

Both genus and species are predicated as wholes, even though to a certain extent in an indeterminate manner:

Genus significat indeterminate totum quod est in specie. ... Similiter differentia significat totum ...; et etiam definitio significat totum, et etiam species. ... Sicut natura generis prout praedicabitur de specie implicabit in sua significatione,

⁷⁷ *S.T.*, III, 2, 3 c; cf. I, 29, 2; *In I Sent.*, 23, 1, 1; *In III Sent.*, 6, 1, 1, sol. 1 & ad 2; *Quodl.* IX, 2; *De Unione Verbi Incarnati*, 2 c & ad 6. And see texts quoted in chap. V, note 90.

⁷⁸ *De Pot.*, 9, 1 c; cf. *S.T.*, I, 3, 3 c: in rebus compositis ex materia et forma necesse est quod differant natura vel essentia et suppositum; *De Un. Verbi.*, 2 ad 11: in supposito includitur natura, non autem e converso.

⁷⁹ *S.T.*, I, 3, 3 c: essentia vel natura comprehendit in se illa tantum quae cadunt in definitione speciei, sicut humanitas ...; et hoc significat humanitas, hoc scilicet quo homo est homo; *Quodl.* IX, 2 ad 1 & ad 4; *De Pot.*, 9, 1 c: Comparatur ergo essentia ad substantiam particularem ut pars formalis ipsius, ut humanitas ad Socratem.

⁸⁰ *De Ente et Ess.*, c. 2, n. 12 (ed. Perrier); cf. *In I Sent.*, 23, 1, 1 sol.: essentia non dicit formam tantum sed in compositis ex materia et forma dicit totum. ... Et ideo "natura" vel "essentia" significatur dupliciter: scilicet ut pars ... sicut hoc nomen "humanitas," et sic non praedicatur nec est genus nec est species, sed ea formaliter denominatur homo; vel significatur ut totum ...; et sic significatur hoc nomine "homo," et significatur ut quod est; *In De Hebđ.*, 2, n. 25 (ed. Calcaterra): humanitas significatur ut quo aliquid est homo, et albedo quo aliquid est album; ... et ideo huiusmodi abstracta nihil alienum in se habere possunt. Aliter autem se habet in his quae significantur in concreto. ... Albedo vel humanitas significatur per modum partis, et non praedicatur de concretis, sicut nec sua pars de toto; *De Nat. Gen.*, c. 3, n. 24 (ed. Perrier): Natura enim animalis quod praedicatur est quod dicit totum respectum illius de quo praedicatur et non partem, quia pars non praedicatur de toto. ... Accipitur ... ut totum universale, quod praedicatur de qualibet parte; *In I Sent.*, 25, 1, 1 ad 3; *In VII Met.*, 5, nn. 1378-80.

quamvis indistincte, totum quod determinate est in specie, ita etiam illud quod est species, secundum id quod praedicatur de individuo, oportet quod significet totum illud quod essentialiter est in individuo, licet indistincte.⁸¹

Although it must be granted that universals are taken concretely and as wholes, and when predicated are predicated of concrete wholes, and granted that predication is identification (as will be brought out in the following chapter), nevertheless it seems that there is some difference in the point of view from which the universal and the inferiors are regarded, and that this prevents simple identity. In the intention of universality, it is true, as in any logical intention, the conceived nature is regarded objectively, as a set of intelligible notes belonging to things, and not just as something of the mind. Yet the nature must also be viewed as abstracted and as one. Since these attributes or conditions belong to it only in the mind, they cannot be attributed to real inferiors; nor can the apprehended nature with them be perfectly identified with the subjects of that nature outside the mind.

From the point of view of the inferiors too there is an obstacle to identification. If the inferiors are real beings, they are regarded as suppositors or as individuals, singulars, or particulars. But this is to add to the real nature a special aspect, view, or intention, which is even a second intention:

Hoc vero nomen "suppositum" est nomen secundae impositionis, significans ipsam habitudinem particularis ad naturam communem in quantum subsistit in ea: "particulare" vero in quantum exceditur ab ea. ... Ideo omne nomen designans particulare ... designat etiam ipsum per respectum ad naturam communem: ... vel per nomen primae impositionis ...; vel per nomen secundae impositionis, et sic est "individuum" in quantum est indivisum in se, "singulare" vero in quantum est divisum ab aliis.⁸²

Sed individuum ... potest significari ... per nomen secundae intentionis, sicut hoc nomen "individuum" vel "singulare," quod non significat rem singularem sed *intentionem singularitatis*.⁸³

The singular inferiors of the universal concept include in their notion not only the common nature but also the note of individuation, whether

⁸¹ *De Ente et Ess.*, c. 2, nn. 9 & 11 (ed. Perirer); *De Nat. Gen.*, c. 3, n. 17 (ed. Perrier): genus de toto praedicatur, ut animal de homine; *In I Sent.*, 25, 1, 1 ad 2; Animal dicit totum, et similiter rationale mortale. ... Sed genus significat totum ut non designatum, et differentia ut designans, et definitio ut designatum, ut species.

⁸² *In III Sent.*, 6, 1, 1, sol. 1; cf. *In I Sent.*, 26, 1, 1 ad 3: Individuum substantiae ... potest significari ... per nomen secundae impositionis, hoc nomine quod est "suppositum"; ... similiter nomine secundae impositionis quod est singulare, ut "individuum."

⁸³ *In I Sent.*, 26, 1, 3 sol.; cf. *De Pot.*, 2, 2 ad 2: intentio singularitatis est communis omnibus individuis substantiis ...; et hoc modo significat ... nomen intentionis, sicut "singulare" vel "individuum."

they are designated by terms proper only to the category of substance, as "supposit" or "hypostasis," or by those that apply also to accidents, as "individual," "particular," and "singular":

Nominum ad individuationem pertinentium, sive sint nomina primae impositionis, sicut "persona" et "hypostasis," quae significant res ipsas, sive sint nomina secundae impositionis, sicut "individuum," "suppositum" et huiusmodi, quae significant *intentionem individualitatis*; quaedam eorum pertinent ad solum genus substantiae, sicut "suppositum" et "hypostasis," quae de accidentibus non dicuntur; ... quaedam vero pertinent ad individuationem in quocumque genere, sicut "individuum," "particulare" et "singulare," quae etiam in accidentibus dicuntur.⁸⁴

Particulare significat compositum ex materia et forma demonstrata, sed universale in substantiis compositis significat etiam compositum ex materia et forma, sed non demonstrata.⁸⁵

Since the apprehended nature and the singular inferiors can be compared only as conceived or viewed by the intellect for the intention of universality, and in the view which the intellect takes of the inferiors there is something which is not in its view of the common nature, namely, its individuation, the common nature and the inferiors cannot be simply identified.

A similar situation obtains when the inferiors are not singulars but species. In this case the generic concept, prescinding from its differences, remains indeterminate as regards its final determination or specification and is conceived as indeterminate, whereas the species are determinate and are so conceived even though the precise determinations are not yet expressed in their concept:

Unitas generis ex ipsa indeterminatione procedit vel indifferentia, ... quia genus significat aliquam formam, nec tamen determinate hanc vel illam quam differentia determinate exprimit. ... Unde patet quod per additionem differentiae, remota indeterminatione illa quae erat causa unitatis generis, remanet species per essentiam diversa.⁸⁶

Genus significat totum ut non designatum, et differentia ut designans, et definitio ut designatum, sicut et species.⁸⁷

Again because of the difference in the way in which the universal (the genus) and its inferiors (the subordinate species) are conceived, there cannot be an unqualified identification between them, and hence not a relation of identity but at best one of likeness.

⁸⁴ *De Un. Verbi*, 2 c.

⁸⁵ *In I Sent.*, 23, 1, 1 ad 1; cf. 19, 4, 2 sol.: particulare semper se habet ex additione ad universale.

⁸⁶ *De Ente et Ess.*, c. 3, n. 11.

⁸⁷ *In I Sent.*, 25, 1, 1 ad 2.

There are, however, qualifications that need to be made in each of these two types of relations in the matter at hand; and these qualifications greatly reduce the difference that can be found between them. The relation of identity must be so qualified that it does not refer to unity in existence or in primary substance or supposit or in number but rather to unity in form or nature, whether specific or generic. But this is to take identity, not simply and without qualification, but in a qualified sense.⁸⁸ The latter need not be a rationally relation but may be real. But then it verges into a relation of likeness, in the qualified sense in which likeness does not mean unity in quality but rather unity in any form or nature.⁸⁹ And just as identity in its primary meaning must be a rationally relation, but in its secondary meaning may be a real relation, though it need not be; so also likeness, though in its primary sense a real relation, in its secondary sense may, but need not, be a rationally relation:

Similitudo et conformitas, quamvis sint relationes aequiparantiae, non tamen semper utrumque extremorum denominatur in respectu ad alterum; sed tunc tantum quando forma secundum quam attenditur similitudo vel conformitas eadem ratione in utroque extremorum existit. ... Sed quando forma est in uno principaliter, in altero vero quasi secundario, non recipitur similitudinis reciprocatio: sicut dicimus statuam Herculis similem Herculi, sed non e converso; non enim potest dici quod Hercules habeat formam statuæ sed solum quod statua habeat Herculis formam.⁹⁰

The relation of likeness is symmetrical, or reciprocal in species; but it need not be mutual, or reciprocal in reality. An example of the latter case is the relation of likeness between an image or representation and the thing represented, as between a statue and its subject. The subject does not have the form of the statue, but the statue has the form of the subject; and thus the subject is not like the representation, but the representation is like the subject.

Knowledge takes place through a likeness or representation of the thing known in the knower. Although St. Thomas follows Aristotle in

⁸⁸ *S.T.*, I, 28, 1 ad 2: relatio quae importatur per hoc nomen "idem" est relatio rationis tantum si accipitur *simpliciter idem* quia huiusmodi relatio non potest consistere nisi in quodam ordine quem ratio adinvenit alicuius ad seipsum secundum aliquas eius duas considerationes. Secus autem est cum dicuntur aliqua eadem esse non in numero sed in natura generis sive speciei; *In De Div. Nom.*, XI, 2, n. 911 (ed. Pera): Dicitur autem aliquid *simpliciter idem*, non secundum seipsum, sed per relationem ad aliquid quod est alterum: vel ratione aut nomine tantum, sicut si Marcum dicamus idem Tullio vel vestem indumento; aut est alterum secundum rem, sicut si dicamus, "Socrates Platoni est idem *specie* et equus bovi est idem *genere*"; cf. *In X Met.*, 4, nn. 2002-5.

⁸⁹ See above, n. 66.

⁹⁰ *De Ver.*, 23, 7 ad 11; cf. 2, 3 ad 9.

recognizing a resulting formal identity between the knower and the thing known in the intentional or representative order, he insists that this is not identity in the ordinary sense but rather representation: "applicatio cogniti ad cognoscentem, quae cognitionem facit, *non est intelligenda per modum identitatis sed per modum repraesentationis.*"⁹¹ Since representation involves a relation of likeness, he would seem to hold such a relation rather than one of identity, at least for direct or first-intentional knowledge; and this would be the non-mutual relation of likeness belonging to a representation that has just been explained. Now the relationship found in second-intentional knowledge must be founded upon this first-intentional relationship; and it seems that it too must be a relation of likeness of some sort. It can no longer be real because the representation or "likeness" in the intellect is no longer the direct likeness of any real being but rather of the first-intentional likeness. The form thus conceived in the mind is related to the thing known by an indirect or mediated or mediately-founded relation; and it seems that according to the mind of St. Thomas Aquinas this also must be a relation of likeness.

The intention of universality would accordingly be a mutually ratiolate relation of likeness of the abstractly apprehended nature to its singular or less universal inferiors or subjects; and this relation, which is devised by the intellect, is attributed to the apprehended nature as its qualifying characteristic or property.

⁹¹ *Ibid.*, 2, 5 ad 7; cf. *De Ver.*, 4, 4 ad 2: in his quae se habent per modum causae et causati non invenitur, proprie loquendo, reciprocatio similitudinis; dicimus enim quod imago Herculis similatur Herculi, sed non e converso. ... Non exigitur ad veritatem verbi similitudo ad rem quae per verbum dicitur secundum conformitatem naturae sed secundum repraesentationem; *In I Sent.*, 19, 1, 2 sol.: non enim dicitur quod homo sit similis suae imagini, proprie loquendo.

CHAPTER VIII

THE INTENTION OF ATTRIBUTION

The logical intention proper to each of the acts of reason is the outgrowth or product of that act. Because its nature depends upon the nature of the act that produces it, only by first studying the act will it be possible to gain an understanding of the nature of the intention.

The second operation of the intellect goes by the name of judgment. From it there results a product called a proposition, in which something that is apprehended is attributed to something else previously apprehended. Hence the intention proper to judgment is the intention of attribution.

THE SECOND ACT OF UNDERSTANDING

The first act of understanding is simple apprehension, which St. Thomas designates in technical Aristotelian terminology as *indivisibilibium intelligentia*. The second act of understanding is judgment, to use its current designation. *Iudicium* is used by Aquinas primarily in regard to practical, especially moral, matters, but is extended also to speculative compositions.¹ His more frequently used term for this second act, however, is *compositio et divisio*;² for by this act the simple objective concepts or intentions derived from simple apprehension are combined or separated:

Una duarum operationum intellectus est indivisibilium intelligentia: in quantum scilicet intellectus intelligit absolute cuiusque rei quidditatem sive essentiam per

¹ *S.T.*, I-II, 60, 1 ad 1: Nomen iudicii, quod secundum primam impositionem significat rectam determinationem iustorum, ampliatum est ad significandum rectam determinationem in quibuscumque rebus, tam in speculativis quam in practicis.—Used of speculative knowledge: *De Ver.*, 10, 8 c: ad cognitionem enim duo concurrere oportet: scilicet apprehensionem et iudicium de re apprehensa (cf. 12, 12 c); *In De Trin.*, 6, 2 c (prin.): Principium quidem [cognitionis] ad apprehensionem pertinet, terminus ad iudicium; ibi enim cognitio perficitur; *ibid.* (med.): Iudicium autem de unaquaque re potissime fit secundum eius definitivam rationem.—See Francis A. Cunningham, S.J., "Judgment in St. Thomas," *Mod. School.*, XXXI (1953-54), 185-212, especially pp. 202-6.

² See texts quoted chap. III, pp. 50-51, and below.

seipsam, puta quid est homo vel quid album vel quid aliud huiusmodi. Alia vero operatio intellectus est secundum quod huiusmodi simplicia concepta simul componit et dividit.

It is always a comparison of apprehended natures. When by this comparison the intellect perceives that they belong together, it is called composition; and when it perceives that they do not, it is called division:

Quandoque dicitur compositio, quandoque dicitur divisio: compositio quidem quando intellectus comparat unum conceptum alteri, quasi apprehendens conjunctionem aut identitatem rerum quarum sunt conceptiones; divisio autem quando sic comparat unum conceptum alteri ut apprehendat res esse diversas.³

There are some points that deserve examination in this text; but before considering the real foundation and reference of this act, it will be profitable to examine its necessity and its function.

NECESSITY OF THE SECOND ACT

There would be no need at all of this composition and division were it not for the imperfection of human understanding. Simple apprehension alone would suffice if human apprehension were not so limited and incomplete in its grasp:

Si intellectus statim in apprehensione quidditatis subiecti haberet notitiam de omnibus quae possunt attribui subiecto vel removeri ab eo, numquam intelligeret componendo et diviando, sed solum intelligendo quod quid est.⁴

Compositione enim et divisione opus non esset si in hoc ipso quod de aliquo apprehenderet quid est, haberetur quid ei inesset vel non inesset.⁵

Our intellect would grasp everything in a single intuition ("uno intuitu omnia consideraret").

As the power of a soul which is the form of a material body, the human intellect suffers some of the limitations and conditions of matter. Being an intellect, it has as its object the quiddity of things; but being the intellect of man, a composite being, it has an object proportioned to its own state, the quiddity of material and sensible things. Matter, however, is the principle of separation and particularization, with the result that it cannot be shared by a cognitive faculty; and the thing which it individualizes cannot, in so far as it is material, inform any-

³ *In I Perih.*, 3, nn. 3 & 4.

⁴ *S.T.*, I, 58, 4 c.

⁵ *C.G.*, I, 58, Adhuc.

thing else, even a power whose nature it is to take on the form of other things. For this reason the quiddity of these material things cannot be apprehended except in so far as it is dematerialized by the abstractive action of the intellect. As a consequence, the apprehension of the human intellect is abstractive; and herein lies its imperfection: "Quod autem non intelligantur nisi ea quae non sunt secundum se intelligibilia sed fiunt intelligibilia per intellectum, est imperfectus modus intelligendi."⁶ It is not apprehension as such which creates the necessity for the further acts of composition and of discursive reasoning, but the abstraction which characterizes human apprehension. From this there results the disintegration of the intelligible data, the fractioning of the object: "Intellectus non solum sistit in rebus sed res in multas intentiones dividit";⁷ "Intellectus autem noster, quia infimum gradum tenet in substantiis intellectualibus, adeo particulatas similitudines requirit quod unicuique cognoscibili proprio oportet respondere propriam similitudinem in ipso."⁸

The first effect of abstractive apprehension is the disindividualization of the object. What exists as singular, distinct, and diversified is grasped by the intellect without its singularity and diversity and the accompanying differentiation; it is known as common and universal. This, of course, though it is knowledge and is useful, is a very imperfect kind of knowledge:

Intelligere aliquid in communi et non in speciali est imperfecte aliquid cognoscere.⁹

Quod autem cognoscitur in communi tantum, non perfecte cognoscitur: ignorantur enim ea quae sunt praecipua illius rei, scilicet ultimae perfectiones quibus perficitur proprium esse eius; unde tali cognitione magis cognoscitur res in potentia quam in actu.¹⁰

Only the substantial quiddity of the thing is known and only in a universal way; and even this may be known more or less confusedly. We do, in fact, first grasp it confusedly and indeterminately, and only later, if at all, arrive at a differentiated and distinct grasp of it; for generic

⁶ *C.G.*, II, 91, Item.

⁷ *De Ver.*, 8, 4 ad 5; cf. ad 1: de una re cognoscibili possunt intelligi plures rationes; *C.G.*, I, 58, Adhuc seorsum unumquodque.

⁸ *C.G.*, II, 98, Non est. For the human intellect as the lowest of intellectual substances see chap. VII, note 3.

⁹ *S.T.*, I, 14, 6 c (ad prin.).

¹⁰ *C.G.*, I, 50, Item.

knowledge precedes specific.¹¹ And even when the substantial quiddity is distinctly grasped in the apprehension of the species, though this is perfect knowledge of that quiddity, it is not perfect knowledge of the concrete being whose quiddity is known; for this abstracting quidditative grasp gives knowledge only of the substance according to its formal principles but not of its individuality or of its accidents.

The second effect of abstraction, which follows from the disindividuation, is that the quiddities of substance and accidents are known separately. First the substantial quiddity of the thing is known; and it is known "absolutely," without anything else except what belongs to its own intelligible character or is included in its definition. Because accidents are not included in the *ratio* of the substance, they are not grasped in the quidditative apprehension of the substance. After the substance is grasped, the accidents are made the object of knowledge; their quiddity also is grasped, and this absolutely and independently of everything else, just as the quiddity of the substance was grasped:

Intellectus humanus non statim in prima apprehensione capit perfectam rei cognitionem; sed primo apprehendit aliquid de ipsa, puta quidditatem ipsius rei, quae est primum obiectum intellectus; et deinde intelligit proprietates et accidentia et habitudines circumstantes rei essentiam.¹²

Intellectus noster diversas conceptiones format ad cognoscendum subiectum et accidens, et ad cognoscendum diversa accidentia.¹³

Besides grasping the accidents separately from the substance, our intellect grasps the accidents separately from each other, even though they exist together in reality:

¹¹ *S.T.*, I, 85, 3 c: Intellectus noster de potentia in actum procedit. Omne autem quod procedit de potentia in actum prius pervenit ad actum incompletum. ... Actus autem incompletus est scientia imperfecta per quam sciuntur res indistincte sub quadam confusione. ... Secundum intellectum cognitio magis communis est prior quam cognitio minus communis. (But see the whole article); 14, 6 c: Unde intellectus noster, dum de potentia in actum reducitur, pertingit primo ad cognitionem universalem et confusam de rebus quam ad propriam rerum cognitionem, sicut de imperfecto ad perfectum procedens; *C.G.*, II, 98, Non est: Per similitudinem enim animalis, per quam cognoscimus aliquid in genere tantum, imperfectiorem cognitionem habemus quam per similitudinem hominis, per quam cognoscimus speciem completam: cognoscere autem aliquid secundum genus tantum est cognoscere imperfecte et quasi in potentia, cognoscere autem in specie est cognoscere perfecte et in actu; *In I Phys.*, 1, n. 7: dum intellectus noster procedit de potentia in actum, primo occurrit sibi confusum quam distinctum; sed tunc est scientia completa in actu quando pervenitur per resolutionem ad distinctam cognitionem principiorum et elementorum.

¹² *S.T.*, I, 85, 5 c; cf. *In VII Met.*, 5, n. 1379: omnia accidentia hominis excluduntur a significatione humanitatis. ... Unde licet in significatione hominis non includuntur accidentia eius, non tamen homo significat aliquid separatum ab accidentibus; 1, n. 1259

¹³ *De Ver.*, 2, 7 c (ad fin.).

Multa sunt coniuncta secundum rem quorum unum non est de intellectu alterius; sicut album et musicum coniunguntur in aliquo subiecto, et tamen unum non est de intellectu alterius; et ideo potest unum separatim intelligi sine alio. Et hoc est unum intellectum esse abstractum ab alio.¹⁴

This must be so because whatever is grasped as having a distinct *ratio* or quiddity, must be grasped by a distinct act of apprehension, since the intellect cannot at the same time grasp many things as many.¹⁵

This does not mean that accidents are grasped as if they were without substance; for their direct apprehension is in the concrete, as, e.g., white rather than whiteness. And although white implies a subject, which is the substance, it does not mean substance directly but only indirectly and by implication. Whiteness, on the other hand, does not mean substance at all:

Album ut in praedicamentis dicitur solam qualitatem significat. Hoc autem nomen album significat subiectum ex consequenti, in quantum significat albedinem per modum accidentis. Unde oportet quod ex consequenti includit in sui ratione subiectum. Nam accidentis esse est inesse. Albedo enim etsi significat accidens, non tamen per modum accidentis sed per modum substantiae. Unde nullo modo consignificat substantiam.¹⁶

The accident can indeed be grasped in either way, either as a whole designated in this accidental way, or as a form alone. The difference is in the kind of abstraction.

Two kinds of abstraction are distinguished and must be taken into account in the study of our mode of understanding. By the first kind of abstraction a whole is grasped, but in a universal way, without individuating conditions. It is grasped as an intelligible whole. By the second kind of abstraction a form alone is grasped apart from the subject in which it inheres, but precisely as a part:

Duplex fit abstractio per intellectum. Una quidem secundum quod universale abstrahitur a particulari, ut animal ab homine. Alia vero secundum quod forma abstrahitur a materia; sicut forma circuli abstrahitur per intellectum ab omni materia sensibili.¹⁷

¹⁴ *In II Phys.*, 3, n. 5; cf. *In I Perih.*, 10, n. 4: Ea vero quae sunt coniuncta in rebus intellectus potest distinguere quando unum eorum non cadit in ratione alterius; *In III De An.*, 8, n. 717: Nihil enim prohibet duorum ad invicem coniunctorum unum intelligi absque hoc quod intelligatur aliud; *C.G.*, II, 75, Nec tamen: Quae enim coniuncta sunt in re interdum divisim cognoscuntur.

¹⁵ *S.T.*, I, 85, 4 c; 12, 10 c; 58, 2 c; *C.G.*, I, 55, Intellectus; II, 60. Adhuc?; *De Ver.*, 8, 14 c.; *Quodl.* VII, 2 c.

¹⁶ *In V Met.*, 9, n. 894; *In VIII Met.*, 1, nn. 1251-59; *In II De An.*, 1, n. 213; *In I Perih.*, 10, n. 6.

¹⁷ *S.T.*, I, 40, 3 c; cf. *In De Trin.*, 5, 3 c (med. et fin.); *Comp. Theol.*, I, 62; *In III Met.*, 7, n. 405; *In VIII Met.*, 1, nn. 1683 & 1687. *In De Trin.*, 5, 3 is the principal passage explaining the three kinds of "abstraction" or distinction which found the distinction of natural philosophy, mathematics, and metaphysics. The third kind of distinction is "separation," which is effected by judgment.

It is according to the second kind of abstraction, by which a form is considered without the matter of the composite, that the term *abstract* is opposed to *concrete*:

Intellectus noster potest in abstractione considerare quod in concretionem cognoscit. Etsi enim cognoscat res habentes formam in materiam, tamen resolvit compositum in utrumque, et considerat ipsam formam per se.¹⁸

In rebus sensibilibus ... ad significandum simplices formas nominibus abstractis utimur; ad significandum vero res subsistentes utimur nominibus concretis.¹⁹

Even though this type of abstraction of forms is not found in every apprehension, still it is frequent, and in any case presents a problem for the explanation of knowledge as a whole.

The final kind of separation in thought effected by abstractive apprehension is that of beings from their particular act of being.²⁰ What is

¹⁸ S.T., I, 12, 4 ad 3; cf. C.G., I, 30, Dico; *In VII Met.*, 5, nn. 1378-80.

¹⁹ S.T., I, 32, 2 c; cf. 13, 1 ad 2; *In I Sent.*, 33, 1, 2 sol.

²⁰ This and subsequent statements about abstraction and the affirmation of *esse* in judgment do not intend to imply that the quiddity which is known in simple apprehension is cut off from the act of being by a precision. To be apprehended without any particular mode of being is not to be apprehended as if it were not oriented to the act of being. Such a precision from *esse* is expressly denied by St. Thomas: "Patet ergo quod natura hominis absolute considerata abstrahat a quolibet esse, ita tamen quod non fiat praecisio alicuius eorum" (*De Ente et Ess.*, c. 3, n. 15—ed. Perrier). It would be contradictory to attempt to conceive of an essence without a reference to existence, since essence is nothing other than the manner in which a thing exercises its act of existing: "Essentia dicitur secundum quod per eam et in ea ens habet esse" (*ibid.*, c. 1, n. 3). An essence or quiddity is always the essence or quiddity of something; that is to say, of some being. In some sense before an essence is grasped as essence, being is grasped; for "primo in intellectu cadit ens" (*In I Met.*, 2, n. 46); and before anything is conceived as a particular kind of thing, being is conceived; for "illud quod primo intellectus concipit quasi notissimum et in quo omnes conceptiones resolvit, est ens" (*De Ver.* 1, 1 c, prin.).

For a thing to be known it must be in the knower: "cognitio autem fit per hoc, quod cognitum est aliquo modo in cognoscente" (*In II De An.*, 12, n. 377): and "omne autem intellectum in quantum intellectum oportet esse in intelligente" (C.G., IV, 11, Hoc). That means that it is a being exercising an act of existence in the knower. At the same time the knower too must be exercising this same act because, in knowing, the act of the knower and of the thing known are the same: "Cognoscens in actu est ipsum cognitum in actu" (*In II De An.*, 12, n. 377).

When this being which exists in the intellect as well as in reality is apprehended in simple apprehension, the man becomes aware of what kind of being it is. In that awareness there is no direct attention to the particular mode of existing which is being exercised; but neither is there the apprehension of the quiddity as if it had no act of existence nor of a quiddity that is not the quiddity of something. Since form is the principle of existing ("forma est principium essendi"—*In De Heb.*, 2, n. 27—ed. Calcaterra; cf. below, note 144) and essence is the manner in which the thing exercises its act of being, when the form or essence of a thing is apprehended by the intellect, existence is implicitly in the apprehension, even though only the manner or kind of being is explicitly present to consciousness. It is left to judgment to give the explicit awareness of the act of existing and to affirm that act. Because there are in a thing both essence or quiddity and existence, there are two corresponding operations: "Cum in re duo sint, quidditas rei et esse eius, his duobus respondet duplex operatio intellectus" (*In I Sent.*, 38, 1, 3 sol).

For a fuller treatment of this question see Gilson, *Le Réalisme Thomiste*, chap. 7, "Le sujet connaissant," and chap. 8, "L'appréhension de l'existence"; and *Being and Some Philosophers*, chap. 6, "Knowledge and Existence," especially pp. 202-209.

grasped by a simple apprehension in regard to beings is their quiddity; and that holds true whether the being in question is a substance or an accident. But the quiddity is grasped absolutely, according to the absolute consideration of the nature.²¹ And this manner of considering the nature abstracts from existence either in singular real things or in the intellect: "Tertia vero est consideratio naturae absoluta, prout abstrahit ab utroque esse [vel in singularibus vel in intellectu]";²² "Patet ergo quod natura hominis absolute considerata abstrahit a quolibet esse."²³ Even if it were not expressly stated that the abstracted quiddity is apprehended without its act of existence, this would naturally be concluded from the fact that it is grasped apart from the individuals and without the individuating conditions in which alone the nature has existence.

Abstractive apprehension, accordingly, by separating in thought what exists together in reality, presents only partial views or aspects of the real thing which is known: "Intellectus vero ea quae sunt in esse coniuncta interdum disiunctim accipere potest, quando unum eorum in alterius rationem non cadit";²⁴ "Quae enim coniuncta sunt in re interdum divisim cognoscuntur."²⁵ These views of the real, because they are many, must be obtained successively, one after the other; and thus the cognition of our human intellect falls under the vicissitudes of time: "Intellectus est supra tempus, quod est numerus motus corporali-um rerum. Sed ipsa pluralitas specierum intelligibilium causat vicissitudinem quamdam intelligibilium operationum, secundum quam una operatio est prior altera."²⁶ In our apprehension both objects and operations are multiplied:

Intellectus successive multa considerantis impossibile est esse unam tantum operationem: cum enim operationes secundum obiecta differant, oportebit diversam esse operationem intellectus qua considerabitur primum et qua considerabitur secundum.²⁷

The problem that accordingly arises regarding our cognition is how we can know the real thing as it is—as one, as existing, as composed of matter and form, of substance and accidents, all existing together in one real subject—when our apprehension analyzes and disintegrates it into many intelligible objects. As long as these many objects remain

²¹ See chap. V, pp. 112-113.

²² *Quodl.* VIII, 1 c.

²³ *De Ente et Ess.*, c. 3, n. 15 (ed. Perrier).

²⁴ *C.G.*, I, 54, In his.

²⁵ *C.G.*, II, 74, Nec tamen.

²⁶ *S.T.*, I, 85, 4 ad 1.

²⁷ *C.G.*, I, 55, Amplius.

many, we cannot know them all at the same time or as representing one real thing. There is need of some further operation which will re-integrate, synthesize, and concretize in our thought the various aspects or determinations analytically apprehended.

FUNCTION AND NATURE OF JUDGMENT

Although many things cannot at the same time be known as many, they can all be known if they can somehow be brought into the same view and be seen as one. Because no being can at the same time be informed with more than one form of the same kind, and all intelligible species are of one genus in regard to the information of the intellect, only one species can be present to the intellect at one time. And thus only so much can be simultaneously known as is represented in one species.²⁸

The problem, then, is to find one intelligible species that will unite several different ones in some way so that they no longer are seen as many but in some sense as one. For the same thing can be many from one point of view and one from another, as the parts of a whole may be looked at separately or they may all be regarded together as one whole.²⁹

Composition by Comparison

The intellect must somehow construct an intelligible whole out of the separated data of simple apprehension; it must join the abstracted natures. This it does by comparing them with one another; for the terms of a comparison, because put into relationship with each other, are now no longer seen as two distinct things but as one. Correlatives are known together: "Qui enim comparisonem duorum considerat intentionem ad utrumque dirigit et simul intuetur utrumque";³⁰ "In uno enim relativo est intellectus alterius relativi."³¹ Then when the

²⁸ *S.T.*, I, 85, 4 c; 12 10 c; 58, 2 c; *Quodl.* VII, 2 c; *De Ver.*, 8, 14 c; *C.G.*, I, 55; *In III Sent.*, 14, 1, 2, sol. 4; cf. *De Ver.*, 21, 3 c: unumquodque intelligibile est in quantum est unum; qui enim non intelligit unum, nihil intelligit.

²⁹ *S.T.*, I, 58, 2 c: ad unitatem operationis requiritur unitas obiecti: Contingit autem aliqua accipi ut plura et ut unum, sicut partes alicuius continui. Si enim unaquaeque per se accipiatur, plures sunt; unde et non una operatione nec simul accipiuntur per sensum et intellectum. Alio modo accipiuntur secundum quod sunt unum in toto, et sic simul una operatione cognoscuntur tam per sensum quam per intellectum, dum totum continuum consideratur. *De Ver.*, 8, 14 c (fin.); *Quodl.* VII, 2 c (prin.).

³⁰ *C.G.*, I, 55, Item¹; cf. *In IV Sent.*, 15, 4, 2, sol. 5 ad 3: ea quae habent ordinationem adinvicem possunt simul intelligi in quantum huiusmodi, quia in quantum adinvicem ordinata accipiuntur, sic intellectus eorum ordinem comprehendendo, ea unum facit.

³¹ *De Pot.*, 7, 10 ad 4; cf. *De Ver.*, 2, 3 s.c. 2: cognito uno relativorum cognoscitur aliud

intellect sees concepts as related, it sees them as one.³² By comparing the apprehended natures the intellect grasps the terms of the comparison together; it can perceive the likeness or difference of these natures and apprehend their identity or conjunction, their divergence or separation.

As an operation of the intellect, judgment is always a composition, since it brings two concepts together; but from the point of view of the apprehended natures it will be either composition or division, according as they are perceived to belong together or not:

Si consideremus ea quae sunt circa intellectum secundum se, semper est compositio ubi est veritas et falsitas; quae numquam invenitur in intellectu nisi per hoc quod intellectus comparat unum simplicem conceptum alteri. Sed si referatur ad rem, quandoque dicitur compositio, quandoque dicitur divisio. Compositio quidem quando intellectus comparat unum conceptum alteri, quasi *apprehendens coniunctionem aut identitatem rerum* quarum sunt conceptiones; divisio autem quando sic comparat unum conceptum alteri ut apprehendat res esse diversas. Et per hunc etiam modum in vocibus affirmatio dicitur compositio in quantum coniunctionem ex parte rei significat; negatio vero dicitur divisio in quantum significat rerum separationem.³³

By virtue of the comparison which the intellect makes between simple concepts, it joins them into one intelligible object, one *intellectum*:

In illis intelligibilibus in quibus est verum et falsum est iam quaedam compositio intellectuum, idest rerum intellectarum: sicut quando ex multis fit aliquid unum. ... Intellectus multa incomplexa prius comparata componit, et facit ex eis unum intellectum.³⁴

The uniting or "composition" of the diverse concepts does not destroy the distinction which they have in reason by virtue of their apprehension and from their own intelligible character, and does not form an absolute unity of them; but it does effect a union between them:

³² *De Ver.*, 13, 3 c: Ad actum cuiuslibet cognoscitivae potentiae requiritur intentio. ... Intentio autem unius non potest ferri ad multa simul nisi forte illa multa hoc modo sint *adinvicem ordinata*, ut accipiantur quasi unum; *S.T.*, I, 58, 2 c: Et sic intellectus noster simul intelligit ... *dua comparata* secundum quod conveniunt in una comparatione. *Quodl.* VII, 2 c (ad fin.): Et cum intelligit similitudinem vel differentiam aliquorum, simul intelligit ea quorum est similitudo vel differentia.

³³ *In I Pevih.*, 3, n. 4.

³⁴ *In III De An.*, 11, n. 747; cf. *In VI Met.*, 4, n. 1241: Sed illa compositio vel divisio qua intellectus coniungit vel dividit sua concepta est tantum in intellectu, non in rebus. Consistit enim in quadam duorum comparatione conceptorum; sive illa duo sint idem secundum rem sive diversa; *In III Sent.*, 14, 1, 2, sol. 4: homo ... intelligens propositionem simul intelligit praedicatum et subiectum quia intelligit ea ut unum; *De Ver.*, 8, 14 c (post med.): intellectus, quando considerat propositionem, considerat multa ut unum; et ideo in quantum sunt unum, simul intelliguntur dum intelligitur una propositio quae ex eis constat; *S.T.*, I, 58, 2 c: intellectus noster simul intelligit subiectum et praedicatum prout sunt partes unius propositionis, et duo comparata secundum quod conveniunt in una comparatione.

“Compositio est quaedam imitatio unitatis: unde et unio dicitur.”³⁵ A union makes diverse things one. It does not make a simple unity, because of the diversity of the elements; but it can effect a unit which is *simply* one, as opposed to a unit *in a certain sense (secundum quid)*. A pile of rocks, inasmuch as it is *one* pile, is a unit, but only in a certain sense. A potentially divisible being, however, such as a line, or a composite being, as a material substance composed of matter and form, is truly and simply one (*unum simpliciter* though not *unum simplex*). Union can have both of these senses. The latter kind of union is also called *concretion*, because the elements exist together as one and exercise one act of being.³⁶

The composition of the second act of understanding is an act of uniting and making many one because it signifies the objective union and concretion of the natures represented by the concepts. It reintegrates the real and concretizes the natures. Because abstractive apprehension grasps natures as universalized and known out of their inferiors, and accidents as out of their substances, judgment must put back the accidents into their substances and the quiddities into their inferiors, as a form into matter: “Et propter hoc, ea quae seorsum intelligimus, oportet nos in unum redigere per modum compositionis vel divisionis, enuntiationem formando.”³⁷

Forms or natures that exist together in one subject (“quae enim coniuncta sunt in re”) are apprehended apart (“interdum divisim cognoscuntur”).³⁸ For this reason, if we are to know the real thing as it is, as one subject and one being, we must see it reintegrated, with accidents in the substance and various accidents joined in the one being:

Intellectus noster diversas conceptiones format ad cognoscendum subiectum et accidens, et ad cognoscendum diversa accidentia; et ideo discurrit de cognitione substantiae ad cognitionem accidentis; et iterum ad hoc quod inhaerentiam unius ad alterum cognoscat, componit alteram speciem cum altera, et unit eas quodammodo; et sic in seispo enuntiabilia format.³⁹

When we know a quiddity in the individual in which it exists and an accident in its substance, we know that being as concrete. Since it is

³⁵ *De Ver.*, 2, 7 ad 3; cf. *De Pot.*, 7, 1 ad 10: nam omnis compositio est unio.

³⁶ *In III Sent.*, 27, 1, 1 ad 5: Unio est duplex. Quaedam quae facit unum *secundum quid*, sicut unio congregatorum se superficialiter tangentium. ... Alia est unio quae facit unum *simpliciter*, sicut unio continuorum, et formae et materiae ...; et ideo super unionem addit concretionem, ad differentiam primae unionis, quia concreta dicuntur quae simpliciter sunt unum effecta.

³⁷ *S.T.*, I, 14, 14 c; cf. 85, 5 c.

³⁸ *C.G.*, II, 75, Nec tamen; cf. *C.G.*, I, 54, In his: Intellectus vero ea quae sunt in esse coniuncta interdum disiunctim accipere potest.

³⁹ *De Ver.*, 2, 7 c.

the cognition of sensible being (which is proportioned to our nature) that is under discussion, the real object of our knowledge will be a composite being, having a form in matter, a common nature in an individual, accidents in substance. Our knowledge must recognize and in some way reproduce this composition and concretion. This is what judgment does. By joining the universal concept to its inferior judgment reproduces, in the manner of the intellect, the composition of matter and form in the real thing; and by joining the concept of an accident to that of its substance, it reproduces the concrete whole. It must not be assumed, however, that the composition of the intellect is just like that of the thing; for the elements which go to compound the real thing are really distinct, whereas the things signified by the concepts which are joined by judgment are not really distinct but identified in reality.⁴⁰

The intellect does not pretend to identify the natures in the absolute or abstract state, but does perceive and affirm the identity of the things which have these natures. The abstraction by which the universal is derived is, as was seen in the last chapter, an abstraction of a whole, not of a part or merely of the form. Though the quiddity is apprehended apart from any individual subject, it is not apprehended as without any subject at all. In the composition effected by the intellect the common whole is placed in a determined subject. This is the concretion necessary for truth:

Cum autem intellectus compositionem format, accipit duo quorum unum se habet ut formale respectu alterius: unde accipit id ut in alio existens, propter quod praedicata tenentur formaliter. Et ideo, si talis operatio intellectus ad rem debeat reduci sicut ad causam, oportet quod in compositis substantiis ipsa compositio formae ad materiam, aut eius quod se habet per modum formae et materiae, vel etiam compositio accidentis ad subiectum, respondeat quasi fundamentum et causa veritatis, compositioni quam intellectus interius format et exprimit voce.⁴¹

Testimony of Concrete Existence

From the fact that the intellect reproduces in its own way the concretion of the real external thing which is known, it is clear that there is another comparison involved besides that of one concept to another—the comparison of both of the concepts to the real thing; or it might more accurately be said that the concepts are compared to each other

⁴⁰ *S.T.*, I, 85, 5 ad 3: compositioni et divisioni intellectus respondet quidem aliquid ex parte rei; tamen non eodem modo se habet in re sicut in intellectu. ... Differt compositio intellectus a compositione rei; nam ea quae componuntur in re sunt diversa; compositio autem intellectus est signum identitatis eorum quae componuntur.

⁴¹ *In IX Met.*, 11, n. 1898.

by comparing them both to the thing which exists in reality.⁴² The apprehended natures are joined or separated according to the composition of the real thing; and the fact of joining them is the testimony of the intellect that the composition of these concepts corresponds to the composition of the thing.⁴³ The intellect testifies that the intelligible objects which the concepts represent are joined in reality: the thing is in the composite manner of existing in which the intellect represents it.

The real existence of a composite thing results from the composition of its elements: "Omne compositum habet esse secundum quod ea ex quibus componitur uniuntur";⁴⁴ "Esse compositorum surgit ex componentibus."⁴⁵ Especially, the supervention of the form upon the matter causes the composite to be: "Forma dat esse materiae" and "forma facit esse in actu."⁴⁶ This holds true, with modifications, whether the form is the substantial form and the matter is prime matter, or the form is an accidental form and the matter is the substance taken as second matter.⁴⁷ The thing will therefore be signified by the intellect as existing, in that act in which the intellect imitates the "putting together of the principles" of the thing, namely, in composition, and only there:

Duplex est operatio intellectus. Una quae dicitur intelligentia indivisibilium, qua cognoscitur de unoquoque quid est. Alia vero est qua componit et dividit, scilicet enuntiationem negativam vel affirmativam formando. Et hae quidem duae operationes duobus quae sunt in rebus respondent. Prima quidem operatio respicit ipsam naturam rei, secundum quam res intellecta aliquem gradum in

⁴² Cf. *C.G.*, I, 59, Amplius: Incomplexum autem, quantum est de se, non continet aliquam comparisonem vel applicationem ad rem. Unde de se nec verum nec falsum dici potest; sed tantum complexum, in quo designatur comparatio incomplexi ad rem per notam compositionis aut divisionis.

⁴³ The comparison of the apprehended natures to reality, of course, requires and involves the intervention of the senses and imagination, since our knowledge begins from sense and in some way is always reduced to sense data: Iudicium non dependet tantum a receptione speciei, sed ex hoc quod ea de quibus iudicatur examinantur ad aliquod principium cognitionis, sicut de conclusionibus iudicamus eas in principia resolvendo. ... Sed quia primum principium cognitionis est sensus, oportet ad sensum quodammodo resolvere omnia de quibus iudicamus (*De Ver.*, 12, 3 ad 2). See *In De Trin.*, 6, 2 c for further precisions regarding the termination of our cognition.

⁴⁴ *De Pot.*, 7, 1 c.

⁴⁵ *In IX Met.*, 11, n. 1903; cf. *In I Sent.*, 23, 1, 1 sol.: esse consequitur compositionem materiae et formae; 38, 1, 3 sol.

⁴⁶ *De Prin. Nat.* (ad prin.), n. 2 (ed. Perrier).

⁴⁷ *Ibid.*; *In De Heb.*, lect. 2, n. 27 (ed. Calcaterra): Quia enim forma est principium essendi, necesse est quod secundum quamlibet formam habitam habens aequaliter esse dicatur; *S.T.*, I, 14, 4 c: esse sequitur formam; *De Ente et Ess.*, c. 2, n. 4 (ed. Perrier): Per formam enim, quae est actus materiae, materia efficitur ens actu et hoc aliquid. Unde illud quod superadvenit non dat esse actu simpliciter materiae, sed esse actu tale, sicut accidentia faciunt; ut albedo facit actu album.

entibus obtinet; sive sit res completa, ut totum aliquod, sive incompleta, ut pars vel accidens. *Secunda vero operatio respicit ipsum esse rei, quod quidem resultat ex congregatione principiorum rei in compositis.*⁴⁸

Simple apprehension is concerned with the nature or quiddity of things considered in itself and regardless of its actual individuation, concretion, or existence. Judgment, by representing the actual concretion of things, posits in thought their existence; thus it "looks to the act of being of the thing."

In any act of cognition the thing is known through the existence which it has in the intellect; yet it is known in its own act of being:

Et si aliquis cognoscens cognoscat cognitum secundum esse quod habet in cognoscente, nihilominus cognoscit ipsum secundum esse quod habet extra cognoscentem; sicut intellectus cognoscit lapidem secundum esse intelligibile quod habet in intellectu inquantum cognoscit se intelligere, sed nihilominus cognoscit esse lapidis in propria natura.⁴⁹

If this is true of all cognition, including simple apprehension, it is particularly true of judgment, where the act of being which the thing has in the intellect is the conscious sign of the act of being which it exercises in reality, and where the very act of existence of the thing is expressly known. In judgment some of the words in this text take on a new force; for the reflex knowledge of the act of existence which the object has in the intellect ("secundum esse intelligibile quod habet in intellectu, inquantum cognoscit se intelligere") is not just an accessory but an essential part of judgment. Not only does the thing known exist in the intellect and the intellect understand it, but the intellect *knows* that it understands, and by being aware of its own act, it is aware of the objective significance of that act and can make affirmations about the thing known.⁵⁰

⁴⁸ *In De Trin.*, 5, 3 c (prin.); cf. *In I Sent.*, 19, 5, 1 ad 7: prima operatio respicit quidditatem rei; secunda respicit esse ipsius; 38, 1, 3 sol.: Cum in re duo sint, quidditas rei et esse eius, his duobus respondet duplex operatio intellectus: una quae dicitur a philosophis formatio, qua apprehendit quidditates rerum, quae etiam dicitur indivisibilium intelligentia; alia autem comprehendit esse rei, componendo affirmationem, quia etiam esse rei ex materia et forma compositae, a qua cognitionem accipit, consistit in quadam compositione formae ad materiam vel accidentis ad subiectum; ad 2: Intellectus noster, cuius cognitio a rebus oritur quae esse compositum habent, non apprehendit illud esse nisi componendo et dividendo.

⁴⁹ *S.T.*, I, 14, 6 ad 1; cf. *De Ver.*, 14, 8 ad 5: res cognita dicitur esse cognitionis obiectum secundum quod est extra cognoscentem in seipsa subsistens, quamvis de re tali non est cognitio nisi per id quod de ipsa est in cognoscente. ... [Veritatem] intellectus noster accipit suo modo per viam compositionis.—The function of *to be* in judgment as the sign of the real act of being of the thing will be discussed a little more fully later regarding the proposition, in the section "*To Be as the Sign of Composition.*"

⁵⁰ *In III Sent.*, 23, 1, 2 ad 3: intellectus ..., sicut alia, cognoscit seipsum. ... Cognoscit actus sui naturam, et ex natura actus naturam potentiae cognoscentis, et ex natura

Truth in Judgment

Because judgment is a composition or synthesis expressing about the thing concerning which knowledge is being acquired what is apprehended about it, and because it is an assertion about the existence of the thing, either the simple fact of its existence or the manner in which it exists, judgment has another property: it is necessarily either true or false.

In distinguishing from simple apprehension or "the understanding of simple objects" a second operation which is compositive, Aristotle says that in the first there is no question of its being false but that the second is characterized by truth or falsity.⁵¹ St. Thomas follows this lead, especially in his commentaries on Aristotle.⁵² *True* and *false* are terms that properly apply to assertion; for *true* means to say that what is, is, and that what is not, is not; and *false* means to say that what is not is or that what is, is not: "Verum nihil est aliud quam dicere esse quod est vel non esse quod non est. Falsum autem, dicere non esse quod est vel esse quod non est."⁵³ Truth, then, means the agreement or correspondence of our assertions with reality.

Agreement or correspondence belongs in some way to all knowledge because knowledge involves likeness—a likeness of the thing known in the knower and the likeness of the knower to the thing known, as has been seen. All knowledge is accordingly an assimilation: "Omnis cognitio est per assimilationem cognoscentis ad cognitum."⁵⁴

potentiae naturam essentiae. ... Cognoscit rationem veri secundum quam est eius obiectum; *S.T.*, I, 87, 3 c; *De Ver.*, 2, 2 ad 2; 10, 9 c; and especially *De Ver.*, 1, 9 c. On this last text see C. Boyer, S.J., "Le sens d'un texte de Saint Thomas: *De Verit.*, I, a. 9," *Gregorianum*, V (1924), 424-443; translated into English in Hoenen, *Reality and Judgment*, appendix, pp. 295-309.

⁵¹ *De An.*, III, 6, 430a 26-28.

⁵² *In III De An.*, 11, n. 746: una operationum intellectus est secundum quod intelligit individibilia, ... circa quae non est falsum; n. 747: Sed in illis intelligibilibus in quibus est verum et falsum est iam quaedam compositio intellectuum, idest rerum intellectarum; ... in qua compositione quandoque est veritas, quandoque falsitas; n. 748: Veritas quidem quando componit ea quae in re sunt unum et composita. ... Falsa autem compositio est quando componit ea quae non sunt composita in re.

In VI Met., 4, n. 1224: [conceptiones] quae ... sunt simplices non habent veritatem neque falsitatem, sed solum illae quae sunt complexae per affirmationem vel negationem; n. 1225: praedictum ens et non ens, scilicet verum et falsum, consistunt in compositione et divisione; n. 1227: verum et falsum consistunt in compositione et divisione; n. 1236: veritas non est in rebus sed solum in mente, et etiam in compositione et divisione.

In I Perih., 3, n. 2: duplex est operatio, ... in quarum una non invenitur verum et falsum, in altera autem invenitur; n. 6: veritas ... sicut in dicente vel cognoscente verum non invenitur nisi secundum compositionem et divisionem; n. 9: veritas et falsitas sicut in cognoscente et dicente non est nisi circa compositionem et divisionem.

⁵³ *In IV Met.*, 17, n. 740; cf. n. 736; 16, n. 721; *C.G.*, I, 59, Cum enim; 62, Sicut (with Aristotle, *Met.*, I, 7, 1011b 25-29).

⁵⁴ *De Ver.*, 8, 5 c; cf. *De Malo*, 16, 8 ob. 10 & ad 10; *In I Sent.*, 36, 1, 1 ob. 3; *S.T.*, I, 12, 9 ob. 1; *C.G.*, I, 65, Item².

In discussions of truth the classical term in medieval philosophy for this correspondence or likeness is *adaequatio*.⁵⁵ Originally and in its primary signification it is a quantitative term referring to equality. As a verbal noun it means first of all the act of making equal. But because these *-tio* nouns are frequently extended from the action to the resulting state in the effect,⁵⁶ it means also the equality that results.⁵⁷ Other quantitative expressions used of truth, though less frequently, are *proportio*⁵⁸ and *commensuratio*,⁵⁹ which implies both making commensurate and commensurateness. As applied to truth the quantitative aspect of these terms cannot, of course, be taken literally. In cognition the unity or identification that is found is not in quantity but in form or nature. Hence "equality" in this context means agreement in form, that is, likeness or conformity. In fact, *conformitas*, which both in its etymology and in practice means agreement in form,⁶⁰ is not infrequently used in this context.⁶¹ Truth, then, is the conformity of knowledge and the thing known. And because it is the truth of knowledge that is in question and truth is a relation, knowledge must be the subject of this relation and the thing its term. Consequently, this truth is the relation of conformity of knowledge to the thing known.

Although all knowledge involves likeness or conformity, not all knowledge has the conformity that is genuinely characteristic of knowledge and that constitutes truth. First of all, though the con-

⁵⁵ *De Ver.*, 1, 1 c: Veritas est adaequatio rei et intellectus; 2 c & ad 1; 3 c; 4 ad 7 in contr.; 5 c: veritas adaequationem et commensurationem importat; 6 c & ad 2; 8 c & ad 1; 10 c; *In I Sent.*, 19, 5, 1 sol.; 2 ad 2; 3 ad 5; *C.G.*, I, 59, Cum enim; 61, Praeterea; *S.T.*, I, 16, 1 c; 2 ob. 2; 21, 2 c; *In III De An.*, 11, n. 760: Veritas enim et falsitas consistit in quadam adaequatione vel comparatione unius ad alterum, quae quidem est in compositione vel divisione; *De Carit.*, 9 ad 1.—The definition "adaequatio rei et intellectus" is attributed to Isaac Israeli, *Liber de Definitionibus* (edition of the work by J. T. Muckle, C.S.B., *Archives d'histoire doctrinale et littéraire du moyen-âge*, XI [1937-38] 300-340; see pp. 322-23), but see Muckle, "Isaac Israeli's Definition of Truth," *ibid.*, VIII (1932), 5-8; and a note in the Quaracchi edition of *Sancti Bonaventurae Opera Omnia*, I, 707, n. 5.

⁵⁶ Cf., e.g., *extensio*, *intensio*, *remissio*, *submissio*, *abstractio*, *concretio*, *separatio*, *praeparatio*, *cautio*, *commensuratio*, *deliberatio*, *ordinatio*, which mean not only the act of extending, intensifying, slackening, submitting, abstracting, making concrete, separating, preparing, taking care or cautioning, applying a common measure, deliberating, and ordering, but also extendedness, intensity, slackness, submissiveness, abstractness, concreteness, deliberateness, and order.

⁵⁷ Hence for truth *aequalitas* is found: *De Ver.*, 1, 3 c; *C.G.*, I, 59, Amplius; 62, Praeterea; *S.T.*, I, 85, 7 ob. 2; II-II, 109, 1 c; 110, 2 c; *De Carit.*, 9 ad 1.

⁵⁸ *De Ver.*, 1, 9 c; *In I Sent.*, 19, 5, 2 sol.

⁵⁹ *De Ver.*, 1, 5 c: veritas adaequationem et commensurationem importat; *In I Sent.*, 19, 5, 2 ad 2: veritas non est mensura sed commensuratio vel adaequatio; 1 sol.

⁶⁰ *In I Sent.*, 48, 1, 1 sol.: conformitas est convenientia in forma una, et sic est idem quod similitudo; ob. 3; ob. 4; 2 ob. 1.

⁶¹ *S.T.*, I, 16, 2 c: per conformitatem intellectus et rei veritas definitur; 1 c; 21, 2 ad 2; *In I Perih.*, 3, nn. 7, 9, 10; *De Ver.*, 1, 1 c; 4 ad 1 in contr.; 9 c; *In De Trin.*, 5, 3 c.

formity, likeness, or "equality" (*adaequatio*) of truth is a relation, it is not merely a relation—i.e., not merely the relationship resulting from the passive possession of a common form—but something of the verbal force of the nouns used, as *adaequatio*, *commensuratio*, and *assimilatio*, is preserved: the activity of making equal, commensurate, similar, or conformed is connoted.⁶² For this reason the formal character of truth is said to be completed or fulfilled by the action of the intellect: "in ipsa operatione intellectus accipientis esse rei sicut est, per quamdam similationem ad ipsum, completur ratio adaequationis in qua consistit ratio veritatis."⁶³ In its strict formality, then, truth implies a relation not only in its passive sense, as the mere relationship that is set up, but also in its active sense, as the act of relating.⁶⁴

The need of actively setting up and expressing a relationship in order to have truth is the basis of one of Aquinas' arguments for holding that truth is formally and properly only in judgment. The "equality" of truth, being a relation, requires two terms or extremes that are compared; and in truth these must be the intellect and the thing. In simple quidditative apprehension there is only one term, the quiddity or essence. Hence there is no relationship. Of course, the knowledge is in fact related to the thing; but this does not appear in the objective knowledge itself: the relationship is not expressed. In judgment, however, there are two terms and these are actively related to each other in the objective content of this knowledge; and consequently truth can be found formally in judgment:

Veritas per prius invenitur ... in actu intellectus componentis et dividensis quam in actu intellectus quidditates rerum formantis. Veri enim ratio consistit in adaequatione rei et intellectus; idem autem non adaequatur sibi ipsi, sed aequalitas diversorum est; unde ibi primo invenitur ratio veritatis ubi primo intellectus

⁶² *In I Sent.*, 19, 1, 2 sol.: assimilari, supra hoc quod est simile esse, ponit quemdam motum et accessum ad unitatem qualitatis; et similiter *adaequari*, ad quantitatem; *C.G.*, I, 29, Multo: *assimilatio* motum ad similitudinem dicit; *S.T.*, I, 42, 1 ad 3: aequalitas vel similitudo potest dupliciter significari ..., scilicet per nomina et per verba. ... Verba significant aequalitatem cum motu; *Resp. de Art. 108*, q. 44: aequale quandoque importat motum ad aequalitatem: huiusmodi enim motum non significat aequale sive aequalitas sed *adaequatio*.—Though the verbal noun *conformatio*, corresponding to the abstract noun *conformitas*, is not found in these contexts, the verb *conformari* or *conformatur* is frequently found in discussions of truth.

⁶³ *In I Sent.*, 19, 5, 1 sol.; cf. ad 5: Cum ratio veritatis compleatur in actione animae ...; 2 sol.: Habet etiam intellectus suam operationem in se, ex qua completur ratio veritatis; 3 sol.; *De Ver.*, 1, 1 c: Omnis autem cognitio perficitur per assimilationem cognoscentis ad rem cognitam, ita quod assimilatio dicta est causa cognitionis. ... Prima ergo comparatio entis ad intellectum est ut ens intellectui correspondeat: quae quidem correspondentia adaequatio rei et intellectus dicitur; et in hoc formaliter ratio veri perficitur.

⁶⁴ The distinction of active and passive relations is made in *De Ver.*, 22, 13 ad 4; cf. ad 10.

incipit aliquid proprium habere quod res extra animam non habet sed aliquid ei correspondens, inter quae adaequatio attendi potest. Intellectus autem formans quidditates non habet nisi similitudinem rei existentis extra animam ...; sed quando incipit iudicare de re apprehensa, tunc ipsum iudicium intellectus est quoddam proprium ei quod non invenitur extra in re. Sed quando adaequatur ei quod est extra in re, dicitur iudicium verum esse.⁶⁵

In the act of judging there is something proper to the intellect that is not in the thing but that is somehow compared to the thing. This is the judgment, the assertion, the affirmation or negation itself. In the judgment something is said of the thing, and therefore a relationship is set up and expressed. In this relationship one of the terms represents what is known about the thing and the other stands for the thing itself,⁶⁶ as will be brought out more fully later in dealing with the components of the proposition.

Not only is something known about the thing, as in simple apprehension, but in judgment (*compositio et divisio*) what is known is applied to the thing; thus a relationship or comparison of what is apprehended about the thing with the thing about which it is apprehended is objectively presented:

Cum aliquod incomplexum vel dicitur vel intelligitur, ipsum quidem incomplexum, quantum est de se, non est rei aequatum nec rei inaequale: cum aequalitas et inaequalitas secundum comparationem dicuntur; incomplexum autem, quantum est de se, non continet aliquam comparationem vel applicationem ad rem. Unde de se nec verum nec falsum dici potest, sed tantum complexum, in quo designatur comparatio incomplexi ad rem per notam compositionis aut divisionis.⁶⁷

Although in simple apprehension there actually is likeness or conformity to the thing known, this relation is not known and expressed; it is not a part of the knowledge as such. Consequently the conformity or "equality" is just like the conformity of any thing to another thing, but it is not the conformity proper to knowledge. As in knowledge and proper to knowledge, the conformity must be known.

This constitutes the basis of another argument that Thomas uses to show that truth is properly only in judgment: truth requires *known*

⁶⁵ *De Ver.*, 1, 3 c; cf. *In III De An.*, 11, n. 760: dictio qua dicit intellectus aliquid de aliquo, sicut contingit in affirmatione, semper est vera vel falsa. Sed intellectus non semper est verus aut falsus, quia intellectus est incomplexorum, qui neque verus aut falsus est quantum ad id quod intelligitur. Veritas enim et falsitas consistit in quadam adaequatione vel comparatione unius ad alterum, quae quidem est in compositione vel divisione intellectus, non autem in intelligibili incomplexo.

⁶⁶ A more detailed analysis of the reflection involved in this attribution is given in *De Ver.*, 1, 9 c. See above, note 50, for further references on this point; cf. also *In VI Met.*, 4, n. 1236.

⁶⁷ *C.G.* I, 59, Amplius.

conformity. For truth in its proper sense, besides conformity possessed there must be also conformity expressed; and this requires that the conformity be known. But conformity known and expressed is found only in judgment:

Veritas in aliquo invenitur dupliciter: uno modo sicut in eo quod est verum: alio modo sicut in dicente vel cognoscente verum. Invenitur autem veritas sicut in eo quod est verum tam in simplicibus quam in compositis; sed sicut in dicente vel cognoscente verum non invenitur nisi secundum compositionem et divisionem. ... Quamvis sensus proprii obiecti sit verus, non tamen cognoscit hoc esse verum. Non enim potest cognoscere habitudinem conformitatis suae ad rem, sed solum rem apprehendit; intellectus autem potest huiusmodi habitudinem conformitatis cognoscere; et ideo solus intellectus potest cognoscere veritatem. ... Veritas est solum in mente, sicut scilicet in cognoscente veritatem. Cognoscere autem praedictam conformitatis habitudinem nihil est aliud quam iudicare ita esse in re vel non esse: quod est componere et dividere; et ideo intellectus non cognoscit veritatem nisi componendo vel dividendo per suum iudicium. Quod quidem iudicium, si consonet rebus, erit verum, puta cum intellectus iudicat rem esse quod est vel non esse quod non est; falsum autem quando dissonat a re, puta cum iudicat non esse quod est vel esse quod non est. Unde patet quod veritas et falsitas sicut in cognoscente et dicente non est nisi circa compositionem et divisionem.⁶⁸

What is expressed in the judgment and known to be conformed to the thing is, by the act of judgment, referred to the thing about which the judgment is made, that is, the thing as it exists in itself.

Knowledge of the existence of the thing forms a third line of argument used by St. Thomas to show that truth taken properly is only in judgment. Truth and falsity, though in the intellect, are defined by the existence of the thing, as has already been noted at the beginning of

⁶⁸ *In I Perih.*, 3, nn 6 & 9; cf. *In VI Met.*, 4, n. 1236: Intellectus autem habet apud se similitudinem rei intellectae, secundum quod rationes incomplexorum concipit; non tamen propter hoc ipsam similitudinem diiudicat, sed solum cum componit vel dividit. Cum enim intellectus concipit hoc quod est animal rationale mortale, apud se similitudinem hominis habet; sed non propter hoc cognoscit se hanc similitudinem habere, quia non iudicat hominem esse animal rationale et mortale: et ideo in hac sola secunda operatione intellectus est veritas et falsitas, secundum quam non solum intellectus habet similitudinem rei intellectae, sed etiam super ipsam similitudinem reflectitur, cognoscendo et diiudicando ipsam. Ex his igitur patet quod veritas non est in rebus sed solum in mente, et etiam in compositione et divisione.

S.T., I, 16, 2 c: Cum autem omnis res sit vera secundum quod habet propriam formam naturae suae, necesse est quod intellectus, in quantum est cognoscens, sit verus in quantum habet similitudinem rei cognitae, quae est forma eius in quantum est cognoscens. Et propter hoc per conformitatem intellectus et rei veritas definitur. Unde conformitatem istam cognoscere est cognoscere veritatem. Hanc autem nullo modo sensus cognoscit; licet enim visus habeat similitudinem visibilis, non tamen cognoscit comparationem quae est inter rem visam et id quod ipse apprehendit de ea. Intellectus autem conformitatem sui ad rem intelligibilem cognoscere potest; sed tamen non apprehendit eam secundum quod cognoscit de aliquo quod quid est; sed quando iudicat rem ita se habere sicut est forma quam de re apprehendit, tunc primo cognoscit et dicit verum. Et hoc facit componendo et dividendo.

this section. The formality of truth requires both the existence of the thing known and its adequate grasp by the intellect: "Ratio veritatis in duobus consistit: in esse rei et in apprehensione virtutis cognoscitivae proportionata ad esse rei."⁶⁹ For truth is formally constituted by the operation of the intellect conforming itself to the act of existence of the thing:

Similiter dico de veritate, quod habet fundamentum in re, sed ratio eius completur per actionem intellectus, quando scilicet apprehenditur eo modo quo est. ... Veritas fundatur in esse rei magis quam in quidditate, sicut et nomen entis ab esse imponitur; et in ipsa operatione intellectus accipientis esse rei sicut est per quamdam simulationem ad ipsum, completur relatio adaequationis in qua consistit ratio veritatis. Unde dico quod ipsum esse rei est causa veritatis secundum quod est in cognitione intellectus.⁷⁰

The formal constituent of truth is "the relation of 'equality' (or conformity)," and this is found "in the operation of the intellect taking upon itself the existence of the thing as it is, by a certain likening of itself to that act of existing."

The existence of the thing more properly than its quiddity or its truth is said to be the cause and foundation of truth.⁷¹ But this does not mean just the bare fact of existing but also the concrete manner in which the existence is exercised. For this reason the cause of truth is also said to be the *disposition* or *condition* or *composition* of the thing: "dispositio rei est causa veritatis in opinione et oratione";⁷² "veritas propositionis sequitur conditionem rei";⁷³ "compositio rei est causa veritatis."⁷⁴ This last point is explained and amplified:

Qui putat dividi quod est divisum in rebus verus est in sua opinione, ut qui putat hominem non esse asinum; et similiter qui putat componi quod est compositum in rebus, ut qui putat hominem esse animal. Ille autem mentitur in opinando qui e contrario habet res aliter in sua opinione quam res sint in sua natura, ut qui putat hominem asinum aut non esse animal.⁷⁵

⁶⁹ *In I Sent.*, 19, 5, 2 sol.

⁷⁰ *Ibid.*, 1 sol.

⁷¹ See also *ibid.*, ad 7: ratio veritatis fundatur in esse et non in quidditate; 3 sol.: Cum enim ratio veritatis ... fundamentum habeat ipsum esse rei ...; 33, 1, 1 ad 1: esse quod significat veritatem compositionis ... fundatur in esse rei, quod est actus essentiae; *De Ver.*, 1, 2 ad 3: veritas quae in anima causatur a rebus non sequitur aestimationem animae sed existentiam rei; *S.T.*, I, 16, 1 ad 3: esse rei, non veritas eius, causat veritatem intellectus; *In II Met.*, 2, n. 298: esse rei est causa verae existimationis quam mens habet de re.

⁷² *In IX Met.*, 11, n. 1897.

⁷³ *De Ver.*, 12, 11 ad 6.

⁷⁴ *In IX Met.*, 11, n. 1899.—*To be* is signified by way of concretion: *De Pot.*, 7, 2 ad 7: ... esse significetur per modum concretionis.

⁷⁵ *In IX Met.*, 11, n. 1896.

The act of existing, whether taken just in itself or in its concrete conditions, is not found explicitly in simple apprehension, where only the quiddity of the thing is represented; but it is known and expressed in judgment. For this reason truth in its proper sense is not found in simple apprehension but only in judgment:

Prima operatio respicit quidditatem rei; secunda respicit esse ipsius. Et quia ratio veritatis fundatur in esse et non in quidditate, ut dictum est, ideo veritas et falsitas proprie invenitur in secunda operatione et in signo eius, quod est enuntiatio.⁷⁶

Prima quidem operatio respicit ipsam naturam rei, secundum quam res intellecta aliquem gradum in entibus obtinet. ... Secunda vero operatio respicit ipsum esse rei, quod quidem resultat ex congregatione principiorum rei in compositis. ... Et quia veritas intellectus est ex hoc quod conformatur rei, patet quod secundum hanc operationem [est in intellectu].⁷⁷

Because only in judgment is the existence of the thing in its concrete conditions signified, only in judgment is truth formally found.

Until the relation of truth is formally established, knowledge cannot be said to be complete. It may be present fundamentally and in principle, but not in its fulfillment. Thus the principle or starting point of human cognition is found in simple apprehension, but its term is judgment: "In qualibet cognitione duo est considerare: scilicet principium et finem, sive terminum. Principium quidem ad apprehensionem pertinet, terminus autem ad iudicium; ibi enim cognitio perficitur."⁷⁸ Cognition is completed and truth is present when the composition of judgment is effected:

Intellectus autem noster apprehendendo incomplexa nondum pertingit ad ultimam suam perfectionem, quia adhuc est in potentia respectu compositionis et divisionis. ... Sed veritas consequitur intellectum nostrum in sui perfecta cognitione quando iam usque ad compositionem pervenit.⁷⁹

That "composition" as spoken of here belongs to judgment is clear; but whether its exact meaning is the act of judging or the result of this act requires examination.

⁷⁶ *In I Sent.*, 19, 5, 1 ad 7.

⁷⁷ *In De Trin.*, 5, 3 c.

⁷⁸ *Ibid.*, 6, 2 c; cf. *De Ver.*, 12, 3 ad 1: in cognitione duo est considerare: scilicet receptionem et iudicium de receptis; 7 c: Ad cognitionem autem duo requiruntur, scilicet acceptio cognitorum et iudicium de acceptis; 12 c (med.): Cum enim omnis cognitio perfecta duo habeat: scilicet acceptionem et iudicium de acceptis, ...; 13 c (ante med.); 28, 3 ad 6: ad intellectum duo pertinent: scilicet percipere et iudicare de perceptis; *S.T.*, II-II, 173, 2 c: Circa cognitionem autem humanae mentis duo oportet considerare: scilicet acceptionem sive repraesentationem rerum, et iudicium de rebus praesentatis.

⁷⁹ *C.G.*, I, 59, Adhuc.

TERM OF THE SECOND OPERATION

Although composition and division is usually spoken of as an operation of the intellect, frequently one cannot be sure whether the expression designates the operation or the product or objective term of the operation. An instance is the statement that a composition is true or false,⁸⁰ or that composition is an imitation of unity and is therefore a union.⁸¹ And sometimes it is clear that the word has a passive signification and that it is not the act of compounding but either the resulting state of composition or else the composite itself that is meant. An example of the former is "the composition which is found in a material thing,"⁸² which is the condition or state of being composite rather than the act of compounding. The resulting composite being itself must be meant by "composition" when we speak of a composition which is made, formed, or expressed.⁸³ It is, in fact, impossible to speak about the composition and division of judgment without implying that which is composed and divided or judged. An indication of this is seen in a number of the texts quoted regarding judgment, which pass quite naturally from the active composition on the part of the intellect to the "proposition" or "enunciation" that is formed by it.⁸⁴ For an

⁸⁰ E.g., *In III De An.*, 11, n. 750.

⁸¹ *De Ver.*, 2, 7 ad 3.

⁸² *S.T.*, I, 85, 5 ad 3.

⁸³ E.g., *In III De An.*, 11, n. 749: Quando autem [intellectus] componit, fit *unum intelligibile*. ... Quod si intellectus *faciat compositionem*, ... Et sic componit, formans compositionem.—*In IX Met.*, 11, n. 1898: Cum autem intellectus *compositionem format* ..., oportet quod in compositis substantiis ipsa compositio formae ad materiam ... vel etiam compositio accidentis ad subiectum respondeat, quasi fundamentum et causa veritatis, *compositioni quam intellectus interius format et exprimit* voce.

⁸⁴ The two terms are for the most part synonymous, as appears to a certain extent in the texts already seen and will be more apparent from those which are to follow. Yet they do have a somewhat different connotation. *Proposition* is often used in a context dealing with reasoning and means an enunciation used as a premise in a syllogism. (E.g., *S.T.*, I-II, 90, 1 ad 2: est invenire in ratione practica quod ita se habet ad operationes, sicut se habet *propositio* in ratione speculativa ad conclusiones; *In I Post. Anal.*, 36, n. 11: Syllogismi principia sunt propositiones; *In II Phys.*, 5, n. 8: propositiones syllogismi sunt causa conclusionum; n. 9: ex terminis propositionum constituitur conclusio: unde secundum hoc propositiones dicuntur materia conclusionis; n. 10: principium discursus rationis in conclusione est ex propositionibus; *In I Post. Anal.*, 4, n. 10: necesse est quod demonstrativa scientia ... procedat ex propositionibus veris, primis et immediatis.) This is not, however, the exclusive use of the term "proposition," but often it means an enunciation in general. (See texts quoted: *S.T.*, I, 58, 2 c: Intellectus noster simul intelligit subiectum et praedicatum, prout sunt partes unius propositionis; *Quodl.* VII, 2 c; *De Ver.*, 8, 14 c; also *In I Sent.*, 33, 1, 1 ad 1: esse quod significat veritatem compositionis in propositionibus ... fundatur in esse rei.)

Enunciation, like "word," can be either the internal or the external expression of what is conceived, and seems, like "word," to be denominated from the external expression. Its etymology from *e-nuntiare*, "to announce forth," "to speak out," suggests this. Moreover, it is placed in the genus *oratio*, the etymology of which is given as *oris* and *ratio*, meaning the expression of some act of reason through the mouth (*In IV Sent.*,

enunciation is the sign of the compounding and dividing which the intellect does: "Enuntiatio significat compositionem et divisionem intellectus."⁸⁵ Inasmuch, then, as the proposition is the intelligible sign and term of the compounding operation, it is just the objective counterpart or expression of the act of judging; it is *that which* is compounded.

The operation of the intellect in compounding or judging is, as has been noted, an active comparison or reference of one apprehended nature to another. The proposition is just the passive or objective relation that is set up by this active reference: it is the relation which the one nature has to the other as a result of the comparing done by the intellect. The comparing is the operation by which the intellect "devises" the comparative intention which is called a proposition, and the relation devised is the intention or proposition itself. We need only take in an objective sense practically everything that was said about judgment, and the proposition is already very largely explained.

Just as it is the function of judgment to unify a multiplicity, enabling the intellect to grasp the many as one, the proposition is the objective unity of the many which is thus grasped:

Intellectus quando considerat propositionem, considerat multa ut unum; et ideo in quantum sunt unum, simul intelliguntur, dum intelligitur una propositio quae ex eis constat. ... Non enim simul intelliguntur in quantum habent ordinem distinctionis adinvicem, sed in quantum uniuntur in una propositione.⁸⁶

It is the "imitation of unity" or "union" which is effected by composition;⁸⁷ it is the "enuntiable" which is formed by compounding and

15, 4, 1, sol. 1), and as such is a species of external word (*vox significativa*) (*In I Perih.*, 1, n. 3, & 6, n. 2). Its material parts, furthermore, are nouns and verbs, both also *voces significativae* (*ibid.*, 4, n. 1). That "enunciation" is not exclusively an external expression of thought but also the internal compound term appears from the fact that it is said to be constituted by the operation of the intellect and that it is called an internal word (e.g., *Quodl.* V, 9 c: Est autem duplex operatio intellectus. ... Una quidem quae vocatur indivisibilium intelligentia, per quam intellectus format in seipso definitionem vel conceptum alicuius incomplexi. Alia autem operatio est intellectus componentis et dividendis, secundum quam format enuntiationem. Et utrumque istorum per operationem intellectus constitutorum vocatur verbum cordis).

Another synonym for "enunciation" is *enuntiable*, a term emphasizing the objective meaning of enunciation; it is the *unum intelligibile* formed by judgment. (See *De Ver.*, 2, 7 c: intellectus noster ... in seipso enuntiablem format; *S.T.*, I, 14, 14 c: formare enuntiablem ... enuntiationem formando; *Quodl.* IV, 17 c: idem enuntiable quandoque est verum, quandoque falsum; *ibid.*, ob. 2: partes enuntiables sunt praedicatum et subiectum et compositio; *S.T.*, I, 16, 7 c: enuntiable enim est in intellectu et in voce.)

⁸⁵ *S.T.*, I, 85, 2 ad 3; cf. 58, 4 ob. 3: enuntiationes ... sunt signa compositionis et divisionis in intellectu; *In I Sent.*, 19, 5, 1 ad 7: veritas et falsitas proprie invenitur in secunda operatione et in signo eius, quod est enuntiatio; *In I Perih.*, 7, n. 3: dicitur autem in enuntiatione esse verum vel falsum, sicut in signo intellectus veri vel falsi.

⁸⁶ *De Ver.*, 8, 14 c (fin.); cf. *Quodl.* VII, 2 c: contingit simul plura intelligere ... ex unitate eius quod intelligitur, scilicet quando plura intelliguntur ut unum ... [sicut] cum intelligit propositionem, intelligit simul subiectum et praedicatum; *S.T.*, I, 58, 2 c.

⁸⁷ *De Ver.*, 2, 7 ad 3: Compositio est quaedam imitatio unitatis; unde et unio dicitur.

uniting species;⁸⁸ it is the *unum intelligibile* which is made when the intellect joins two intelligibles,⁸⁹ or the *intelligibile complexum* which is brought about by the comparison of one thing with another.⁹⁰

COMPONENTS OF THE PROPOSITION

One of the apprehended natures which are joined in judgment is *understood* or *said* of the other;⁹¹ and it is accordingly said to be *predicated* of the other.⁹²

The act of predicating is given the name *predication*;⁹³ but the same name seems also to be taken in a passive sense as the proposition formed by this predicating.⁹⁴ The known nature that is said or predicated of another is called a *predicate*; the thing known of which the other is predicated is called the *subject*. Since a proposition is simply the objective predication, it is composed of a subject and a predicate ("Enuntiatio constituitur ex subiecto et praedicato"⁹⁵), and is formed by joining the predicate to the subject ("Esse ... significat compositionem propositionis, quam anima adinvenit coniungens praedicatum subiecto"⁹⁶). This joining is really a comparison or reference ("In intellectu componente et dividente comparatur praedicatum ad subiectum"⁹⁷), the objective counterpart of the active comparison of judgment ("Intellectus comparat unum simplicem conceptum alteri"⁹⁸).

In every composite there is a mixture of potency and act; either one of the parts is in potency to the other as matter to form, or all are so to the whole.⁹⁹ Wherever there is a form, as such it is an act; and wherever there is a subject, it is in potency to that of which it is the

⁸⁸ *Ibid.*, c.: intellectus noster ... componit alteram speciem cum altera et unit eas quodammodo; unde in seipso enuntiabilia format. ... In intellectu nostro est compositio specierum.

⁸⁹ *In III De An.*, 11, n. 749.

⁹⁰ The term is implied, *ibid.* nn. 760-61, by contrast with *intelligibile incomplexum*.

⁹¹ *Ibid.*, 761 & 760.

⁹² E.g., *De Pot.*, 8, 2 ad 6: Per se autem praedicatur aliquid de aliquo, quod praedicatur de eo secundum propriam rationem: *In I Post. Anal.*, 5, n. 5: affirmatio ... praedicat aliquid de aliquo.

⁹³ *In VII Met.*, 13, n. 1576: ... quantum ad praedicationem, quae est actus rationis.

⁹⁴ *De Ente et Ess.*, c. 3, n. 17 (ed. Perrier): Praedicatio enim est quiddam quod completur per actionem intellectus componentis et dividensis; cf. *In I Post. Anal.*, 35, n. 1: ad logicam autem communiter pertinet considerare praedicationem universaliter.

⁹⁵ *In I Perih.*, 9, n. 8.

⁹⁶ *S.T.*, I, 3, 4 ad 2.

⁹⁷ *Ibid.*, 58, 4 c.

⁹⁸ *In I Perih.*, 3, n. 4.

⁹⁹ *De Pot.*, 7, 1 c: In omni autem composito qualicumque compositione, oportet potentiam actui commisceri. In compositis enim vel unum eorum ex quibus est compositio est in potentia ad alterum, ut materia ad formam, subiectum ad accidens, genus ad differentiam; vel saltem omnes partes sunt in potentia ad totum.

subject.¹⁰⁰ And this is verified not only in the physical order, of natural composites but also in the intelligible order, of the intelligible composite which is the proposition. For in an proposition the subject stands to the predicate as the determinable to the determining element, as matter to form:

Cum autem intellectus compositionem format, accipit duo quorum unum se habet ut formale respectu alterius; unde accipit id ut in alio existens, propter quod praedicata tenentur formaliter.¹⁰¹

Praedicatum comparatur ad subiectum ut forma ad materiam; et similiter differentia ad genus: ex forma autem et materia fit unum simpliciter.¹⁰²

In the comparison made by the intellect between two direct objective intentions, one is regarded as being in the other as a form in a matter, and it is thus predicated of that other, being "applied to it" in affirmative predication or "removed from it" in negative predication: "In omni propositione aliquam formam significatam per praedicatum [intellectus] vel applicat alicui rei significatae per subiectum vel removet ab ea."¹⁰³ Thus by an analogical application of matter and form to intellectual composition, the predicate serves as the formal part of the proposition and the subject as the material: "Praedicatum est quasi pars formalis enuntiationis, subiectum autem est pars materialis ipsius."¹⁰⁴

It is not without reason that the subject of a proposition is called by the same name as the ontological subject which receives a form or determination, whether substantial or accidental. We speak of prime matter as the subject of the substantial form, the substance as the subject for accidents, and the supposit as the subject of actions. Because the proposition is a means of cognition, it must be a sign of the real being which is to be known; its composition must signify the composition of the real thing, and its parts must in some way reflect the parts of the real composite. In knowing we pick out a thing and want to know something about it. When we discover this something about the thing, we join it to the thing, making a composition in thought; we affirm or predicate of the thing what we have come to know about it,

¹⁰⁰ *De Spir. Creat.*, 1 ad 1: Nam omnis forma, in quantum huiusmodi, est actus; omne autem subiectum comparatur ad id cuius est subiectum, ut potentia ad actum.

¹⁰¹ *In IX Met.*, 11, n. 1898; cf. *De Ver.*, 8, 14 ad 6: Si enim aliqua duo ita se habeant quod unum sit ratio intelligendi aliud, unum eorum erit quasi formale et aliud quasi materiale; et sic illa duo sunt unum intelligibile, cum ex forma et materia unum constituitur. Unde intellectus, quando intelligit aliquid per alterum, intelligit unum tantum intelligibile.

¹⁰² *In I Perih.*, 8, n. 11.

¹⁰³ *S.T.*, I, 16, 2 c.

¹⁰⁴ *In I Perih.*, 10, n. 23 (ante med.).

and express this predication internally as an enunciation or proposition. In the proposition the subject will represent the thing which is known, and the predicate will represent what we know about it. Thus the subject will stand for the supposit, and the predicate will stand for some quiddity or nature which belongs to that supposit and which in some way we find in it: "Terminus in subiecto positus tenetur materialiter, idest pro supposito, positus vero in praedicato tenetur formaliter, idest pro natura significata."¹⁰⁵

By the fact of predication the predicate is signified as being *in* the subject: "Praedicatum semper significatur inesse subiecto."¹⁰⁶ And the subject is signified as that in which something else is or inheres: "Subiectum enuntiationis significatur ut cui inhaeret aliquid."¹⁰⁷ Whether the *res intellecta* represented by the subject is singular or universal, in either case the predicate is regarded as being in it: "Quia enim semper enuntiatum aliquid de aliqua re (rerum autem quaedam sunt universalialia, quaedam singularialia), necesse est quod quandoque enuntietur aliquid inesse vel non inesse alicui universalium, quandoque vero alicui singularium."¹⁰⁸ As a consequence, all propositions that are not modal but simply affirm or deny the predicate of the subject are called "propositions of inherence" (*de inesse*): "Propositiones quae modales non sunt dicuntur de inesse."¹⁰⁹

ESSENTIAL AND ACCIDENTAL PREDICATION

A distinction is made in regard to the way in which the predicate is signified as being in the subject. It may be in the subject essentially (*per se*) or accidentally (*per accidens*): "Per se autem dicitur inesse aliquid alicui quod inest ei secundum rationem propriae definitionis; praeter hoc autem quidquid inest alicui dicitur inesse per accidens."¹¹⁰

¹⁰⁵ *S.T.*, III, 16, 7 ad 4; cf. 9 ad 3: nomen ... secundum quod ponitur in subiecto tenetur pro supposito, secundum autem quod ponitur in praedicato refertur ad naturam.

¹⁰⁶ *In I Sent.*, 4, 2, 2 ob. 2; cf. *In IX Met.*, 11, n. 1898: intellectus ... accipit id ut in alio existens; *In VI Met.*, 4, n. 1223: Dicitur autem hic affirmatio compositio, quia significat praedicatum inesse subiecto.

¹⁰⁷ *In I Perih.*, 5, n. 8.

¹⁰⁸ *Ibid.*, 10, n. 8.

¹⁰⁹ *De Prop. Modal.*, n. 1 (ed. Perrier). Modal propositions are those in which the very composition of subject and predicate is determined in a special way, e.g., as possible or necessary: "Quidam [modus] determinat compositionem ipsam praedicati ad subiectum, ut cum dicitur 'Socratem currere est possibile' et ab hoc solo modo dicitur propositio modalis."

¹¹⁰ *De Fallaciis*, c. 10. The terminology "essentially" and "accidentally" is found in *In I Perih.*, 5, n. 9, where the question is raised whether every predicate can be said to be *in* a subject, or whether this can be said only of accidental predicates, and essential predicates can be said only to be *predicated of* a subject. The same discussion applied to substances is taken up in *In VII Met.*, 13, n. 1575-76; also *De Nat. Gen.*, c. 3, n. 19 (ed. Perrier).

Something is said to be in another essentially when its definition or *ratio* is included in the definition or *ratio* of that other. If it is not, that thing can be in the other only by addition to its essence, and therefore it is in the other only as an accident.

Since the disjunction between being in the definition of another and not being in its definition is complete, whatever is in another can be there in no other way than either essentially or accidentally; and we must accordingly predicate one thing of another in one of the same two ways: "Omne quod praedicatur aut praedicatur per se aut per accidens."¹¹¹ These two modes of predication are expounded frequently and at length in the works of St. Thomas Aquinas. For the present purpose a brief explanation will suffice.

One thing is said to be predicated of another essentially (*per se*) if it is in the subject on its own account, because of what it is, and predicated of the subject by reason of its definition or formal character; whatever is in the subject in any other way or predicated of it for some reason outside its own quiddity, is predicated accidentally (*per accidens*):

Quidquid inest unicuique propter seipsum per se dicitur de eo; quod vero non propter seipsum inest alicui per accidens dicitur.¹¹²

Per se autem praedicatur aliquid de aliquo quod praedicatur de eo secundum propriam rationem; quod vero non secundum propriam rationem praedicatur sed propter rei identitatem, non etiam praedicatur per se.¹¹³

When the meaning of subject and of predicate is in whole or in part the same, the predication is *per se*. This can come about in two different ways. The predicate may be in the definition of the subject and belong to its form, as line is included in triangle, or animal in man; or the subject may be in the definition of the predicate, designating the proper matter in which the form attributed to it is found, as nose is the proper subject of snubness, line of circularity, surface of color. In the first case the predicate is the species, genus, or specific difference of the subject. In the second case it is a proper accident, or "property" in the strict sense.¹¹⁴

The predication is accidental when anything is predicated of another

¹¹¹ *In I Post. Anal.*, 13, n. 2; cf. *De Pot.*, 7, 8 ob. 6.

¹¹² *In I Post. Anal.*, 10, n. 7.

¹¹³ *De Pot.*, 8, 2 ad 6. The principal texts are *In I Post. Anal.*, 10, nn. 2-7; 33, nn. 4-9, n. 9; 35, n. 4; *In V Met.*, 9, nn. 886-888; 7, nn. 843-847; *In IV Met.*, 2, nn. 548 & 554; 7, nn. 622-635; *De Ente et Ess.*, cc. 2 & 3, nn. 7-15; *C.G.*, II, 58, Quae & Si autem; *De Pot.*, 9, 4 c (post med.); *S.T.*, I, 76, 3, c; 13, 12 c.

¹¹⁴ *In I Post. Anal.*, 10, nn. 3 & 4; cf. *C.G.*, II, 91, *Amplius*¹; *In VII Met.*, 3, nn. 1311 & 1313. For the second mode of *per se* predication see William M. Walton, "The Second Mode of Necessary and *Per Se* Propositions," *Mod. School.*, XXIX (1951-52), 293-306.

thing which is not its proper subject and which does not include it in its definition. This will usually involve an accident, as when an accident is predicated of a subject, or an accident of another accident, or when the subject is predicated of its accident.¹¹⁵ If an inferior is predicated of its superior, as "The animal is a man," that also is accidental predication.¹¹⁶ What there is in common in these modes of accidental predication is that the predicate does not belong to the subject in virtue of the quiddity or essence of the subject, but for some reason extrinsic to that essence but yet in the subject in some way; for otherwise it could not be predicated of the subject at all. For the predication to be true and justified it must be founded in the things represented by the subject and predicate. In essential predication, as has already been noted, the justifying cause of the predication is the inclusion of the intelligible character of the predicate in that of the subject, or a oneness of essence. In accidental predication there is no such oneness of essence but only some *de facto* oneness in the concrete subject.

REAL IDENTITY AND RATIONAL DIVERSITY

Every affirmative predication asserts an identity of the thing signified as the subject and that signified as the predicate; for whatever is predicated of another is signified as identical with it: "Quod enim praedicatur de aliquo significatur idem esse illi."¹¹⁷ This goes beyond what was said in regard to judgment. There it was seen that the composition made by the intellect signifies the composition of the thing known and draws its truth from it, so that by the composition of judgment the concretion of the thing known is fittingly signified. There it was a question merely of the two apprehended natures belonging together. Now it emerges that there is some kind of identity, not in the abstract natures but in the concrete being that has those natures; for the being signified in the predicate is the same being as is signified in the subject, though designated from a different formal principle. It is an identity in the concrete—a material identity or oneness in the supposit: "Ad veritatem autem locutionis ... exigitur quod praedicatum conveniat subiecto; sufficit autem quod conveniat ei ratione suppositi."¹¹⁸

¹¹⁵ *In V Met.*, 9, nn. 886-887; cf. 11, n. 908; *In I Post. Anal.*, 33, n. 4.

¹¹⁶ *S.T.*, I, 39, 6 ob. 2. The statement quoted is not rejected in the answer; only the application made of it. Cf. *In I Sent.*, 4, 2, 2 ob. 3.

¹¹⁷ *In V Met.*, 11, n. 908; cf. *S.T.*, I, 85, 5 ad 3; *compositio autem intellectus est signum identitatis eorum quae componuntur.*

¹¹⁸ *In III Sent.*, 22, 1, 2 sol.; cf. 11, 1, 4 ad 6: *ad veritatem propositionis sufficit quod praedicatum conveniat subiecto quocumque modo*; 12, 1, 1 ad 6: *ad veritatem propositionis sufficit quod praedicatum conveniat subiecto, nec oportet quod conveniat ei ratione formae significatae*; *S.T.*, I, 85, 5 ad 3 (fin.).

Whether there is also a formal identification depends upon the mode of predication.

In *per accidens* predication, as was suggested above, the predicate is attributed to the subject because of an identity of the *thing* to which each refers in the concrete ("propter rei identitatem"¹¹⁹); there is identity of subject only, and not of nature or form; they are numerically one or one in subject: "Quaedam sunt *idem numero* quae non sunt una natura sed diversae, sicut Socrates et hoc album et hoc musicum. ... Quaedam ... convertuntur ut sint *idem subiecto*."¹²⁰ Because the subject and predicate are denominated from different forms, they cannot be substantially identical or simply one, but are joined accidentally or, as it were, extrinsically:

Per accidens [est haec propositio] *hoc album est homo*. Id enim quod est per se suppositum hominis non est pars significationis huius nominis *album*. Album enim solam qualitatem significat cum nomen significet unum. Ex albedine autem et subiecto non fit unum simpliciter. Unde hoc nomen *album* copulat suum subiectum quasi extrinsecum.¹²¹

The apprehended natures signified as subject and predicate are not identified because of what they are (*propter seipsa* or *secundum propriam rationem*) but because they happen to exist in a common subject. Between subject and predicate there is only a material identity.

The case of *per se* predication is different. Here the identity is more than an existential one in the subject in which the two apprehended natures happen to have their being; it is also a formal or essential identity: "Ad hoc quod propositio sit per se oportet quod praedicatum conveniat subiecto ratione formae importatae in subiecto."¹²² One nature is predicated of the other because of what it is in itself (*propter seipsum*), because it really is the other: "Unumquodque est vere id quod praedicatur substantialiter de eo."¹²³ The two are one in reality ("idem secundum rem"¹²⁴) and not really two different natures or essences but one. A genus and its species and even the singulars of a species have the same essence, as *man* and *animal* signify the same essence and a man is both man and animal by the same substantial form:

¹¹⁹ *De Pot.*, 8, 2 ad 6.

¹²⁰ *In IV Met.*, 2, n. 548; cf. 7, n. 622; homo et album sunt diversa secundum rationem, licet sint idem subiecto; *C.G.*, II, 58, Quae: Quae attribuuntur alicui eidem secundum diversas formas, praedicantur de invicem per accidens: *album* enim dicitur esse *musicum* per accidens, quia Socrati accidit albedo et musica (cf. *S.T.*, I, 76, 3 c).

¹²¹ *In III Sent.*, 7, 1, 1 ad 5; cf. *In I Post. Anal.*, 33, n. 8.

¹²² *In III Sent.*, 11, 1, 4 ad 6; cf. 12, 1, 1 ad 6.

¹²³ *In IV Met.*, 7, n. 628.

¹²⁴ *Ibid.*, 2, n. 554.

Genera praedicantur de speciebus, in quarum definitionibus ponuntur; quia non est aliud per essentiam animal et homo.¹²⁵

Homo ab eadem forma substantiali habet quod sit animal et quod sit homo; non enim sunt unius rei plures formae substantiales secundum rem diversae.¹²⁶

Because a universal is designated from the same essential form as its inferiors, it is present in all of them (its subjective parts) perfectly and in the same sense: "Totum ... universale ... adest cuilibet parti subiectivae secundum esse et perfectam virtutem, et ideo proprie praedicatur de parte sua."¹²⁷ As a consequence it is predicated univocally: "Univoce enim praedicatur genus de speciebus, sicut et species de individuis."¹²⁸

It does not necessarily follow, however, from the identity in essence of the subject and predicate in *per se* predication, that the predicate formally and explicitly signifies everything that is implied in the subject, since the subject contains more than its essence; and even this essence need not be signified explicitly in all its intelligible notes:

Ad hoc quod aliqua praedicatio sit per se non oportet quod praedicatum per se conveniat subiecto secundum omne quod in nomine subiecti implicatur, sed sufficit si secundum aliquid eorum per se conveniat. Sicut ratiocinari per se convenit homini non in quantum habet corpus sed in quantum animam habet; unde haec est per se: "Homo ratiocinatur."¹²⁹

When a universal is predicated of its inferior, the difference between subject and predicate lies in the fact that the predicate is undetermined in regard to the inferior, including in itself, though indistinctly, whatever is contained in the inferior as such:

Et quia, ut dictum est, natura speciei est indeterminata respectu individui, sicut natura generis respectu speciei, ideo est quod, sicut id quod est genus prout praedicabatur de specie implicabat in sua significatione, quamvis indistincte, totum quod determinate est in specie, ita etiam et illud quod est species, secundum id quod praedicatur de individuo, oportet quod significet totum illud quod essentialiter est in individuo, licet indistincte; et hoc modo essentia Socratis significatur nomine hominis: unde homo de Socrate praedicatur.¹³⁰

Both modes of predication, accidental as well as essential, are based upon unity in the real: the proposition made by composition on the

¹²⁵ *In VII Met.*, 2, n. 1288; cf. 3, n. 1328: Genus autem non praedicatur de speciebus per participationem sed per essentiam. Homo enim est animal essentialiter, non solum aliquid animalis participans. ... Species enim non se habent ad genus sicut propria generis passio; sed sicut id quod est per essentiam idem generi.

¹²⁶ *De Pot.*, 8, 4 ad 2.

¹²⁷ *In I Sent.*, 3, 4, 2 ad 1.

¹²⁸ *In VII Met.*, 14, n. 1593.

¹²⁹ *In III Sent.*, 10, 1, 1, sol. 2.

¹³⁰ *De Ente et Ess.*, c. 2, n. 11 (ed. Perrier). See the whole chapter. Cf. *De Ver.*, 21, 1 c.

part of the intellect represents the real unity of that which is predicated with the thing about which it is predicated:

Praedicatio enim est quiddam quod completur per actionem intellectus componentis et dividitatis, habens fundamentum in re ipsam unitatem eorum quorum unum de altero dicitur.¹³¹

Et ideo rei identitatem proponit per compositionem verbalem, quae est identitatis nota, ... ita quod si quae est diversitas in compositione, ad intellectum referatur, unitas vero ad rem intellectam.¹³²

If the things represented by subject and predicate are united in reality, there is a real identity between them. Yet inasmuch as they are represented separately as subject and predicate, they are distinguished in reason. There is therefore a real identity but a rational distinction between the thing signified by the subject and that signified by the predicate.

This is clearly brought out in an article of the *Summa*: "In qualibet propositione affirmativa vera, oportet quod praedicatum et subiectum significant idem secundum rem aliquo modo et diversum secundum rationem."¹³³ In accidental predication the diversity is obvious because the subject and predicate are denominated from diverse forms, but the real identity is not so apparent. It is not an essential identity but an identity in the concrete subject. In *per se* predication, on the other hand, the identity is more obvious because it is based on identity of essence. The diversity in reason arises because the same essence is apprehended according to different formalities and different manifestations of the nature, as the nature of man is both animal and rational and can be grasped according to either aspect found in the same composite essence and concrete subject. Even when the subject and predicate are perfectly identical according to the explicit formal meaning of each, as when we say, "Man is a rational animal" or "A garment is an article of clothing," we still distinguish the two in reason inasmuch as we treat the one as determinable and the other as determining, the one as material and the other as formal. In this as in the preceding cases the rational diversity is signified by the distinction of subject and predicate; the real identity is signified by the composition of the two which the intellect makes and affirms.¹³⁴

¹³¹ *De Ente et Ess.*, c. 3, n. 17. (Perrier reads "fundamentum in re ipsa repraesentans unitatem" but this is less satisfactory for sense than the reading given from Parma and Baur, who based his edition on eight early MSS: seven from Italy and one from Basle).

¹³² *C.G.*, I, 36.

¹³³ *S.T.*, I, 13, 12 c.

¹³⁴ Cf. *S.T.*, I, 85, 5 ad 3: composito intellectus est signum identitatis eorum quae componuntur.

TO BE AS THE SIGN OF COMPOSITION

The composition and affirmation of identity is made by the verbal copula *to be*.¹³⁵ This is the second of the two meanings which are assigned to the word *to be*. The first meaning is the act of real being as it is determined according to the ten categories; the second is the operation and act of the intellect by which it understands and makes the composition of a proposition: "*Esse dupliciter dicitur: quandoque enim esse idem est quod actus entis; quandoque autem significat compositionem enuntiationis; et sic significat actum intellectus.*"¹³⁶ By this copula the intellect signifies and assents to the truth of the composition made and of the proposition formed: "*Dicitur esse quod significat veritatem compositionis in propositionibus, secundum quod est dicitur copula.*"¹³⁷ *To be* not only signifies the composition and the truth of the proposition but is its formal constituent: "*Esse autem, in quo consistit compositio intellectus, ut affirmatio, compositionem quamdam et unionem indicat.*"¹³⁸ The composition and union which it indicates is that which is in things; for in signifying the truth of the composition which is made by the intellect, *to be* signifies the identity in reality of what the intellect joins: "*Compositio autem intellectus est signum identitatis eorum quae componuntur.*"¹³⁹

By making the composition the intellect understands the subject and predicate simultaneously as making one intelligible whole: "*Quando [intellectus] componit, fit unum intelligibile, et simul intelligitur ab*

¹³⁵ It is called the copula: *In V Met.*, 9, n. 896; *Quodl.* IX, 3 c; *In I Sent.*, 33, 1, 1 ad 1; *De Nat. Gen.*, c. 2, n. 8, (ed. Perrier).

¹³⁶ *Quodl.* XII, 1 ad 1; cf. *In I Sent.*, 19, 5, 1 ad 1: *esse dicitur dupliciter: uno modo, secundum quod ens significat essentiam rerum prout dividitur per decem genera; alio modo, secundum quod esse significat compositionem quam anima facit; In V Met.*, 9, n. 895: Ponit [Philosophus] alium modum entis, secundum quod *esse et est* significant compositionem propositionis quam facit intellectus componens et dividens; *Quodl.* IX, 3c: *esse dicitur dupliciter. ... Uno modo secundum quod est copula verbalis significans compositionem cuiuslibet enuntiationis quam anima facit: unde hoc esse non est aliquid in rerum natura, sed tantum in actu animae componentis et dividensis; In I Sent.*, 33, 1, 1 ad 1: Tertio modo dicitur *esse* quod significat veritatem compositionis in propositionibus, secundum quod *est* dicitur copula; *C.G.*, I, 12, Nec: ... *esse* quod significat compositionem intellectus.—It is the medium of attribution: *In II Perih.*, 2, n. 2.

¹³⁷ *In I Sent.*, 33, 1, 1 ad 1; cf. *De Pot.*, 7, 2 ad 1: Quandoque [ens et esse] significat veritatem propositionis; *In V Met.*, 9, n. 896: Ex hoc enim quod aliquid in rerum natura est, sequitur veritas et falsitas in propositione, quam intellectus significat per hoc verbum *est* prout est verbalis copula; *S.T.*, I, 48, 2 ad 2: Alio modo dicitur ens quod significat veritatem propositionis, quae in compositione consistit, cuius nota est hoc verbum *est*; *De Nat. Gen.*, c. 2, n. 8 (ed. Perrier): veritas autem propositionis significatur per hoc verbum *est*.

¹³⁸ *In IX Met.*, 11, n. 1900. This passage continues: non esse vero, quod significat negatio, tollit compositionem, et designat pluralitatem et diversitatem.

¹³⁹ *S.T.*, I, 85, 5 ad 3.

intellectu";¹⁴⁰ "Cum intelligit propositionem intelligit simul subiectum et praedicatum."¹⁴¹ The subject and predicate can be understood as one because the predicate is understood *in* the subject, and the act of being (*esse*) attributed to both in the intellect is the sign of the act of being in the subject (*inesse*) exercised in reality by that which is predicated.¹⁴² Thus the copula signifies the act of being of the intelligible composite in the intellect; and this composite, the proposition, signifies the real external composite according to its act of being.

The reason why *to be* is used as the copula seems rather clear already from what has just been said. Aquinas explains even further. In composite beings in the real order, form is the act of the matter and of the composite, perfecting the potency of the matter and constituting the composite so that it is one being; and it is what it is in virtue of the form.¹⁴³ By informing the matter, not only does the form constitute the composite in the order of essence, but it makes the thing exist, giving it its act of being: "Quia enim forma est principium essendi, necesse est quod secundum quamlibet formam habitam habens aequaliter esse dicatur."¹⁴⁴ In order that the form may constitute the composite in act in the order of essence, the whole must be constituted in act in the order of existence. That act is to be; for to be is the act of all acts; and just as the form is the perfection and act of the matter, so to be is the perfection and act of the whole composite, form and matter together:

Esse est inter omnia perfectissimum: quod ex hoc patet quod actus est semper perfectior potentia. Quaelibet autem forma signata non intelligitur in actu nisi per hoc quod esse ponitur. ... Sed hoc quod habet esse efficitur actu existens.

¹⁴⁰ *In III De An.*, 11, n. 749.

¹⁴¹ *Quodl.* VII, 2 c; cf. *S.T.*, I, 58, 2 c: Intellectus noster simul intelligit subiectum et praedicatum, prout sunt partes unius propositionis; also *In VI Met.*, 4, n. 1229.

¹⁴² *In I Perih.*, 5, n. 22: Cum volumus significare quamcumque formam vel actum actualiter *inesse* alicui subiecto, significamus illud per hoc verbum *est*.—See also the texts cited in note 110.

¹⁴³ *In I Sent.*, 42, 1, 1 ad 1: Illud quod respondet potentiae passivae, quasi perfectio et complementum, actus dicatur. Et propter hoc omnis forma actus dicitur; *De Spir. Creat.*, 3 c: omnis forma est actus; et per consequens est ratio unitatis qua aliquid est unum; *Quodl.* I, 6 c: res habet esse per formam; unde et per formam res habet unitatem.

¹⁴⁴ *In De Hebd.*, 2, n. 27 (ed. Calcaterra); cf. *S.T.*, I, 75, 6 c: Esse autem per se convenit formae, quae est actus. Unde materia secundum hoc acquirit esse in actu quod acquirit formam; 76, 4 c: forma accidentalis non dat esse simpliciter sed esse tale. ... Forma autem substantialis dat esse simpliciter; 77, 6 c: forma substantialis facit esse simpliciter. ... Forma autem accidentalis non facit esse simpliciter sed esse tale. ... Forma substantialis causat esse in actu in suo subiecto; 42, 1 ad 1: Primus autem effectus formae est esse, nam omnis res habet esse secundum suam formam; *C.G.*, II, 54, Unde: Forma tamen potest dici *quo est*, secundum quod est essendi principium; *De Prin. Nat.*, n. 2 (ed. Perrier): forma facit esse in actu.

Unde ... *esse* est actualitas omnium actuum, et propter hoc est perfectio omnium perfectionum. Nec intelligendum est quod ei quod dico *esse* aliquid addatur quod sit eo formalius.¹⁴⁵

Just as in the real order *to be* is the ultimate act of things and the act in which composite things have their reality, so in the order of thought and cognition it is through an act *to be* exercised in the intellect that apprehended natures are compounded and made into an intelligible composite, as was found concerning judgment. It is therefore most fitting that, in our expression of the composition of the intellect and, through this, of the real composite being, we signify the act of the composite being by the verb *to be*. Taken by itself it signifies real existence, the "absolute actuality" of the thing of which it is predicated. And because the things of the material world which form the proper object of our human intellect exist as composite, we use this verb to signify composition:

Hoc verbum *est* significat compositionem, quia non eam principaliter significat sed ex consequenti; significat enim primo illud quod cadit in intellectu per modum actualitatis absolute: nam *est*, simpliciter dictum, significat *in actu esse* et ideo significat per modum verbi.

Quia vero actualitas, quam principaliter significat hoc verbum *est*, est communiter actualitas omnis formae, vel actus substantialis vel accidentaliter, inde est quod cum volumus significare quamcumque formam vel actum actualiter inesse alicui subiecto, significamus illud per hoc verbum *est*. Et ideo ex consequenti hoc verbum *est* significat compositionem.¹⁴⁶

The composition which is signified by *to be* is fundamentally the real composition of sensible things. Because our knowing is conditioned both by the composition of its object and by our own composite nature, it must take place by way of composition; and so the *to be* by which we affirm something of the subject—the "*to be* which signifies the truth of propositions"—expresses directly the composition of the product or term of the intellect, which is the cognitive representation of the composition of the thing known. Thus the positing of the copula by the intellect, by joining subject and predicate, constitutes a proposition, which is a sign of the compounding operation, or act of knowing composites, called judgment; and through this operation it is the sign of the thing known according to the manner in which that thing exists.

The copula *to be* signifies the act *to be* of the thing known. This does not mean, however, that it necessarily signifies it as being in the real order; rather it signifies it in whatever order it is found ("eo modo quo

¹⁴⁵ *De Pot.*, 7, 2 ad 9.

¹⁴⁶ *In I Perih.*, 5, n. 22.

est"¹⁴⁷); for what is apprehended may not exist in reality (as when we say, "Man is a species"), and if the copula always represented the thing as in the real order, it would often be false. But since anything of which a proposition is formed must exist at least in the soul, the copula must signify at least such an act of being: "Nec oportet quod semper respondeat sibi esse in re extra animam, cum ratio veritatis compleatur in ratione animae."¹⁴⁸

EXISTENTIAL AND ATTRIBUTIVE PROPOSITIONS

Concerning the meaning and force of the copula a distinction must be made between existential and attributive propositions. When the verb *to be* is the only predicate, and the proposition contains only a subject and the verb *to be*, as "Socrates is," then the *to be* must have its primary meaning, which is actual existence in reality: "Hoc verbum *est* quandoque in enuntiatione praedicatur secundum se; ut cum dicitur, 'Socrates est': per quod nihil aliud intendimus significare quam quod Socrates sit in rerum natura."¹⁴⁹ In this case *to be* is predicated without qualification, and can therefore have only its principal and primary meaning of the act of actual real being; for it posits the subject absolutely, and every absolute positing signifies something existing in nature ("Omnis enim positio absoluta aliquid in rerum natura existens significat"¹⁵⁰).

But when there is a predicate besides the verb *to be*, which in this case serves to join the predicate to the subject and is properly called the copula, then the verb *to be* does not directly denote the existence of the subject but its determination in the mode of the predicate:

Quandoque vero [esse] non praedicatur per se, quasi principale praedicatum, sed quasi coniunctum principali praedicato ad connectendum ipsum subiecto; sicut cum dicitur "Socrates est albus," non est intentio loquentis ut asserat Socratem esse in rerum natura, sed ut attribuat ei albedinem, mediante hoc verbo *est*.¹⁵¹

The predicate noun or adjective in this case is the principal predicate, not the verb *to be*; and the joining of the predicate to the subject, thus determining the subject by the predicate, is what is directly intended by this predication.

When *to be* and *not to be* are used in the sense of the truth and falsity of propositions and they are said to be referred to the existence and

¹⁴⁷ *In I Sent.*, 19, 5, 1 sol.

¹⁴⁸ *Ibid.*, ad 5.

¹⁴⁹ *In II Perih.*, 2, n. 2.

¹⁵⁰ *De Ver.*, 21, 1 c.

¹⁵¹ *In II Perih.*, 2, n. 2.

non-existence of the thing signified, it is not the absolute real existence or non-existence of the thing which is in question but the conjunction or separation of the things signified by the subject and predicate—the existence of the thing (or form) signified by the predicate in the thing signified by the subject:

Non est autem intelligendum quod hoc quod dixit [Philosophus]: quod *est* et quod *non est* sit referendum ad solam existentiam vel non existentiam subiecti, sed ad hoc quod res significata per praedicatum insit vel non insit rei significatae per subiectum. Nam cum dicitur, "Corvus est albus," significatur quod non est, esse, quamvis ipse corvus sit res existens.¹⁵²

But since a form does not exist in a subject unless it is, and nothing is determined except in so far as it is, the existence of the subject at least in thought is implied by the copula: the subject exists in the mode of the predicate. It is with this modal determination of the subject rather than with its existence that logic is concerned, "for the logician considers the mode of predication and not the existence of the thing" ("Logicus enim considerat modum praedicandi, et non existentiam rei").¹⁵³

Existential propositions as such are not properly within the competence of the logician. But since he studies propositions generically, considering their form and composition, existential propositions enter into his study merely as propositions. In the strict sense of composition as applied to attributive propositions, existential propositions have no composition for logic to study, since there are not two apprehended natures to compare and join. And while they signify the most basic composition of all in the real order, the composition of a substance with its act of being,¹⁵⁴ this composition as such pertains to metaphysics, not to logic. Logic "studies things according to their formal principles,"¹⁵⁵ especially the "form of the whole," the quiddity or essence, and considers the relations between these in so far as they are apprehended; but because the act of being is not a formal principle or quiddity, it does not offer logic another term to compound with the subject. It is only in so far as it is signified in words that it takes on a certain similarity with the composition which logic studies, and thus enters into the accidental domain of logic, that of the external signification of intentions. The direct concern of the logic of the second act of

¹⁵² *In I Perih.*, 9, n. 4.

¹⁵³ *In VII Met.*, 17, n. 1658.

¹⁵⁴ See *C.G.*, II, 53 & 54; *De Ente et Ess.*, cc. 4 & 5 (ed. Perrier); *Quodl.* II, 3 & 4; III, 20; IX, 6; XII, 5; *De Subst. Sep.*, c. 8 (4a ratio).

¹⁵⁵ *De Pot.*, 6, 1 ad 11. See chap. III, last section, "'Formal' and 'Material' Logic."

reason is the attributive proposition, in which one apprehended nature signified by the predicate is attributed to another apprehended nature signified by the subject.

THE TRUE AND THE FALSE

That truth is in the composition of the intellect and that the copula *to be* constitutes the composition and signifies its truth has already been noted. The proposition itself thus constituted is said to be true inasmuch as it is the sign of the truth of the intellect: "Verum per prius dicitur de veritate intellectus, et de enuntiatione dicitur in quantum est signum illius veritatis; de re autem dicitur in quantum est causa."¹⁵⁶ As the internal expression of the correspondence made by the operation of the intellect, it is more properly said to be true than the operation itself; for it is not the operation as an operation which is conformed to the thing, but the objective significance of that operation:

Cum enim veritas intellectus sit adaequatio intellectus et rei, secundum quod intellectus dicit esse quod est vel non esse quod non est, ad illud in intellectu veritas pertinet quod intellectus dicit, non ad operationem qua illud dicit. Non enim ad veritatem intellectus exigitur ut ipsum intelligere rei adaequetur, cum res interdum sit materialis, intelligere vero immateriale: sed illud quod intellectus intelligendo dicit et cognoscit oportet esse rei aequatum, ut scilicet ita sit in re sicut intellectus dicit.¹⁵⁷

What is expressed by the intellect through its operation is the proposition or enunciation. This is the being which is equivalent to the true, *ens* in the sense of *verum* and *non ens* in the sense of *falsum*, which is distinguished from *ens* as real being, divided according to the ten categories.¹⁵⁸ It is a being constituted by the operation of the intellect conforming itself to the thing known. It is the *unum intellectum*, the *intelligible complexum*, formed by the composition of the intellect.¹⁵⁹ Its whole act of existence (*esse*) is to be true (*esse verum*):

Qui dicit, "homo est albus," significat hoc esse verum; qui dicit, "non est albus," significat hoc esse falsum.¹⁶⁰

¹⁵⁶ *In I Sent.*, 19, 5, 1 sol. (med.); cf. ad 7: Veritas et falsitas proprie invenitur in secunda operatione, et in signo eius, quod est enuntiatio.

¹⁵⁷ *C.G.*, I, 59, Cum enim.

¹⁵⁸ See chap. IV, p. 75 and note 1; also *In VI Met.*, 4, n. 1223: ens quod dicitur quasi verum et non ens quod dicitur quasi falsum; n. 1223: ens et non ens, scilicet verum et falsum; n. 1242: ens quod significat verum.

¹⁵⁹ *In III De An.*, 11, nn. 747 & 760-761; *C.G.*, I, 59.

¹⁶⁰ *In IX Met.*, 11, n. 1914. See the whole paragraph.

Cun enim dicimus aliquid esse, significamus propositionem esse veram. Et cum dicimus non esse, significamus non esse veram ...; sicut dicimus quod Socrates est albus, quia hoc verum est.¹⁶¹

Its whole function is to signify the truth of the intellect in its composition of simple elements.

Although it is of the very essence of the proposition to be true (or privatively, to be false, when distorted from its proper orientation), since it is the very expressed conformity of the human intellect to the thing known in the concrete, still this kind of truth (or falsity) is quite accidental to the thing which is known, since the fact of its being known by the human intellect in no way constitutes or modifies the thing itself; and thus the copulative *is* of a proposition is said to be predicated by accidental predication: "Si autem [*est*] accipiatur primo modo [secundum quod *esse* et *est* significant compositionem propositionis], est de praedicato accidentali."¹⁶² It is not at all surprising to find this affirmed, since it has already become clear that there is no real relation between a thing that is known and the knowledge which the human intellect has of it.¹⁶³

A RATIONATE BEING

As an internal expression of what the intellect knows by composition, the proposition is not a real being existing in nature but has its existence only in the intellect:

Illud quod est ita ens sicut verum in tali compositione consistens est alterum ab his quae proprie sunt entia, quae sunt res extra animam.¹⁶⁴

Propositionis per intellectum componentem et dividentem formatae compositio in ipso intellectu existit, non in re quae est extra animam.¹⁶⁵

It is referred to as a product (*opus*) of reason existing in the mind, not in reality: "Compositio propositionis non est opus naturae, sed opus rationis et intellectus. ... Et quia verum et falsum consistit in compositione, ideo ... verum et falsum non est in rebus sed in mente."¹⁶⁶ And

¹⁶¹ *In V Met.*, 9, n. 895; cf. *In VI Met.*, 4, n. 1223: cum enim interrogamus si homo est animal, respondetur quod est; per quod significatur propositionem praemissam esse veram.

¹⁶² *In V Met.*, 9, n. 896; cf. *In III Sent.*, 6, 2, 2 sol.; *In II Sent.*, 34, 1, 1 sol.; *Quodl.* II, 3 c.

¹⁶³ See chap. VI., pp. 152-155, 157-159, 163 and notes 86 & 117.

¹⁶⁴ *In VI Met.*, 4, n. 1241.

¹⁶⁵ *C.G.*, I, 58.

¹⁶⁶ *In III De An.*, 11, n. 751; cf. *S.T.*, I-II, 90, 1 ad 2; II-II, 47, 2 ad 3.

its act of existence (*esse*) is not exercised in nature but only in the soul as it associates and dissociates:

*Esse ... dicitur ... uno modo, secundum quod est copula verbalis significans compositionem cuiuslibet propositionis quam anima facit; unde hoc esse non est aliquid in rerum natura, sed tantum in actu animae componentis et dividensis.*¹⁶⁷

From this it is evident that the proposition is a rationate being deriving from reason and existing in reason; and from what was said about its being the objective counterpart of the active reference or comparison made by the intellect in judging, it is clear that it must be a relation, and a rationate relation.

This appears further from the fact that a proposition expresses an identity of subject and predicate, as has been seen, whether it is merely an identity in subject and in number, as in accidental predication, or in essence, as in essential predication. For things to be identical they must not be two, but one thing merely viewed as two. Under its two aspects the thing is compared with itself and the relation of identity set up. But because there are not two really distinct terms, the relation between these terms cannot be real, and can be only a rationate relation¹⁶⁸

ANALYSIS OF THE RELATION OF ATTRIBUTION

It is not particularly difficult to distinguish the elements of this relation. That which is related or attributed to something else is the predicate: "In intellectu componente et dividente comparatur praedicatum ad subiectum."¹⁶⁹ The predicate is therefore the subject of the

¹⁶⁷ *Quodl.* IX, 3 c; cf. *In III Sent.*, 6, 2, 2 sol.: *Esse ... dicitur uno modo secundum quod significat veritatem propositionis, secundum quod est copula ...; et hoc esse non est in re sed in mente quae coniungit praedicatum cum subiecto.*

¹⁶⁸ *In V Met.*, 11, n. 912: *Identitas est unitas vel unio; aut ex eo quod illa quae dicuntur idem sunt plura secundum esse et tamen dicuntur idem inquantum in aliquo uno conveniunt. Aut quia sunt unum secundum esse, sed intellectus utitur eo ut pluribus ad hoc quod relationem intelligat. Nam non potest intelligi relatio nisi inter duo extrema. Sicut cum dicitur aliquid esse idem sibi ipsi. Tunc enim intellectus utitur eo quod est unum secundum rem ut duobus. Alias eiusdem ad seipsum relationem designare non posset. Unde patet quod, si relatio semper requirit duo extrema, et in huiusmodi relationibus non sunt duo extrema secundum rem sed secundum intellectum solum, relatio identitatis non erit relatio realis sed rationis tantum, secundum quod aliquid dicitur idem simpliciter.*

¹⁶⁹ *S.T.*, I, 58, 4 c. When we speak thus we are referring to the relation of attribution or predication, in which the predicate of the proposition is the subject of the relation. It would be possible to consider the relation in the other direction, making the subject of the proposition its subject. We should then have the relation of *subijectibility* or of *subjection*. Since subject and predicate are correlative, we always have the two relations at the same time. But inasmuch as the predicate is the formal and determining part of the proposition (and therefore the most informative), the relation of the predicate to the subject is the more important. Logic, which studies things from the viewpoint of their

relation, and the subject of the proposition is the term of the relation. In terminology this is somewhat confusing, but the meaning is clear: the predicate is related to the subject of the proposition, and that which is related to something else is called the subject of the relation. Since the subject and predicate of a proposition signify the same thing in reality, the extremes of the relation are not really distinct but only rationally so.

The foundation of this rationally related relation must be looked for, as in the case of all logical intentions, in the operation of the soul upon which it follows or in (what is the same thing) the manner in which the apprehended natures exist in the intellect through this operation. In regard to the first operation of the intellect, which is abstractive apprehension, the nature apprehended was found to exist in the intellect as abstract; its *esse* is *abstrahi*. The second operation of the intellect joins the abstractively apprehended natures, and it does this by seeing one in the other as its formal determination. From two such natures joined together one composite act of being results, whose act of being is to be composed—its *esse* is *componi*. In a true sense the operation by which the intellect joins the natures can be said to be the foundation of the relation established, which is the proposition.

But because logic is more properly concerned with the objective aspect of the rationally being constituted than with the active and psychological aspect of the operation which constitutes it, the proximate foundation of the relation must be sought in the disposition that is in its subject. Since in this case the subject of the relation is the predicate of the proposition, its disposition will be the manner in which the apprehended form represented by the predicate exists in the intellect as a result of the operation of intellectual composition. It exists as joined to the apprehended thing signified by the subject of the proposition and making with it a composite, hylomorphic whole inasmuch as the predicate is perceived as a form determining that thing, and therefore existing in it as in a matter. The particular disposition of this apprehended nature, therefore, which founds the relation of attribution is precisely its determinativity or formalness in regard to the thing apprehended as determinable and designated by the subject, i.e. its role of being a determination or form of the subject. It is not merely the form of the apprehended nature considered in itself; it is its appre-

formal principles, studies the proposition also principally from the point of view of the determination effected in the subject by the predicate, and therefore is more directly interested in the relation of the predicate to the subject than vice versa.

hended *existence in* the supposit represented by the subject and affirmed by the intellect through the copula *to be* that constitutes the relation.

The formal effect of this affirmed *inesse* or *componi* is the relation of attribution, by which the predicate is joined to the subject and which constitutes a composite *ens rationis* in the intellect. This is a relation of identity. The formal part of the proposition can be identified with the material part because it is not taken abstractly, by a formal abstraction, but concretely, as a whole, by a total abstraction.¹⁷⁰

Since this *ens rationis* is an instrument of cognition and a sign of the thing known, it will have its remote foundation in the thing. Just as the unit made by the intellect is a sign of the unifying apprehension of the intellect, so this in turn is the sign of the unity of the thing known: "Praedicatio enim est quiddam quod completur per actionem intellectus componentis et dividensis, habens fundamentum in re ipsam unitatem eorum quorum unum de altero dicitur."¹⁷¹ But since the unity is not a perfect formal unity in the intelligible character (*ratio*) of the things (for they are at least *ratione distincta*), it is a unity in the concrete, the hylomorphic unity resulting from the inherence of the form in its subject, an exercised unity, the *act of being* which makes them one. Therefore judgment "looks to the act of being of the thing,"¹⁷² and the intention formed by judgment, the proposition, signifies the concretion and the composite manner of existing of the thing known. Thus, whereas the intention of universality consequent upon simple apprehension is founded remotely upon the nature of the thing known, the intention of attribution is founded upon its existence.

¹⁷⁰ See chap. VII, pp. 197–198 and notes 80 and 81.

¹⁷¹ *De Ente et Ess.*, c. 3, n. 17 (ed. Perrier). (See note 131 on the reading of this text.)

¹⁷² *In De Trin.*, 5, 3 (prin.) (quoted pp. 213–214), and see above, note 48.

CHAPTER IX

THE INTENTION OF CONSEQUENCE

THE THIRD OPERATION AND THE NEED OF IT

Besides simple apprehension and judgment there is a third operation of reason belonging to the intellective power, not as intellect, but properly as reason. This is discursive reasoning.¹ It is described as the motion of the intellect passing from one thing known or considered to another:

Ratiocinativa est nostra consideratio quando ab uno considerato in aliud transimus. ... Ratiocinatio autem est quidam motus intellectus transeuntis ab uno in aliud.²

Ratiocinari autem proprie est devenire ex uno in cognitionem alterius.³

Est enim actus rationis quasi quidam motus de uno in alterum perveniens.⁴

The need of this rational passage or discourse arises from the same source which makes compositive judgment necessary, namely, the imperfection of the human intellect and the insufficiency of its first operation, simple apprehension: "Patet quod ex eodem provenit quod intellectus noster intelligit discurrendo et componendo et dividendo, ex hoc scilicet quod non statim in prima apprehensione alicuius primi apprehensi potest inspicere quidquid in eo virtute continetur."⁵ Because our

¹ *In I Perih.*, 1, n. 1: Additur autem et tertia operatio, scilicet ratiocinandi, secundum quod ratio procedit a notis ad inquisitionem ignotorum; cf. *In I Post. Anal.*, 1, n. 4: Tertius vero actus rationis est secundum id quod est proprium rationis, scilicet discurrere de uno in aliud, ut per id quod est notum deveniat in cognitionem ignoti; *De Ver.*, 24, 3 ad 1: Ratio quandoque sumitur large pro omni immateriali cognitione. ... Alio modo accipitur proprie pro vi cognitiva cum discursu.—For this and the following section see Péghaire, *Ratio et intellectus*, Part II, pp. 75-169.

² *C.G.*, I, 57, Tunc enim; Praeterea².

³ *S.T.*, I, 83, 4 c; cf. 58, 3 ad 1; *De Ver.*, 8, 15 c: Discurrere proprie est ex uno in cognitionem alterius devenire; 15, 1 c: Ratio vero discursum quemdam designat quod ex uno in aliud cognoscendum anima humana pertingit vel pervenit.

⁴ *S.T.*, I, 79, 9 c.

⁵ *Ibid.*, 58, 4 c; cf. a. 3; 85, 5 c; II-II, 49, 5 ad 2: Necessitas rationis est ex defectu intellectus; illa enim in quibus vis intellectiva plenarie viget ratione non indigent, sed suo simplici intuitu veritatem comprehendunt; *In I Sent.*, 25, 1, 1 ad 4: Ratio oritur in umbra intelligentiae. Quod patet ex hoc quod statim non offertur sibi veritas, sed per

apprehension is so weak and imperfect, the knowledge which we have as a result of it is insufficient by itself. The effects of abstraction and the fractioning of knowledge, which requires its reintegration by composition were sufficiently examined at the beginning of the preceding chapter. Sometimes the composition that is to be made is apparent; sometime it is not. When both of the things apprehended fall directly under the senses, there is little difficulty in ascertaining that they are together in reality and therefore are to be combined in thought, or that they are separate in reality and to be dissociated in thought. If we see a pink flower, we can without fear of error affirm that it is pink; and similarly we can affirm that a man is stout. Not so easily, however, can we affirm that the same man is wise, since wisdom does not fall directly under the observation of sense.

For two reasons, then, we need a manner of knowing beyond simple apprehension, and also beyond judgment inasmuch as it depends upon simple apprehension for its materials. The first reason is that we may come to further knowledge beyond what is had in direct apprehension. We must usually get further knowledge about the thing which is apprehended, such as non-sensible accidents, properties, and specific difference. And we must be able to get knowledge of things which we do not apprehend through the senses at all, whether they are themselves immaterial and non-sensible or merely not present to our senses. For our apprehension is obscured and bounded by the limitations of time and space, and so we must have a manner of knowing which surmounts these limitations: "Ratiocinatur homo discurrens et inquirendo lumine intellectuali per continuum et tempus obumbrato, ex hoc quod cognitionem a sensu et imagine accipit."⁶

From this limitation of the object of our apprehension arises another reason why we must have a manner of knowing beyond apprehension and judgment. Often we are not certain whether two things are to be joined in judgment or not. Since neither apprehension nor judgment in this case can give us certitude, we must have another process of knowing by which we can arrive at certain knowledge of whether things are or are not to be understood together. Our intellect can be determined to one member of the contradiction on intellectual grounds either immediately or mediately:

inquisitionem discurrendo pervenit; *In II Sent.*, 7, 1, 2 sol.: ratio est intellectus quasi obumbratus; *De Ver.*, 2, 1 ad 4: ad imperfectionem pertinet discursus a principiis in conclusiones.

⁶ *In II Sent.*, 3, 1, 2 sol.

Intellectus possibilis determinatur ad hoc quod totaliter adhaereat uni parti ... quandoque immediate, quandoque mediate: *immediate*, quando ex ipsis intelligibilibus statim veritas propositionum intelligibilium infallibiliter apparet; et haec est dispositio intelligentis principia, quae statim cognoscuntur notis terminis ...; et sic ex ipso quod quid est intellectus immediate determinatur ad huiusmodi propositiones; *mediate* vero quando, cognitio definitionibus terminorum, intellectus determinatur ad alteram partem contradictionis virtute primorum principiorum; et ista est dispositio scientis.⁷

When the quiddities of the two things apprehended are grasped with sufficient clarity for the intellect to perceive that they are identical or that the one is included in the definition of the other, the assent to their conjunction is immediate. When such evidence is not present, we must arrive at it through something else, or mediately. We start from something which is evident to us, then see the connection of each thing with this, and through this with the other. Because our apprehension is so imperfect, there are relatively few propositions to which we can give immediate assent; for this reason we must arrive at knowledge mediately.

MOTION IN REASONING

Thus to proceed from one thing which we know to the knowledge of something else which we at first do not know is to reason: "Ratiocinari autem est procedere de uno intellecto ad aliud, ad veritatem intelligibilem cognoscendam";⁸ "Cognitio discursiva est cognoscere unum cognitum per aliud cognitum absolute."⁹ This process from one thing to another, required by the imperfection of our apprehension, is itself imperfect, and the sign of an imperfect intellectual nature:

Ex imperfectione intellectualis naturae provenit ratiocinativa cognitio. Nam quod per aliud cognoscitur minus est notum eo quod per se cognoscitur; nec ad id quod per aliud est notum natura cognoscentis sufficit sine eo quod fit notum. In cognitione ratiocinativa fit aliquid notum per aliud: quod autem intellectualiter cognoscitur per se est notum, et ad ipsum cognoscendum natura cognoscentis sufficit absque exteriori medio. Unde manifestum est quod defectivus quidam intellectus est ratio.¹⁰

When something is known in a manner proper to intellect, it is known in itself, and not through something else. The less immediately the evidence of a thing is perceived, the less perfectly it is known. Knowl-

⁷ *De Ver.*, 14, 1 c (med.).

⁸ *S.T.*, I, 79, 8 c.

⁹ *Quodl.* XI, 2 ad 2.

¹⁰ *C.G.*, I, 57, Amplius²; cf. *De Ver.*, 15, 1 c: Quaedam vero sunt inferiores [naturae] quae ad cognitionem veritatis perfectam venire non possunt nisi per quemdam motum quo ab uno in aliud discurrunt, ut ex cognitis in incognitorum cognitionem perveniant; 18, 2 ad 1.

edge which is gained by the indirect process of reasoning, then, is an imperfect sort of intellectual knowledge.

The imperfection of reasoning is further shown from the fact that it is a form of motion:

Ratiocinatio autem est quidam motus intellectus transeuntis ab uno in aliud.¹¹

Inferiores intellectus, scilicet hominum, per quemdam motum et discursum intellectualis operationis perfectionem in cognitione veritatis adipiscuntur.¹²

Motus autem ille imperfectionis est quantum ad necessitatem discurrendi ut causetur certitudo.¹³

And for a being which is in potency, as is human reason to knowledge,¹⁴ motion is an "act of the imperfect."¹⁵ This is, of course, not a local motion on the part of the intellect or a material change. But there is a successiveness in knowledge; the starting point is known first, but not yet the terminus, which is originally unknown; then, through the motion of reasoning, the intellect arrives at a knowledge of this: "Discursus quemdam motum nominat. Omnis autem motus est de uno priori in aliud posterius. Unde discursiva cognitio attenditur secundum quod ex aliquo prius noto devenitur in cognitionem alterius posterius noti, quod prius erat ignotum."¹⁶ In our cognition there is a certain similarity to the motion effecting a material change. Just as the art of the builder influences the building because from the art there proceeds a motion of construction terminating in the edifice, so from knowledge possessed there is a certain ordered motion to new knowledge:

Ad similitudinem autem ordinis qui in motibus exterioribus consideratur, attenditur etiam quidam ordo in rerum cognitione; et praecipue secundum quod intellectus noster quamdam similitudinem motus habet, discurrens de principiis in conclusiones. Et ideo alio modo dicitur principium, unde res primo innotescit.¹⁷

The prior knowledge is called a principle of the new knowledge in a way comparable to that in which the art is said to be the principle of the building.

¹¹ *C.G.*, I, 57, Praeterea²; cf. *S.T.*, I, 79, 9 c: Est autem actus rationis quasi quidam motus de uno in aliud perveniens; *De Ver.*, 2, 2 ad 2: pro tanto dicitur esse processus vel motus in quantum ex uno cognoscibili pervenitur ad aliud.

¹² *S.T.*, I, 58, 3 c.

¹³ *In III Sent.*, 31, 2, 4 sol.

¹⁴ *S.T.*, I, 85, 3 c.

¹⁵ *Ibid.*, 53, 1 ad 2: Motus existentis in potentia est actus imperfecti.

¹⁶ *Ibid.*, 58, 3 ad 1; cf. *In I Eth.*, 11, nn. 132-23: Rationis autem proprium est non statim apprehendere veritatem; et ideo ad hominem pertinet paulatim in cognitionem veritatis proficere. ... Si enim aliquis tempore procedente det operam investigandae veritati, iuvatur ex tempore ad veritatem inveniendam.

¹⁷ *In V Met.*, 1, n. 759; cf. n. 758.

The starting point of our knowledge (referred to as the principle or principles) is known at the beginning of the process either of itself through a simple act of understanding or as the result of a previous process of reasoning. The terminal point of the process, the unknown truth to which the process is directed and in which it comes to rest, is called the conclusion.¹⁸ It is the knowledge of the conclusion which is sought in reasoning, and so our reasoning is said to be about conclusions: "Ratiocinari autem proprie est devenire ex uno in cognitionem alterius; unde proprie de conclusionibus ratiocinamur, quae ex principiis innotescunt."¹⁹

We reason to the conclusion, and we do this from the principles. We do not immediately see the conclusion *in* the principles or there would be no discourse, no succession, no reasoning: "Si enim intellectus noster statim in ipso principio videret conclusionis veritatem, numquam intellexeret discurrendo et ratiocinando."²⁰ There is a distinction between knowing something *in* another and knowing something *from* another. In the first case both are seen in one act and there is no discourse; in the second case the two are perceived separately and successively:

Differt autem cognoscere aliquid *in* aliquo, et aliquid *ex* aliquo; quando enim aliquid in aliquo cognoscitur, uno motu fertur cognoscens in utrumque, sicut patet quando aliquid cognoscitur in aliquo ut in forma cognoscibili; et talis cognitio non est discursiva. Nec differt, quantum ad hoc, utrum aliquid videatur in propria specie vel in specie aliena; visus enim non dicitur conferre neque videndo lapidem per speciem a lapide acceptam neque videndo lapidem per eius speciem in speculo resultantem. Sed tunc dicitur aliquid ex aliquo cognosci quando non est idem motus in utrumque; sed primo movetur in aliud; unde hic est quidam discursus, sicut patet in demonstrationibus. Primo enim intellectus fertur in principia tantum, secundo fertur per principia in conclusiones.²¹

Judgment is such a single grasp of one thing in another: what is signified by the predicate is perceived to be in the thing signified by the subject, either essentially or accidentally; and therefore it is not a discursive operation.

In reasoning, however, there is genuine succession. The principles or premises are first known in themselves, then from them the conclusion is known:

¹⁸ *S.T.*, I, 14, 7 c: procedentes a principiis ad conclusiones.

¹⁹ *Ibid.*, 83, 4 c; cf. *C.G.*, I, 76, Adhuc: in actu cognitivae virtutis discursus attenditur secundum quod semotim cognoscimus principia, et ex eis in conclusiones venimus.

²⁰ *S.T.*, I, 58, 4 c.

²¹ *De Ver.*, 8, 15 c; cf. *S.T.*, I, 58, 3 ad 1: Si autem in uno inspecto simul aliud inspicatur, sicut in speculo inspicitur simul imago rei et res; non est propter hoc [cognitio] discursiva; *De Ver.*, 2, 3 ad 3; *C.G.*, III, 49, Contingit.

Omnis ratiocinans alia consideratione intuetur principia et conclusionem.²³

Tunc enim dicitur solum intellectus de uno in aliud discurrere quando diversa apprehensione utrumque apprehendit; sicut intellectus noster alio actu apprehendit causam et effectum; et ideo effectum per causas cognoscens dicitur discurrere in effectum.²³

The example given is the knowledge of a cause and then the knowledge of its effect, which comes about through the knowledge of the cause. This example was not chosen at random, for it has a deep and basic connection with the problem of reasoning, as will be seen shortly.

Though there is in discourse a succession of acts of cognition, it is not the mere succession which constitutes reasoning. We can have successive acts of cognition which are totally unrelated, and in that case we do not reason at all. The successive acts of assent to premises and to conclusion must be connected; it must in some sense be one movement of thought, and therefore there must be one mobile: "Est enim actus rationis quasi quidam motus de uno in aliud perveniens; idem autem est mobile quod pertransiens medium pertingit ad terminum."²⁴ If what is moving is not one but many, the motion is not one but several motions.

Because reasoning is *de conclusionibus*, it is the truth of the conclusion which is the mobile. In some sense it is present all the while. It is in the premises virtually ("Conclusio ... est virtute in suis principiis")²⁵ or potentially ("Conclusiones in principiis sunt in potentia").²⁶ Knowledge of the conclusion goes from potency to act; this is its motion.²⁷ But why this motion? It cannot be haphazard or the conclusion will be thought of only *per accidens* and thus cannot command assent or give certitude.

²² C.G., I, 57, Item¹; cf. S.T., I-II, 8, 3 c: Primo aliquis intelligit ipsa principia secundum se; postmodum autem intelligit ea in ipsis conclusionibus secundum quod assentit conclusionibus propter principia.

²³ *De Ver.*, 2, 3 ad 3; cf. C.G., I, 76, Adhuc: discursus attenditur secundum quod semotim cognoscimus principia et ex eis in conclusiones venimus; si enim in ipsis principiis intueremur conclusiones ipsa principia cognoscendo, non esset discursus.

²⁴ S.T., I, 79, 9 c.

²⁵ *In I Post Anal.*, 3, n. 3; cf. n. 1: In ipsis quidem principiis praecognitis praecognoscitur conclusio, non autem actu: sic enim in eis praexistit; S.T., I, 58, 4 c: Ex eodem provenit quod intellectus noster intelligit discurrendo et componendo et dividendo, ex hoc scilicet quod non statim in prima apprehensione alicuius primi apprehensi potest inspicere quidquid in eo virtute continetur; 1, 7 c: cum tota scientia virtute contineatur in principiis ...

²⁶ C.G., I, 57, Praeterea¹; cf. 55, Praeterea; *In I Post Anal.*, 3, n. 6: id quod quis addiscit ... erat notum potentia sive virtute.

²⁷ *De Ver.*, 2, 1 ad 4: Hic enim discursus non contingit nisi secundum quod intellectus cognoscens principia cognoscit in potentia tantum conclusiones; si enim actu cognosceret, non esset ibi discursus; cum notus non sit nisi exitus de potentia ad actum.

There must be some reason why thought passes from the principles to the conclusion and why the conclusion passes from potency to act: "Perfecta enim cognitio conclusionum duo exigit: scilicet principiorum intellectum et rationem deducentem principium in conclusiones."²⁸ Naturally there must be an understanding of the premises as a pre-requisite for the drawing of the conclusion; but a mere understanding of the premises in themselves, separately and absolutely, is not enough. The reason which draws the conclusion from the premises is something besides this.

Whether "reason" in the text just quoted is taken as a power of the soul capable of such a movement of thought, or as a motive or cause that prompts such a movement, in either case the statement will be true and applicable to the problem under discussion.²⁹ Both a power by which the soul makes the transition and a motive for the power are necessary. The motive especially is of interest in the present investigation.

CAUSATION IN REASONING

When it is said that the conclusion is contained *virtually* in the premises, it is implied that the premises contain the principle of the motion which terminates in the conclusion; for "virtue," taken in the broad sense, "means the principle of motion or action" ("virtus significat principium motus vel actionis").³⁰ It is in some sense a principle of efficient causality: "Virtus dicitur secundum quod est principium actionis et tenet se ex parte causae efficientis."³¹

In reasoning there is not only a succession of principles and conclusion, but there is a *caused* passage of reason from knowledge of the principles to knowledge of the conclusion:

In scientia enim nostra duplex est discursus. Unus secundum successionem tantum; sicut cum, postquam intelligimus aliquid in actu, convertimus nos ad intelligendum aliud. Alius discursus est *secundum causalitatem*, sicut cum per principia pervenimus in cognitionem conclusionum. ...

²⁸ *De Ver.*, 14, 6 c.

²⁹ The latter, the motive or cause of assent, seems to be the meaning of the word in the passage; for Thomas goes on to say that, if one errs regarding the principles (and hence does not have an understanding of them) or does not grasp the *force* of the reasoning ("vim ratiocinationis non comprehendat"), he will not have knowledge of the conclusions. If he misses the force of the reasoning, this force is not a motive or cause for him, though it is such in itself; and this seems to be the *ratio* referred to.

³⁰ *S.T.*, I-II, 26, 2 ad 1; cf. 41, 1 ad 1; *In III Sent.*, 27, 1, 1 ad 1: virtus hic non sumitur pro habitu sed communiter pro omni eo quod potest esse principium alicuius operationis vel motus.

³¹ *In IV Sent.*, 46, 1, 1, sol. 2 ad 1; cf. 1, 1, 4 sol. 2.

Secundus discursus praesupponit primum; procedentes enim a principiis ad conclusiones, non simul utrumque considerant. [Insuper] discursus talis est procedentis de noto ad ignotum. Unde manifestum est quod, quando cognoscitur primum, adhuc ignoratur secundum. Et sic secundum non cognoscitur in primo sed ex primo. Terminus vero discursus est quando secundum videtur in primo, resolutis effectibus in causas; et tunc cessat discursus.³²

Although the simple successiveness of thinking first of the premises and then of the conclusion is presupposed and is necessary for reasoning, this does not formally constitute the rational discourse; it is rather the caused passage of thought from principles to the conclusion which constitutes it. There appears again in this text the distinction between seeing something *in* another and seeing it *from* another. If we immediately saw the conclusion in the premises, there would be no discourse, because we should, in a single act of knowing, grasp the conclusion. But reasoning requires a succession of acts. After we have grasped the principles in themselves, then we see the conclusion in the principles, in which it is virtually contained; and this is what is meant by saying that we know the conclusion *from* the principles.

Besides knowing the conclusion from the principles, we assent to it *because of* the principles: "Primo aliquis intelligit ipsa principia secundum se; postmodum autem intelligit ea in ipsis conclusionibus secundum quod assentit conclusionibus *propter principia*."³³ It is somewhat surprising to find it said here that we know the principles in the conclusion. This seems to be just the opposite of what was said above, namely, that we finally see the conclusion in the principles. But really the same thing is said from two different viewpoints. It is explained that we know the principles in the conclusion inasmuch as we assent to the conclusion because of the principles. When we see the force of the principles in conjunction, we see that the conclusion follows; that is, we see that, when the principles are taken together, they imply the conclusion. Thus the conclusion is seen to be in the combined principles. But at the same time, when we thus see and assent to the con-

³² S.T., I, 14, 7 c; cf. 19, 5 c: si seorsum [intellectus] intelligat principium et seorsum conclusionem, intelligentia principii est causa scientiae conclusionis. Sed si intellectus in ipso principio inspiceret conclusionem, uno intuitu apprehendens utrumque, in eo scientia conclusionis non causaretur ab intellectu principiorum: quia idem non est causa sui ipsius; I-II, 57, 2 ad 2: Principia demonstrationis possunt seorsum considerari, absque hoc quod considerentur conclusiones. Possunt etiam considerari simul cum conclusionibus, prout principia in conclusiones deducuntur. Considerare ergo hoc secundo modo principia pertinet ad scientiam; *De Ver.*, 10, 9 ad 3: principia sunt causa cognoscendi conclusiones.

³³ S.T., I-II, 8, 3 c; cf. I, 83, 4 c: Sicut se habet in cognitivis principium ad conclusionem, cui *propter principia* assentimus ...

clusion, not absolutely, but precisely as following from the principles, we see both the principles together in seeing the conclusion.³⁴

This act of assenting to the conclusion because of the principles is not a plurality or succession of acts but one act:

Idem autem actus cadit super obiectum et super rationem obiecti, sicut eadem visio est coloris et luminis. ... Et est simile de intellectu, quia si absolute principium et conclusionem consideret, diversa est consideratio utriusque; in hoc autem quod conclusioni propter principia assentit, est unus actus intellectus tantum.³⁵

The general principle is expressed here that the same act is directed to the object of the act and the condition under which the object is grasped, as both color and light are seen in one vision. Elsewhere the *ratio cognoscendi* (a synonym for *ratio obiecti*) is explained to be that in which a thing is known, and as such is said to be the form of the thing in so far as it is known, because by it cognition is made actual:

Illud in quo aliquid videtur est ratio cognoscendi illud quod in eo videtur. Ratio autem cognoscendi est forma rei in quantum est cognita, quia per eam fit cognitio actu: unde sicut ex materia et forma est unum esse; ita ratio cognoscendi et res cognita sunt unum cognitum; et propter hoc utriusque, in quantum huiusmodi, est una cognitio secundum habitum et secundum actum.³⁶

Both the thing and the condition of knowing the thing are grasped in the same act of cognition, just as the matter and the form of a material thing exist in one act of existence. This is really the same point that was made above where a distinction was drawn between knowing something *from* something else and knowing it *in* something else. There the point in question was the medium in which something is known; here it is the formal condition under which it is known. But in either case it is the *ratio cognoscendi*, that in which the thing is known. In reasoning the two are clearly identified, for the principles are the media by which the conclusion is known, and their peculiar force, which leads to the conclusion and evokes assent, is the aspect or formal condition

³⁴ *In III Sent.*, 28, 1, 6 sol.: cognitio principiorum est in conclusione sicut causa in causato, et e converso cognitio conclusionum etiam est in principiis sicut causatum in causa.

³⁵ *S.T.*, I-II, 12, 4 c; cf. 57, 2 ad 2: ad eandem potentiam visivam pertinet videre colorem et lumen, quod est ratio videndi colorem, et simul cum ipso videtur. Principia vero demonstrationis possunt seorsum considerari absque hoc quod considerentur conclusiones. Possunt etiam considerari simul cum conclusionibus, prout principia in conclusiones deducuntur; *C.G.*, I, 76: Omnis enim virtus una operatione vel uno actu fertur in obiectum et in rationem formalem obiecti: sicut eadem visione videmus lumen et colorem qui fit visibilis actu per lumen; *De Pot.*, 4, 2 ad 10: intellectus simul intelligit principia et conclusiones per principia, quando tamen scientiam acquisivit.

³⁶ *In III Sent.*, 14, 1, 1, sol. 4.

under which the conclusion is known and assented to, as will be considered soon. What the above text particularly emphasizes is that the assent to the conclusion because of the principles is a single act. This is the formal complement of reasoning.

The principles constitute the formal aspect under which the conclusion is known, just as light is that under which an object of sight is seen; for the conclusion is known in the light of the principles just as color is seen by virtue of light: "Sicut autem formalis ratio visibilis sumitur ex lumine, per quod color videtur, ita formalis ratio scibilis accipitur secundum principia, ex quibus aliquid scitur. ... Sunt enim [scibilia] per sua principia scibilia."³⁷ After the intellect grasps the principles in themselves, it is carried, through the mediation of these principles, to the conclusion: "Primo enim intellectus fertur in principia tantum, secundario fertur per principia in conclusiones";³⁸ "Intellectus devenit in conclusiones per principia quae media dicuntur."³⁹ It may perhaps seem strange that the same premises should be called both the principle or starting point and the medium of the operation, as indeed it would if there were question of a single simple entity. But the premises are more than one (at least implicitly), and each is itself a composite being. Though they are understood first absolutely, and so are the starting point, through their own complexity seen in relation (as will be brought out soon) they lead to a new composition, which is the conclusion.

The discourse or succession in thought which is characteristic of reasoning is not a mere succession but a caused succession (*per causalitatem*). The movement occurs because of the premises (*propter principia*). And the conclusion results from the premises as its cause:

Causae conclusionis in demonstrabilibus sunt praemissae.⁴⁰

Suppositiones, idest propositiones syllogismi, sunt causa conclusionum.⁴¹

Cognitio horum principiorum est causa cognitionis conclusionum.⁴²

The conclusion, as an effect, is seen in the premises as its cause. The vision of the conclusion is the knowledge that was sought throughout. When that is reached, the discourse ceases: "Terminus vero discursus

³⁷ *In I Post. Anal.*, 41, n. 11; cf. *S.T.*, II-II, 1, 1 c: formalis ... ratio sciendi sunt media demonstrationis, per quae conclusiones cognoscuntur.

³⁸ *De Ver.*, 8, 15 c.

³⁹ *S.T.*, I-II, 8, 3 ad 3.

⁴⁰ *In V Met.*, 6, n. 838.

⁴¹ *In II Phys.*, 5, n. 8.

⁴² *In I Post. Anal.*, 7, n. 8; cf. *De Ver.*, 10, 9 ad 3: principia sunt causa cognoscendi conclusiones.

est quando secundum videtur in primo, resolutis effectibus in causas; et tunc cessat discursus."⁴³ All reasoning is thus seen to be a movement of thought from cause to effect.⁴⁴

Is it not also a movement from effect to cause? St. Thomas seems to say so; for he says that to discourse from causes to effects and from effects to causes belongs only to the intellect, not to sense: "Discurrere enim a causis in causata, vel *e contrario*, non est sensus sed solum intellectus."⁴⁵ The cause and effect spoken of here are in the real and physical order rather than in the psychological and logical. What is known is some real thing, as the cause of another real thing, not knowledge as the cause of further knowledge. There is question of the objective meaning of a particular discourse about cause and effect, not about the process of the discourse itself. When a real cause is known from a real effect, the real effect is the cause of knowledge, and the knowledge of the cause is the effect of the knowledge of the effect; so that, when the process is considered, then that from which something else is known, whether it is a real cause or a real effect, is the cause of the knowledge of the other.⁴⁶ The operation always proceeds from cause to effect; whereas in regard to the objects of the operation, knowledge may pass from an effect to a cause.⁴⁷

The causation in knowledge is not only understood by comparison with physical causation, but in some way depends upon it. By having a material body man is a part of the material and changing world, in which potency is constantly being reduced to act. Because his knowing depends upon bodily senses for its initiation, it too passes from potency to act.⁴⁸ It therefore requires an extrinsic cause, and it becomes subject to the laws of change. Furthermore, because the things of the material

⁴³ *S.T.*, I, 14, 7 c; cf. II-II, 8, 1 ad 2.

⁴⁴ *De Ver.*, 15, 1 c: ratio vero discursum quemdam designat, quo ex uni on aliud cognoscendum anima humana pertingit vel pervenit. Unde dicit Isaac in libro *De Definitionibus* [ed. Muckle, *Archives d'histoire doctrinale et littéraire du moyen-âge*, XI (1937-38), 321, 338] quod ratiocinatio est cursus causae in causatum; cf. 8, 6 ad 9.

⁴⁵ *In VI Met.*, 1, n. 1146. This is implicitly said of human cognition when it is denied that angels know in this way; though they can know a syllogism, they do not syllogize: *S.T.*, I, 58, 3 ad 2: non tamen ita quod cognitionem veritatis ignotae acquirant syllogizando ex causis in causata et ex causatis in causas.

⁴⁶ *C.G.*, III, 49: Contingit enim ex effectu cognoscere causam ... secundum quod effectus sumitur ut medium ad cognoscendum de causa. ... Nam ... sunt duae cognitiones, effectus et causae, quarum una est alterius causa: nam cognitio effectus est causa quod cognoscatur eius causa.

⁴⁷ Compare a similar distinction of the operation and that which is signified, made regarding judgment: as an operation it is always composition; but considered from the viewpoint of what is known, it is either composition or division (*In I Perih.*, 3, n. 4—see p. 210).

⁴⁸ *S.T.*, I, 85, 3 c; cf. *In II Sent.*, 39, 3, 1 sol.; *In II Met.*, 1, n. 285; *In I Phys.*, 1, n. 7; *In I Post. Anal.*, 4, n. 16; *C.G.*, II, 77.

world form the proper and proportioned object of man's knowledge, the human manner of knowing necessarily reflects the successiveness and dynamism of that world and the causation which effects it. In two ways, then, human cognition is dependent upon real causation; first, in its being, since it must in part be externally caused, and secondly in its signification, since it must represent the causation of the things that it properly knows.

It is evident that the real causation just referred to is efficient. When premises are said to be the cause of the conclusion, is this also efficient causality which is meant? While efficient causality in such a connection clearly could not be used in exactly the same sense as the production of a material product, in which by the action of the agent a form is introduced into a matter, nevertheless there can be no doubt that St. Thomas understood the causality of the premises to be in some sense efficient. This is explicitly taught: "In omni scientia discursiva oportet aliquid esse causatum: nam principia sunt quodammodo causa efficiens conclusionis."⁴⁹ Although there are other aspects under which the premises can be considered, in regard to their inferential force they are reduced to that genus of cause which is "the principle of motion and of rest"; in other words, they are efficient:

Quaedam vero dicuntur esse causam ... quia ... sunt principium motus et quietis ... Propositiones quidem quantum ... ad vim illativam ipsarum reducuntur ad hoc genus causae; nam principium discursus rationis in conclusione est ex propositionibus.⁵⁰

It is for this reason that the conclusion is said to be in the premises not only potentially, but also virtually; for, as was seen above, "virtue" implies efficient causality. The principles which thus contain the conclusion are compared to efficient causes acting in the natural order, in which the effect, before being brought into act, exists virtually:

Principia autem se habent ad conclusiones in demonstrativis sicut causae activae in naturalibus ad suos effectus (unde in II Physicorum propositiones syllogismi ponuntur in genere causae efficientis). Effectus autem, antequam producatur in actu, praexistit quidem in causis activis virtute, non autem actu, quod est simpliciter esse. Et similiter antequam ex principiis demonstrativis deducatur conclusio, in ipsis quidem principiis praecognitis praecognoscitur conclusio virtute, non autem actu; sic enim in eis praexistit. Et sic patet quod non praecognoscitur simpliciter, sed secundum quid.⁵¹

⁴⁹ *C.G.*, I, 57, Amplius¹; cf. *In V Met.*, 2, n. 778: propositiones ... secundum virtutem earum ... se habent in ratione causae efficientis.

⁵⁰ *In II Phys.*, 5, n. 10.

⁵¹ *In I Post. Anal.*, 3, n. 1. Similarly the premises are called the *principia activa* of the conclusion in *S.T.*, I-II, 51, 2 c: vis intellectiva secundum quod ratiocinatur de conclu-

Because the premises contain the conclusion virtually, when they are known, the conclusion also is known in a way—not actually but virtually. But it is also because of this “virtue” or force of the premises that the knowledge becomes actual.

The question arises how mere propositions exercise efficiency and produce another proposition or enunciation, the conclusion. It must not be forgotten that, being rationally beings, they exist only by virtue of the operation of the intellect and only so long as the intellect is operating. They are but the objective expression of the conjunctive or disjunctive comparison of their several terms made by the intellect. They do not by themselves formulate a new proposition which is the conclusion. The activity of formulating it belongs to the intellect. Yet they move the intellect to see a new conjunction or disjunction, and thereby cause a new proposition to be expressed:

Tunc dicitur aliquid ex aliquo cognosci quando non est idem motus in utrumque, sed primo movetur in aliud; unde hic est quidem discursus, sicut patet in demonstrationibus. Primo enim intellectus fertur in principia tantum, secundo fertur per principia in conclusiones.⁵²

Thus not only are the premises said to cause the conclusion (“propositiones ... sunt causa conclusionum”),⁵³ but it is stated more expressly that the premises are the cause of *knowing* the conclusion (“principia sunt causa cognoscendi conclusiones”),⁵⁴ or more fully still: the knowledge of the premises causes the knowledge of the conclusion (“cognitio horum principiorum est causa cognitionis conclusionum”).⁵⁵

This ability or power of the premises to make the conclusion known derives from the active or agent intellect, by whose light the conclusion is revealed: “Principium vel medium ... habet virtutem manifestandi conclusionem, et hoc verius inest ei ex lumine intellectus agentis, cuius est instrumentum.”⁵⁶ In this sense the premises or principles are the instruments of the agent intellect:

Ipsa vero principia comparantur ad intellectum agentem ut instrumenta quaedam eius, quia per ea facit intelligibilia actu.⁵⁷

sionibus, habet sicut principium activum propositionem per se notam. ... Habitus scientiarum causatur in intellectu secundum quod movetur a primis propositionibus; cf. ad 3; *In III Sent.*, 27, 1, 1 sol.

⁵² *De Ver.*, 8, 15 c. Cf. p. 246 and note 21.

⁵³ *In II Phys.*, 5, n. 8.

⁵⁴ *De Ver.*, 10, 9 ad 3.

⁵⁵ *In I Post. Anal.*, 7, n. 8.

⁵⁶ *In III Sent.*, 23, 2, 1 ad 4.

⁵⁷ *Q.D. de An.*, 5 (ad fin.).

Intellectus in actu principiorum non sufficit ad reducendum intellectum possibilem de potentia in actum sine intellectu agente; sed in hac reductione intellectus agens se habet sicut artifex, et principia demonstrationis sicut instrumenta.⁵⁸

The knowledge of the principles alone would not suffice to bring the conclusion to light were it not for the agent intellect, which uses them as an artisan uses a tool or instrument to produce his product: the agent intellect uses the premises to make the conclusion intelligible or actually known.

This instrumental role is explicitly assigned to first principles: "Prima autem principia demonstrationis ... sunt in nobis quasi instrumenta intellectus agentis."⁵⁹ But this is also expressly extended from first principles to derived or secondary principles that serve as premises in an argument, especially a demonstration: "Prima enim principia sunt quasi instrumenta intellectus ...; et similiter omnia *principia secunda* quae continent propria media demonstrationum."⁶⁰

An instrument is that by which someone or some agent operates;⁶¹ and it is constituted an instrument, an agent, and a cause by being applied by the principal agent.⁶² It does not act by its own power, but it derives its ability to act and to produce an effect from the principal agent.⁶³ Because the principal agent is acting through the instrument, there is but one action that proceeds from the two.⁶⁴ This one action is attributed to the instrument as the immediate and proximate agent and to the principal agent as the mediate but primary source of the action.⁶⁵ Thus the action is more properly attributed to the principal agent than to the instrument.⁶⁶ And similarly the effect is attributed

⁵⁸ *Ibid.*, 4 ad 6.

⁵⁹ *De Ver.*, 10, 13 c; cf. 6 c (ad fin.).

⁶⁰ *Ibid.*, 9, 1 ad 2.

⁶¹ *S.T.*, III, 62, 1 c: Hoc autem proprie dicitur instrumentum per quod aliquid operatur; *In I Perih.*, 6, n. 7: hoc enim dicimus instrumentum quo agens operatur.

⁶² *In IV Sent.*, 19, 1, 2, sol. 1: ex hoc constituitur agens instrumentale ... quod est applicatum a principali agente ad effectum aliquem inducendum.

⁶³ *S.T.*, III, 64, 2 c: Instrumentum autem habet virtutem a principali agente; 62, 4 ad 2: virtus instrumentalis acquiritur instrumento ex hoc ipso quod movetur ab agente principali; I, 18, 3 c: instrumentum ... non agit ex virtute suae formae sed ex virtute principalis agentis; I-II, 112, 1 ad 1; *C.G.*, IV, 74, Huius: instrumentum movetur ab agente ad aliquid efficiendum ...; nam et instrumentum aliquid participat de virtute principalis agentis; *In I De Generatione*, 13, n. 4: instrumentum enim non agit in virtute propriae formae, sed in quantum movetur a principali agente, quod per suam formam agit.

⁶⁴ *S.T.*, I, 76, 2 c: Si vero agens principale sit unum et instrumentum unum, dicitur unum agens et una actio.

⁶⁵ *S.T.*, III, 66, 5 ad 1: actio attribuitur instrumento sicut immediate agenti; attribuitur autem ... principali agenti sicut in cuius virtute instrumentum agit.

⁶⁶ *C.G.*, III, 67, Adhuc²: Causa autem actionis magis est illud cuius virtute agitur quam etiam illud quod agit: sicut principale agens magis quam instrumentum; *S.T.*,

to the principal agent more properly than it is to the instrument.⁶⁷ Nevertheless, the instrument is the cause of the effect.⁶⁸ And because the causation of the instrument is in the line of action and the instrument shares in the action of the principal agent, the instrument is an efficient cause.⁶⁹

As instruments of the agent intellect, the principles or premises in reasoning are efficient causes. But they presuppose the efficiency of the intellect as the principal agent. Under the influence of the agent intellect they lead the possible intellect to see the conclusion. This they do by proposing to the intellect a comparison, or several comparisons. After comparing the terms of each premise to each other, and thus forming these propositions, the intellect compares the premises one to the other. In this it sees the conclusion; that is, it makes the comparison of the terms in the conclusion; and in so doing it establishes a relationship of the conclusion to the premises:

Ratio considerando [ordinem] facit in proprio actu, ... principiorum adinvicem et ad conclusiones.⁷⁰

Ratio nostra componit principia in ordine ad conclusionem.⁷¹

In intellectu ratiocinante comparatur conclusio ad principia.⁷²

Ex ipsa collatione principiorum ad conclusiones assentit conclusionibus, resolvendo eas in principia.⁷³

Given this comparative activity on the part of the intellect, the premises determine the intellect in that activity to assent to the conclusion. Thus their efficiency is based upon the efficiency of the faculty itself. Just how they determine this efficient activity will appear in an examination of the syllogism.

THE SYLLOGISM

St. Thomas has no direct and express treatment of the syllogism as such. His doctrine must be gathered from incidental remarks made on

I-II, 16, 1 c: Actio autem proprie non attribuitur instrumento sed principali agenti; III, 13, 3 c: virtus actionis non proprie attribuitur instrumento sed principali agenti; 15, 9 ad 1: operatio attribuitur principali agenti.

⁶⁷ C.G., II, 86, Quod vero tertio: effectus qui per instrumentum agitur a principali agente magis proprie attribuitur principali agenti quam instrumento.

⁶⁸ S.T., III, 56, 1 ad 2: ex quo [virtus principalis agentis] per instrumentum operatur, instrumentum illud est causa effectus.

⁶⁹ C.G., IV, 74, Huius: instrumentum movetur ab agente ad aliquid *efficiendum*.

⁷⁰ *In I Eth.*, 1, n. 2.

⁷¹ *De Ver.*, 15, 1 ad 5.

⁷² S.T., I, 58, 4 c.

⁷³ *De Ver.*, 14, 1 c (paulo ante fin.).

other topics. As might be expected, the most ample source of this doctrine is the *Commentary on the Posterior Analytics*; but this is directly concerned with a particular type of syllogism, that peculiar to demonstration. Remarks on the general nature of the syllogism are only incidental to the explanation of demonstration and the syllogism proper to it. The absence of a commentary on the *Prior Analytics* is particularly felt here. Had Thomas written such a commentary, he would surely have given us a more evolved and explicit doctrine of the syllogism as well as of the relation of consequence.

Comparison of Propositions and Terms

From what has been said above it is apparent that reasoning is essentially a comparison, an active reference, conducted by the intellect. But every active reference implies an objective relation of the things thus actively referred. They themselves stand in such a relation (either in reality or in thought), and that relation itself can be studied. As was seen in the preceding chapter regarding judgment and the proposition, judgment is essentially a comparison of apprehended natures, and the proposition is just the relation constituted between the natures, the one signified as the subject and the other as the predicate. In reasoning the operation is again a kind of comparison; and there is constituted by this operation an objective relation which is called the syllogism.

That the syllogism is something constituted or produced by the intellect has already been noticed more than once.⁷⁴ Under the alternative name *argumentatio* it is said to be an intention.⁷⁵ Obviously it follows upon the manner of understanding called reasoning,⁷⁶ and through reasoning, on the other two modes of cognition, simple apprehension and judgment; for reasoning, being complex, makes use of apprehensions and judgments.

That the syllogism constituted by reasoning is composed of premises

⁷⁴ See chap. I, pp. 6-8, and chap. V, pp. 121-122, especially *S.T.*, I-II, 90, 1 ad 2: in operibus rationis est considerare ipsum actum rationis, qui est intelligere et ratiocinari, et aliquid per huiusmodi actum *constitutum*. Quod quidem in speculativa ratione primo quidem est definitio; secundo, enuntiatio; tertio vero, *sylogismus vel argumentatio*; II-II, 47, 2 ad 3: ratio speculativa quaedam facit, puta *sylogismum*, propositionem et alia huiusmodi.

⁷⁵ *In I Sent.*, 33, 1, 1 ad 3: Ratio est nomen intentionis, sive secundum quod significat definitionem rei, prout ratio est definitio, sive prout ratio dicitur argumentatio.

⁷⁶ See especially p. 246, where the passage from principles (premises) to conclusion is referred to, and notes 19 & 21. Reasoning itself is sometimes called *sylogizing* (e.g., *S.T.*, I, 58, 3 c & ad 2; *C.G.*, I, 57, Patet).

and a conclusion is evident from what has been said.⁷⁷ And because it is not the premises taken independently, but rather the premises as conjoined and giving rise to the conclusion, which constitute the syllogism, the most important thing to consider is the conclusion—not, however, in itself and absolutely, as an independent enunciation, but precisely as following upon the premises. When the conclusion is thus considered, the premises are said to be its causes. This has already been discussed from the viewpoint of efficient causality. But there are other kinds of causality involved. The premises are also the material cause of the conclusion. This is brought out in a passage in the *Commentary on the Physics* where the four kinds of causes are being discussed. It is pointed out that, in the same way as a whole is made up of its parts, so the propositions are that out of which the conclusion is made: “Quaelibet partes sunt causa totius; et suppositiones, idest propositiones syllogismi, sunt causa conclusionum: et omnia ista habent unam rationem causae, prout dicitur causa id ex quo fit aliquid.”⁷⁸ Such a cause is the material cause; and so the propositions of a syllogism are the material cause of its conclusion.

This is discussed more fully in the solution of a difficulty: since the material cause must be *in* the thing constituted, and the premises exist *apart from* the conclusion, how can they be its material cause?

Item potest esse dubium de hoc quod dicit quod propositiones sunt materia conclusionis. Materia enim inest ei cuius est materia: unde supra, notificans causam materialem, dixit quod est ex quo fit aliquid cum insit; propositiones autem sunt seorsum a conclusione.⁷⁹

The answer is that they are the material cause inasmuch as they contain and supply the terms of which the conclusion is composed:

Sed dicendum quod ex terminis propositionum constituitur conclusio: unde secundum hoc propositiones dicuntur materia conclusionis in quantum termini, qui sunt materia propositionum, sunt etiam materia conclusionis, licet non secundum quod stant sub ordine propositionum; sicut et farina dicitur materia panis, licet non secundum quod stat sub forma farinae.⁸⁰

⁷⁷ From p. 245 on, but especially p. 251 in the words of *In II Phys.*, 5, n. 8: propositiones syllogismi sunt causa conclusionum. Cf. *In II Sent.*, 24, 2, 4 sol.: In syllogismo autem est triplex consideratio, secundum tres propositiones, ex quarum duabus tertia concluditur.

⁷⁸ *In II Phys.*, 5, n. 8; cf. *In V Met.*, 3, n. 778: Suppositiones, idest propositiones praemissae, ex quibus propositis syllogizatur, dicuntur esse causa conclusionis ... secundum quod dicitur causa illud ex quo fit aliquid, quod est ratio causae materialis.

⁷⁹ *In II Phys.*, 5, n. 9.

⁸⁰ *Ibid.*; cf. *In V Met.*, 3, n. 778: Propositiones dicuntur esse materia conclusionis, non quidem secundum quod sub tali form existunt ..., sed quantum ad terminos, ex quibus ponuntur. Nam ex terminis praemissarum componitur conclusio, scilicet ex maiori et minori extremitate.

The terms contained in the premises make up the conclusion, and are therefore its material cause. But for this to be true they must be regarded *materially* in the propositions as well. That is, we must look at the *terms which* are contained there, but not at the *form under which* they are in the propositions. For in the conclusion the same terms stand under a different form, inasmuch as they are there in a combination not found in either of the premises. This is illustrated from the example of flour and bread. The matter from which bread is made is flour. In the bread materially the same flour is present, but is no longer under the form of flour. So in the conclusion the same terms as are found in the premises are present, but not under the form of the premises.

Although the same terms are found in both the conclusion and the premises, the conclusion is not called the matter of the premises, but rather the premises are called the matter of the conclusion, because the composition of the composite is considered rather than of the elements entering into the composite; and in this case the conclusion is the composite of terms derived from the premises, and the premises contain the terms separately: "Ideo tamen potius dicuntur propositiones materia conclusionis quam e converso, quia termini qui coniunguntur in conclusione separatim ponuntur in praemissis."⁸¹

From the terms found separately in the premises a new composition is made; and this is the conclusion. The premises stand to the conclusion as both its material and its efficient cause, as has been seen. The premises themselves in some sense effect the new combination of terms.

Two-Stage Relation of Inherence

An examination of how the premises are efficient reveals that their efficient causation depends upon their own formal causality, and the formal causality of the premises depends upon formal causality in the terms. A proposition is a comparison of the predicate with the subject; and this is a comparison, not of empty forms of the mind, but of apprehended natures that stand in certain relations in the propositions that serve as premises. In each premise the predicate stands as a formal principle with reference to the subject, which is the material element of the proposition.⁸² Just as a form is in its matter, the predicate is presented as in the subject and as constituting its determining principle.

In reasoning, what is sought is to see the predicate of the conclusion (which is the major term of the syllogism) in the subject of the con-

⁸¹ *In II Phys.*, 5, n. 9.

⁸² See chap. VIII, pp. 224-226.

clusion (which is the minor term⁸³). This conjunction or inherence is not seen directly in itself but is seen from the premises. There the term that will become the predicate of the conclusion is presented in another subject, which serves as the middle term of the syllogism; this middle term, becoming the predicate in the other premise, is there expressed as inhering in the subject of this proposition; and this same subject then becomes the subject of the conclusion. Thus through the premises the major term is seen to be in the middle term and the middle term is seen to be in the minor term; and as a consequence the major term is seen to be in the minor: "Praedicatum conclusionis per prius inest medio quam subiecto; cui etiam per prius inest medium quam praedicatum."⁸⁴ Thus the inherence of the major term in the minor is made apparent in a two-stage inherence: that of the major in the middle and of the middle in the minor. For if the first is in the second and the second is in the third, the first must be in the third.

This is just another expression of the basic law of the syllogism, "to be predicated of all" (*dici de omni*): "the predicate is in every one of the things that are contained under the subject" ("quod praedicatum insit cuilibet eorum quae continentur sub subiecto").⁸⁵ This is also expressed negatively: "nothing is said to be subsumed under the subject of which the predicate is not said" ("Tunc enim dicitur aliquid de omni ... quando nihil est sumere sub subiecto de quo praedicatum non dicatur").⁸⁶ An example of the application of the *dici de omni* is given: "*animal* is predicated of every man; and everything of which it is true to say that it is a man is in truth said to be an animal."⁸⁷ In other words, the nature of man is found in each of its subjects or exemplifications; and the nature of animal is found wherever man is found; therefore the nature of animal is found in each subject of the nature of man. Through the inherence of the major term, *animal*, in the middle term *man*, its in-

⁸³ *In I Post. Anal.*, 15, n. 6.

⁸⁴ *Ibid.*, 5, n. 2; cf. *In II Post Anal.*, 19, n. 5: Sit enim A in omni B, B autem in unoquoque eorum quae sunt D sed in plus quam D. Sic igitur B universaliter erit in eis quae continentur sub D, secundum quod universaliter dicitur inesse quod non convertitur. ... Sic igitur quod A sit in ipsis quae continentur sub D, causa est B.

⁸⁵ *In I Post. Anal.*, 9, n. 4; cf. *S.T.*, III, 16, 2 ob. 2: Quidquid praedicatur de praedicato praedicatur de subiecto.

⁸⁶ *In I Post. Anal.*, 9, n. 3. If a slight alteration is made in this statement, so that "nihil ... de quo praedicatum non dicatur" is changed to read "de quo ... dicatur," the law is called the *dici de nullo*, which governs negative syllogisms. But St. Thomas has no express discussion of this. He does say, however (*In I Post. Anal.*, 36, n. 13): in negativis syllogismis nihil mediolorum acceptorum procedendo ad immediata cadit extra genus terminorum affirmativae propositionis in prima figura ...; caderet tamen extra genus praedicati negativi.

⁸⁷ *Ibid.*, 9, n. 4.

herence in the minor term, any particular subject of the nature of man, becomes evident.

The *dici de omni*, requiring universal possession of the attribute expressed by the predicate, presupposes a universal subject and universal propositions. But even if the subject of the conclusion (the minor term) is singular, the major premise and the major and middle terms must be universal. Without this there could be no question of "predicating of all."

The manner in which the predicate of a proposition belongs to its subject or inheres in it is, of course, not always the same. This was brought out in the preceding chapter where essential (*per se*) and accidental (*per accidens*) predication were discussed.⁸⁸ A proposition is essential if the very definition or meaning of one term is included in the other. In this case there is a *de jure* composition and a formal connection; and the predicate must necessarily belong to the subject in every case. If there is merely a *de facto* or material connection of the predicate with the subject, the proposition is accidental. In that event it just happens that the predicate is found in the subject. The subject may be universal and the universal proposition true, but it can be true only with a contingent truth. From two such propositions nothing can follow, and there can be no genuine reasoning; for there is no necessity in the connection of the subject and the predicate and therefore no motive for the movement of thought to a new proposition which would be a conclusion. For this reason there can be no science of accidental being.⁸⁹ Only the spurious science of reasoning, sophistics, makes use of accidental predication for reasoning;⁹⁰ and it does this under the guise of essential (*per se*) predication,⁹¹ for it is the science of *apparent* consequence.⁹²

Genuine science and demonstrative reasoning require essential propositions;⁹³ for only among these is there a necessary connection, and only these guarantee that the conclusion is necessarily true and certain.

The Role of the Middle Term

The middle term is the key to reasoning and to the syllogism. Reasoning is a motion of thought; and in any motion, in order to get from one terminus to the other, from the starting point to the finish, it is nec-

⁸⁸ Pp. 226-228.

⁸⁹ *In VI Met.*, 2, nn. 1172-76; *In XI Met.*, 8.

⁹⁰ *In I Post. Anal.*, 4, n. 4; 13, n. 2: *ex his autem quae sunt per accidens non fit demonstratio sed magis sophisticus syllogismus.*

⁹¹ *De Fallaciis*, c. 10.

⁹² *In IV Met.*, 4, n. 576: *tradit ... modum arguendi apparenter.*

⁹³ *In I Post. Anal.*, 9, nn. 3 & 4; 10; 11, nn. 3-5; 14.

essary to pass through the mean or the middle.⁹⁴ This is not only stands between the extremes but joins them together.⁹⁵ In reasoning the premises are in some sense said to be the mean or middle through which, or the means by which, the intellect arrives at the conclusion: "Intellectus devenit in conclusiones per principia quae media dicuntur."⁹⁶ In this broad sense *medium* would mean anything which, by being known, leads to the knowledge of something else. And some statements using the term might be understood in this way.⁹⁷ Even the assertion that the whole force of a demonstration derives from the *medium* ("tota autem virtus demonstrationis ... dependet ex medio")⁹⁸ could possibly be taken in this sense. But in most cases, as here, it is clear from the context if not from explicit statement that *medium* refers to the middle term of a syllogism. It is said, for instance, that the *medium* of a demonstration is a definition ("demonstrationis autem medium est definitio").⁹⁹ Since a definition is not a proposition and not the product formed by the second operation of the intellect, judgment, as such, but rather the fruit of the first operation, simple apprehension, what is meant must be a term in the syllogism, and in this case the middle term.

Formal Causality in the Terms

A definition expresses and signifies the essence¹⁰⁰ or nature¹⁰¹ or

⁹⁴ *S.T.*, I, 55, 2 ad 2: de extremo ad extremum non pervenitur nisi per medium; II-II, 33, 8 c: de uno extremo ad aliud extremum convenienter transitur per medium.

⁹⁵ *In III Sent.*, 19, 1, 5 sol. 2: Dicitur autem medium ex hoc quod est inter extrema. Actus autem medii est extrema coniungere.

⁹⁶ *S.T.*, I-II, 8, 3 ad 3; cf. *In I Post. Anal.*, 36, n. 7: quaecumque accipiuntur ut media sunt principia conclusionum mediatarum quae per ea concluduntur. Nihil enim aliud sunt principia demonstrationum quam propositiones immediatae.

⁹⁷ E.g., *S.T.*, I, 94, 1 ad 3: medium est per cuius notitiam in aliquod ignotum pervenimus, sicut est medium demonstrationis; *De Ver.*, 9, 1 c: aliquis intellectus ex aliquo manuducitur in aliquid cognoscendum; ... sicut patet cum aliquis per aliquod medium quod mente concipit, intellectus eius confortatur ad alia videnda quae prius videre non poterat.

⁹⁸ *S.T.*, I-II, 54, 2 ad 2.

⁹⁹ *S.T.*, I, 3, 5 c; cf. *De Pot.*, 7, 3 c: ... cum demonstrationis propter quid medium sit definitio; *In I Post. Anal.*, 2, n. 3: ... cum ex definitione subiecti et passionis sumatur medium demonstrationis; 5, n. 8: Principium autem syllogismi dici potest non solum propositio sed etiam definitio; 13, n. 3: ... cum in demonstratione probetur passio de subiecto per medium, quod est definitio; 22, n. 5: In demonstrationibus autem semper proceditur ex definitionibus; 26, nn. 2-3; 44, n. 9: definitiones ... sunt media per quae demonstrationes procedunt; *In II Post. Anal.*, 1, n. 9; 7, n. 8 (fin.); 17, n. 2; 19, n. 2: medium per se in demonstrationibus est ... definitio maioris extremitatis.—This same thing is said equivalently by saying that the principle of demonstration is the quiddity: *S.T.*, I, 46, 2 c: demonstrationis principium est quod quid est; cf. *C.G.*, I, 3, Quod autem.

¹⁰⁰ *In I De An.*, 1, n. 10; *In III De An.*, 8, n. 705; *S.T.*, I, 29, 1 ad 4; 2 ad 3; *Quodl.* II, 4 c; III, 4 ad 1.

¹⁰¹ *C.G.*, II, 95, Unde; *S.T.*, I, 29, 1 ad 4; *Quodl.* II, 4 c; III, 4 ad 1; *In V Met.*, 2, n. 764.

quiddity¹⁰² of a thing. All of these have especial reference to formal causality as the principle specifying the thing and determining of what sort it is. The essence and quiddity are called the "form of the whole" (*forma totius*).¹⁰³ And this is said not only of *quidditas* but also of *quod quid est*.¹⁰⁴ Moreover, *quod quid erat esse* is interpreted as a form or formal cause,¹⁰⁵ and is explicitly said to be the formal cause¹⁰⁶ of the thing and the formal principle of the corresponding species, genus, and individuals.¹⁰⁷

This is not to say that the essence or quiddity is always identified with the form. That is true only in separated substances or purely spiritual essences.¹⁰⁸ In the case of material substances, composite beings having matter as well as form in their essence, a distinction between the quiddity or essence and the form is recognized.¹⁰⁹ Nevertheless, even in these the form is the principal and specifying part of the quiddity:

*Quod quid est se tenet ex parte formae.*¹¹⁰

*Forma est ratio ipsius quod quid erat esse, idest definitio per quam scitur quid est res. Quamvis enim in definitione ponantur aliquae partes materiales, tamen id quod est principale in definitione oportet quod sit ex parte formae.*¹¹¹

*Unumquodque ponitur in sua specie per formam. ... Unde oportet quod definitio speciei accipiatur a forma.*¹¹²

¹⁰² *Quidditas*: C.G., II, 93, Ostensum; *De Ente et Ess.*, c. 1, n. 3 (ed. Perrier); *In III De An.*, 8, n. 705; cf. *In I Met.*, 12, n. 183.—*Quid est res*: C.G., I, 21, Adhuc; III, 46, Patet; *In VII Met.*, 11, n. 1528.—*Quod quid est*: *In VII Met.*, 12, n. 1537; *In II Post. Anal.*, 2, nn. 2-4; *In III De An.*, 8, n. 705.—*Quod quid est esse*: *In VII Met.*, 5, n. 1378; *In IV Met.*, 7, n. 627; *In V Met.*, 7, n. 864.—*Quod quid erat esse*: *In VII Met.*, 3, n. 1316; 4, n. 1355; 10, n. 1493; 11, n. 1535; *De Ente et Ess.*, c. 1, n. 2 (ed. Perrier); *In II Post. Anal.*, 3, n. 8.

¹⁰³ *In I Sent.*, 23, 1, 1 sol. (ad fin.): *essentia significat quidditatem ut est forma totius*; *In III Sent.*, 2, 1, 3, q1a. 3 s.c., resp., & sol. 3; *In IV Sent.*, 44, 1, 1, sol. 2 ad 2; *Comp. Theol.*, I, 154, n. 309 (ed. Verardo); C.G., IV, 81, De humanitate; *In VII Met.*, 9, n. 1469; *Quodl.* II, 4 c; IX, 2 ad 4.

¹⁰⁴ *In I Met.*, 12, n. 183.

¹⁰⁵ *Ibid.*, 4, n. 70; 11, n. 175; 17, n. 272 (where *forma* or *causa formalis* is used in the commentary although *quod quid erat esse* is found in the Latin text of Aristotle); *In II Phys.*, 11, n. 8.

¹⁰⁶ *In II Post. Anal.*, 9, n. 2: *una [causa] est quod quid erat esse, idest causa formalis, quae est completiva essentiae rei*; C.G., IV, 35, Item¹: *Forma ... rei naturalis est eius natura.*

¹⁰⁷ *In VII Met.*, 2, n. 1275.

¹⁰⁸ *Ibid.*, 11, nn. 1533-34, 1536; *De Ente et Ess.*, c. 4, n. 19 (ed. Perrier); S.T., III, 13, 1 c. By implication this is said also in the passages cited in notes 103 and 109.

¹⁰⁹ *In VII Met.*, 9, nn. 1467-69; C.G., IV, 81, De humanitate; S.T., I, 3, 3 c; *De Ente et Ess.*, c. 2, nn. 4 & 5; *In I Sent.*, 23, 1, 1 sol. (med.); *In IV Sent.*, 44, 1, 1, sol. 2 ad 2; *De Pot.*, 3, 11 ad 11.

¹¹⁰ *In VII Met.*, 13, n. 1567; cf. S.T., III, 3, 2 ad 3: *res aliqua singularis ... ponitur in genere vel in specie ... ratione naturae, quae secundum formam determinatur*; C.G., IV, 36, Cuiuslibet: *forma est ... secundum quam unaquaeque natura habet propriam speciem.*

¹¹¹ *In V Met.*, 2, n. 764.

¹¹² *In VII Met.*, 11, n. 1531.

This is why the definition, which expresses the quiddity, is said to be taken from the form. In fact the definition itself is related to the thing defined as its form or formal cause, and even the parts of the definition are in the order of formal causality: "Non solum tota definitio comparatur ad definitum ut forma, sed etiam partes definitiones, quae scilicet ponuntur in definitione in recto";¹¹³ "Partes definitionis reducuntur ad genus causae formalis."¹¹⁴

The underlying reason for this is that the quiddity, nature, or essence, viewed abstractly as the *forma totius*, is a determining or formal principle with reference to the concrete individual subject, the supposit, having this nature:

Natura ... significat essentiam speciei, quam significat definitio. ... Suppositum [quod est individuum subsistens in natura illa] significatur ut totum habens naturam sicut partem formalem et perfectivam sui.¹¹⁵

Natura igitur speciei constituta ex forma et materia communi se habet ut formalis respectu individui quod participat talem naturam; et pro tanto hic dicitur quod partes quae ponuntur in definitione pertinent ad causam formalem.¹¹⁶

Comparatur ergo essentia ad substantiam particularem ut pars formalis ipsius.¹¹⁷

It is this broad sense of form, formal cause, or formal principle as the ontological and intelligible determination of concrete beings that especially concerns knowledge and logic, as was brought out in chapters III, V, and VII.¹¹⁸ It is also the key to reasoning, most particularly in its principal form, causal (*propter quid*) demonstration.¹¹⁹

In reasoning the intellect is subject to motion or progression and is to that extent passive. It requires an efficient cause to move it from its ignorance of the conclusion to knowledge of that conclusion. But its starting point is not purely negative, not mere ignorance of the con-

¹¹³ *In V Met.*, 2, n. 764.

¹¹⁴ *S.T.*, I-II, 18, 7 ad 3.

¹¹⁵ *S.T.*, III, 2, 2 c. The definition of supposit here inserted is found earlier in the same article.

¹¹⁶ *In III Phys.*, 5, n. 4.

¹¹⁷ *De Pot.*, 9, 1 c.

¹¹⁸ Pp. 64-71, 111-114, 178-181, 185-188, 196-197.

¹¹⁹ The distinction is made in *In I Eth.*, 4, n. 51: assignat differentiam in processu ratiocinandi. Quia quaedam rationes sunt quae procedunt a principiis, idest a causis, in effectus: sicut demonstrationes *propter quid*. Quaedam autem e converso ab effectibus ad causas sive principia, quae non demonstrant propter quid sed solum *quia*.—That *propter quid* demonstration is the principal and most proper kind is implied in the word *solum*. It appears more clearly from the fact that Aristotle in *Post. Anal.*, I, 1-12, and St. Thomas in *In I Post. Anal.*, 1-22, are speaking of *propter quid* demonstration (lect. 23, n. 1), and that to it the definition of demonstration properly applies (n. 2) in an unqualified sense (n. 3). *Quia* demonstration, the discussion of which begins at lect. 33, is demonstration only in a qualified sense.

clusion. It is knowledge of the premises in which the conclusion is potentially or virtually contained. All action, however, supposes formal causality in at least two respects. The action proceeds from the form of the agent¹²⁰ and terminates in the information of the patient.¹²¹ In so far as the thing known is the cause of the knowledge of our human intellect,¹²² it communicates itself according to its own form, thus both determining and moving the intellect:

Natura cuiuslibet actus est quod seipsum communicet quantum possibile est. Unde unumquodque agens agit secundum quod est in actu. Agere vero nihil aliud est quam communicare illud per quod agens est actu, secundum quod est possibile. . . . Huius autem communicationis exemplum in operatione intellectus congruentissime invenitur. . . . Cum enim alicuius rei extra animam per se subsistentis noster intellectus concipit quidditatem, fit quaedam communicatio rei quae per se existit, prout a re exteriori intellectus noster aliquo modo recipit; quae quidem forma intelligibilis in intellectu nostra existens aliquo modo a re exteriori progreditur.¹²³

Illa enim [similitudo rei] quae est in intellectu nostro est accepta a re secundum quod res agit in intellectum nostrum . . . ; et ideo res quae agit in animam nostram agit solum *per formam*; unde similitudo rei quae imprimitur . . . est tantum similitudo formae.¹²⁴

In all action the agent informs the patient and the form received also informs, though in two different modes of causation, efficient and formal. Thus there is a certain coincidence of efficient and formal causality: "Ipsa forma est effectus agentis, unde idem est quod agens facit effective et quod forma facit formaliter."¹²⁵ This is particularly true in the matter of intellectual knowledge, where to move is to inform, and vice versa.

In reasoning, whose function it is to lead the intellect to a conclusion, that is, to move it to form the conclusion and to assent to it, the adequate information of the intellect is required. As long as this adequate information is not had, the inquiry and motion go on. Once the intellect

¹²⁰ *S.T.*, I, 55, 1 c: forma est qua agens agit; 14, 5 ad 3; *C.G.*, I, 43, Amplius⁴: unumquodque agit per suam formam; II, 49, Item; 98, Ahduc; *In III Sent.*, 27, 1, 1 sol.

¹²¹ *S.T.*, I, 115, 1 c: Omne agens agit sibi simile; 4, 3 c: Cum enim omne agens agit sibi simile inquantum est agens, agit autem unumquodque secundum suam formam, necesse est quod in effectu sit similitudo formae agentis; *C.G.*, II, 98, Dicunt: In qualibet autem causa effectiva oportet esse similitudinem sui effectus, et similiter in quolibet effectu oportet esse similitudinem suae causae: eo quod unumquodque agens agit sibi simile; III, 52, Amplius: Forma alicuius propria non fit alterius nisi eo agente: agens enim facit sibi simile inquantum formam suam alteri communicat; *De Ver.*, 27, 7 c.

¹²² By no means excluding the action of the active intellect, which is here presupposed.

¹²³ *De Pot.*, 2, 1 c (prin. & med.).

¹²⁴ *De Ver.*, 2, 5 c.

¹²⁵ *De Malo*, 5, 5 ad 16.

is so informed, the motion ceases and the intellect rests in the conclusion:

Omne autem passivum perficitur secundum quod formatur per formam sui activi, et in hoc motus eius terminatur et quiescit. Sicut intellectus, antequam formetur per formam intelligibilis, inquirat et dubitat: qua cum informatus fuerit, inquisitio cessat et intellectus in eo figitur; tunc et dicitur intellectus firmiter illi rei inhaerere.

... Intellectus formatus per quidditates rerum ex hoc dirigitur in cognitione principiorum quae scitis terminis cognoscuntur, et ulterius in cognitionibus conclusionum quae notae fiunt ex principiis.¹²⁶

It is the quiddity of the thing that informs the intellect and makes it see the connection of subject and predicate in the conclusion. The quiddity is the formal aspect under which the thing is known; it is the formal object of the intellect in knowing.

What is known in reasoning, and therefore its material object, is a conclusion about the thing. But the reason why it is known and the formal aspect under which it is known is the middle term:

Id per quod [materiale obiectum] cognoscitur ... est formalis ratio obiecti. ... In scientia ... materialiter scita sunt conclusiones; formalis vero ratio sciendi sunt media demonstrationis per quae conclusiones cognoscuntur.¹²⁷

But the middle term is the definition or quiddity. Being the formal aspect of the thing known, it can serve to lead the intellect to the truth of the conclusion:

Actus specificatur per obiectum. ... Obiectum intellectus est primum principium in genere causae formalis; est enim eius obiectum ens ut verum.¹²⁸

Ratio autem cognoscendi est forma rei in quantum est cognita.¹²⁹

Principium autem in speculativis est forma et *quod quid est*.¹³⁰

The thing, then, moves the intellect by its formal causality.

The formal aspect of the thing can move the intellect, however, only because of the syllogism and the formal relationships in which the syllogism presents the definition of the thing. This is given as a middle term joining the two extremes which are found as the subject and predicate of the conclusion.

¹²⁶ *In III Sent.*, 27, 1, 1 sol.

¹²⁷ *S.T.*, II-II, 1, 1 c.

¹²⁸ *De Malo*, 6 c (ante med.).

¹²⁹ *In III Sent.*, 14, 1, 1, sol. 4.

¹³⁰ *C.G.*, III, 97, Est autem.

The syllogism compares the two premises, and in so doing makes the conclusion appear from them and in its relation to them: "Ratio nostra ... componit principia in ordine ad conclusionem";¹³¹ "Ex ipsa collatione principiorum ad conclusiones assentit conclusionibus resolvendo eas in principia, et ibi figitur motus cogitantis et quietatur."¹³² Because the intellect sees the necessary connection of the terms of the conclusion in this comparison, it assents to the conclusion drawn. But the middle term must be used twice, once in each of the premises, in order that it be compared to each of the other terms: "In demonstrativis enim oportet medium idem semper esse dupliciter, idest ad duo extrema comparari."¹³³ The nature or quiddity that serves as the middle term is shown to be in the subject of the conclusion and the predicate to be contained in this middle term, as was explained above,¹³⁴ where it was shown that deductive reasoning involves a two-stage inherence and through this shows the connection of the subject and predicate of the conclusion, that is, the inherence of the predicate in the subject.

This is especially evident when a property is proved of the subject. A property necessarily follows from the nature or essence of a being and is caused by the nature or essence. But science is knowledge from causes. Hence a property will be shown to belong to a subject by expressing its cause, the essence of the subject. The expression of the essence or quiddity is the definition. Thus the property will be proved from the definition of the subject:

Proprium enim non est de essentia rei, sed ex principiis essentialibus speciei causatur.¹³⁵

Manifestum est enim quod propriae passiones causantur a principiis subiecti.¹³⁶

Proprium ... causatur ex principiis essentialibus speciei; et ideo per definitionem significantem essentiam demonstratur proprietates de subiecto.¹³⁷

¹³¹ *De Ver.*, 15, 1 ad 5.

¹³² *Ibid.*, 14, 1 c (post med.).

¹³³ *In I Post. Anal.*, 22, n. 5.

¹³⁴ Pp. 259-260.

¹³⁵ *S.T.*, I, 77, 1 ad 5; cf. 6 c & ad 2 & 3; 7 c & ad 1.

¹³⁶ *In V Phys.*, 3, n. 4; cf. *In I Phys.*, 11, n. 10; *In De Trin.*, 5, 4 ad 4.

¹³⁷ *De Spir. Creat.*, 11 c (ad fin.); cf. *In I Post. Anal.*, 10, n. 8: Cum scientia proprie sit conclusionum, proprie scibilia dicuntur conclusiones demonstrationis in quibus passiones praedicantur de propriis subiectis. Propria autem subiecta non solum ponuntur in definitione accidentium sed etiam sunt causae eorum; 26, n. 2: Oportet autem in demonstratione propter quid medium esse causam passionis quae praedicatur in conclusione de subiecto; 38, n. 2: Demonstratio est syllogismus ostendens causam et propter quid. ... Illud autem cui inest aliquid per se est causa eius; subiectum enim est causa propriae passionis quae ei per se inest.

Manifestum est enim quod principia quae continet definitio subiecti sunt principia passionis. Non ergo demonstratio resolvet in primam causam nisi accipiatur ut medium demonstrationis definitio subiecti.¹³⁸

The middle term in this syllogism must therefore be the definition of the subject. Since in the conclusion the property will be predicated of the subject, the property will be the major term and the subject will be the minor term.¹³⁹

The two-stage inherence mentioned earlier is verified in the syllogism in question because the nature or quiddity of the minor term (the subject of the conclusion) is expressed in its definition and used as the middle term. As the *forma totius* it is presented as in the minor term, which is the subject of this formal determination; and the property (the major term) is in this quiddity or nature as in its cause.¹⁴⁰ Thus the property is shown to be in the subject because it is in the middle term (the definition).

¹³⁸ *In II Post. Anal.*, 1, n. 9; cf. 7, n. 8 (ad fin.): cum enim subiectum sit causa passionis, necesse est quod definitio passionis demonstratur per definitionem subiecti; 17, n. 2: ratio est quia subiectum est causa propriae passionis. Et ideo si volumus investigare causam alicuius passionis propter quam insit quibusdam rebus inferioribus, oportet accipere commune quod est proprium subiectum per cuius definitionem accipitur causa eius passionis.

¹³⁹ *In I Post. Anal.*, 13, n. 3: cum in demonstratione probetur passio de subiecto per medium quod est definitio, oportet quod prima propositio [sit] cuius praedicatum est passio et subiectum est definitio, quae continet principia passionis ...; secunda autem, cuius subiectum est ipsum subiectum et praedicatum ipsa definitio ...; conclusio vero [sit] in qua praedicatur passio de subiecto; *In II Post. Anal.*, 3, n. 8: sequitur ... quod medius terminus sit quod quid erat esse minoris extremitatis.

¹⁴⁰ The precise kind of causality involved here is difficult to explain and is a matter of some dispute. St. Thomas has only brief indications on the question. It is clear that the subject is the material cause of the property since it is that in which the property is found and is further determined by the property. It is the final cause of the property inasmuch as the property is ordained to the perfection and completion of the subject. And the subject is in some sense the efficient or productive cause of the property inasmuch as the property results from the constituent principles of the subject. *S.T.*, I, 77 6: actualitas formae accidentalis causatur ab actualitate subiecti. Ita quod subiectum, in quantum est in potentia, est susceptivum formae accidentalis; in quantum autem est in actu, est eius productivum. Et hoc dico de proprio et per se accidente; nam respectu accidentis extranei subiectum est susceptivum tantum; productivum vero talis accidentis est agens extrinsecum. Secundo autem differunt substantialis forma et accidentalis quia cum minus principale sit propter principalius, materia est propter formam substantialem; sed e converso forma accidentalis est propter completionem subiecti; ad 2: subiectum est causa proprii accidentis et finalis et quodammodo activa; et etiam ut materialis in quantum est susceptivum accidentis; ad 3: emanatio propriorum accidentium a subiecto non est per aliquam transmutationem; sed per aliquam naturalem resultationem; cf. *In I Post. Anal.*, 10, n. 8; 38, nn. 2 & 3.

Efficient, productive, or active causality is attributed here only "in a certain sense." Clearly it is not efficient causality in the ordinary sense of the term, for there is no action on the part of the subject and no change in an external matter or patient. But just from what the subject is, the property results. This would seem to be in some sense a question of formal causality, and another case (like that of the causality of the thing known in moving the intellect) where the efficient and formal causes coincide.

Mediated Relation of Identity

Although the mediating role of the middle term is explained from the point of view of the inherence of a form in a subject, there is another and somewhat simpler way of viewing it. The middle term not only shows the inherence of the predicate in the subject (being in the subject itself and having the predicate in it), but it also shows the identity of the predicate with the subject.

In the preceding chapter it was explained that a proposition expresses an identity of the predicate with the subject.¹⁴¹ There it was shown that in any attributive proposition there is expressed a real identity even though there is a rational diversity. The copula *is* asserts that the predicate is identical with the subject: "Quod enim praedicatur de aliquo significatur idem esse illi."¹⁴² This identity is always at least material: the subject and the predicate refer to the same *thing*. In accidental (*per accidens*) predication the identity is only this. In essential (*per se*) predication the identity is also formal. That is, there is identity in the formal or intelligible notes, whether this identity is complete, as when a definition is predicated, or only partial, as when some essential note though not a complete definition is the predicate. The identification of subject and predicate does not make the two terms completely co-ordinate, for the predicate is still determining and formal with reference to the subject, which is determinable and material.¹⁴³ Yet, when the proposition is viewed from the standpoint of an identification and it is the identity of the thing referred to by the subject and the predicate that is stressed, the relation of inherence is not brought into prominence.

Because a syllogism is a concatenation of three propositions such that the third follows from the preceding two, the conclusion will express an identity that is brought out and made evident by the two premises. That is, the minor and the major terms, whose identity is expressed in the conclusion, are shown to be identical with each other because each is in turn identified with the same middle term.

From this point of view the general principle that governs the syllogism is the truth that "two things that are identical with a third thing are identical with each other" ("quae uni et eidem sunt eadem, sibiinvicem sunt eadem").¹⁴⁴ This can be called the principle of mediated

¹⁴¹ Pp. 228-231.

¹⁴² *In V Met.*, 11, n. 908.

¹⁴³ See pp. 224-226.

¹⁴⁴ *In IV Met.*, 7, n. 616; *In VII Met.*, 5, n. 1360; *In VIII Eth.*, 12, n. 1712; *In I Phys.*, 3, n. 3; *In I Post. Anal.*, 43, n. 9; *S.T.*, I, 28, 3 ad 1.

identity. By the application of this maxim the syllogism shows the identity of the two extremes through the mediation of the middle term. The syllogism itself accordingly consists in the expression of this mediated identity. It can be schematized in this form:

$$S = M = P.$$

Thus the principle of mediated identity not only governs the syllogism but expresses its very nature. St. Thomas himself has almost no explicit development of this aspect of the syllogism; but it is implicit in his writings, especially in his doctrine about the nature of propositions and in his use of the principle of mediated identity in various other contexts.

INDUCTION

From the exposition so far given of Aquinas' doctrine on reasoning it is evident that his main concern is with deduction and that he considers this the typical form of reasoning. Yet he recognizes as a type of reasoning induction as well as deduction or the syllogism:

Duplex est modus acquirendi scientiam: unus quidem per demonstrationem, alius autem per inductionem. ... Differunt autem hi duo modi, quia demonstratio procedit ex universalibus; inductio autem procedit ex particularibus. ... Sed impossibile est universalia speculari absque inductione.¹⁴⁵

Est autem duplex doctrina ex cognitis: una quidem per inductionem, alia vero per syllogismum. Inductio autem inducitur ad cognoscendum aliquod principium et aliquod universale in quod devenimus per experimenta singularium. ... Sed ex universalibus principiis praedicto modo cognitis procedit syllogismus. ... Sic ergo relinquitur quod principium syllogismi sit inductio.¹⁴⁶

Both deduction (here referred to as demonstration or the syllogism) and induction are means of deriving new knowledge from knowledge already possessed and are therefore reasoning. Deductive reasoning proceeds from the universal to the less universal or particular, whereas inductive reasoning proceeds inversely—from the particular to the universal. The universal in question in either case is, of course, not a universal concept but a universal proposition.¹⁴⁷ For all reasoning

¹⁴⁵ *In I Post. Anal.*, 30, n. 4; cf. 22, n. 6: inductio ex particularibus procedit, sicut syllogismus ex universalibus; 8, n. 4.

¹⁴⁶ *In VI Eth.*, 3, n. 1148; cf. *In I Post. Anal.*, 1, n. 11: in syllogismo accipitur cognitio alicuius universalis conclusi ab aliis universalibus notis. In inductione autem concluditur universale ex singularibus, quae sunt manifesta quantum ad sensum.

¹⁴⁷ *In I Post. Anal.*, 11, n. 2: universale non hoc modo hic accipitur prout omne quod praedicatur de pluribus universale dicitur ...; sed dicitur hic universale secundum quamdam adaptationem vel adaequationem praedicati ad subiectum, cum scilicet neque praedicatum invenitur extra subiectum, neque subiectum sine praedicato.

passes from premises or principles to a conclusion; and both the premises and the conclusion are propositions.

On induction St. Thomas has relatively little explicit doctrine, and most of that is on a special case, the induction of first principles. To discover his general doctrine at all it is necessary to cull it from a variety of passages and from implicit statements and from the specialized discussion of the knowledge of first principles. The result must necessarily be somewhat lengthy and diffuse, at least by comparison with what would be the case if there were a treatise expressly on this topic.

That there must be a process of induction is evident from the fact that there is deductive reasoning and deduction proceeds from universal propositions. For our universal knowledge is derived from knowledge of the singular: "universalium cognitionem accipimus ex singularibus."¹⁴⁸ To go from knowledge of the singular to a universal judgment would be induction. Deductive reasoning accordingly presupposes and requires inductive reasoning.¹⁴⁹

There are two principal reasons why our human knowledge must begin from singulars. The first is its dependence upon external reality, since our knowledge is about reality and is derived from reality itself.¹⁵⁰ But the beings in reality that can properly be said to exist are singular things rather than universal.¹⁵¹ Secondly, because of our compound, corporeal nature the starting point of our knowledge is sense;¹⁵² and the senses attain the singular.¹⁵³ Our knowledge must accordingly start from singulars and in sense, and sensible singulars are better known to us than universals: "Priora autem et notiora quoad nos sunt proxima

¹⁴⁸ *In II Post. Anal.*, 20, n. 14; cf. n. 13: ex experimento singularium accipitur universale; *In VI Eth.*, 9, n. 1249: quod singularia habeant rationem principiorum patet quia ex singularibus accipitur universale.

¹⁴⁹ *In I Post. Anal.*, 30, n. 5: impossibile est universalia speculari absque inductione; n. 5: universalia, ex quibus demonstratio procedit, non fiunt nobis nota nisi per inductionem; *In II Post. Anal.*, 20, n. 14: necesse est prima universalia principia cognoscere per inductionem; *In VI Eth.*, 3, n. 1148: ex universalibus principis praedicto modo [inductione] praecognitis procedit syllogismus. . . . Sic ergo relinquitur quod principium syllogismi sit inductio.

¹⁵⁰ Cf. pp. 177-181.

¹⁵¹ *C.G.*, III, 75, Amplius²: Singularia autem sunt entia, et magis quam universalia, quia universalia non subsistunt per se sed solum in singularibus; I, 65, Ostensum: universalia habent esse solum in singularibus.

¹⁵² Cf. pp. 177-178; also *De Ver.*, 12, 3 ad 2: primum principium nostrae cognitionis est sensus; 28, 3 ad 6; *In De Trin.*, 6, 2 c; *In IV Sent.*, 9, 4, sol. 1.

¹⁵³ *In II De An.*, 12, n. 375: sensus . . . sunt singularium; nn. 376-77; 5, n. 284: Est enim sensus particularium; *In I Met.*, 2, n. 45; *S.T.*, I, 59, 1 ad 1; 12, 4 c; 86, 1 ad 4; *C.G.*, II, 66, Adhuc; *De Ver.*, 10, 5 c; 22, 4 ad 4; *De Subst. Sep.*, 14, n. 82 (ed. Perrier).

sensui, scilicet singularia, quae opponuntur universalibus.”¹⁵⁴ And since reasoning proceeds from the more known to the less known, induction, which goes from singulars to universals, seems from this point of view to have the first claim upon the title of reasoning.

Induction and Abstraction

The passage from singulars to the universal, and especially from sense knowledge to universal knowledge, which is found in induction, seems very much like the process of abstraction. They agree in that both abstraction and induction go from the singular and from sense to the universal. Yet there is this clear difference. Abstraction goes from the simple apprehension of sense (and so from singulars simply apprehended according to their external accidents) to a simple apprehension on the intellectual plane, in which the nature or quiddity of the thing is grasped and a universal concept of it is formed. Induction, on the other hand, goes from singular propositions to a universal proposition. And since propositions are found only in intellectual knowledge and are the product of the intellect’s combining and separating (*compositio et divisio*), i.e., associating or dissociating objects of previous apprehension, induction goes from intellectual knowledge to other intellectual knowledge, as is characteristic of reasoning. It is said to proceed from sense, however, because the singulars known (and to which the subjects of the singular propositions refer) are known in sense knowledge; and the intellectual knowledge had of them depends upon a reflection upon sense knowledge or a “return to the phantasm.”¹⁵⁵

An example of an induction from singular judgments to a universal judgment is given by St. Thomas where he distinguishes between experience and “art” (which is here taken broadly to include scientific knowledge¹⁵⁶). He has just said that experience is concerned with the singular and art with the universal: “experimentum tantum circa singularia versatur, ars autem circa universalia.”¹⁵⁷ Then he gives an example from medicine: if it is observed that a patient (Socrates) suffering from a certain illness is cured when given a certain herb, and again another patient (Plato) suffering from the same illness, and other

¹⁵⁴ *In I Post. Anal.*, 4, n. 15; cf. 1, n. 11; 8, n. 4: singularia sunt priora quoad nos; 30, n. 4: Et hoc quidem in rebus sensibilibus est magis manifestum, quia in eis per experientiam quam habemus circa singularia sensibilia accipimus universalem notitiam.

¹⁵⁵ *De Ver.*, 2, 5 c; 6 c & ad 3; 10, 5 c; *Quodl.* VII, 3 c; XII, 11; *Q.D. de An.*, 20 ad 1 in contr.; *In III De An.*, 8, n. 713; *S.T.*, I, 86, 1; *De Prin. Indiv.*, nn. 1-4 (ed. Perrier). And see chap. V, note 99, where some of these passages are quoted.

¹⁵⁶ *In I Met.*, 1, n. 34; *In II Post. Anal.*, 20, n. 11.

¹⁵⁷ *In I Met.*, 1, n. 18.

patients repeatedly in the same circumstances, the physician finally comes to the realization that in general or universally in cases of this particular type the herb in question is effective in bringing about the cure:

Cum homo accepit quod haec medicina contulit Socrati et Platoni tali infirmitate laborantibus, et multis aliis singularibus, quidquid sit illud, hoc ad experientiam pertinet: sed cum aliquis accipit quod hoc omnibus conferat in tali specie aegritudinis determinata, et secundum talem complexionem, sicut quod contulit febricitantibus et phlegmaticis et cholericis, id iam ad artem pertinet.¹⁵⁸

This is made somewhat more particular in another place, where the illness is specified as a fever:

Putat cum aliquis recordatur quod talis herba multoties sanavit multos a febre dicitur esse experimentum quod talis sit sanativa febris. Ratio autem non sistit in experimento particularium, sed ex multis particularibus in quibus expertus est accipit unum commune, quod firmatur in anima, et considerat illud absque consideratione alicuius singularium; et hoc commune accipit ut principium artis et scientiae. Putat quamdiu medicus consideravit hanc herbam sanasse Socratem febricitantem et Platonem et multos alios singulares homines, est experimentum; cum autem sua consideratio ad hoc ascendit quod talis species herbae sanat febricentem simpliciter, hoc accipitur ut quaedam regula artis medicinae.¹⁵⁹

We can put this more specifically still and express it in modern terms. When a patient, A, had chills and a fever and a characteristic weakness and other symptoms of a syndrome designated as malaria, and quinine, an extract of the bark of the cinchona tree, was administered, the symptoms were relieved and a cure effected. Again when patient B had a similar syndrome and was given quinine, he also was cured. And the same happened in the case of C and D; and so on. Finally the physicians become convinced that in every case of malaria (barring extraneous complications) quinine is an effective remedy.

Somehow the singular judgments that case A of malaria was cured by dose A of quinine, and case B of malaria was cured by dose B of quinine, and case C of malaria was cured by dose C of quinine, and so on, caused the universal judgment: every case of malaria (certain conditions being met) will be cured by quinine. How do the singular judgments cause the universal judgment?

The conclusion is certainly not caused here in the same way as in a syllogism or in deductive reasoning. The reasoning is not syllogistic: "Ille enim qui utitur deductione non probat syllogisticè."¹⁶⁰ There is

¹⁵⁸ *Ibid.*, n. 19.

¹⁵⁹ *In II Post. Anal.*, 20, n. 11.

¹⁶⁰ *Ibid.*, 4, n. 8; cf. n. 3: qui inducit per singularia ad universale non demonstrat neque syllogizat ex necessitate.

no identification of the subject and predicate of the conclusion with a middle term. We do not identify "case of malaria" and "cured by quinine" because each is identified with the definition of malaria or the definition of quinine or any other middle term. There is, in fact, no middle term in the proper sense at all.

Yet there is something which leads the intellect to join the universal subject and predicate of the conclusion and thus in some way mediates the judgment. This is the collection of singular facts or events or correlations expressed in the singular propositions. "Every case of malaria is cured by quinine" because "A was cured by quinine" and "B was cured by quinine" and so forth. But how do they mediate the universal judgment?

Complete Enumeration of Particulars?

Does this occur through the complete enumeration of instances or singulars? In at least three passages St. Thomas seems to say so. In distinguishing rhetorical arguments from more strictly logical procedures on the grounds that they are at best suasive rather than conclusive, he says that in place of a syllogism (i.e., demonstrative reasoning) an enthymeme is used and in place of a complete induction an example:

In rhetoricis ... persuasio fit per enthymema aut per exemplum; non autem per syllogismum vel *inductionem completam*, propter incertitudinem materiae circa quam versatur, scilicet circa actus singulares hominum, in quibus universales propositiones non possunt assumi vere. Et ideo utitur loco syllogismi, in quo necesse est esse aliquam universalem, aliquo enthymemate; et similiter loco inductionis, in qua concluditur universales, aliquo exemplo, in quo proceditur a singulari, non ad universale sed ad singulare.¹⁶¹

Here he says that an induction, in order to be valid, must be complete. This at first seems to refer to a complete enumeration. But in fact nothing is said about enumeration. A valid induction is called complete to distinguish it from an example, which, being a single instance, is regarded as an inchoate induction. The contrast is drawn between an induction just begun and an induction carried out or *completed*. The manner in which it is completed is not discussed. The meaning of *inductio completa*, then, in this passage is not "induction by complete enumeration" but rather "completed induction."

Another passage appears to be a much stronger and more explicit statement of the need of complete enumeration. St. Thomas says that, if we are to conclude from singulars to the universal, we must assume

¹⁶¹ *In I Post. Anal.*, 1, n. 12.

that all the instances of a common case are contained or included: "Oportet supponere quod accepta sint omnia quae continentur sub aliquo communi: alioquin nec inducens poterit ex singularibus concludere universale."¹⁶² This seems to say that the enumeration of particulars must be complete or be granted to be complete. And this interpretation is strengthened by the fact that in this passage induction is coupled with "division" or argument by elimination, which depends for its validity on the complete enumeration of alternatives.¹⁶³

Nevertheless, this interpretation would be contrary to the whole tenor of St. Thomas' discussion of induction (in which he poses the problem of concluding to the universal—a problem that would be non-existent if the enumeration were complete) and to some explicit statements that the universal is taken from the experience of a few or a certain number of cases: "[universale] accipitur ac si in omnibus ita sit sicut est experimentum in quibusdam."¹⁶⁴ Furthermore, if all instances were individually known and enumerated, induction would not be reasoning—a passage from the known to the previously unknown—at all; and yet Thomas regards induction as reasoning. But especially the context indicates that something besides the need of complete enumeration was intended. The question under discussion in this part of the *Posterior Analytics* is whether the definition or quiddity (*quod quid est*), which would serve as the middle term in a demonstration, can be demonstrated; and in the immediate context the question is whether the demonstration could be achieved by way of division. The point being made is that it cannot be demonstrated by division because from division of itself the conclusion does not follow necessarily from the premises: "in via divisionis non ex necessitate sequitur conclusio existentibus praemissis."¹⁶⁵ That is, the conclusion does not follow unless the enumeration of alternatives in the major premise is complete; but neither the premise itself nor the whole argument proves or makes evident the completeness of the enumeration. This would have to be shown by another argument.¹⁶⁶ Induction is brought in by way of comparison ("sicut et in via inductionis"), as something better known in order to clarify the point made about division. It is here that it is

¹⁶² *In II Post. Anal.*, 4, n. 4.

¹⁶³ *Ibid.*, n. 3: Proceditur enim via divisionis cum accepto aliquo communi quod per multa dividitur, remoto uno, concluditur alterum.

¹⁶⁴ *In II Post. Anal.*, 20, n. 11; cf. 1, n. 11 and *In I Post. Anal.*, 30, n. 5, where a single instance is apparently said to suffice.

¹⁶⁵ *In II Post. Anal.*, 4, n. 3.

¹⁶⁶ It might, for instance, be done in some cases by showing that each division made is reduced to a contradictory opposition, which admits of no middle ground.

said that induction does not demonstrate or syllogize with necessity: "Ille enim qui inducit per singularia ad universale non demonstrat neque syllogizat ex necessitate." It does not compel assent in virtue of its premises as demonstration does, whose purpose is to certify.¹⁶⁷ The purpose of induction is rather discovery and the arrival at knowledge.¹⁶⁸ And discovery is not always characterized by certitude: "inventio non semper est cum certitudine."¹⁶⁹

Induction of itself is not necessarily certain. It would, of course, be certain if the enumeration of instances were not only in fact complete but shown to be complete; but to do this is not its function. That is why one must assume (*supponere*) that all cases are included in the common subject: "Oportet supponere quod accepta sint omnia quae continentur sub aliquo communi."¹⁷⁰ But *supponere* does not mean to suppose or gratuitously take for granted. In the context of reasoning and demonstration it clearly has the meaning assigned to the noun *suppositio*, which is a proposition used as a premise in an argument which, though not self-evident but needing proof, is not proved in this particular demonstration or even this particular science, but is taken as true and as established in another (higher) science or at least in another demonstration.¹⁷¹ This would seem to be the meaning in the text at issue: for an induction to have probative force or to be certain it would be necessary to establish by some other means or demonstration (*exteriori ratione*) that the common subject covered all cases. Without this the induction would not show the certitude of the conclusion whether the conclusion were in fact certain or not. An alternative to proving by an

¹⁶⁷ Demonstration belongs to the *judicative* part of logic, which is designed to produce certitude: *In I Post. Anal.*, 1, n. 6: pars iudicativa dicitur, eo quod iudicium est cum certitudine scientiae; 4, n. 9: Demonstratio est syllogismus scientialis, idest faciens scire; cf. 38, n. 4; *In II Post. Anal.*, 19, n. 7.—Its purpose is to beget scientific knowledge (*scientia*, *scire*) and involves certitude: *In I Post. Anal.*, 4, n. 5: *scire* aliquid est perfecte cognoscere ipsum ...; per certitudinem ... quod id quod scitur non possit aliter se habere; ... *scientia* est certa cognitio rei; 44, n. 3: *scientia* importat certitudinem cognitionis per demonstrationem; *In II Post. Anal.*, 4, n. 3: Cum enim aliquid syllogistice probatur, ... necesse est quod conclusio sit vera praemissis existentibus veris.

¹⁶⁸ It is brought in under the *inventive* part of logic (*In I Post. Anal.*, 1, n. 6) which is dialectics; and dialectics makes use of induction (n. 11).

¹⁶⁹ *Ibid.*, n. 6.

¹⁷⁰ *In II Post. Anal.*, 4, n. 4.

¹⁷¹ *In I Post. Anal.*, 5, n. 7: aliquae propositiones *suppositiones* dicuntur ... quae non possunt probari nisi per principia alterius scientiae; n. 8: suppositio dicitur quia tamquam veritatem habens supponitur; 19, n. 3: petitio et suppositio exteriori ratione confirmari possunt; n. 4: cum sint demonstrabilia, tamen demonstrator accipit ea non demonstrans, et praecipue quia non sunt demonstrabilia per suam scientiam sed per aliam.—This is extended to the case in which the proposition is not established in the argument at hand but has previously been established: *In I De Caelo*: 16, n. 8: Vocat autem suppositiones quibus utitur ad propositum ostendum propter hoc quia haec supponuntur sicut principia licet quaedam eorum supra fuerint probata.

extrinsic argument or assuming as proved elsewhere that “nothing else is contained under the common term than the instances that have been adduced” is to get the one to whom the argument is being addressed to grant this: “Patet igitur quod inducens, facta inductione, ... non potest ex necessitate concludere ... nisi detur sibi a respondente quod nihil aliud contineatur ... quam ista quae inducta sunt.”¹⁷² The use of what is held or granted by the addressee is another related meaning of *supponere* and *suppositi*—in this case not an absolute or unqualified assumption but a relative one or, as it were, *ad hominem*.¹⁷³ But even here what is held or granted is not that all the instances have been enumerated but that nothing contradictory to the tenor of the instances is contained (“quod nihil aliud contineatur”).

A third passage that seems to require complete enumeration of particulars for induction occurs at the end of the *Commentary on the Posterior Analytics*. In discussing the dependence of universal propositions, even first principles, on sense, Aquinas says: “Per viam inductionis sensus facit universale intus in anima in quantum considerantur omnia singularia.”¹⁷⁴ The phrase “inasmuch as all the singulars are considered” appears to require that all singulars be known and taken into account if a universal proposition is to be formed. Nevertheless, this cannot be Thomas’ meaning unless he is patently contradicting himself; for in the same lesson only three paragraphs earlier he has said that the universal proposition is formed from the experience of a few instances: “[universale] accipitur ac si in omnibus ita sit sicut est experimentum in quibusdam”¹⁷⁵—“the universal is taken as if the case were the same in all instances as experience finds it in a few.” Though this statement presents some difficulty of its own, it makes clear that St. Thomas considers the empirical basis of universal propositions and inductions to be only a partial rather than a complete experience and enumeration of particulars.

The difficulty raised by this passage is just how “the universal is taken as if the case were the same in all instances”; but this is the basic problem of induction itself: What justifies passing from knowledge of a few instances to a statement about all? Before this is tackled, what can be said about Thomas’ assertion that “by induction sense causes a

¹⁷² *In II Post. Anal.*, 4, n. 4.

¹⁷³ *In I Post. Anal.*, 39, n. 2: Suppositio est propositio non per se nota sed [quae] accipitur sicut a discente opinata; 19, n. 4: Si quidem talis propositio sit probabilis addiscenti cui fit demonstratio, dicitur suppositio. Et sic suppositio dicitur non simpliciter sed ad aliquem.

¹⁷⁴ *In II Post. Anal.*, 20, n. 14 (fin.).

¹⁷⁵ *Ibid.*, n. 11 (med.).

universal within the soul inasmuch as all the singulars are considered?"

First it should be recognized that the Leonine edition records that two important manuscripts have "*aliqua singularia*" instead of "*omnia singularia*." That reading would, of course, avoid all difficulty about total enumeration. But even when the better manuscript authority is followed and the reading *omnia* is taken, what Thomas must be speaking of is not the *means* but the *result* of the induction. What he is referring to is not *how* the universal proposition is attained but rather *what* is attained in the universal proposition. It is of the very nature of a universal that it applies to all the members of its class, all its inferiors. Without this it would not be a universal. The qualifying phrase introduced by "inasmuch" is not adverbial, modifying the verb *facit* and meaning "by means of" or "by the fact that," but rather adjectival, modifying the direct object *universale* in an expository sense: "such that all the singulars are considered." What is being said is that from sense knowledge (which is always of singulars and necessarily finite in extension) a universal that applies to all singulars of this type or class is grasped by the intellect and used as the subject of a proposition and precisely in its universality. This still leaves the question of the means unanswered, but it does not contradict Thomas' manifest doctrine elsewhere given about the incomplete basis for induction.

The Basis of Induction

The true basis of induction is hinted at in several of the passages already seen. The various instances cited must be seen to agree in a certain respect. In the comparison already referred to between division and induction St. Thomas says that in either case it must be assumed that all cases are taken into account which are contained under *something common*: "Utrobique enim oportet supponere quod accepta sint omnia quae continentur *sub aliquo communi*."¹⁷⁶ This means not only that the same predicate belongs to many different subjects but also that the subjects somehow agree. The subjects of the judgments involved in induction are not purely singular. We do not argue "*This* cured malaria in case A" and "*That* cured malaria in case B," but rather "*This quinine* cured malaria" and "*That quinine* cured malaria," etc.; not "*This* boils at 212° F." and "*That* boils at 212° F.," but "*This water* boils at 212° F." and "*That water* boils at 212° F." That is, the subjects are seen under a common aspect: "Eadem est enim ratio in omnibus."¹⁷⁷

¹⁷⁶ *In II Post. Anal.*, 4, n. 4.

¹⁷⁷ *Ibid.*, n. 4 (ad fin.).

There is more to induction than a mere recording of instances. They must be compared to reveal what is common, and this takes intelligence and reason: "Experimentum indiget aliqua ratiocinatione circa particularia, per quam confertur unum ad aliud, quod est proprium rationis."¹⁷⁸ This work of comparison is a form of reasoning and is the proper work of reason. When many singulars are found not to differ in some particular respect, a universal is at least vaguely grasped: "Si enim accipiuntur multa singularia quae sunt indifferentia quantum ad aliquid unum in eis existens, illud unum secundum quod non differunt in anima acceptum est primum universale."¹⁷⁹ It is here referred to as the first universal because other universal aspects may be perceived on further inspection and understanding. And although the first universal must be derived from sense knowledge, further universals that are more universal still can later be derived from an intellectual comparison of the intelligible aspects of things.

In order to pass by induction from singular or particular judgments to a universal judgment, the various instances must be grasped according to a common or universal aspect. Doses A, B, C, etc., must all be recognized as quinine before we can conclude that quinine (in general or universally) cures malaria; various portions of liquid that have been brought to the boiling point must all be recognized as water if we are to judge that all water boils at 212° F. And from the fact that some vessels float on water we cannot judge that all vessels float on water; but if those that float are seen to agree in the property of displacing water of greater weight than their own, then we can judge that every watertight vessel that displaces more water than would equal itself in weight floats on water. The justification for extrapolating the universal from the singular or particular instances is the grasp of the common trait, which is taken to be or to manifest the nature of the thing (e.g., quinine, water, or vessel displacing water of greater weight than its own), and this nature is understood to be constant and unvarying. The reason for the observed constancy of the predicate is seen to lie in the nature of the subject, and the conclusion is drawn that, wherever a subject of this nature is found, it will have the predicate in question.

Though St. Thomas does not at any length apply to the problem of induction his doctrine about nature, he does hold the constancy of natures; and his doctrine is relevant here. Whatever is found in most cases or in all is regarded as pertaining to the nature of the things in

¹⁷⁸ *In II Post. Anal.*, 20, n. 11 (ad prin.); cf. n. 12.

¹⁷⁹ *Ibid.*, n. 13.

question.¹⁸⁰ And whatever is constant or enduring is considered to be intended by nature.¹⁸¹ The nature of each thing is what that thing is, its essence or quiddity or what is expressed in its definition.¹⁸² It is the essence or quiddity of the thing viewed not only as the principle of existence and intelligibility but specifically as the principle of operation or activity.¹⁸³ As the essence or quiddity the nature is the first or most basic principle in the thing; and as a consequence it and all that belongs to it as such are necessary, at least with a conditional necessity—if that being is to exist, it must have that nature and behave as that nature dictates.¹⁸⁴

A nature by its very notion is something definite and determinate—“determined to one thing”: “natura determinata est ad unum.”¹⁸⁵ Since the nature is the essence or quiddity, this means, first of all, one definite set of quidditative or specifying notes. But secondly, since the nature is the basic determining principle in the thing and (as essence) ordained to existence and to determine the existence,¹⁸⁶ this means a definite manner of existing. And, thirdly, since existence implies operation and the manner of existing determines the manner of

¹⁸⁰ *S.T.*, I-II, 5, 3 ob. 3: videtur enim naturale quod in pluribus est; 35, 6 ob. 1: Illud autem in quo communiter omnia consentiunt videtur esse naturale; II-II, 85, 1 s.c.: Quod autem est apud omnes videtur naturale esse; *C.G.*, II, 83, Praeterea⁹: quae sunt naturalia sunt eadem apud omnes; *In VIII Phys.*, 15, n. 7: hoc enim est naturale quod similiter se habet in omnibus, quia natura semper eodem modo operatur.

¹⁸¹ *In II Sent.*, 20, 1, 1 ad 3: omne perpetuum est per se intentum in natura; *S.T.*, I, 98, 1 c: Id enim per se videtur esse de intentione naturae quod est semper et perpetuum.

¹⁸² *S.T.*, I, 60, 1 c: natura cuiuscumque rei est essentia eius; 29, 1 ad 4: essentia uniuscuiusque rei, quam significat eius definitio, vocatur natura; III, 2, 2 c: Natura enim ... significat essentiam speciei, quam significat definitio; a. 1 c; *Quodl.* II, 3 c: dicitur natura ipsa substantia rei ... secundum quod substantia significat essentiam vel quidditatem vel *quid est*. Illud ergo significatur nomine naturae quod significat definitio.

¹⁸³ *De Ente et Ess.*, c. 1, n. 3 (ed. Perrier): nomen naturae ... videtur significare essentiam rei secundum quod habet ordinationem ad propriam operationem rei, cum nulla res propria operatione destituatur; *S.T.*, I, 39, 2 ad 3: natura designat principium actus; I-II, 49, 3 ad 3; 50, 2 ad 3.

¹⁸⁴ *S.T.*, I, 60, 2 c: cum natura sit primum quod est in unoquoque, oportet quod id quod ad naturam pertinet sit principium in quolibet; 82, 1 c: Necessesse est quod non potest non esse. Quod quidem convenit alicui ... ex principio intrinseco. ... Et haec est necessitas naturalis et absoluta. ... Oportet enim quod naturaliter alicui convenit et immobiliter sit fundamentum et principium omnium aliorum: quia natura rei est primum in unoquoque; *C.G.*, I, 54, In his: Nam ea quae ad esse alicuius rei requiruntur illius rei natura divisa esse non patitur.

¹⁸⁵ *De Pot.*, 3, 13 c; 15 c; *S.T.*, I, 41, 2 c; 6 c; 42, 2 ad 2; I-II, 10, 1 ob. 3 & ad 1; 18, 10 c; 21, 2 ad 1; 63, 1 c; II-II, 184, 4 ad 1; *C.G.*, I, 50, Amplius¹; III, 23, Quod autem; 85, Praeterea¹.

¹⁸⁶ *De Pot.*, 2, 3 ad 6: natura ... [est] principium quo res subsistit; *De Ente et Ess.*, c. 1, n. 3 (ed. Perrier): nomen naturae ... videtur significare essentiam, ...; sed essentia dicitur secundum quod per eam et in ea ens habet esse; *S.T.*, III, 17, 2 ad 1: esse consequitur naturam, non sicut habentem esse sed sicut qua aliquid est; *Quodl.* VIII, 1 c: Hoc quod competit naturae secundum absolutam considerationem est ratio quare competitatur naturae alicui secundum esse quod habet in singulari.

operating,¹⁸⁷ this means a definite manner in which it operates. A given nature's manner of operating is constant or always the same.¹⁸⁸ Consequently, the nature is revealed by its operation¹⁸⁹ and known from it. And where many different things are found to agree in their constant manner of operating, they can be known to agree in a common nature.¹⁹⁰

The discovery of a common nature is the real basis for deriving the universal conclusion from the singular premises. For if the operation is known to be the proper or characteristic one of that nature, and a nature always acts in the same way so far as depends upon itself (though its operation may be extrinsically impeded),¹⁹¹ then there are grounds for concluding that not only in the observed cases but in any case of the same type a thing of that nature will act in that way. What must be taken into account is not directly the number of subjects in which the nature is found or the collectivity of all individuals or totality of all instances (as if the individuals could be enumerated if the enterprise were carried out long enough), but rather the distributive application of the nature: wherever this nature is found or in whatever subject it may be, it will act in the way proper to that nature. The proper quanti-

¹⁸⁷ *In IV Sent.*, 4, 1, 1 sol.: cuiuslibet existentis in aliqua natura sunt aliquae operationes propriae; *C.G.*, II, 79, Si autem: unumquodque operatur secundum quod est ens, et propria operatio rei sequitur propriam ipsius naturam; III, 84, Adhuc²: Propria operatio rei consequitur naturam ipsius; IV, 36: cuiuslibet enim naturae est aliqua operatio propria; *Q.D. de An.*, 14 c: Unumquodque autem operatur secundum quod est; 19 c: unumquodque secundum hoc operatur secundum quod est ens; *S.T.*, I, 75, 2 c: eo modo aliquid operatur quo est; 89, 1 c: cum nihil operetur nisi in quantum est actu, modus operandi uniuscuiusque rei sequitur modum essendi ipsius; I-II, 4, 5 c: Cum enim operatio dependeat a natura rei ...

¹⁸⁸ *C.G.*, II, 83, Si autem: natura enim semper uno modo operatur; *S.T.*, I, 19, 4 c: natura uno et eodem modo operatur nisi impediatur. Et hoc ideo quia secundum quod est tale agit; unde quamdiu est tale, non facit nisi tale; 8 ob 2.; 46, 1 ob. 6; II-II, 47, 7 ad 3; III, 28, 1 ad 4: natura, sicut est determinata ad unum effectum, ita etiam est determinata ad unum modum producendi illum; 23, 2 c: ubi est una natura oportet quod sit ... una operatio.—If a given natural being does not operate in the same way, this comes from its weakness and from external interference, not from its nature: *C.G.*, III, 72, Item: Ex virtutis autem debilitate et eius impedimento contingit quod res naturalis non semper eodem modo operatur, sed quandoque deficit ab eo quod competit sibi secundum suam naturam, ut sic naturales effectus non ex necessitate proveniant.

¹⁸⁹ *S.T.*, I, 76, 1 c: Natura enim uniuscuiusque rei ex eius operatione ostenditur; 50, 5 c: operatio rei indicat modum esse ipsius; *C.G.*, II, 79, Si autem: Operatio enim rei demonstrat substantiam et esse ipsius: quia unumquodque operatur secundum quod est ens, et propria operatio rei sequitur propriam ipsius naturam; *In IV Sent.*, 47, 2, 1, sol. 3 ad 2: sicut operatio quae procedit a virtute rei est virtutis indicium, ita et virtus est indicium essentialis vel naturae quae procedit a principiis essentialibus rei.

¹⁹⁰ *S.T.*, I, 39, 2 ad 3: possunt dici aliqua unius naturae quae conveniunt in aliquo actu.

¹⁹¹ *S.T.*, I, 19, 4 c: natura uno et eodem modo operatur nisi impediatur; 8 ob. 2: natura semper idem operatur nisi aliquid impediatur; *C.G.*, II, 15, Amplius¹: Quod alicui convenit ex sua natura, non ex alia causa, minoratum in eo et deficiens esse non potest; III, 72, Item (quoted note 188); cf. *In I Post. Anal.*, 1, n. 5.

fying adjective to indicate this universality is not *all* (in the plural) but rather *every* or *any*.¹⁹² Thus it would be less proper to say, "All men are mortal," than "Every man is mortal." And if we observe that free-falling bodies accelerate at the rate of thirty-two feet per second, we would less correctly make an induction about "all free-falling bodies" than about "every free-falling body." In this case the common nature seen to belong to the observed individuals is not rock or iron or glass or wood but simply material body, and in the condition of having its support withdrawn and of being permitted to fall.

The fact that some common aspect is perceived in the observed instances and that this is taken as a nature or as attributable to a nature does not mean that the universal conclusion is directly drawn out of this nature. If we were to know that the predicate belongs to the common nature as such and then draw the conclusion from this, that would not be an induction at all but a deduction—of the type called a *quia* demonstration. The induction would, in fact, already have occurred in knowing that the predicate belongs to that nature as such. Even less does it mean that we see in the common nature what the particular cause of the occurrence is and, understanding this cause, deduce from it each and every instance. In that case we should have a *propter quid* demonstration. It is not even necessary that we should know the essence or quiddity of the nature involved, or what that nature is. It is enough that we should realize, however vaguely or implicitly, that there is a nature at the bottom of the constant phenomenon or operation and that, wherever this nature is found, it must operate in that way.

Knowledge of Self-Evident Universal Propositions

The manner in which this realization is arrived at varies considerably with the different types of propositions, especially with those that are self-evident (*per se notae*) and those that are not. In either case, because there is question of what belongs to the nature as such, the propositions involved are essential (*per se*) propositions.¹⁹³ These have terms that

¹⁹² In speaking of materials, such as gold, water, or sodium, because we customarily have in mind an aggregate of molecules rather than a strict individual, we use *all* in the singular in a distributive sense. E.g., "all gold" or "all water" or "all sodium" would mean any piece or portion. This is equivalent to *every* applied to individuals of a species or genus. In Latin *omne* would be used in either case. *In I Sent.*, 21, 2, 1 ad 1: per hanc dictionem *omnis* ratione distributionis importatur quaedam divisio subiecti et multiplicatio ratione contentorum; *In I De Caelo*, 2, n. 8: *omne* utimur in discretis, sicut dicimus "omnem hominem"; utimur etiam in continuis, quae sunt propinqua divisioni, sicut dicimus "omnem aquam" et "omnem aerem"; cf. *In I Perih.*, 10, n. 13.

¹⁹³ See chap. VIII, pp. 226-228.

are joined in their very notions.¹⁹⁴ But the connection of these terms need not always be immediately understood. Sometimes a demonstration is necessary to reveal the connection or identity of predicate and subject, and consequently also the truth of the proposition. These are called mediate propositions.¹⁹⁵ If the connection between the subject and the predicate is known without demonstration or any middle term, the proposition is called immediate.¹⁹⁶ Immediate essential propositions are more commonly and more properly called self-evident than those that are mediate. But all essential propositions, because they have within themselves the reason for their truth and the connection of their terms, are sometimes called self-evident (*per se notae*). A distinction is made, however, between those that are self-evident in themselves (*secundum se*) and those that are self-evident for us (*quoad nos*).¹⁹⁷ The latter are also called "common conceptions of the spirit" (*communes animi conceptiones*).¹⁹⁸ These in turn are distinguished into those evident only to the wise or learned and those evident to all.¹⁹⁹ An example of a proposition evident only to the learned is this: "Incorporeal beings are not in place." This is because only the learned sufficiently understand the meaning of "place" and of "incorporeal" to perceive the incompatibility between them. Propositions evident to all, however, contain terms that all people understand, such as being and non-being, one and many, same and other, equal and un-equal, whole

¹⁹⁴ *De Pot.*, 8, 2 ad 6: Per se autem praedicatur aliquid de aliquo quod praedicatur de eo secundum propriam rationem; *In I Post. Anal.*, 9, n. 3: Per se autem dicitur aliquid praedicari per comparationem ad ipsum subiectum: quia ponitur in eius definitione vel e converso; *In III Sent.*, 11, 1, 4 ad 6: ad hoc quod propositio sit per se oportet quod [praedicatum] conveniat [subiecto] ratione formae importatae per subiectum.

¹⁹⁵ *In I Post. Anal.*, 5, n. 2: aliqua propositio est mediata [si] est habens medium per quod demonstratur.

¹⁹⁶ *Ibid.*: immediata propositio est qua non est altera prior; 4, n. 10: [propositiones immediatae sunt] quae non per aliquod medium demonstrantur, sed per seipsas sunt manifestae (quae quidem immediatae dicuntur in quantum carent medio demonstrante); *In I Sent.*, 12, 1, 3 ad 4: propositiones primae dicuntur immediatae quia praedicatum non coniungitur subiecto per virtutem alterius causae praecedentis.

¹⁹⁷ *S.T.*, I, 2, 1 c: contingit aliquid esse per se notum dupliciter: uno modo, secundum se et non quoad nos; alio modo, secundum se et quoad nos. Ex hoc enim aliqua propositio est perse nota quod praedicatum includitur in ratione subiecti, ut "homo est animal," nam animal est de ratione hominis. ... Si autem apud aliquos notum non sit de praedicato et subiecto quid sit, propositio quidem quantum in se est erit per se nota; non tamen apud illos qui praedicatum et subiectum propositionis ignorant; I-II, 94, 2 c; *In I Post. Anal.*, 5, n. 7 (cf. 4, n. 15); *De Pot.*, 7, 2 ad 11; *De Ver.*, 10, 12 c; *In De Hebd.*, 1, nn. 14-18 (ed. Calcaterra); *In IV Met.*, 5, n. 595.

¹⁹⁸ *In De Hebd.*, 1, n. 15; *In IV Met.*, 5, n. 595; *De Ver.*, 10, 12 c; *In I Post. Anal.*, 19, nn. 1-3; *De Pot.*, 3, 5 ad 7; *S.T.*, I, 2, 1 c; I-II, 94, 4 c.

¹⁹⁹ *In De Hebd.*, 1, nn. 16-18; *In IV Met.*, 5, n. 595; *De Ver.*, 10, 12 c; *In I Post. Anal.*, 5, n. 7; *S.T.*, I, 2, 1 c; I-II, 94, 2 c.

and part. An example of such a self-evident proposition would be this: "Things equal to the same thing are equal to each other."

It is the common conceptions known to all that are called self-evident first principles.²⁰⁰ But even though they are called self-evident, they are still said to be known by induction: "Necesse est prima universalia principia cognoscere per inductionem",²⁰¹ "universalia ex quibus demonstratio procedit non fiunt nobis nota nisi per inductionem."²⁰² In so far as these are universal propositions and must somehow be derived from the starting point of all human knowledge, sense, whose object is the singular, it is clear that in some sense the process by which they are known is induction. On the other hand, this would seem to contradict some of the other things that are said about the knowledge of first principles.

They are said to be innate²⁰³ or naturally implanted (*naturaliter indita*) in the soul²⁰⁴ or naturally known (*naturaliter nota* or *cognita*)²⁰⁵ or known without discourse,²⁰⁶ without reasoning,²⁰⁷ without motion,²⁰⁸ without comparison (*sine collatione*),²⁰⁹ and without rumination (*sine cogitatione*),²¹⁰ immediately,²¹¹ by a simple intuition²¹² or by an absolute and simple acceptance²¹³ as soon as the terms of the proposition are understood,²¹⁴ because the meaning of the predicate is contained

²⁰⁰ *In IV Met.*, 5, n. 595; *S.T.*, I, 2, 1 c; I-II, 94, 2 c; *In I Post. Anal.*, 5, n. 7; *In De Hebd.*, 1, n. 15.

²⁰¹ *In II Post. Anal.*, 20, n. 14; cf. *In I Post. Anal.*, 30, n. 4: *Impossibile est universalia speculari absque inductione.*

²⁰² *In I Post. Anal.*, 30, n. 5; cf. *In VI Eth.*, 3, n. 1148: *Inductio autem inducitur ad cognoscendum aliquod principium et aliquod universale in quod devenimus per experimenta singularium. ... Sic ergo relinquitur quod principium syllogismi sit inductio; In De Div. Nom.*, VII, 2, n. 711 (ed. Pera); *In VIII Phys.*, 3, n. 4.

²⁰³ *De Ver.*, 10, 6 ad 6; 11, 1 c (fin.).

²⁰⁴ *S.T.*, I, 79, 12 c; *C.G.*, III, 46, *Amplius*; *In III Sent.*, 33, 1, 2 sol. 2; *In II Eth.*, 4, n. 286; *De Ver.*, 11, 1 ad 5 (*naturaliter indita* in the manuscript Leonine text supplied to the translators of *Truth* [Chicago: Regnery, 1952-54] although previous editions read *naturaliter insita*); cf. 11, 3 c.

²⁰⁵ *S.T.*, I, 79, 12 c; 117, 1 c; I-II, 51, 1 s.c.; II-II, 47, 6 c; 15 c; 49, 2 ad 1; *De Ver.*, 8, 15 c; *C.G.*, III, 46, *Amplius*; IV, 11, *Rursus*; 95, *Finis*; *Quodl. X*, 7 c & ad 2; *De Malo*, 16, 6 c; *In VI Eth.*, 5, n. 1179; *In IV Met.*, 6, nn. 599, 603-4; *In De Trin.*, 6, 4 c.

²⁰⁶ *De Ver.*, 8, 15 c; *In IV Met.*, 6, n. 599; cf. *In II Sent.*, 24, 3, 3 ad 2; *In De Div. Nom.*, IV, 7, n. 376 (ed. Pera).

²⁰⁷ *In IV Met.*, 5, n. 595: *nec acquiruntur per ratiocinationes.*

²⁰⁸ *S.T.*, I, 64, 2 c: *immobiliter.*

²⁰⁹ *De Ver.*, 14, 1 c.

²¹⁰ *Ibid.*

²¹¹ *Ibid.*; *In I Post. Anal.*, 4, nn. 10 & 14; 5, nn. 2 & 7; 6, n. 2; 7, nn. 7 & 8; 19, n. 4; 43, n. 11; 44, n. 5; *S.T.*, I, 36, 3 ad 4.

²¹² *De Ver.*, 8, 15 c; 15, 1 c; *In III Sent.*, 35, 1, 2 sol. 2; *S.T.*, II-II, 180, 6 ad 2.

²¹³ *In I Post. Anal.*, 36, n. 11; *De Ver.*, 15, 1 c.

²¹⁴ *De Ver.*, 14, 1 c; *S.T.*, I, 17, 3 ad 2; 85, 6 c; I-II, 66, 5 ad 4; *In I Post. Anal.*, 7, n. 8; 20, n. 5; *In IV Met.*, 5, n. 595; *In VI Eth.*, 5, n. 1179; 7, n. 1214; *In III De An.*, 10, n. 729.

in that of the subject.²¹⁵ Where, then, is there any room for induction, which is a form of reasoning, discourse, and motion?

To save induction and reasoning in the knowledge of self-evident principles it is necessary first to explain in what sense discourse and motion are denied in this case. It is clear that first principles are not known by deduction or demonstration, which is the primary sort of reasoning and what is principally meant by the term;²¹⁶ for demonstration proceeds from principles and cannot involve or depend upon a regress to infinity but must arrive at the indemonstrable.²¹⁷ If reasoning or discourse is taken to mean deduction and demonstration, then obviously the first principles are not known by reasoning. Similarly, if reasoning is understood to involve a middle term in the strict sense, as is had in a syllogism, since first principles are known without a middle term, it is not reasoning by which they are known. What seems to be denied is not all reasoning or discourse, but syllogistic reasoning, its primary form.

Is the intuition spoken of here the same as simple apprehension or the abstraction of a universal concept? That there is an intimate relationship between induction and abstraction, as was pointed out above, cannot be doubted, not only because both go from the singular to the universal but also because both attain a nature that is common to many. And induction, which sees a given manifestation or operation as consequent upon a certain nature, depends upon abstraction for its knowledge of that common nature, whatever the degree of that knowledge. But even if induction were identified with abstraction, that hardly seems to justify its being called intuitive or the product of intuition. Not all simple apprehension or abstraction is accomplished in a single glance or in one simple operation, without the intervention of judgment and even reasoning. Some complicated concepts such as those of relativity or of entropy are the result of a long inquiry and much casting about for intelligibility. On the other hand, there are some much more elementary or primitive concepts that everyone has and that are conceived at the very outset of one's intellectual life or very close to it. It is on the basis of these primary concepts that St. Thomas explains our knowledge of first principles or self-evident truths.

²¹⁵ *In I Post. Anal.*, 5, n. 7; 7, n. 8; *In De Hebd.*, 1, n. 15; *In IV Met.*, 5, n. 595; *S.T.*, I, 2, 1 c; 17, 3 ad 2; I-II, 94, 2 c.

²¹⁶ See above, p. 270 and cf. pp. 259-260.

²¹⁷ *In I Post. Anal.*, 35, n. 10; *In II Post. Anal.*, 2, n. 9; 20, n. 15; *In IV Met.*, 6, n. 607;—Of them there is no demonstration or science: *In I Post. Anal.*, 5, n. 2; 7, n. 3; 20, nn. 2, 4, & 5; *In II Post. Anal.*, 20, n. 14; *In XI Met.*, 5, n. 2213; *In I Eth.*, 18, n. 219; *In VI Eth.*, 5, n. 1178; *S.T.*, I-II, 15, 3 ad 1; II-II, 25, 1 c.

Examples of such primary concepts or conceptions are being and non-being, one, good, whole, part, equal, unequal, subtracting.²¹⁸ From these are derived such self-evident principles as "The same thing cannot be and not be at the same time," "A whole is greater than its part," "Two things equal to a third thing are equal to each other," and "If equals are subtracted from equals, the remainders are equal." These propositions are self-evident because the terms are understood by all, and they are such that the relationship between them is necessarily and immediately understood. If anyone understands being, he must by that very fact understand its distinction from and opposition to non-being. If anyone knows what a whole is, he must know that it is made up of its parts and is necessarily greater than any one of them. Whoever knows what equal means must understand the relationship of equality even if it is a two-stage relation and even if it involves removal or subtraction.

But is the understanding of these complex self-evident principles not achieved without reasoning, by a simple understanding of the terms and by an intuition? And if so, how can they be said to be known by induction? A grasp of this delicate matter is, it seems, the key to St. Thomas' doctrine on the induction of first principles.²¹⁹ It is necessary to distinguish an aspect under which the grasp of these principles can be called intuitive and another aspect under which it can be said to be discursive.

In the one extended passage in which Thomas sets out expressly to explain how we come to know the first principles of demonstration²²⁰ he devotes more space to the formation of universal concepts than to the expression of universal propositions. Our knowledge begins with sense; and from sense, memory arises. From repeated memories regarding the same given sort of thing as found in many singulars there comes experience. Then a rational comparison of many experiences, abstracting from singulars, yields a common intelligibility which is a universal in the intellect:

Ex sensu fit memoria. ... Ex memoria autem multoties facta circa eandem rem, in diversis tamen singularibus, fit experimentum; quia experimentum nihil aliud

²¹⁸ *Quodl.* VIII, 4 c; *De Ver.*, 11, 1 c; *In De Trin.*, 6, 4 c; *In I Post. Anal.*, 5, n. 7; 20, n. 5; 43, nn. 11 & 13; *S.T.*, I, 2, 1 c; 66, 5 ad 4; I-II, 94, 2 c; *In IV Met.*, 6, n. 605; 5, n. 595; *In VI Eth.*, 5, n. 1179; *In De Hebd.*, 1, nn. 17 & 18.

²¹⁹ On this whole question see P. Hoenen, S.J., "De origine primorum principiorum scientiae," *Gregorianum*, XIV (1933), 153-184; and J. Issac, O.P., "Sur la connaissance de la vérité," *Rev. des sciences phil. et théol.*, XXXII (1948), 337-350, especially pp. 343-348.

²²⁰ *In II Post. Anal.*, 20.

esse videtur quam accipere aliquid ex multis in memoria retentis. Sed tamen experimentum indiget aliqua ratiocinatione circa particularia per quam confertur unum ad aliud, quod est proprium rationis. ... Ratio autem non sistit in particularibus ex multis particularibus in quibus expertus est accipit unum commune quod firmatur in anima, et considerat illud absque consideratione alicuius singularium.²²¹

The universal in question here appears to be a universal concept. And this impression is confirmed and further borne out in a subsequent amplification in the same lesson. It is pointed out that many singulars are found to agree or not to differ in some particular respect, either accidental or essential, and this common trait is taken in its community as a universal. Thus many men are seen not to differ in their color, whiteness, and the universal "white" is conceived; or again they are found to be undifferentiated in their rationality, and the universal "rational" is conceived. In the first case the universal is an accident; in the second it is a specific difference:

Ex experimento singularium accipitur universale. ... Si enim accipiantur multa singularia quae sunt indifferentia quantum ad aliquid unum in eis existens, illud unum secundum quod non differunt, in anima acceptum, est primum universale, quidquid sit illud, sive scilicet pertineat ad essentiam singularium sive non. Quia enim invenimus Socratem et Platonem et multos alios esse indifferentes quantum ad albedinem, accipimus hoc unum, scilicet album, quasi universale quod est accidentis. Et similiter quia invenimus Socratem et Platonem et alios esse indifferentes quantum ad rationalitatem, hoc unum in quo non differunt, scilicet rationale, accipimus quasi universale quod est differentia (n. 13).

St. Thomas goes on to explain more in detail how the universal is known from the singular. He points out that, although the singular is properly the object of sense, nevertheless the senses in a way attain the universal too: "Manifestum est enim quod singulare sentitur proprie et per se, sed tamen sensus est quodammodo etiam ipsius universalis" (n. 14). For by the senses we know Callias and Socrates not only as Callias and Socrates but also as this man and that man; to some extent we know the universal nature in the singular.²²² And, Thomas insists,

²²¹ *Ibid.*, n. 11. A close parallel to this whole discussion is found in *In I Met.*, 1, nn. 18-22, where the focus of attention, however, is on "art" (in a broad sense that includes science) and its distinction from inferior types of knowing.

²²² Cf. *In I Phys.*, 1, n. 11. Elsewhere St. Thomas, specifying this function, attributes it to the cogitative sense: *In II De An.*, 13, n. 398: Nam cogitativa apprehendit individuum ut existens sub natura communi; cf. *In VI Eth.*, 1, n. 1123. This power is also called *ratio particularis* (*In II De An.*, 13, n. 396; *In VI Eth.*, 1, n. 1123; 9, nn. 1249 & 1255; *In I Met.*, 1, n. 15; *In III Sent.*, 26, 1, 2 sol.; *De Ver.*, 10, 2 ad 4 in contr.; 5 c; 14, 1 ad 9; 15, 1 c; *S.T.*, I, 78, 4 c & ad 5; 81, 3 c; I-II, 30, 3 ad 3; 51, 3 c; *Q.D. de An.*, 13 c). Its function is most often explained as *collatio intentionum individualium* or *particularium*, where *collatio* means directly "bringing together," in the sense, first, of "comparison" and, secondly, of "uniting" into some kind of unity the intentions that

unless this were so, it would not be possible to derive universal knowledge from sense knowledge: "Si autem ita esset quod sensus apprehenderet solum id quod est particularitatis et nullo modo cum hoc apprehenderet universalem naturam in particulari, non esset possibile quod ex apprehensione sensus causaretur in nobis cognitio universalis."

Very little in addition is said about the passage from universal concepts to the universal self-evident propositions that are the first principles of demonstration and of science. That knowledge of universal first principles is under discussion is evident from the explicit statement at the beginning of this lesson ("hic ostendit [Aristoteles] quomodo cognoscantur prima principia demonstrationis communia") and from the general context. The whole discussion seems to slip back and forth without warning from universal concepts to universal propositions. After a discussion of the derivation of universals from sense, memory, and experience, there is the example of an induction, the efficacy of a certain herb to cure a fever of a definite type, mentioned above. Then Thomas adds in summary: "Sicut ex memoria fit experimentum, ita etiam ex experimento, aut etiam ex universali quiescente in anima, ... est in anima id quod est principium artis et scientiae" (n. 11). This statement is interrupted, however, by a long parenthesis explaining the universal. The first part might seem to refer to a universal proposition extrapolated from singular propositions by induction: "quod scilicet accipitur ac si in omnibus ita sit sicut est experimentum in quibusdam." But immediately the discussion shifts to the abstraction of a universal concept such as *white* or *man*. And again in the subsequent and somewhat more psychological discussion of the abstraction of universal concepts (nn. 13-14), the conclusion is about the induction of universal principles: "Quia igitur universalium cognitionem accipimus ex singularibus, concludit manifestum esse quod necesse est prima universalia principia cognoscere per inductionem. Sic enim, scilicet per inductionem, sensus facit universale intus in anima in quantum considerantur omnia singularia."

It is obvious that Aquinas regards the relationship between abstraction and induction as very close. But are they the same thing? Is the intuition noted in the knowledge of first principles simply the abstraction of the subject term? This would seem to be indicated and confirmed by the description of self-evident propositions as those in which

agree. See Pégahaire, "A Forgotten Sense: The Cogitative According to St. Thomas Aquinas," *Mod. School.*, XX (1943-43), 123-140, 209-229, esp. pp. 135-140, 216-222; Klubertanz, *The Discursive Power* (St. Louis: The Modern Schoolman, 1952), esp. pp. 174-175, 206-212, 225, 259, 287-293.

the predicate is contained in the meaning of the subject (*praedicatum est de ratione subiecti*).²²³ But there are several difficulties with this. First principles are known by induction, and induction is a form of reasoning. Moreover, abstraction cannot always be considered an intuition since sometimes it is achieved only with difficulty and at the term of a long process. And finally, though all induction is connected with abstraction, not all conclusions reached by induction but only self-evident first principles are said to be known by a simple intuition. The difference lies in the kind of terms involved: first principles have terms understood by all and so related that to understand the predicate is to understand its connection with the subject; whereas other universal propositions are not composed of terms understood by all. Several examples will help to make this difference clear and at the same time serve to show how induction and reasoning are saved even in the knowledge of first principles.

Anyone who has any understanding of material, quantified beings (as all have who have progressed very little beyond the very first intellectual conception) knows the meaning of whole and part. This would come about chiefly from observing the division of an integral whole, as when an apple or cake is cut into pieces. The apple or cake would be known as a being or one or unit previously undivided but now divided into several beings or parts, previously divisible but made up of the parts into which it could be divided. Thus "whole" would be understood, and by that very fact "part" as well and the relationship of whole to part as greater. In a single instance the truth would be grasped that this whole is greater than this part of it. And this truth would be known by the simple apprehension of whole and—implied in whole—of part; nor would this act of understanding be induction. The question is, however, whether the universal principle "*Every* whole is greater than its part" is immediately grasped. If whole is understood, it is abstracted and universalized, and all instances are potentially contained in it. But two questions remain: (1) Is it at once grasped in its full universality? and (2) Is the notion known to be universal and to apply to all?

When the concept of whole is abstracted from an apple, it is one thing to know that this apple is a whole and this portion of it a part and another thing to know that every apple is a whole. In the normal course of events a number of apples would be known and a number would be seen to be divided before the notion even of whole apple would be conceived. A broader base of experience, as with cakes and

²²³ See above, notes 214 and 215.

houses and bricks and planks and sand piles and trees and human bodies, would be needed before the universal concept just of integral dimensive whole would be grasped. And to progress from integral dimensive whole to whole of every sort would require much more experience and, in most cases, being taught. Thus abstraction ordinarily requires the experience of many instances or subjects of the nature abstracted. This is particularly true for knowledge of the universal as universal. As soon as a correct concept is formed, it is in fact universal. But to have a universal concept and to know its universality are by no means the same thing.²²⁴

Induction not only requires that a universal be conceived but also that it be known as universal; for the universal nature must be known to apply to every instance of the sort. The induction, however, is not the same as the abstraction by which the universal is conceived or even the reflection by which it is known to be universal.²²⁵ These are on the plane of simple apprehension, whereas induction is on the plane of judgment and reasoning. Yet they are intimately connected, not only in the sense that induction depends upon abstraction but also, inversely, in the sense that abstraction depends upon induction. This is what Aquinas seems to say in the famous last lesson of the *Commentary on the Posterior Analytics* just discussed—throughout, but especially in the words: “Sic enim, scilicet per viam inductionis, sensus facit universale in anima.”²²⁶ Only the ambiguity of the term “universal” here, which might mean either a universal concept or a universal proposition, prevents an apodictical statement to this effect. It would seem that abstraction and induction proceed hand in hand. Each time a particular being is conceived under a universal aspect, a judgment is made. Thus each time something is conceived as a whole, the judgment is made: “This is a whole.” And whenever anything is conceived as a part, the judgment “This is a part” is similarly made. But because part is relative to whole, so that the understanding of part includes that of whole (for it is always the part *of* something), and the understanding of whole includes that of part and the incorporation of the part in the whole, another judgment would always at least implicitly be made: “This whole is greater than this part.” Then as the universal concept of whole is abstracted from many particular wholes, the induction of the uni-

²²⁴ See above, chapter VII, pp. 182-194, where the material and the formal universal, or the direct and the reflex universal, are distinguished.

²²⁵ See *ibid.*

²²⁶ *In II Post. Anal.*, 20, n. 14.

versal proposition "Every whole is greater than its part" is made from many particular instances framed in singular propositions.

The universal proposition can at the same time be regarded as intuitively known and as known by reasoning or a discourse. It is known intuitively inasmuch as the connection between the predicate and the subject is known in each instance of knowing the subject and by the mere fact of understanding the subject and the predicate. No reasoning or discourse or middle term is needed for this. Yet the universal proposition is known by induction and discourse inasmuch as it is known from many singular propositions and cannot be known in its universality except from many particular propositions that cover a variety of cases. Only in this way can it be grasped that the relationship of whole and part belongs to wholes and parts as such and in the full universality of the terms and not just to particular cases of wholes and parts.

Now, if it is granted that the self-evident proposition "Every whole is greater than its part," which is a first principle in matters dealing with wholes and parts, is known by induction, does it follow that all self-evident propositions and first principles are so known? After all, the notions of whole and part are derivative and not among the most primitive or primary concepts such as those of being or one or good. It could well be that the notion of whole needs to be abstracted from many particulars and its corresponding principle induced from many singular propositions but that the most primitive notions and most basic principles do not.

A test case would be the principle of non-contradiction, "Being is not non-being" or "Nothing can be and not be at the same time" (that is, in the same respect), which St. Thomas holds to be the very first principle of all²²⁷ and immediately consequent upon the first conception, which is that of being.²²⁸ If anything is understood, being must be understood; and if being is understood, its opposition to and exclusion of non-being must be understood. Thus, just as being in the first thing known, the starting point, in the first operation of the intellect, simple apprehension, so the principle of non-contradiction, which depends upon the notion of being, is the first thing known and the starting point in the second operation of the intellect, judgment. And just as every other conception such as whole or part presupposes and includes

²²⁷ *In IV Met.*, 6, nn. 600-605; *In XI Met.*, 5, nn. 2211-13; *In I Post. Anal.*, 5, n. 7; 19, n. 3; 20, n. 3; *C.G.*, II, 22, Item; 25, Primo²; *S.T.*, I-II, 94, 2 c; II-II, 1, 7 c.

²²⁸ *De Ver.*, 1, 1 c; 21, 1 c; 4 ad 4; *In I Sent.*, 8, 1, 3 c; 19, 5, 1 ad 2 & 8; 24, 1, 3 ad 2; *S.T.*, I, 5, 2 c; 11, 2 ad 4; 16, 4 ad 2; I-II, 55, 4 ad 1; 94, 2 c; *De Pot.*, 9, 7 ad 6 & 15; *In I Met.*, 2, n. 46; IV, 3, n. 566; 6, n. 605; X, 4, n. 1998; XI, 5, n. 2211.

being, so every other proposition such as the principle that a whole is greater than its part presupposes and implies the principle of non-contradiction.²²⁹ But if being is the first thing conceived and the principle of non-contradiction naturally follows the conception of being, is this principle not known and possessed without any plurality of judgments and without any reasoning and induction?

It is certainly true that in understanding anything, even in our very first act of understanding, we understand being in some vague way, and that what we understand then applies truly to all beings. But this is by no means to know being in general (*ens commune*) or being as such (*ens inquantum est ens*). Were that the case, every child who is just beginning to understand anything in the least degree would be a metaphysician. To know being as such it is necessary to distinguish what belongs to any being just by reason of the fact that it is a being, and what belongs to it because it is a being of some particular sort. It is done only by distinguishing what belongs to being as such from all particular manners or modes of being. This, according to St. Thomas, requires negative judgments in the process he calls "separation."²³⁰ But if the conception of being as such is not attained by the knowledge of a single being but requires the knowledge of many different beings, the knowledge of the universal principle of non-contradiction ("Every being, as a being, is not non-being" or "Whatever is, by the fact that it is, cannot at the same time not be") requires induction from many particular judgments of non-contradiction. For every time a being is known as a being, the particular judgment "This thing which is, is not (and cannot here and now be) non-existent" is implicitly made.

This principle is intuitive and known without discourse, in the sense that each one of the particular judgments is made without a reasoning process by the simple understanding of being in each instance, and furthermore in the sense that, once the transcendental concept of being is formed, no further reasoning is needed to understand that every

²²⁹ *In IV Met.*, 6, n. 605: In prima quidem operatione est aliquod primum quod cadit in conceptione intellectus; scilicet hoc quod dico ens; nec aliquid hac operatione potest mente concipi nisi intelligatur ens. Et quia hoc principium "impossibile est esse et non esse simul" dependet ex intellectu entis, sicut hoc principium "omne totum est maius sua parte" ex intellectu totius et partis; ideo hoc etiam principium est naturaliter primum in secunda operatione intellectus, scilicet componentis et dividitantis. Nec aliquis potest secundum hanc operationem intellectus aliquid intelligere nisi hoc principio intellecto. Sicut enim totum et partes non intelliguntur nisi intellecto ente, ita nec hoc principium "omne totum est maius sua parte" nisi intellecto praedicto principio firmissimo.

²³⁰ *In De Trin.*, 5, 3-4. Cf. Robert W. Schmidt, S.J., "L'emploi de la séparation en métaphysique," *Rev. philosophique de Louvain*, LVIII (1960), 373-393, esp. pp. 377-382.

being as such excludes its own unqualified non-existence. But inasmuch as the transcendental character of this principle is not known except through the knowledge of many beings and through many implicit judgments that particular beings exclude their own non-existence, it is known by induction.

In the case of self-evident first principles their universality is known and known to be necessary. For the terms are understood and their essential connection is recognized, so that wherever the subject is found the predicate must necessarily also be found. They are necessarily known as true, and about them there can be no error (“intellectus ex necessitate inhaeret primis principiis”);²³¹ and they are taken as certain even in their universality. The nature, meaning, or definition of the subject serves in some sense as a middle term joining the subject and the predicate and certifying this conjunction, for this nature or definition necessitates the association of the predicate with the subject.

Induction of Non-Evident Universal Propositions

Not all inductions, however, produce the same certitude. In the case of propositions that are not self-evident the predicates are not necessarily seen to belong to the meaning of the subject. If, for example, observation and experiment lead us to conclude that a free-falling body accelerates at the rate of thirty-two feet per second, this is not known from the definition of free-falling body; and it is quite possible to know what a free-falling body is without knowing its rate of acceleration. Similarly, we can come to know that hollow watertight vessels float on water without knowing why or being able to generalize absolutely; “hollow watertight vessel” does not of itself imply floating on water, and about it we may be in error (as in fact we would be if we universalized and judged that *every* such vessel floats). To come to a universal conclusion and to certitude we should have to change the subject to

²³¹ *S.T.*, I, 82, 2 c; *In I Perih.*, 14, n. 24: Est autem quoddam verum quod est per se notum, sicut prima principia indemonstrabilia, quibus ex necessitate intellectus assentit; *De Ver.*, 14, 1 c: intellectus possibilis determinatur ad hoc quod totaliter adhaereat uni parti [contradictionis] ... ab intelligibili ... immediate quando ex ipsis intelligibilibus statim veritas propositionum intelligibilium infallibiliter apparet; et haec est dispositio intelligentis principia quae statim cognoscuntur notis terminis; 24, 1 ad 18: aliquid verum est quod propter impermixtionem falsi ex necessitate ab intellectu recipitur, sicut prima principia demonstrationis; *In II Sent.*, 25, 1, 2 sol.: Invenitur autem aliquod verum in quo nulla falsitatis apparentia admisceri potest, ut patet in dignitatibus [i.e., axioms or first principles]; unde intellectus non potest subterfugere quin illis assentiat; *De Malo*, 6 ad 10: intellectus ex necessitate movetur vero necessario quod non potest accipi ut falsum; *In De Div. Nom.*, IV, 7, n. 376: omnis ista ratiocinatio diiudicatur per resolutionem in prima principia, in quibus non contingit errare, ex quibus anima contra errorem defenditur.

“bodies that displace more water than would equal their own weight.” Here some necessity is seen and some justification for generalizing, though the ultimate necessity is not known. Even if we come to the law of gravitation and know that masses exert an attraction upon each other, we still do not understand why.

When the supposed universal proposition cannot be known just from an understanding of its terms and is therefore not known to be an essential (*per se*) proposition, the induction from singulars reveals a certain factual constancy. From this constancy it appears that somehow a nature is at the bottom of it and accounts for it, but it is not known just what that nature is. As long as this condition prevails, the universality of the conclusion is not known with certitude but only with greater or lesser probability. It is here that the calculation of probabilities that plays so important a role in modern discussions of induction comes into play. The greater the statistical probability, the greater the constancy; and the greater the constancy, the more reason there is to believe that the proposition is *per se* and therefore universal. The induction becomes a dialectic approaching certainty, and sometimes reveals that a nature is at work and even what that nature is. If it becomes clear that the operation or phenomenon is characteristic of a nature, the proposition is known to be universal. And if it can be known what the nature is, then the dialectic has or can become a causal (*propter quid*) demonstration; for the proper cause of the effect is known.

Where it is possible to complete an induction and arrive at an unqualified universal conclusion, the justification is found in the common nature apprehended in some manner by the intellect. In the knowledge of self-evident universal propositions the nature and its essential property are so clearly understood that not only is a factual connection grasped but also a necessary and essential connection. Here it is clear that the nature or essential meaning of the terms, especially of the subject, is the cause of the connection and therefore the middle term in the induction; but it is the nature or essence as seen in the particulars or singulars on which the induction was based. And even when the universal proposition is not self-evident, the justification for the universal conclusion must still somehow be found in the common nature.

If there is no common nature of which the predicate is an essential note or property and the community is purely factual, as “All the McGillicuddy children are redheaded” or “All the oak trees in this park are at least thirty feet high,” there cannot be an induction but can only be a complete enumeration. But where there is more than a

factual community and a constancy of characteristics or of manner of operating, then it is possible in some cases to arrive by induction at a universal conclusion even when the exact nature itself is not known but only that there is some common nature there. Thus we can say, "The black oak has pointed cleft leaves"—that is, every black oak, barring defect—even though we do not know what there is in the nature of the black oak that causes the production of pointed cleft leaves. The nature again, even if what it is is not known, serves as the middle term that connects the predicate with the universal subject. In the latter case we know *that* the proposition is an essential one although we do not know it in the manner of an essential proposition, that is, through an understanding of the quiddity of the subject. The reasoning might be illustrated in this way: "Every black oak—because a black oak (whatever that may really be)—has pointed cleft leaves." In the many instances, A, B, C, D, etc., it is seen that there is a common nature and that this common nature controls and determines the characteristic predicated of it.

THE INTENTION OF CONSEQUENCE

Wherever there is reasoning, whether inductive or deductive, there is a conclusion that follows from the premises or some antecedent knowledge. The conclusion itself is an enunciation or proposition, and as such is a relation of predicate to subject. When it is viewed in itself or absolutely, just as an enunciation, there is only the relation or intention of attribution to take into account. But when it is viewed precisely as a result of the premises and as revealed in the premises, then its relation to the premises and the relation of the premises to each other must be taken into account. This relation is the intention of consequence. For the conclusion follows upon (*consequitur*) the premises.

What exactly is the intention of consequence? Every intention is relational, as was seen in Chapter V; and logical intentions are remotely founded rationally relations, as came to light in Chapter VI. The intention of consequence is concerned with the derivation of a conclusion from antecedent propositions. It is accordingly a relation of propositions. But the propositions are themselves relations, the relations of predicates to subjects; and they constitute intentions of attribution, as was found in Chapter VIII. The terms of the proposition involve the intention of universality (treated in Chapter VII), which is the relation of a common nature or trait to its inferiors or subjects. Hence the rela-

tion which constitutes the intention of consequence is a very complex relation or relation of relations.

There must be at least two antecedent propositions, called premises or principles, expressed or implied.²³² These must stand in a relationship to each other in such a way that another proposition arises from the relationship of the principles, itself having a relationship to them as flowing from them and caused by them.²³³ In the relation of consequence, then, there is first of all the relation of the premises or principles among themselves, and secondly there is the relation of these to the conclusion or of the conclusion to them.

The nature of these relationships varies, however, with the different kinds of reasoning, especially in deduction and in induction. Deduction is considered the typical kind of reasoning, and in it the relationships are most clearly discernible.

The deductive intention of consequence is called the syllogism. It is a concatenation of three propositions of which the first two are so related to each that the third necessarily follows from them. The three propositions themselves can be regarded as the matter of this intention or logical entity, and the relationship of the conclusion to the premises can be regarded as its form. The intention of consequence taken formally will then be this relationship. But the syllogism itself from a formal point of view (which is the proper viewpoint of the logician²³⁴) is nothing but this relationship of consequence. The syllogism can accordingly be said either to *have* or to *be* the relation of consequence.

When the propositions of the syllogism are looked at more in detail, a slightly different analysis of the intention of consequence comes to the fore. Each proposition is a relation of its predicate to its subject. And when the conclusion is caused by the premises, what is caused is the relation or connection of its predicate to its subject; that is, this connection is made manifest. By supposition the connection of the predicate of the conclusion to its subject is not evident from that proposition alone but needs to be made evident. The premises have the function of making evident this connection; and they do it by supplying a middle

²³² In a formal syllogism or in a formal induction the premises will be expressed. In an enthymene only one premise is expressed and another is implicit (*In I Post. Anal.*, I, n. 12: *enthymema est quidam syllogismus detruncatus*); and an example is an inchoate or incomplete induction (*ibid.*: *exemplum est quaedam inductio imperfecta*).

²³³ See above, sections "Motion in Reasoning" and "Causation in Reasoning," pp. 244-256.

²³⁴ *De Pot.*, 6, 1 ad 11: *logicus et mathematicus considerant tantum res secundum principia formalia*; and see chap. III, final section, "'Formal' and 'Material' Logic."

term and connecting both of the terms of the conclusion (the extremes) with the middle term.

Because there are two slightly different analyses that can be given for a proposition or the intention of attribution,²³⁵ the manner in which the middle term of a syllogism connects the extremes can be explained in two related but differing ways.

When a proposition is viewed according to the diverse functions of the subject and the predicate, so that the subject is taken materially, as that which is to be known and characterized in our knowledge, and the predicate is taken formally, as that which is known about the subject and which characterizes it, then the relation of the predicate to the subject is regarded as one of inherence. The predicate is in the subject as a form in matter or as a trait in a thing. From this point of view the syllogism shows the predicate of the conclusion as inhering in the middle term of the syllogism and the middle term as inhering in the subject of the conclusion. Thus through a two-stage relation of inherence the predicate of the conclusion is revealed as inhering in its subject as its characteristic or trait. In this case the intention of consequence is this two-stage or mediated relation of inherence. Through it the conclusion (that is, the inherence of its predicate in its subject) is seen in the premises and seen to be caused (in the realm of knowledge) by them.

When the predicate of the proposition is regarded somewhat more materially and viewed precisely as a concrete term, and the copula is taken as a sign of identity, then the proposition is regarded as a relation of identity. From this point of view the conclusion of a syllogism expresses the identity of its predicate with its subject, and the function of the premises is to make this identity evident. Each of the premises identifies a different one of the extremes with a common middle term, and through the middle term the premises taken together identify the extremes with each other. The identity of the predicate of the conclusion with its subject is seen in their common identification with the middle term in the premises and because of the premises. The syllogism, then, and consequently also the intention of consequence, is a relation of mediated identity and precisely as mediated.

In inductive reasoning the structure of the intention is somewhat less obvious. The conclusion must be a universal proposition, and it will be the function of the induction to make evident that the predicate belongs universally to the subject (whether the conclusion is taken as a relation of inherence or as one of concrete identity). The premises

²³⁵ See chap. VIII, final section, "Analysis of the Relation of Attribution."

will be singular or at least less universal propositions. As premises taken together they must show the universal truth of the conclusion. Here there is no middle proposition as there is in a syllogism, and no middle term with which the extremes (the terms of the conclusion) are identified. Yet there must be causation and mediation. The comparison that is involved in all reasoning must, in the case of induction, reveal that the particular truths expressed in the premises are instances of a common phenomenon. Therefore a relation of likeness or of formal identity must be discovered. And the community discovered must not be only in the predicate. Although many discrete subjects must be found to have a common predicate, the subjects themselves must be seen to be instances or exemplifications or particulars of a common class. That is, the many subjects must be seen to share in the same nature or to be the inferiors of a common universal. Then the common predicate must be seen to belong to them precisely as having that common nature or as inferiors of that universal. From this it becomes evident that wherever that nature is found, not only in these particular subjects but in whatever subjects it may have, the predicate in question belongs to it.

In induction there is accordingly mediate knowledge and through a middle term of a sort. This is the common nature discovered in the particular instances. And it serves to show the universal connection of the predicate of the conclusion with its subject, whether what is known is *what* that nature is or only *that* there is a common nature present and responsible for the discovered constancy of the predicate. Where the quiddity of the common nature is known, the conclusion will frequently be seen with certainty. Where this quiddity is not known, the conclusion may very well not be known with certainty. When it is possible to reduce the observed constancy of the predicate to the existence of a common nature, even though this nature remains unknown in itself, the factual truth of the universal conclusion can be known, and even as certain. When this reduction cannot be made—that is, when the constancy of the predicate may be due to something besides the supposed nature of the subjects, and the existence of a common nature is not known but only suspected—there cannot be certainty about the truth of the universal conclusion but at best probability. In any case, however, the connection between the terms of the conclusion is mediated by the common nature that is known in its quiddity or at least in its existence. Let the conclusion be represented in this way: “Every X is Y.” Then the force of the induction can be represented thus:

“Every X, because X (as shown in X₁, X₂, and X₃), is Y.” Or in a more concrete example: “All copper alloyed with 2% beryllium, because it contains the beryllium (as shown in samples A, B, and C), is hard enough to cut steel.”

It must be noted, however, that in the relation of consequence, whether in inductive or in deductive reasoning, it is not properly the terms of the conclusion that are the mediated extremes of the relation but rather the conclusion and the premises. The conclusion must be the subject of the relation, for the consequence is precisely the manner in which the conclusion is causally related to the premises. The premises, then, not singly but taken together as related to each other, will be the term of the relation. That they are two or more does not militate against the unity of the relation because, as was seen in Chapter VII,²³⁶ the multiplication of terms does not multiply the relation.

The foundation of the relation must in some sense be the operation of reason since this relation is a logical intention and logical intentions follow upon the operation of the soul.²³⁷ In reasoning the operation is one of discourse or *caused movement* of thought and consists in comparison. In deduction two propositions containing a common term are compared and cause the non-common terms to be compared. This comparison constitutes the conclusion. In induction the many particular facts, as expressed in the singular or particular propositions, are compared; the common determining principle or nature emerges; and on this basis the predicate or common attribute is referred to every subject of that nature as belonging to it or as inherent in it. The causation in thought that leads to the perception of a new relationship, which is the conclusion, is the psychological foundation of the relation of consequence.

But because logic is more directly concerned with formal principles and objective intentions than with the operations of the soul, the proper proximate foundation of the relation which constitutes the logical intention of consequence must be sought in the antecedent propositions or premises themselves. What is there about these propositions that provides the motive for the discursive operation of reason? What constitutes the “virtue” or force of these propositions in conjunction? For the syllogism this has been found to be the formal inclusion of the one extreme in the middle term and of this middle term in the other extreme; and when these two formal inclusions are viewed

²³⁶ Section on “The Intention of Universality,” p. 190.

²³⁷ See chap. V, final section, “Second Intentions,” pp. 122-123 and note 88.

together, they reveal or lead to the perception of the formal inclusion of the one extreme, the more determinate term, in the other extreme, the less determinate term. This is what causes the intellect to understand and formulate the conclusion, which expresses the existence of the formal determination signified by the predicate in the thing designated by the subject. For induction the foundation in the antecedent propositions has been found to be the common nature as the determinant of the phenomenon or attribute associated with it in the instances expressed in the premises. When it is seen that the same nature is found individuated or particularized in each one of the subjects and further, regardless of the complicated process by which this may be revealed, that this common nature must be the principle determining the observed constancy of the predicate, then the intellect is moved to grasp and to formulate the universal conclusion: whatever has this nature will have the predicate in question.

Because logical relations have not only a proximate foundation in thought but also a remote foundation in reality, the relation or intention of consequence must also be remotely founded in the real. This can be traced in the lines of both formal and efficient causality. In the formal order it is the composition and complexity of the thing known (especially the proportioned object of the human intellect, the quiddity of material things) and the causality of the nature. The composition consists in the fact that the nature or essence is in the supposit, is composed of matter and form with the form in the matter, and is modified on a secondary plane by accidents (some of which are properties) that inhere in the substance. The unity in this diversity and the inherence of the formal principles in the material found both the propositions and inferences about them. This is particularly true for the intention of consequence in syllogistic reasoning, with its two-stage inherence of formal principles and its mediated material identity. But it is also operative in inductive reasoning, in which the manner of operating or the trait signified by the predicate is seen to inhere in the subject, and by a certain necessity. The causality especially at play here is that peculiar sort of causality by which the nature or subject of a property causes the property.²³⁸ For the subject is not only a material and a final cause with reference to its property but is also in some sense its efficient cause.²³⁹ This causality is also operative as the

²³⁸ For the fact of causation in this case see above, under "Syllogism," subsection on "Formal Causality in the Terms" and notes 135-138.

²³⁹ See above, note 140.

foundation for demonstrative deduction; for what is principally demonstrated is a property of the subject.²⁴⁰

Most basically, then, the remote foundation in reality of the intention or relation of consequence is the composite structure of the objects proportioned to our human intellect, and especially the nature of the subject as giving rise to the predicate. This it is that causes our thought to pass from the understanding of the related premises to the understanding of the conclusion.

The intention of consequence itself is the relation among the premises by which they give rise to the conclusion, or—what is really the same relation but still more accurately expressed—the relation of the conclusion to the premises as arising from them.

²⁴⁰ *In I Post. Anal.*, 1, n. 2: id cuius scientia per demonstrationem quaeritur est conclusio aliqua in qua propria passio de subiecto aliquo praedicatur; n. 3: Passionis autem esse ... est inesse subiecto; quod quidem demonstratione concluditur.

CONCLUSION

There remains only the task of drawing together the doctrine of St. Thomas Aquinas on the domain of logic and the nature of logical being which has been discovered, in order to see it in greater unity and bring into relief its salient features.

What is Logic?

Logic is an intellectual discipline or habit which it is hard to classify. It is an art inasmuch as its purpose is to direct operations, those which it directs being the acts of reason itself. But because an art in the strict sense, as a mechanical art, directs the making of an external material product, logic cannot fit here; for the operations of reason which logic directs do not terminate in any external or material thing, though they do, in an analogous sense, constitute immanent and immaterial terms, such as definitions, propositions, and syllogisms. By extension of the word art to include habits guiding such immaterial production, logic can be called a liberal art.¹

At the same time logic is called a science; but here too it will not fit into ordinary classifications, for it has affinities to all classes and differences from all. It is like factive science, which is mechanical art, in being productive, but different in producing only an immanent and immaterial term. In its direction of operations which have no material product, it is like moral science, but differs in that it is concerned with the operations of reason rather than of will. By its ordination to the cognition of truth for its own sake it resembles speculative sciences. Yet it cannot fit into any of the three exclusive divisions of speculative science. Clearly it is not the philosophy of nature because it is not concerned with material and mobile beings; nor is it mathematics because not concerned with discrete or continuous quantity. Though it resembles metaphysics in its commonness and universality, it is expressly distinguished from it. For whereas metaphysics in common

¹ Chap. I, pp. 3-9.

with all speculative sciences is concerned with knowing real things without producing them, logic studies only the instruments of knowledge and produces what it studies. In this logic differs from all other sciences; for all other sciences are directed to the knowledge of something other than knowledge itself; but logic is concerned with knowledge. Thus in a certain sense logic must be given a class by itself, distinct from all other sciences.²

But because it is subordinated in its finality to the discovery of truth, which is the end of speculative science, logic can also be said to be reductively speculative; for it supplies to speculation the instruments and the guidance which it needs.³ Such guidance is needed for three different cognitive acts of the intellect, simple apprehension, judgment, and reasoning; and for each of these there will be a distinct part of logic. The logic of reasoning is divided according to the manner in which it attains truth. Demonstrative, analytical, or judicative logic leads to certitude in the possession of truth; dialectical or inventive logic leads to probability, and sophistical logic leads to the mere appearance of truth. The third kind can be neglected except to be on one's guard against it. The other two serve a useful purpose. Dialectics argues from general or common principles. Their application to the particular problem in hand may not be clearly perceived, so that only a probable conclusion is drawn. Demonstrative reasoning, on the other hand, makes use of principles proper to the science or to the question under discussion, applying a more general principle to the question at issue through a particular principle.⁴

It would not be correct to say that demonstrative logic makes use of particular principles, because there is a distinction between pure and applied logic. Pure logic (*logica docens*) studies the instruments and procedure of thought theoretically, laying down certain conditions and norms for their application. But the application itself, in so far as it belongs to logic at all, is called applied logic (*logica utens*). Pure logic is a science, even for dialectical and sophistical reasoning. Applied logic is not, but more resembles an art. The application of demonstrative logic belongs to science, but not to logic itself; for, making use of proper principles, it properly belongs to the particular sciences dealing with the subject matter to which those proper principles belong. Dialectics and sophistics, however, since they do not use principles

² Chap. II, pp. 19-27.

³ Chap. II, pp. 26-31.

⁴ Pp. 32-35.

proper to any particular science, retain their own application. Therefore, dialectics is both theoretical and applied; and so also is sophistics; but demonstrative logic is only theoretical.⁵

This distinction must be borne in mind if one is to understand correctly the word "logic" as it is often used by St. Thomas; for he often speaks of arguing logically or by logical reasons, and sometimes opposes such procedure to arguing demonstratively or analytically. In such cases "logic" means dialectics; for it retains its own use; but logic does not make use of demonstration; it merely studies it and expounds its rules.⁶

The Subject of Logic

Some of the most enlightening explanations of what logic is from a theoretical point of view occur in passages which distinguish it from metaphysics.⁷ Though the two sciences have much in common, both being universal and extending to all things, metaphysics studies these things as real and as beings, whereas logic is concerned with things only in so far as they fall under certain "intentions" of the intellect, certain views which reason takes of things. These intentions are also referred to as rationally beings (*entia rationis*)⁸ because they do not exist as such in nature but have existence only from reason, following upon the manner in which the intellect understands. These intentions or rationally beings are what logic directly studies; they form the "subject" of the science of logic.⁹ Logic will study, then, such intentions as genus and species, definitions, propositions and syllogisms, the contrary, the mode of predication, and the true and the false.¹⁰

For St. Thomas the subject of a science is that kind of being which is studied and whose properties are sought. In its proper sense it does not mean everything that in any way enters into the consideration of a science, but the particular aspect under which the science considers the things with which it deals. This particular aspect determines the *kind* of being considered and formally constitutes the *genus subiectum* of the science.¹¹

A number of passages in St. Thomas' works say that logic is concerned with the three acts of reason, simple apprehension, judgment, and

⁵ Pp. 36-37.

⁶ Pp. 37-41.

⁷ Chap. II, pp. 41-48.

⁸ For the use of the word "rationally" see chap. III, note 15.

⁹ Chap. II, pp. 44-46; chap. III, pp. 52-55.

¹⁰ *Ibid.*, pp. 52-54 & 57-64; also chap. I, pp. 6-9.

¹¹ Chap. III, pp. 49 & 56-57.

reasoning. These acts are even said to be the “proper matter” of logic. Does this mean that they form its “subject”? It cannot, because the subject is explicitly said to be intentions or rationally beings which follow upon these acts. Clearly what follows them cannot be identified with them, and the products of operations are not the operations themselves. There is no contradiction in the statements, however, because logic can and must have a concern for the operations of reason without studying them as its subject. The intentions which are its subject arise from these operations and are determined by the manner of these operations. Logic must therefore necessarily take the mode of the operation into account. And when it is said that logic is the science by which reason considers the order in its own acts, this order must be understood to be in some way identified with the intentions or rationally beings which logic properly studies.¹²

*Rationally being*¹³

Rationally being (“ens secundum quod est tantum in mente”) is frequently distinguished by Aquinas from real being “which is divided according to the ten categories.”¹⁴ We often speak of things which do not exist as such in nature. Blindness is an example. It is rather the absence of a being, sight, than something positive itself. It has non-being in its very notion. There are other non-real things of which we speak that do not have non-being in their notion. Any fiction like a unicorn would be such a rationally being.

Though such things as fictions and privations do not exist in reality, they do exist at least in thought. This is enough to make them beings in at least a secondary and analogous sense. Because they have existence in reason, we call them rationally beings (*entia rationis*).

Logic is not concerned with the kind of rationally being which has non-existence in its definition. The study of negations and privations belongs to metaphysics since they are the contrary of being as being in its primary sense, which is the direct and principal subject of metaphysics, and contraries belong to the same science. Logic must therefore find its subject in positive rationally being, which is not defined by its non-existence.

Two kinds of positive non-real being are distinguished, one of which is a pure fiction without any foundation in reality, such as a character

¹² Pp. 49-51, 54-57.

¹³ In this section the order of chap. IV is followed.

¹⁴ Chap. IV, p. 75 and note 1.

in a dream, and the other of which has a real foundation. Pure fictions cannot be the subject of any science since there is nothing outside of thought to be demonstrated and nothing to found certitude. This cannot be the subject of the science of logic, then, especially since logic is subordinated to the knowledge of things.

Not only by elimination but also because of the description given for founded non-real being, are we led to find the subject of logic in this kind of positive rationally being; for it is illustrated by the example of the intention of universality and of species. Additional examination of this kind of rationally being with a foundation in reality reveals that a further distinction can be made within it. The foundation of some rationally beings is in reality immediately, as the concept of man is immediately founded upon real man. For other rationally beings which have a foundation in reality, the foundation is only mediate or remote. Such a being is the intention of genus. An old familiar example has come back; and it occurs in a description very similar in expression and in notion to that given for the subject of logic: this kind of rationally being is devised by the intellect and follows from the manner of understanding. Thus the subject of logic is seen to be rationally being with a remote foundation in the real.

Intention

Further clarification of the subject of logic comes from an examination of the notion of "intention." Basically it means a tendency to something else. Sometimes the term refers to an act of the will or of the intellect. Occasionally it designates the intelligible species by which the intellect is informed and made like some other thing. More frequently, as *intentio intellecta*, it means the internally conceived and expressed term of cognition. And finally it is used of logical intentions.¹⁵

Cognition, according to St. Thomas, is a form of tendency by which the knower, without ceasing to be himself, becomes something else. A cognitive faculty is a capacity to take on the form of another being. The form received into the intellect is called the intelligible species. By it the knower is given the formal or intelligible determinations of the thing known.¹⁶ Thus informed, the knower actively expresses or acts out the part of the thing known, so that the accidental act of the knower becomes one (in intention) with the act of the thing known. The expression within the intellect is called an internal word, *intentio*

¹⁵ Chap. V, pp. 94-98, and see heads of sections.

¹⁶ Pp. 99-102.

intellecta, or direct intention.¹⁷ This intention, expressed by the knower and expressing the thing known, has a twofold relation: it is a form or quality perfecting the knower and a relation of likeness to the thing known. Viewed in this latter relation, according to what it expresses, it is essentially the relation of truth, the conformity of intellect to thing.¹⁸

What this intention of the intellect expresses concerning the thing is its quiddity or essence—what the thing is. As the manner in which a given thing exercises its act of existence, essence actually exists in singular real things and, when known, also exists in the intellect. Nevertheless, in direct apprehension it is grasped by the intellect according to its “absolute consideration,” without attention to either of the two particular modes in which it exists. Expressing within itself the essence or quiddity of the thing, the intellect knows, in a more or less perfect and distinct way, the full intelligibility of the thing in itself.¹⁹

Upon this direct apprehension of the thing according to its nature, two different kinds of reflection of the intellect can follow, one upon the phantasm and through this upon the existence of the nature in some singular material thing, and another upon the way in which that nature exists in the intellect.²⁰

The latter kind of reflection founds the logical intention. By reflecting upon itself the intellect can know its own operation and the media involved. Reflection upon the operation as a perfection of the intellect is left to psychology. Logic is concerned with what is expressed in that operation, the nature that is known. When the intellect is aware of how that nature exists in the intellect, and what happens to it as a consequence of its existing there, a logical or “second” intention is formed.²¹ The particular consequences of its existence in the intellect are accidents with reference to the nature which is there. It is these accidents which logic studies as its subject.²² They are understood “in the second place,” after the thing itself is known, and for this reason are called second intentions.²³

Such intentions the intellect attributes to the nature, not as existing in real things, but precisely as known and as it exists in the soul. And so logic considers as its subject certain accidents of being, not as being,

¹⁷ Pp. 103-107.

¹⁸ Pp. 108-110; cf. p. 101.

¹⁹ Pp. 111-114.

²⁰ Pp. 114-117.

²¹ Pp. 122-126.

²² Pp. 126-127.

²³ Pp. 122-124 & note 90.

but *as known*. That such accidents are rationally beings is clear from the fact that the nature as known exists only in the intellect and that the accidents which follow upon its existence there can have real existence even less.²⁴

Nevertheless, we must not conclude from the fact that logical intentions exist only in the mind that they are pure forms of the intellect without any content or that logic is "formal" in the sense that it takes no account of the things that are known. If the distinction were forced upon us we should have to say that for St. Thomas logic is rather "material" than "formal," since it necessarily takes into account the natures of the things known. It is only because the nature of *some thing* is in the intellect that logical intentions of it are formed; and these, as accidents of the nature, can no more be considered without reference to their subject than a real accident can. There is, however, a sense in which St. Thomas speaks of logic as formal: it considers the forms of things, their "formal principles," rather than the matter of things or the way in which the things exist in reality.²⁵

*Relation*²⁶

As a tendency to something else, intention "implies the orientation of one thing to another." But the orientation of one thing to another is a relation. This is what the direct intention has been found to be: the relation of likeness between the intellect and the thing. Since the second intention is an intention of the direct intention, it must be a relation of a relation. The understanding of intentions, then, requires the study of relations.

The same holds true of rationally being, for this kind of being can be only a negation or a relation;²⁷ and as logic is not concerned with negation, logical being must be a relation.

Relation is the only one of the ten categories that will admit of rationally being. All the rest posit something in nature and are therefore kinds of real being. Although a relation can be a real accident, and for this reason relation finds a place among the categories, it is not necessarily real. Aquinas distinguishes between the existence (*esse*) of a thing and its formal character (*ratio*). Though a relation may, like other accidents, have its being in a real subject, its formal character does not

²⁴ Pp. 127-129.

²⁵ See chap. III, final section, pp. 64-71.

²⁶ The general order of chap. VI is followed. Only matter that is brought in from elsewhere or quotations will be given separate references.

²⁷ Chap. IV, pp. 91-93.

demand this, since relation does not posit something but is merely "to something." It is just a regard, a bearing, or an orientation to something outside the subject; it does not of itself posit anything in the subject.

If a relation is real, this is because its subject, its term, and its foundation are all real. If reality is wanting in any of these elements, as for instance, if the subject and term are not two really distinct things, but identical in reality even though distinguished in thought, or if the foundation is not really in the subject, the relation cannot be real. But since the notion of relation does not demand its reality, the relation is not destroyed; it remains in reason.

In explaining the mutualness or reciprocity of relations St. Thomas lists, among other kinds, mutual ratiolate relations in which "there cannot be an order and bearing between the given extremes except according to the apprehension of reason," and within this comes a class of relations "which follow upon the act of reason." Examples of the latter are genus and species.²⁸ From both the examples and the explanation, then, this class of ratiolate relations agrees with logical intentions and the subject of logic.

But the relation in question that is consequent upon the intellectual operation is not the same as that between an effect and its cause (as is had between the internal word and the intellectual operation which expresses it); the logical relation arises "in the things understood themselves."²⁹ It consists in an order, not of things, but of concepts.³⁰ It is devised by the intellect and attributed to things, not, however, to things as they are in themselves, but precisely as the objects of intellectual knowledge, *as understood*.

What is related in the logical relation, then, is not the real thing as such, nor the nature according to its absolute consideration, but the nature as conceived and under the conditions of this conception. Such relations are contrived by attending to the relationship of the nature which is in the intellect either to external things or to other conceived natures.

If the subject of logic is the ratiolate relation consequent upon the operation of the intellect and attributed to the thing known, this should be verified in each of the three parts of logic according to the three operations of reason, simple apprehension, judgment, and reasoning.

²⁸ *S.T.*, I, 13, 7 c.

²⁹ *Ibid.*, 28, 1 ad 4.

³⁰ *De Pot.*, 7, 11 c.

Intention of Universality

Human cognition is the operation and activity of the whole man rather than of any single part or faculty. Not even the intellect knows by itself. The composite man knows composite being. If different operations in knowing are distinguished, this does not mean that these are complete by themselves. Intellectual knowledge needs sense and imagination. Human cognition passes from potency to act both in regard to the operation and in regard to what is apprehended; we first know in an undifferentiated way, then pass on to more distinct knowledge.³¹ What is first conceived by the intellect is being. But our knowledge does not rest there. We must go on to see what kind of being is conceived and to learn more and more about it.

In simple apprehension by the intellect we grasp what kind of being the thing is; that is, we apprehend the quiddity or essence of the thing. Because the intellect is immaterial it can apprehend a thing only in an immaterial way, without the individuating matter and conditions of the thing; and therefore, without in any way denying the existence which the thing really has, it apprehends the thing only according to its nature considered in itself, "absolutely." In so doing, it abstracts from the individual matter of the thing, its accidents, and its singular mode of existence. Only when so abstracted can the form of the sensible thing be shared by another being.³²

But when the nature is apprehended absolutely in this way, it is in the intellect in a manner which does not restrict it to being the nature of any singular being, any particular subject; but it is such that it can apply to many. It is *de facto* universal. It is not apprehended as universal in the direct apprehension, but only in a reflection upon the manner in which the nature is in the intellect. Then it is seen to be one derived from many, over and above the many, and apt to be in many.

The nature itself thus considered in reflection is the universal formally. But it is not the intention of universality. That intention arises from a comparison made by the reflecting intellect between the apprehended nature and the many things which are or can be its subjects and of which it is accordingly the likeness. Such a comparative act of the intellect is necessary, because the direct intention apprehends only the nature and in no way refers it to the many terms needed for universality. The intention of universality, however, is not the act of comparison but the relation that is set up by means of it.

³¹ S.T., I, 85, 3 c.

³² The order of chap. VII will be followed for the rest of this section.

The subject of the relation is the apprehended nature. The term is the many individuals or less universal concepts to which that nature is referred. Though it is referred to real things, these are not regarded precisely as real but rather as singular or individual and under the intention of singularity; for logic is not concerned with the real as real but deals with things under the aspect of the condition of existence which they have in the intellect or the way in which they can be referred to a nature that is there, that is, the way in which it is seen to possess that nature. It is therefore as an *inferior* of the universal nature that either the singular being or a less universal nature is referred to it. The foundation of the relation is in some sense the abstractive operation of the intellect, but more properly it is the abstractness of the nature, or its uniformity in regard to many, by reason of which it is capable of being related to them. The remote real foundation is the nature as existing in real things.

*Intention of Attribution*³³

There would be no need of further operations on the part of the intellect if our apprehension were not so imperfect and limited. But we cannot know the whole being of the thing known and everything about it in a single glance or a single grasp. The nature of a sensible thing must be dematerialized and disindividualized. As a consequence we grasp the nature without the individual conditions necessary for its real existence. Secondly, the substantial quiddity is apprehended without the quiddities of the accidents, and then these are apprehended in themselves according to their own quiddities. And finally the nature is apprehended without attention to its manner of existing. In order to bring together and integrate the abstractly apprehended aspects of the thing and to form a composite representation of it which conforms to its concrete conditions of existence, another operation is necessary.

Although the intellect cannot at the same time apprehend many things as many, it can know many if they can be brought into a single view. This can be done by comparing them, for correlatives are known together.

Judgment is an operation that brings two apprehended natures together in a comparison and thus perceives their conjunction or identity (or, as the case may be, their disjunction or diversity). The natures are not identified in their absolute or abstract form but in the concrete

³³ See chap. VIII.

subject. One of the natures is seen to be in the thing represented by the other.

Since the real existence of a composite being results from the composition of its elements, the intellect, to know it as concrete and as existing, must reproduce in its own way that composition. It thus posits the thing in thought and affirms its existence.

In this affirmation of the existence of the composite being, the intellect attests that the thing is as the intellect represents it. Here is found truth in its formal sense; for there not only is in fact a conformity of the intellect and the thing but this conformity is consciously apprehended. But this can be done only if the intellect actively compares the apprehended natures both with each other and with the real concrete thing which they diversely represent.

The objective relation or union set up by judgment is called an enunciation or proposition. Of the two natures one is understood or expressed of the other. The former is called the predicate, the latter, the subject. The predicate is regarded as the formal or determinative part of the proposition; the nature or form which it represents is signified as being in the subject and determining it in thought. And the subject is regarded as the material or determinable part, standing for the supposit in which the nature signified by the predicate exists.

Since a form can be in a supposit either accidentally (*per accidens*) or substantially (*per se*), there will be two corresponding modes of predication, accidental and substantial or essential. These are the modes of predication which are found mentioned as the subject of logic.³⁴ If what is predicated is in the subject by definition (either because it is in the definition of the subject, or because the subject is in its definition as its proper matter), the predication is essential. Otherwise it is accidental.

This distinction of modes is important for understanding the kind of identity affirmed between subject and predicate. In accidental predication the things signified by subject and predicate are affirmed to be numerically one, or one in subject; that is, they exist together in one concrete being, as man and stoutness exist together in the subject John. In essential predication there is more than a mere unity in the concrete

³⁴ Chap. III, pp. 57-59. There would be other meanings of "mode of predication" which logic would have to take into account, such as the predicaments, which are distinguished according to the manner in which one thing is predicated of another, or modal propositions, in which the presence of the predicate is not affirmed simply, but the connection between subject and predicate is expressed in a qualified way, such as "perhaps" or "necessarily." But *per se* and *per accidens* are the most fundamental modes and those most important to logic.

subject; a unity of essence is affirmed. When a universal is predicated of its inferior, the same essence is designated by both subject and predicate, but by the predicate in a less determinate though expressly signifying way.

Whatever the kind of real identity affirmed, however, the things signified by subject and predicate are distinct in reason. Even when, as in essential predication, both things have the same essence, the predicate is viewed as being in the subject and informing it.

The composition is affirmed and its truth signified by the verbal copula *to be*. This verb, which expresses existence of both subject and predicate, is a sign of the real existence of the form signified by the predicate in the thing represented by the subject. Because the things of the material world which we properly know exist as composite, we use the word *to be* to signify composite existence, like that of the proposition in the intellect. The metaphysical justification for this is the fact that the composite has its act, *to be*, when the matter has its act, the form. For to be is the act and perfection of all acts. So too in the order of cognition, when the predicate informs the subject, the composite (the enunciation) *is*.

This does not imply, however, that the verb *to be* necessarily means existence in the real order. In existential propositions, where there is no predicate but this verb, it must mean to be in the primary sense of the term, with actual real existence. In attributive propositions, with which logic is concerned, it still means existence; but it directly affirms only the existence of the predicate in the subject without saying whether this is so in reality or only in thought.

Because the proposition is the expression and attestation of the conformity of the intellect to the thing, it is by its very nature "the true" (*verum*). It is that by which the intellect is conformed to the thing. It is a being whose whole existence is to be true; and for it to be false is not to be. When therefore, it is said, as was seen in Chapter III, that logic considers the true and the false,³⁵ what is meant is, not that logic studies the relation of real things to the intellect, but that it studies propositions, the rationate beings by which the intellect expresses its conformity to things.

Since the proposition is a relation, expressing as it does an identity between subject and predicate, it cannot be a real relation but only rationate, because in the relation of identity there are not two really distinct extremes.

³⁵ Pp. 59-64.

In this relation the predicate is referred or attributed to the subject, and therefore the predicate is the subject of the relation, and the subject is its term. The foundation is again, in a way, the operation of the intellect; here an operation of composition. But more properly logic considers the formal foundation, which here is the apprehended existence of the nature signified by the predicate, in the supposit represented by the subject. Remotely it will be the concrete existence of the composite being, or the real unity of the thing that is known under the two aspects of subject and predicate.

In itself, taken formally, this relation is one of attribution; for the intellect, in attesting to the existence of the predicate in the subject, attributes it to the subject.

*Intention of Consequence*³⁶

From the same shortcoming of human apprehension that makes judgment and composition necessary, springs the necessity of a third operation, reasoning, which is a discourse or movement in thought from one thing to another, from the known to the unknown. Simple apprehension does not reveal enough about the things apprehended and is not able to attain to things which do not fall under the senses. Reasoning must supply for these defects and must give certitude where evidence does not arise from direct apprehension.

Although reasoning provides more perfect knowledge than our imperfect apprehension, it is itself an imperfect manner of knowing, giving imperfect knowledge that is not grasped in itself but through something else. There is successiveness in our knowledge: first we know one thing, then from this we proceed to the knowledge of something else. The starting point of the movement, the thing first known, is its principle; the knowledge at which we arrive is the conclusion. We know the conclusion *from* the principles or premises, but not *in* the premises; for when one thing is known in another, the two are known at the same time. But in reasoning, first the premises are known in themselves, then after that the conclusion is drawn from the knowledge of the premises. For the truth of the conclusion is present in the premises from the first, but only *virtually*. But it is this "virtue" or force which accounts for the motion of the intellect to the conclusion.

Although there is successiveness in reasoning, there is more than that; for the succession is *caused*. The movement of thought from prem-

³⁶ See chap. IX. Any departures from its order will be indicated.

ises to conclusion is not accidental but has a reason.³⁷ The conclusion is known and assented to because of the principles and through the principles. It is known from the premises because resultantly known in the premises. For when the force of the premises in conjunction is perceived then the truth of the conclusion is seen in the premises, which become the reason for knowing the conclusion inasmuch as it is in the light of the premises that the new truth is seen. The assent to the conclusion in the premises and because of the premises is a single act in itself, even though it presupposes others before it.

The causality involved here is efficient, as is required where there is motion. The premises are efficient causes of the conclusion. But their efficiency presupposes the operation of reason comparing the conclusion to the principles, which it does by comparing the premises to each other. In so doing it perceives the force of the premises together and so finds in them a motive for affirming and assenting to the conclusion.

The most typical relation thus set up between premises and of conclusion to premises and the one most frequently considered by St. Thomas is called a syllogism. It is composed of three propositions (two premises and a conclusion) and of three terms, the results of judgment and of simple apprehension. These are its parts and material causes, the propositions immediately, and the terms through the propositions. The premises are the material cause of the conclusion inasmuch as they contain the terms of which the conclusion is composed. It is by reason of their material causality that the premises and terms can be the efficient cause of the conclusion; and they exercise their efficient causality through their own formal causality; for it is the *meaning* of the terms seen in relation which becomes the motive for assent to the conclusion. In each premise, as in any proposition, the predicate is related to the subject as a form existing in it. The predicate of one proposition is made the subject of another, and so is signified as having another form within it. It follows that the second predicate is also within the first subject, and so can be predicated of it. This is what has been referred to as formal inclusion. But this does not derive from the meaning of terms taken in isolation, but from them as formally signified in the proposition; for there the one is seen in the other. Similarly, it is not in the propositions in isolation that the inclusion of the second predicate in the first subject is perceived, but only when the two

³⁷ The matter of this paragraph will be found in chap. IX in this order: pp. 247, 251-252, 248-252, 249-250, 251, 249, and 250.

propositions are compared. In this comparison the relation of these two terms is perceived; and that is to say that the conclusion is known and assented to.

Hence a syllogism is a relation of two relations to a third relation which is efficiently caused by those two in conjunction. It is at once the relation of the conclusion to its premises and the relation of the subject and predicate of the conclusion through a middle term; for these are but two expressions of the same relation.

The syllogism, however, is not the only intention of consequence. It is the product of deductive reasoning, which goes from universal to particular or from more universal to less universal propositions. There is also another type of reasoning which goes in the contrary direction, from singular or particular propositions to a universal conclusion. This is called induction.³⁸ A common predicate is found in many particular cases. When it is observed that the constancy of this predicate is associated with a common nature in the discrete subjects and depends upon that nature (whether what is known is *what* the nature is or only *that* it is present), then the necessity and universality of the predicate for all subjects of that nature is recognized. This enables the knower to pass from the particular affirmations to the universal conclusion. The singular or particular propositions that express the truth of the particular instances are the premises and cause the conclusion. But they must be understood together in a comparison. The comparison (in successful inductions) reveals a common nature in the subjects; and this common nature, as the principle determining the subjects' manner of existing and of operating or manifesting themselves, serves as a sort of middle term joining the predicate of the conclusion universally to its subject, which stands for the ontological subject of the nature.

The intention of consequence in induction has no special name. But it too, like the syllogism, is a relation of causal dependence (in the cognitive rather than the physical order) of the conclusion upon the premises. The motive for the intellect to draw the conclusion which is provided by the premises is found in the common nature expressed or implied in the many subjects, and more remotely in the quasi-efficient causality exercised by this nature in causing its properties, among which is its constant manner of operating.

In both inductive and deductive reasoning, then, there is the intention of consequence, which is the relation of causal dependence of the conclusion upon the premises. The subject of this relation is the con-

³⁸ See pp. 270-272, 278-282, 297-299.

clusion; the term is the premises. Its foundation is the motive force of the premises, which for deduction is the two-stage formal inclusion of the terms and for induction is the dependence of the property upon the subject. Formally the relation is one of consequence, for from the premises by reason of the foundation the conclusion follows by a certain necessity. The remote foundation in the real order is both the formal causality of natures and the efficient causality of agents, by which forms are caused to inform matter, new composites are constituted, and new properties arise.

Salient Features of the Logic of St. Thomas

As a result of the investigation carried on in this book several features of the logic of St. Thomas Aquinas should now stand out.

The first is that his doctrine is not one of logical realism. The kind of things that this logic deals with, logical entities such as genera and species, propositions and syllogisms, are not found existing in the world as such independently of human thought. Rather they are constructed by thought.

Yet his doctrine is not a pure constructionism or formalism, nor is it nominalistic or merely linguistic. It is not just about words or forms of speech. Any concern for these is quite secondary to concern for thought. And though the logical entities studied are forms or structures of thought, Aquinas' logic is not purely "formal" in the sense that it studies empty forms of the mind without content. The forms of thought are built upon and added to the forms of things that are in knowledge and in the mind. And though the specifically logical forms are constructed by the mind, logic does not become a pure construction; for the constructed forms are based upon the structure of the human knower and upon the manner of knowing that necessarily flows from this, and more remotely upon the structure of the real beings that are to be known.

In such a view logic is not an isolated and independent discipline even though it is distinct. It presupposes a theory of knowledge which is an epistemological realism. That is, it is based upon a doctrine that holds both that there are real beings to be known and that man is capable of knowing, however imperfectly, those real beings. Man's knowledge is dependent upon the real and is determined, at least in part, by the real. But his manner of knowing is dependent also upon his own nature. Human knowledge is an activity of man, conducted in a manner proportioned to his nature, by which in an immaterial way

he takes possession of other beings and makes them his own by conforming himself, in his spiritual activity, to them. It is essentially *intentional*, that is, directed to the other as other. And being intentional, it is also relational, for a relation is the ordination, orientation, or direction of one thing to another.

Logic too, in Thomas' view, is intentional, but on a secondary plane. In man's direct knowledge the cognitive forms in the mind are the forms of the things known. They are called direct or first intentions. As such they have as their objects the real and are dependent upon the real. But besides directing his attention and knowledge to the real, man can reflect upon his knowing and direct his attention to the intentions within his knowledge. In knowing them he forms intentions of his direct intentions and now has second-order or "second" intentions. These are the entities that are studied in logic and constitute its proper subject.

First intentions are essentially related to their real objects. But in thought they acquire relations to other intentions. Second intentions contain and express the relations which first intentions have among themselves in thought. And because logic is about intentions and intentions are relations, the notion of relation is central in the logic of St. Thomas.

Just as the first intentions are dependent upon the real beings that are known in direct knowledge, second intentions are dependent upon and conditioned by the first intentions that are known in reflexive knowledge. Through the first intentions second intentions are directed to the real and dependent upon it.

The whole purpose of reflecting upon first intentions and of forming second intentions is to assure that our knowledge proceeds aright to knowledge of the real. Logic, then, though itself not about the real or directly a quest of the real, is nevertheless entirely subordinated to such knowledge. Its whole purpose and reason for existing is to guide human knowledge to truth in its quest of the real. Truth, and truth about real being, is the end and final cause of logic.

As an art logic is a guide of the operations of reason in knowing the real.³⁹ As a science logic is introductory, methodological, and instrumental to other sciences, especially the speculative.⁴⁰ It is through these that logic is ordered to the knowledge of real things: "logica ordinatur ad cognitionem de rebus sumendam."⁴¹ It is the end of

³⁹ *In I Post. Anal.*, 1, nn. 1-6.

⁴⁰ Chap. II, pp. 25-31.

⁴¹ *In I Perih.*, 2, n. 3.

reason to know the real;⁴² and logic serves as the internal guide of reason in this pursuit. It is the part of reason to arrange and put things in order and to order things to their end: "rationis enim est ordinare ad finem."⁴³ By logic reason does this for itself. Therefore logic studies order in the acts of reason.⁴⁴ But order is relation.⁴⁵ For this reason logic studies relations in knowing or in things *as known*. Such relations are logical intentions.

Because we must go from indistinct knowledge to distinct, we must make distinctions in reason. But a distinction made by reason is a relative distinction, and such a distinction is constituted by the relation itself.⁴⁶ Not only does relation distinguish, however, but it also unites; for, as has been seen, correlatives are known together.⁴⁷ In the intention of universality, many terms are seen in connection with one form.⁴⁸ By the intention of attribution distinct aspects of one being are perceived in union. By the intention of consequence effects are seen in causes and the originally unknown is seen in the known. Thus relation in thought is a means and an instrument to greater distinctness and greater unity, to deeper penetration and a broader view. It brings reason to a fuller knowledge of truth.

These relations or intentions, which perform so important a function in the intellectual life of man, are the subject of the science of logic as St. Thomas Aquinas conceives it.

⁴² Chap. IV, pp. 83-84.

⁴³ *S.T.*, I-II, 90, 1 c; cf. *De Ver.*, 22, 13 c & ad 4; *In II Sent.*, 38, 1, 3 sol.; and see chap. VI, pp. 136-138.

⁴⁴ *In I Eth.*, 1, nn. 1 & 2.

⁴⁵ Chap. VI, pp. 136-137.

⁴⁶ *De Pot.*, 8, 3 ad 12.

⁴⁷ See chap. VIII, p. 209 and notes 30 and 31; also *S.T.*, I, 85, 4 ad 4: Quando intellectus intelligit differentiam vel comparisonem unius ad alterum, cognoscit utrumque differentium vel comparatorum sub ratione ipsius comparisonis vel differentiae.

⁴⁸ See chap. VII, pp. 187-192; also *De Pot.*, 1, 1 ad 10: Intellectus intelligit naturam animalis in homine, in equo, et multis aliis speciebus: ex hoc sequitur quod intelligit eam ut genus.

BIBLIOGRAPHY

A. WORKS OF ST. THOMAS

1. Collected Works

- Opera Omnia*. Critical Leonine edition. Rome: Leonine Commission, 1882- .
16 vols. so far published. (Used chiefly for paragraph numbers for commentaries on the logical and physical works of Aristotle.)
- Opera Omnia*. 25 vols. Parma: Fiaccadori, 1852-73. (Used chiefly for *In IV Sent.*, dist. 23-50.)
- Opera Omnia*. 34 vols. Edited by E. Fretté and P. Maré. Paris: Vivès, 1872-80.

2. Commentaries on Aristotle

(N.B. Those marked with an asterisk [*] have a system of continuous paragraph numbers for the whole work but give also the Leonine numeration, which begins new numbers for each lesson. It is the latter numbers that are given in the references.)

- In Aristotelis librum De Anima commentarium*. 3rd ed. Ed. by A. M. Pirotta, O.P. Turin: Marietti, 1948.
- **In Aristotelis libros De Caelo et Mundo, De Generatione et Corruptione, Meteorologicorum expositio*. Ed. by R. Spiazzi, O.P. Turin: Marietti, 1952.
- In decem libros Ethicorum Aristotelis ad Nicomachum expositio*. Ed. by R. Spiazzi. Turin: Marietti, 1949.
- In duodecim libros Metaphysicorum Aristotelis expositio*. Ed. by M. R. Cathala, O.P., and revised by R. Spiazzi. Turin: Marietti, 1950.
- Commentary on the Metaphysics of Aristotle*. 2 vols. Trans. by John P. Rowan. (In "Library of Living Catholic Thought.") Chicago: Regnery, 1961.
- **In Aristotelis libros Peri Hermeneias et Posteriorum Analyticorum expositio*. Leonine text. Ed. by R. Spiazzi. Turin: Marietti, 1955.
- **In octo libros Physicorum Aristotelis expositio*. Ed. by P. M. Maggiólo, O.P. Turin: Marietti, 1954.

3. Other Commentaries

- Expositio super librum Boethii De Trinitate*. Ed. by Bruno Decker. Leiden: Brill, 1955.
- The Division and Methods of the Sciences (In De Trin., qq. 5 & 6)*. Trans. by A. A. Maurer, C.S.B. Toronto: Pont. Inst. of Mediaeval Studies, 1953.
- In librum Boethii De Hebdomadibus expositio*. In *Opuscula Theologica* (under A, 6), II, 391-408.
- In librum beati Dionysii De Divinis Nominibus*. Ed. by Ceslaus Pera, O.P. Turin: Marietti, 1950.

Scriptum super libros Sententiarum magistri Petri Lombardi. 4 vols. so far. Vols. I & II ed. by P. Mandonnet, O.P. Vols. III & IV (to IV, d. 22) ed by M. F. Moos, O.P. Paris: Lethielleux, 1929-47.

4. Systematic Works

Summa Contra Gentiles. Leonine manual edition. Rome: Leonine Commission, 1934.

Summa Theologiae. 4 vols. Ed. by Peter Caramello. With Leonine text. Turin: Marietti, 1950.

5. Disputations

Questiones Disputatae. 8th, revised ed. 2 vols. Vol. I (*De Veritate*) ed. by R. Spiazzi. Vol. II ed. by P. Bazzi, M. Calcaterra, T. S. Centi, E. Odetto, P. M. Pession, all O.P. Turin: Marietti, 1949.

Truth (De Veritate). 3 vols. Vol. I (qq. 1-9) trans. by R. W. Mulligan, S.J. Vol. II (qq. 10-20) trans. by J. V. McGlynn, S.J. Vol. III (qq. 21-29) trans. by R. W. Schmidt, S.J. (In "Library of Living Catholic Thought".) Chicago: Regnery, 1952-54.

Quaestiones Quodlibetales. 8th, revised ed. Ed. by R. Spiazzi. Turin: Marietti, 1949.

6. Smaller Treatises

Opuscula Omnia necnon opera minora. Ed. by J. Perrier, O.P. 3 vols. projected; so far only vol. I, "Opuscula philosophica," Paris: Lethielleux, 1949.

esp. <i>De Ente et Essentia,</i>	pp.	24-50
<i>De Fallaciis</i>		428-460
<i>De Propositionibus Modalibus</i>		461-467
<i>De Natura Accidentis</i>		489-494
<i>De Natura Generis</i>		495-545.

Opuscula Theologica. 2 vols. Vol. I, "De re dogmatica et morali," ed. by Raymond A. Verardo, O.P.

esp. <i>Compendium Theologiae</i>	pp.	9-151
<i>De Rationibus Fidei</i>		251-268.

Vol. II, "De re spirituali," ed. by R. Spiazzi; and *Expositio super Boetium De Trinitate* (pp. 313-389) et *De Hebdomadibus* (pp. 391-408), ed. by M. Calcaterra, O.P. Turin: Marietti, 1954.

Opuscula Omnia. 5 vols. Ed. by P. Mandonnet, Paris: Lethielleux, 1927.

Le "*De Ente et Essentia*" de S. Thomas d'Aquin, ed. by M. D. Roland-Gosselin, O.P. (In "Bibliothèque Thomiste," VIII). Kain, Belgium, and Paris: Vrin, 1926.

On Being and Essence. Trans. by A. A. Maurer. C.S.B. Toronto: Pont. Inst. of Mediaeval Studies, 1949.

Tractatus De Unitate Intellectus. Ed. by Leo. W. Keeler, S.J. (In "Textus et Documenta," ser. phil. 12). Rome: Gregorian Univ., 1946.

B. SOURCES OF ST. THOMAS CITED

Aristotle. *Aristoteles Graece et Latine.* 6 vols. Ed. by I. Bekker. Berlin: Prussian Academy, 1831.

- Averroes. *In De Anima Commentarium*, from *Commentaria in opera Aristotelis*. 12 vols. Venice, 1562-76.
- Avicenna. *Metaphysica*, from *Avicenne perhypatetici ... opera*. Trans. by Dominic Gundissalinus. Venice, 1508.
- Boethius. *Commentaria in Porphyrium a se translatum* (i.e., the second commentary on the *Isagoge*), in *Patrologiae cursus completus, series Latina*. Ed. by J. P. Migne. 218 vols. Paris: 1844-55. Vol. 64 (2nd ed., 1891), cols. 71-158. *De Trinitate. Ibid.*, cols. 1247-1256.
- De Hebdomadibus (Quomodo Substantiae Bonae)* in *Theological Tractates*, ed. by H. F. Stewart and E. K. Rand; New York: Putnam, 1926; pp. 38-51.
- Isaac Israeli. *Liber de Definitionibus*. Ed. by J. T. Muckle, C.S.B. in *Archives d'histoire doctrinale et littéraire du moyen-âge*, XI (1937-38), 300-340.
- John Damascene, Saint. *De Fide Orthodoxa* in *Patrologiae cursus completus, series Graeca*. Ed. by J. P. Migne. 166 vols. Paris: 1857-66. Vol. 94 (1864), cols. 789-1228.

C. BIBLIOGRAPHY

- Bourke, Vernon J. *Thomistic Bibliography: 1920-1940*. St. Louis: The Modern Schoolman, 1945.
- Mandonnet, P., O.P., and J. Destrez, O.P. *Bibliographie Thomiste*. Kain, Belgium: Revue des sciences philosophiques et théologiques, 1921.

D. INDEXES

- Bonitz, H. *Index Aristotelicus* in *Aristoteles Graece et Latine* (under B), vol. VI. Leonine Commission, *Indices Auctoritatum Omniumque Rerum Notabilium occurrentium in Summa Theologiae et in Summa Contra Gentiles*. Manual edition. Rome: Leonine Commission, 1948.
- Peter of Bergamo. *Tabula Aurea*. In Parma, *Opera Omnia* (under A, 1), vol. XXV. Photographic reprint, Rome: Editiones Paulinae, 1960.
- Schütz, Ludwig. *Thomas-Lexikon*. 2nd ed. Paderborn: Schöningh, 1895. Photographic reprint, New York: Musurgia, n.d.

E. STUDIES OF AUTHENTICITY AND CHRONOLOGY

- Glorieux, P. "Les questions disputées de S. Thomas d'Aquin et leur suite chronologique," *Recherches de théologie ancienne et médiévale*, IV (1932), 5-33.
- "Pour la chronologie de la Somme," *Mélanges de science religieuse*, II (1945), 59-98.
- Grabmann, M. *Introduction to the Theological Summa of St. Thomas*. Trans. by J. S. Zyburá. St. Louis: Herder, 1930.
- *Die Werke des hl. Thomas von Aquin*. 3rd ed. (In "Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters," XXII, 1-2). Munster: Aschendorff, 1949.
- Hayen, André, S.J. "Saint Thomas a-t-il édité deux fois son commentaire sur le livre des Sentences?" *Recherches de théologie ancienne et médiévale*, IX (1937), 219-236.
- Mandonnet, P., O.P. *Des écrits authentiques de S. Thomas d'Aquin*. Fribourg: L'oeuvre de Saint-Paul, 1910.

- ed. *Opuscula Omnia* (under A, 6), Introduction.
- "Thomas d'Aquin, Novice Prêcheur," IV, *Revue Thomiste*, n.s. VIII (1925), 393-416.
- Mansion, A. "Date de quelques commentaires de saint Thomas sur Aristote," in *Studia Mediaevalia in honorem A.R.P. Raymundi J. Martin, O.P.* Bruges: De Tempel, 1948, pp. 271-287.
- Maurer, Armand A., C.S.B., transl. *On Being and Essence* (under A, 6), Introduction.
- Motte, A. R., O.P. "La chronologie relative du Quodlibet VII et du commentaire sur le IV^e livre des Sentences," *Bulletin Thomiste*, VIII (1931-33), 29*-45*.
- "La date extrême du commentaire de S. Thomas sur les Sentences," *ibid.*, 49*-61*.
- Roland-Gosselin, M. D., O.P. *Le "De Ente et Essentia"* (under A, 6), Introduction.
- Salman, D., O.P. "Saint Thomas et les traductions latines des Métaphysiques d'Aristote," *Archives d'histoire doctrinale et littéraire du moyen-âge*, VIII (1932), 85-120.
- Synave, P., O.P. "La révélation des vérités naturelles d'après S. Thomas d'Aquin, in *Mélanges Mandonnet*. 2 vols. Paris: Vrin, 1930, I, 327-371.

F. STUDIES IN THE HISTORY OF LOGIC

- Bochenski, I. M., O.P. *Formale Logik*. Freiburg: Karl Alber, 1956. (No particular section on St. Thomas; many scattered remarks.)
- *A History of Formal Logic*. Trans. & ed. by Ivo Thomas, O.P. Notre Dame, Ind.: University of Notre Dame Press, 1961.
- Kneale, William and Martha. *The Development of Logic*. Oxford: Clarendon Press, 1962. (Very little on St. Thomas.)
- Lachance, L., O.P. "Saint Thomas dans l'histoire de la logique," *Études d'histoire littéraire et doctrinale du XIII^e siècle* (Ottawa: Inst. d'Études Médiévales, and Paris: Vrin), I (1932), 61-103.
- Prantl, C. *Geschichte der Logik in Abenlande*. 4 vols. Leipzig: Hirzel, 1855-70. Photographic reprint, Leipzig: Fock, 1927. Vol. III, 107-118.

G. GENERAL STUDIES ON THE NATURE OF LOGIC

- Alamannus, Cosmus, S.J. *Summa Philosophiae e variis libris D. Thomae Aquinatis excerpta*. 3 vols., 6 sections. Paris: Lethielleux, 1885-94. Vol. I, sect. I, *Logica*.
- Coffey, P. *The Science of Logic*. 2 vols. London: Longmans, Green, 1918.
- Dufault, Lucien, O.M.I. "The Concept of Being Which is the Proper Object of Logic," *Proceedings of the American Catholic Philosophical Assn.*, XXI (1946), 77-83.
- Forest, Aimé. *La réalité concrète et la dialectique*. (In "Bibliothèque d'histoire de la philosophie"). Paris: Vrin, 1931.
- *La structure métaphysique du concret selon Saint Thomas d'Aquin*. First ed., 1942. 2nd ed. Paris: Vrin, 1956.
- Geiger, L. B., O.P. *La participation dans la philosophie de saint Thomas d'Aquin*. 1st ed., 1942. 2nd ed. Paris: Vrin, 1955.
- Hugon, Edouard, O.P. *Cursus Philosophiae Thomisticae*. 6 vols. 3rd ed. Paris: Lethielleux, 1922. Vol. I, *Logica*.
- John of St. Thomas, *Cursus Philosophicus Thomisticus*. 3 vols. New ed., edited

- by Beatus Reiser, O.S.B. Turin: Marietti, 1930-37. Vol. I, *Ars Logica*.
- Lachance, "Saint Thomas dans l'histoire de la logique" (under F).
- Lottin, Odon, O.S.B. "L'ordre moral et l'ordre logique," *Annales de l'Institut Supérieur de Philosophie*, V (1924) (Louvain, and Paris: Alcan), 301-399.
- McInerny, Ralph M. *The Logic of Analogy: An Interpretation of St. Thomas*. The Hague: Nijhoff, 1961. Chap. 3, "The Nature of Logic," and chap. 4, "The Signification of Names."
- Maritain, Jacques. *An Introduction to Logic*. New York: Sheed and Ward, 1937.
- Parker, Francis H., and Henry B. Veatch. *Logic as a Human Instrument*. New York: Harper & Bros., 1959.
- Philippe, Th., O.P. "Bulletin de Philosophie," *Revue des sciences philosophiques et théologiques*, XXII (1933), pp. 71-78. (A discussion of some manuals of logic.)
- Pirotta, Angelo M., O.P., *Summa Philosophiae Aristotelico-Thomisticae*. 3 vols. Turin: Marietti, 1931. Vol. I, *Logica*.
- Sikora, Joseph J. "The Art and Science of Formal Logic in Thomistic Philosophy," *The Thomist*, XXII (1959), 533-541.
- Simmons, Edward D. "The Nature and Limits of Logic," *The Thomist*, XXIV (1961), 47-71.
- de Tonquédec, Joseph, S.J. *La critique de la connaissance*. Paris: Beauchesne, 1929.
- Ueberweg, Friedrich. *System der Logik*. 5th ed. Bonn: Marcus, 1882.
- Veatch, Henry B. "For a Realistic Logic," in *The Return to Reason*, ed. by John Wild. Chicago: Regnery, 1953. Pp. 177-198.
- *Intentional Logic*. New Haven: Yale U. Press, 1952.
- Wade, Francis C., S.J. *Outline of Formal Logic: John of St. Thomas' "Textus Summularum" of the Ars Logica*. Milwaukee: Marquette U. Press, 1955. Introduction.
- Wernick, Georg. "Wesen und Aufgabe der Logik," *Archiv für Philosophie*, VIII (1958), 1-35.

H. PREFACE

- Dufault (under G).
- de Finance. *Etre et Agir* (under chap. V).
- Forest. *La Structure métaphysique* (under G).
- Geiger, *La Participation* (under G).
- Grabmann. *Die Werke* (under E).
- Hayen. *L'intentionnel* (under chap. V).
- Hoenen. *La théorie du jugement* (under chap. VIII).
- Hugon (under G).
- Kossel (under chap. VI).
- Leonine *Index* (under D).
- Lonergan. "The Concept of *Verbum*" (under chap. V).
- McInerny (under G).
- Mandonnet. *Des écrits* (under E).
- Mandonnet. *Opuscula Omnia* (under A, 6).
- "Thomas ... Novice" (under E).
- Maritain. *An Introduction to Logic* (under G).
- Muller-Thym, "The *To Be ...* ." (under chap. VIII).
- Philippe, Th. (under G).
- Péghaire. *Intellectus et Ratio* (under chap. IX).
- Sikora (under G).

I. CHAPTER I

- Alamannus (under G), Q., I, art. 1, "Utrum ad directionem actuum rationis sit necessarium aliquam doctrinam haberi"; art. 2, "Utrum haec doctrina sit scientia."
- Conway, Pierre, O.P., and Benedict Ashley, O.P. "The Liberal Arts in St. Thomas Aquinas," *The Thomist*, XXII (1959), 460-532.
- Hart, Charles A. "What is Formal Logic?" *Proceedings of the Am. Cath. Phil. Assn.*, XXXI (1959) 87-91.
- John of St. Thomas (under G), P. II, Q. I, "De Logica, qualis sit et ad quae se extendat."
- McWilliams, James A., S.J. Comment on Hart (above), *ibid.*, 91-95.
- Mullahy, Bernard I., C.S.C. "The Nature of the Liberal Arts," *The New Scholasticism*, XXIII (1949), 361-386.
- Mullaney, James V. "The Liberal Arts in the Aristotelian-Thomist Scheme of Knowledge," *The Thomist*, XIX (1956), 481-505.
- Nemetz, Anthony A. "Art in St. Thomas Aquinas," *The New Scholasticism*, XXV (1951), 282-289.
- Parker and Veatch (under G), chap. 1, "What Is Logic?"
- Sikora, "The Art and Science of Formal Logic" (under G).
- Smith, Robert, F.S.C. "The Liberal Arts," *Laval théologique et philosophique*, II (1946), No. II, 79-88.

J. CHAPTER II

- Alamannus (under G), Q. I, art. 4, "Utrum haec doctrina sit scientia practica vel speculativa"; Q. XXXIII, "De divisione scientiae in practicae et speculativae"; Q. XXXIV, "De divisione scientiae speculativae in physicam, mathematicam et metaphysicam et practicae in factivam et activam."
- Bennett, O., O.M.C. *The Nature of Demonstrative Proof According to the Principles of Aristotle and St. Thomas Aquinas*. Washington: Catholic Univ., 1943.
- de Blic, J., S.J. "Un aspect remarquable de la dialectique aristotélicienne," *Gregorianum*, XI (1930), 568-577.
- Connell, Richard J. "Some notes on Whether Logic Is a Speculative or Practical Science," *The New Scholasticism*, XXX (1956), 198-205.
- Deman, Th., O.P. "Notes de lexicographie philosophique médiévale: *Probabilis*," *Revue des sci. phil. et théol.*, XXII (1933), 260-290.
- Flynn, Bernard M. "The Notion of Formal Logic," *Laval théol. et phil.*, II (1946), 181-183.
- Gardeil, P., O.P. "La 'certitude probable'," *Rev. des sci. phil. et théol.*, V (1911), 237; 441-485.
- Hart, "What Is Formal Logic?" (under chap. I).
- Isaac, J., O.P. "La notion de dialectique chez saint Thomas," *Rev. des sci. phil. et théol.*, XXXIV (1950), 481-506.
- John of St. Thomas (under G), P. II, Q. 27, "De unitate et distinctione scientiarum."
- Kane, W. H., O.P. "Abstraction and the Distinction of the Sciences," *The Thomist*, XVII (1954), 43-68.
- Labourdette, M. M., O.P. "Note sur la diversification du savoir: Connaissance speculative et connaissance pratique," *Revue Thomiste*, XLIV (1938), 564-568.
- Lachance (under F).

- Le Blond, J. M., S.J. *Logique et méthode chez Aristote*. Paris: Vrin, 1939.
- McGovern, Thomas, S.J. *The Division of Logic* (mimeographed). Quebec: Doyon, 1956.
- McWilliams (under chap. I).
- Maritain, Jacques. *The Degrees of Knowledge*. Newly translated under G. B. Phelan. New York: Scribner, 1959. Appendix VII, "'Speculative' and 'Practical,'" pp. 456-464.
- Maurer. *The Division and Methods of the Sciences* (under A, 3), Introduction.
- Nemetz, Anthony A. "Logic and the Division of the Sciences in Aristotle and St. Thomas Aquinas," *The Modern Schoolman*, XXXIII (1955-56), 91-109.
- Osterle, J. A. "Theoretical and Practical Knowledge," *The Thomist*, XXI (1958), 146-161.
- Pétrin, J. *Connaissance spéculative et connaissance pratique: Fondements de leur distinction*. Ottawa: Univ. of Ottawa, 1948.
- Régis, L. M., O.P. *L'opinion selon Aristote*. Ottawa: Inst. d'Etudes Médiévales, and Paris: Vrin, 1935.
- Ross, W. D. *Aristotle*. London: Methuen, 1923.
- Thiel, Matthias, O.S.B. "Theoretisches und praktisches Erkennen," *Divus Thomas* (Freiburg), XXVII (1949), 154-179.
- Thurot, Ch. *Etudes sur Aristote*. Paris: Durand, 1860.
- Waitz, Th. *Aristotelis Organon*. Leipzig: Hahn, 1844.

K. CHAPTER III

- Alamannus (under G), Q. I, "De doctrina logicae qualis sit et ad quae se extendat."
- Dufault. "The Concept of Being Which Is the Proper Object of Logic" (under G).
- Hart. "What Is Formal Logic?" (under chap. I).
- John of St. Thomas (under G), P. II, Q. 1, "De Logica, qualis sit et ad quae se extendat."
- McWilliams (under chap. I).
- Maurer, Armand A., C.S.B. "Form and Essence" (under chap. V).
- Parker and Veatch (under G), chap. 1, "What Is Logic?"
- Schmidt, R. W., S.J. "The Translation of Terms like *Ens Rationis*," *The Modern Schoolman*, XLI (1963-64), 73-75.
- Ueberweg (under G).
- Veatch, Henry B. "Concerning the Ontological Status of Logical Forms," *Review of Metaphysics*, II (1948-49) No. 6, pp. 40-64.
- *Intentional Logic* (under G), chap. 2, "On the Idea of an Intentional Logic."
- Wade (under G), Introduction.

L. CHAPTER IV

- Alamannus (under G), Q. I, art. 6, "Utrum ens rationis sit subjectum hujus doctrinae."
- Axters, E., O.P. "Pour l'état des manuscrits des Questions Disputées de Saint Thomas d'Aquin," *Divus Thomas* (Piacenza), XXXVIII (1935), 129-159.
- Balthasar, N. "Êtres de raison: négations et relations," *Critérior*, V (1929), 262-297.
- Bonaventurae (Sancti) Opera Omnia*. Ed. by the Fathers of St. Bonaventure College. 10 vols. Quaracchi: St. Bonaventure College Press, 1882-1902.

- Delisle, L. *Inventaire des manuscrits latins de la Sorbonne conservés à la Bibliothèque impériale sous les numéros 15176-16718 du fonds latin*. "Bibliothèque de l'École des Chartes," XXXI, 1870.
- John of St. Thomas (under G), P. II, Q. 2, "De ente rationis logico, quod est secunda intentio."
- Maritain, *Degrees* (under chap. II), chap. III, "Critical Realism," §§ 32-33, "Beings of Reason," pp. 132-135.
- Millan Puelles, Antonio. "Ser ideal y ente de razon," *Revista de Filosofia*, XII (1953), 191-205.
- Muckle, J. T., C.S.B. "Isaac Israeli's Definition of Truth," *Archives d'hist. doct. et lit. du moyen-âge*, VIII (1933), 5-8.
- Parker and Veatch (under G), chap. 1, 6.1, "Beings of Reason."
- Schmidt, R. W., S.J. "The Translation of Terms like *Ens Rationis*" (under chap. III).
- "An Emendation of a Reply of St. Thomas Aquinas: *De Potentia*, 9, 7 ad 6," *The Modern Schoolman*, XXVIII (1950-51), 58-62.
- de Tonquédec, Joseph, S.J. *La critique de la connaissance*. Paris: Beauchesne, 1929. Appendice VII, "L'être de raison," pp. 506-507.

M. CHAPTER V

- Alamannus (under G), Q. I, art. 6.
- Balthasar, N. "Cognoscens fit aliud inquantum aliud," *Rev. Néo-scholastique*, XXV (1923), 294-310.
- Bourke, Vernon J. "The Operations Involved in Intellectual Conception," *The Modern Schoolman*, XXI (1943-44), 83-89.
- De Petter, D. M., O.P. "Intentionaliteit en identiteit," *Tijdschrift voor Philosophie*, II (1940), 515-550.
- de Finance, Joseph, S.J. *Cogito cartésien et réflexion thomiste* (In "Archives de Philosophie," XVI, cah. II). Paris: Beauchesne, 1946.
- de Finance, Joseph, S.J. *Etre et agir dans la philosophie de Saint Thomas d'Aquin*. 2nd ed. Rome: Gregorian Univ., 1960 (1st ed.: Paris: Beauchesne, 1945).
- Gaetani, F. M., S.J. "De Verbo Mentis," *Acta Pontificiae Academiae Romanae Sancti Thomae et Religionis Catholicae*, II (1935), 70-79.
- Gardeil, A. "Le mens d'après S. Augustin et S. Thomas d'Aquin," *Rev. des sci. phil. et théol.*, XIII (1924), 145-161.
- Garrigou-Lagrange, R., O.P. "Cognoscens quodammodo fit vel est aliud a se," *Rev. Néo-scholastique*, XXV (1923), 420-430.
- Gilson, E. "Avicenne et le point de départ de Duns Scot," *Arch. d'hist. doct. et lit. du moyen-âge*, II (1927), 89-149.
- Gomez-Izquierdo, Alberto, O.P. "Valor cognoscitivo de la *intentio* en S. Tomás de Aquino," *La Ciencia Tomista*, XXIX (1923), 169-188.
- Hayen, André, S.J. *L'intentionnel selon Saint Thomas*. 2nd ed. (1st ed. *L'intentionnel dans la philosophie de Saint Thomas*, 1942). Paris: Desclée, 1953.
- John of St. Thomas (under G), P. II, Q. 2, art. 2, "Quid sit secunda intentio et relatio rationis logica et quotuplex."
- Lonergan, Bernard, S.J. "The Concept of *Verbum* in the Writings of St. Thomas Aquinas," *Theological Studies*, VII (1946), 349-392; VIII (1947), 35-79, 404-444; X (1949), 3-40, 359-393.
- Maréchal, Joseph, S.J. *Point de départ de la métaphysique*. 5 vols. Louvain: Museum Lessianum; Bruges: Beyaert, 1923-26 (vol. IV, 1947). Vol. V, *Le thomisme devant la philosophie critique*, sect. II. chaps. 2 & 3.

- Maritain, *Degrees* (under chap. II), Chap. III, §§ 24-27, "The Concept," pp. 119-128; Appendix I, "The Concept," pp. 387-417.
- Maurer, Armand A., C.S.B. "Form and Essence in the Philosophy of St. Thomas" *Mediaeval Studies*, XIII (1951), 165-176.
- Meisner, William W., S.J. "Some Aspects of the *Verbum* in the Texts of St. Thomas," *The Modern Schoolman*, XXXVI (1958-59), 1-30.
- de Muralt, A. "Adéquation et intentions secondes," *Studia Philosophica*, XX (1960), 88-114.
- O'Connell, M. J., S.J. "St. Thomas and the *Verbum*: An Interpretation," *The Modern Schoolman*, XXIV (1946-47), 224-234.
- Parker and Veatch (under G), chap. 1, 6.2, "Second Intentions."
- Pisters, Edouard, S.M. *La nature des formes intentionnelles d'après Saint Thomas d'Aquin*. Paris: Bossuet, 1933.
- Régis, L. M., O.P. *Epistemology*. Trans. by I. C. Byrne. (In "Christian Wisdom Series"). New York: Macmillan, 1959. Part II, "What Does It Mean to Know?"
- Roland-Gosselin. *Le "De Ente"* (under A, 6).
- Simon, Yves. *Introduction à l'ontologie du connaître*. Paris: Desclée, 1934.
- Simonin, H. D., O.P. "Connaissance et similitude," *Rev. des sci. phil. et théol.*, XXX (1931), 293-303.
- "La notion d'*Intentio* sans l'oeuvre de St. Thomas d'Aquin," *Rev. des sci. phil. et théol.*, XIX (1930), 445-463.
- Slattery (under chap. VII).
- de Tonquédec (under G), chap. I, "La connaissance en général," chap. IV, "La connaissance intellectuelle: Les idées."
- Veatch, *Intentional Logic* (under G), chap. 4, "The Concept," A.
- Wébert, J., O.P. "Reflexio" in *Mélanges Mandonnet*, 2 vols. (in "Bibliothèque Thomiste," XIII), Paris: Vrin, 1930, vol. I, 285-325.

N. CHAPTER VI

- Alamannus (under G), Q. XIII, "De relatione."
- Balthasar. "Êtres de raison: négations et relations" (under chap. IV).
- Blanche, F. A., O.P. "Les mots signifiant la relation dans la langue de S. Thomas d'Aquin," *Revue de Philosophie*, XXV (1925), 363-388.
- Cahill, Sister Mary Carmella. *The Absolute and the Relative in St. Thomas and Modern Philosophy*. Washington: Catholic U., 1939.
- Capreolus, Johannes. *Defensiones Theologiae Divi Thomae*. Ed. by C. Paban and R. Pègues, O.P. 7 vols. Tours, Cattier, 1900-08.
- Coffey, Brian. "The Notion of Order According to St. Thomas Aquinas," *The Modern Schoolman*, XXVII (1949-50), 1-18.
- Ginsburg, Norbert D. "Metaphysical Relations and Saint Thomas Aquinas," *The New Scholasticism*, XV (1941), 238-254.
- Hoenen, *Reality and Judgment* (under chap. VIII).
- Horvath, A., O.P. *Metaphysik der Relationen*. Graz: Mozers, 1914.
- John of St. Thomas (under G), P. II, Q. 17, "De praedicamento relationis."
- Kane, William J., C.S.Sp. *The Philosophy of Relation in the Metaphysics of St. Thomas*. Washington: Catholic U., 1958.
- Kossel, Clifford G., S.J. "The Problem of Relation in Some Non-Scholastic Philosophers," *The Modern Schoolman*, XXIII (1945-46), 61-68.
- "Principles of St. Thomas's Distinction between the *Esse* and the *Ratio* of Relation," *ibid.*, XXIV (1946-47), 17-36, 93-107.

- "St. Thomas's Theory of the Causes of Relation," *ibid.*, XXV (1947-48), 151-172.
- Krempel, A. "Anerkannte Thomas von Aquin transzendente Beziehungen," *Philosophisches Jahrbuch*, LXVII (1959), 171-178.
- *La doctrine de la relation chez saint Thomas*. Paris: Vrin, 1952.
- "S. Thomas et la notion de la relation transcendente," *Rev. des sci. phil. et théol.*, XLIII (1959), 87-94. (Reply to Philippe, below).
- Krings, H. "Sinn und Ordnung," *Philosophisches Jahrbuch*, LXIX (1961), 19-33.
- Maltha, A. M., O.P. "De divisione relationum in ordine ad quaestionem de relationibus divinis," *Angelicum*, XIV (1937), 61-86.
- Manser, G. M., O.P. "Begriff und Bedeutung der transzendentalen Beziehungen," *Divus Thomas* (Freiburg), XIX (1941), 351-360.
- Marling, Joseph M. *The Order of Nature*. Washington: Catholic U., 1934. Chap. 2, "The Metaphysics of Order," pp. 28-43.
- Marmy, E., O.P. "Examen d'une division traditionnelle," *Divus Thomas* (Piacenza), XXI (1943), 307-322.
- Nink, Caspar, S.J. "Zur Relationslehre des heiligen Thomas von Aquin," *Scholastik*, XXX (1955), 94-98.
- Pace, Edward A. "Order in the Philosophy of St. Thomas," *The New Scholasticism*, II (1928), 51-72.
- Philippe, M. D., O.P. "La notion de relation transcendente, est-elle thomiste?" *Rev. des sci. phil. et théol.*, XLII (1958), 265-275.
- Silva Tarouca, A. "L'idée d'ordre dans la philosophie de S. Thomas," *Rev. Néoscol.*, XL (1939), 341-384.

O. CHAPTER VII

- Adamczyk, Stanislaw, S.J. *De obiecto formali intellectus nostri secundum doctrinam S. Thomae Aquinatis*. (In "Analecta Gregoriana"). 2nd ed. Rome: Gregorian U., 1955.
- Adler, Mortimer J. *Problems for Thomists: The Problem of Species*. New York: Sheed and Ward, 1940.
- Adler, Mortimer J. "The Solution of the Problem of Species," *The Thomist*, III (1941), 279-379.
- Alamannus (under G), Q. II, "De universalibus."
- Allers, Rudolph. "Intellectual Cognition," in *Essays in Thomism*, ed. by R. W. Brennan, O.P. New York: Sheed & Ward, 1942. Pp. 39-62.
- Blanche, F. A., O.P. "La théorie de l'abstraction chez S. Thomas d'Aquin," in *Mélanges Thomistes* ("Bibliothèque Thomiste," III). Kain, Belgium, 1923 (reprinted, Paris: Vrin, 1935). Pp. 237-251.
- Bomba, R. "Die Identität im Erkenntnisakt bei Thomas von Aquin," *Philosophisches Jahrbuch*, LXIX (1961), 75-100.
- Connolly, F. G. "Abstraction and Moderate Realism," *The New Scholasticism*, XXVII (1953), 72-90.
- DeAndrea, M., O.P. "Abstrazione et conoscenza razionale della realtà concreta nella noetica aristotelico-tomistica," *Sapienza*, IX (1956), 19-32, 178-190.
- Dondeyne, A. "L'abstraction," *Rev. Néoscol.*, XLI (1938), 5-20, 339-373.
- Dunne, P., O.P. "The Production of the Intelligible Species," *The New Scholasticism*, XXVII (1953, 176-197).
- Ferrari, Leo. "Abstractio totius and abstractio totalis," *The Thomist*, XXIV (1961), 72-89.
- de Finance, *Cogito* (under chap. V), esp. chap. I, "L'intelligence thomiste et son

- rapport à l'être," and chap. IV, "Le statut ontologique de la pensée. La connaissance de l'âme."
- Flynn, Thomas V. "The Cogitative Power," *The Thomist*, XVI (1953), 542-563.
- Forest. *Structure métaphysique*. (under chap V), chap. III, "Les rapports de l'abstract et du concret."
- Gehring, Ralph B. "The Knowledge of Material Essences according to St. Thomas Aquinas," *The Modern Schoolman*, XXXIII (1956), 153-181.
- Guil Blanes, Francisco. "Abstracción del todo, de la forma y por juicio negativo segun el Comentario tomista al *De Trinitate* de Boecio," *Estudios Filosóficos* (Santander), III (1954), 389-404.
- Klubertanz, George P., S.J. *The Discursive Power*. St. Louis: The Modern Schoolman, 1952.
- Lonergan. "The Concept of *Verbum*" (under chap. V), esp. IV, "The *Verbum* and Abstraction," X, 3-40, 359-393.
- McArthur, Ronald P. "Universal in *praedicando*, Universal in *causando*," *Laval théol. et phil.*, XVIII (1962), 59-95.
- McGovern, T., S.J. "The Logic of the First Operation," *ibid.*, XII (1956), 52-74.
- McMullin, E., "The Problem of Universals," *Philosophical Studies*, VIII (1958), 122-139.
- Maquart, F. X. "L'universel," *Rev. de Philosophie*, XXX (1930), 91-112.
- Marc, André, S.J. *L'idée de l'être chez saint Thomas et dans la scolastique postérieure*. (In "Archives de Philosophie," X). Paris: Beauchesne, 1933.
- Parker and Veatch (under G), chaps. 3 & 4.
- Péghaire, Julian, C.S.Sp. "A Forgotten Sense, the Cogitative," *The Modern Schoolman*, XX (1943), 123-140, 210-229.
- Pegis, Anton C. "*In Umbra Intelligentiae*," *The New Scholasticism*, XIV (1940), 146-180.
- Pisters (under chap. V).
- Poelman, N. "Het *intellectus agens* in de werken van St. Thomas," *Tijdschrift voor Philosophie*, XXIV (1962), 123-178.
- Rebollo Pena, A. *Abstracto y concreto en la Filosofía de S. Thomás*. Burgos: Seminario Metropolitano, 1955.
- Slattery, Michael P. "Genus and Difference," *The Thomist*, XXI (1958), 343-364.
- de Tonquédec (under G), chap. IV, "La connaissance intellectuelle: Les idées."
- Van Riet, G. "La théorie thomiste de l'abstraction," *Rev. Philosophique de Louvain*, L (1952), 353-393.
- Van Roo, William A., S.J. "A Study of Genus in the Philosophy of St. Thomas Aquinas," *The Modern Schoolman*, XX (1943), 89-104, 165-181, 230-244.
- Veatch. *Intentional Logic* (under G), chap. IV, A.

P. CHAPTER VIII

- Alamannus (under G), Q. XIX, "De enuntiatione."
Bonaventurae (Sancti) Opera Omnia (under chap. IV).
- Boyer, Charles, S.J. "Le sens d'un texte de Saint Thomas: *De Verit.*, I, a. 9," *Gregorianum*, V (1924), 424-444. In English in Hoenen, *Reality and Judgment* (below), Appendix, pp. 295-309.
- Cunningham, Francis A., S.J. "Judgment in St. Thomas," *The Modern Schoolman* XXXI (1953-53), 185-212.
- de Finance, *Cogito* (under chap. V), chap. V, sect. II, "La certitude thomiste."
- Geatch, P. T. "Subject and Predicate," *Mind.*, LIX (1950), 461-482.
- Gilson, E. *Being and Some Philosophers*. 2nd ed. Toronto: Pont. Inst. of Mediaeval Studies, 1952. Chap. 6, "Knowledge and Existence."

- *Réalisme thomiste et critique de la connaissance*. Paris: Vrin, 1939. Chap. 7, "Le sujet connaissant"; chap. 8, "L'appréhension de l'existence."
- Hoenen, Peter, S.J. *La théorie du jugement d'après S. Thomas d'Aquin*. (In "Analecta Gregoriana," XXXIX). 2nd ed. Rome: Gregorian U., 1953.
- *Reality and Judgment according to St. Thomas* English translation of the above by Henry F. Tiblier, S.J. (In "Library of Living Catholic Thought"). Chicago: Regnery, 1952.
- Isaac, J., O.P. "Sur la connaissance de la vérité," *Rev. des sci. phil. et théol.*, XXXII (1948), 337-350.
- Johan, Roger. "Nature du jugement," *Rev. de Philosophie*, XXXI (1924), 465-489.
- John of St. Thomas (under G), P. II, Q 3, "De universali secundum se"; Q. 4, "De causa universalis."
- Loneragan (under chap. V), sect. II, VIII (1947), 35-79.
- Lotz, Joannes B., S.J. *Metaphysica Operationis Humanae*. (In "Analecta Gregoriana," XCIV). Rome: Gregorian U., 1958. Tractatus I.
- McInerny, Ralph M. "Being and Predication." *Laval théol. et phil.*, XV (1959), pp. 236-274.
- Mansion, S. *Le jugement d'existence chez Aristote*. Paris: Desclée, 1946.
- Marc, André, S.J. *L'idée de l'être* (under chap. VII), pp. 80-111.
- Maréchal, Joseph, S.J. "De la forme du jugement d'après saint Thomas," *Rivista di Filosofia Neo-Scholastica*, XC (1923), 156-184.
- *Point de départ* (under chap. V), vol. V, Sect. II.
- Morard, M. S. "Le double usage du verbe 'être'," *Freiburger Zeitschrift für Philosophie und Theologie*, IV (1957), 420-432.
- Morrison, John J. "The Existential Import of a Proposition in Aristotelian Logic," *Philosophy and Phenomenological Research*, XV (1955), 386-393.
- Muckle, J. T., C.S.B. "Isaac Israeli's Definition of Truth" (under chap. IV).
- Muller-Thym, Bernard J. "The *To Be* Which Signifies the Truth of Propositions," *Proceedings of the Am. Cath. Phil. Assn.*, XVI (1940), 230-254.
- de Muralt (under chap. V).
- Parker and Veatch (under G), Part II, "The Proposition," esp. chaps. 7-11.
- Pétrin, J. "Les modes de dire *per se* et la démonstration," *Rev. de l'Université d'Ottawa*, XXI (1951), 173-192.
- Phelan, Gerald B. "*Verum sequitur esse rerum*," *Mediaeval Studies*, I (1939), 11-22
- Rabeau, G. *Le jugement d'existence*. Paris: Vrin, 1938.
- Régis, L. M., O.P. *Epistemology* (under chap. V), Part III, "What Does It Mean to Know Truth?"
- Renard, Henri, S.J. "The Metaphysics of the Existential Judgment," *The New Scholasticism*, XXIII (1949), 387-394.
- Roland-Gosselin, M. D., O.P. *Essai d'une étude critique de la connaissance*. (In "Bibliothèque Thomiste," XVII). Paris: Vrin, 1932.
- Schmidt, R. W., S.J. "The Evidence Grounding Judgments of Existence," in *An Etienne Gilson Tribute*, ed. by Charles J. O'Neil. Milwaukee: Marquette Univ. Press, 1959. Pp. 228-244.
- "Judgment and Predication in a Realistic Philosophy," *The New Scholasticism*, XXIX (1955), 318-326.
- Smith, Gerard, S.J. "Note on Predication," *The New Scholasticism*, XV (1941), 222-237.
- Tyrrell, Francis M. "Concerning the Nature and the Function of the Act of Judgment," *The New Scholasticism*, XXVI (1952), 393-423.
- Van Haaren, S. W. "Het oordeel als waarheidsbezit," *Tijdschrift voor Philosophie* XIX (1957), 444-476.

- Van Riet, G. "La doctrine thomiste du jugement," *Rev. Philosophique de Louvain*, XLVI (1948), 97-108.
- Veatch. *Intentional Logic* (under G), chap. V, "The Proposition.
- Walton, William M. "The Second Mode of Necessary or *Per se* Propositions according to St. Thomas Aquinas," *The Modern Schoolman*, XXIX (1951-52), 293-306.
- Wilhelmsen, Fredrick D. *Man's Knowledge of Reality*. New York: Prentice-Hall, 1956.
- Wilpert, P. "Das Urteil als Träger der Wahrheit nach Thomas von Aquin," *Philosophisches Jahrbuch*, XLVI (1933) 56-75.
- Xiberta, B. M., O.C. "Momentum doctrinae S. Thomae circa structuram iudicii," *Acta Pontif. Academiae Romanae S. Thomae Aquinatis et Religionis Catholicae*, I (1935), 154-162.

Q. CHAPTER IX

- Alamannus (under G), Q. XX, "De syllogismo"; Q. XXI, "De syllogismo demonstrativo"; QQ. XXII-XXVII, on demonstration.
- Baumgaertner, William, "The Nature of Induction," *Proceedings of the Am. Cath. Phil. Assn.*, XXV (1951), 130-136.
- Bernard, Rogat., O.P. "Proprium rationis est discurrere," *Xenia Thomistica*, 2 vols., ed. by H. S. Szabó, O.P. Rome: Vatican Polyglot Press, 1925. I, 147-157.
- Conway, Pierre, O.P. "Induction in Aristotle and St. Thomas," *The Thomist*, XXII (1959), 336-365.
- Demers, G. Ed. "Les divers sens du mot *ratio* au moyen-âge," *Etudes d'histoire littéraire et doctrinale du XIIIe siècle*." Ottawa: Inst. d'Et. Méd., and Paris: Vrin, 1932. I, 105-139.
- Dolan, S. Edmund, F.S.C. "Resolution and Composition in Speculative and Practical Discourse," *Laval théol. et phil.*, VI (1950), 9-62.
- Guérard des Lauriers, M.L., O.P. "L'induction," *Les sciences philosophiques et théologiques*, 1941-42, pp. 5-27.
- Hawkins, D. J. B., *Causality and Implication*. London: Sheed & Ward, 1937.
- Hoenen, P., S.J. "De origine primorum principiorum scientiae," *Gregorianum*, XIV (1933), 153-184.
- Isaac, J., O.P. "La notion de la dialectique" (under chap. II).
— "Sur la connaissance de la vérité" (under chap. VIII).
- John of St. Thomas (under G), P. I, Lib. III; Quaestiones Disputandae, Q. 8; P. II, QQ. 24 & 25.
- Lachance. "St. Thomas dans l'histoire de la logique" (under F).
- Le Blond (under chap. II).
- Llambias, H. "Ser y devenir en logica," *Sapientia*, VII (1952), 90-102.
- Maritain, Jacques. "La vraie notion du syllogisme," *Rev. de Philosophie*, XXX (19230, 174-181).
- Parker and Veatch (under G), Part III, "The Argument."
- Péghaire, Julien, C.S.Sp. *Intellectus et Ratio selon saint Thomas d'Aquin*. Ottawa: Inst. d'Et. Méd., and Paris: Vrin, 1936. Deuxième partie, pp. 73-169.
- Pegis, Anton C. "*In Umbra Intelligentiae*," *The New Scholasticism*, XIV (1940), 146-180, esp. Part. II.
- Pétrin (under chap. VIII).
- Phelan (under chap. VIII).
- Régis, L. M., O.P. "Analyse et synthèse dans l'oeuvre de saint Thomas," in

- Studia Mediaevalia in honorem A.R.P. Raymundi J. Martin, O.P.* Bruges: De Tempel, 1948. Pp. 303-330.
- *Epistemology* (under chap. V), Part IV, esp. chap. XII, "Infallible Knowledge of Mediate Truth."
- *L'opinion* (under chap. II).
- Richard, T., O.P. *Philosophie du raisonnement dans la science d'après saint Thomas*. Paris: Bonne Presse, 1919.
- Schorsch, Alexander. "Scientific Induction," *Proceedings of the Am. Cath. Phil. Assn.*, XXV (1951), 136-141.
- Smith, Gerard, S. J. "Before You Start Talking about God," *The Modern Schoolman*, XXIII (1945-46), 24-43.
- de Tonquédec. *Critique de la connaissance* (under G), chaps. VIII-XI, "Les inférences."
- Trépanier, E. "La connaissance des premiers principes: une interprétation," *Laval théol. et phil.*, IV (1948), 289-310.
- Veatch. *Intentional Logic* (under G), chap. 6, "Argument," A, I-III.
- Yon, A. "Ratio et les mots de la famille de *veor*," in *Contributions à l'étude historique du vocabulaire latin*. Paris: Champion, 1933.

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