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[A. J. OSGNIACH]

ARISTOTELIANISM

The effect of the philosophical and scientific teachings of ARISTOTLE upon subsequent intellectual history through the transmission of his writings, terminology, ideas and influence. To trace the history of Aristotelianism is to unravel one of the major strands in the evolution of Western and Near Eastern civilization. In the ancient and medieval periods especially, its history has been intimately bound up with that of PLATONISM, NEOPLATONISM and STOICISM and with the theological development of the three monotheistic religions Christianity, Islam and Judaism.

Greek Aristotelianism

Beginning with the death of Aristotle (322 B.C.), this section discusses the Aristotelianism of the early Peripatetic, the Hellenistic and the Byzantine periods.

PERIPATETIC PERIOD

After Aristotle's death, his disciple Theophrastus of Eresos (d. *c.* 288 B.C.) became scholarch or head of his school, called the Peripatos or the Lyceum. The older representatives of this school were of varying fidelity to the balanced synthesis of the empirical and the ideal that had been achieved by their founder; most tended toward more empirical researches in the natural sciences, popular considerations in psychology, ethics and politics, philosophical doxography, studies in the history of literature and institutions stemming from Aristotle's *Rhetoric, Poetics* and *Politics* and constitutional researches. Theophrastus was exceptional in that, besides researches in biology and characterology (the latter of relevance to rhetoric), he wrote a small treatise of *Metaphysica* that seems to be an introduction to a more complete work (ed. W. D. Ross and F. H. Fobes, Oxford 1929). His most significant contribution to theoretical thought, his logic, has been reconstructed from fragments by I. M. Bocheński. Developing modal argument and propositional logic, it shows an effort at a higher synthesis of Megaric and peripatetic logic. His Opinions of the Philosophers of Nature was the source for much of the doxography concerning the first centuries of Greek thought. For the most part the writings of the early Peripatos survive only in fragments.

Dicaearchus of Sicilian Messene (b. before 341) and Aristoxenus of Tarentum, immediate followers of Aristotle, were associated in their theory of the soul as a mortal harmony of the elements but as sharing in the divine. Dicaearchus is typical of this early school. He held the eternity of the human species (a dubious point in Aristotle; confer, *Pol.* 1269a 5) and a cyclical theory of history that he attempted to reconcile with a doctrine of cultural development. Besides a treatise On the Soul, he wrote on prophecy, on the cultural history of Greece, on geography, and on Homeric literary problems. Aristoxenus, who wrote a life of Plato, made lasting contributions to the theory of music.

Eudemus of Rhodes seems to have edited Aristotle's *Physics.* He devoted attention to the history of mathematics and astronomy and worked with Theophrastus in logic. Substantial parts of his history of geometry were transmitted by Proclus in his commentary on Euclid. Demetrius of Phaleron was engaged mainly in the study of politics. He brought the Aristotelian spirit of empirical research to Alexandria. Strato of Lampsacus (d. 269), who followed Theophrastus as scholarch, was interested chiefly in the philosophy of nature; his views are quite materialist. The *De coloribus* and *De lineis insecabilibus,* included in the *Corpus Aristotelicum,* can be ascribed to him or to Theophrastus; the *De audibilibus* is Strato's; and the *Mechanica* comes from him or his school. In the *Mechanica* and *On Motion* he discussed the acceleration of falling bodies, the law of the lever, inertia and the parallelogram of velocities and controverted Aristotle's theory of projectile motion. His mathematical formulations are accurate but his ultimate explanations are more qualitative, that is, physical. One of his students was the astronomer Aristarchus of Samos (fl. 280), who anticipated the Copernican system. Strato's brother Lyco (d. 225) succeeded him in the Lyceum and made contributions to pedagogy and *paideia* (general education; confer, *Part.animal.* 639a 1–15). Other early members of the school are of importance mainly for their doxographical or biographical contributions, largely fragmentary, for example, Hieronymus of Rhodes, Aristo of Ceos, and Hermippus.

HELLENISTIC PERIOD

Philosophical polemics with the Skeptics and with other doctrinal schools (*c.* 100 B.C.–A.D. 100) resulted in the widespread use of Aristotelian dialectic and logic in the clarification of their positions and their absorption of Aristotelian natural philosophy and psychology, for example, Carneades' mastery of the *Topics* and the Stoic discussions on the internal senses. By the same process, the materialistic tendency of the Peripatetics was reinforced by Middle Stoicism, though in a strangely theological way. The Middle Stoic school centering on Rhodes—Panaetius, Posidonius and especially the Stoic-Platonist

Antiochus of Ascalon—seems to have reinforced the immanentist factor present in Aristotle's dialogue *On Philosophy,* where stars and souls both are said to be of ether and in parts of the *De caelo* (for example, 279a 30–b 3), where the God seems to be the immanent form of the outermost heaven. The apocryphal *De mundo*, included in the *Corpus Aristotelicum*, bespeaks this tendency. In reaction to the polemics of the other schools, this group and Antiochus in particular, began the harmonization of Aristotle with Stoicism and especially with Platonism. (Only the Epicurean tradition remained obdurately anti-Aristotelian.) Through Cicero it is known that Antiochus considered the difference between Plato and Aristotle to be one merely of vocabulary.

The peripatetic historico-philological interest continued with Diodorus of Tyre and eventually effected its own cure with the edition of Aristotle's works by Andronicus of Rhodes (fl. 50–40 B.C.) and his collaborator Boethus of Sidon. This invited the first extensive philosophical commentary, the paraphrases On The Philosophy of Aristotle in five books by Nicolaus of Damascus, fragments of which survived among the Arabians along with his *De Plantis,* falsely ascribed to Aristotle and included in the *Corpus Aristotelicum.* Though Boethus insisted on the Aristotelian methodic dictum that one must proceed from the more familiar toward the more intelligible in itself, which would indicate starting with natural philosophy, Andronicus seems to have organized the philosophical works of his edition in a descending order: God, the world, the celestial phenomena; the soul, nature and the natural phenomena (I. Düring). He probably coined the term metaphysics, which first appears in Nicolaus and certainly assigned the term Organon to Aristotle's collected logical treatises. He prefaced the whole with a critical essay On Aristotle's Writings, parts of which were cited by later commentators, particularly Simplicius.

2d to 4th Centuries. There is a gap until the 2d century A.D. and Aspasius, who commented on the *Ethics* and is said to have taught Galen's teacher. Both PTOLEMY (fl. 150) and Galen (129–*c.* 199) must be loosely accounted, by their education and participation in the peripatetic logical and scientific interest, as Aristotelian. Ptolemy attempted a brilliant mediation between Eudoxus and Aristotle, but the element of the Academy dominates that of the Lyceum in his work. His astronomy thus stood somewhat in opposition to the physicotheological astronomy of Aristotle and was a remote prototype of mathematical physics. Galen wrote an important Introduction to Logic that combined Aristotelian and Stoic elements.

Herminus (*c.* 130–190), a highly independent commentator on the *Prior Analytics,* taught Alexander of Aphrodisias (*c.* 160–220), the first commentator whose stature is evident, since many of his works survive. He directed the Peripatos at Athens and was called by later generations the Exegete, or Commentator and the Second Aristotle. He had a sharp awareness of the distinction between the form and the matter of the logical art and appears to have been the first to comment extensively on the *Posterior Analytics,* an indication of his intention to proceed throughout his expositions in accordance with the scientific canons of Aristotle. He commented on nearly all of Aristotle's major works and in addition wrote important Questions on problems arising from his philosophy. (As a literary form this is a remote ancestor of the scholastic *quaestiones.*) There are Platonic elements in his interpretation, but he does not intentionally attempt harmonization of Aristotle with Plato. On the contrary, he is materialistic in his psychology, reducing the individual human intellect to little more than an especially gifted animal imagination (νους ὑλικός, the scholastic *intellectus materialis,* or *intellectus passivus*) and exalting the separate agent intellect by identifying it as the First Cause. Aristotle had expressed his noetic theory, both human and divine, somewhat indeterminately (*Anim.* 424b 20–435b 26; *Meta.* 1074b 15–1075a 11), but its problems as focused by Alexander's commentary were to remain central to Aristotelian interpretation down through the Renaissance. Alexander's work is essential for understanding the original texts and also contains precious fragments taken from Aristotle's youthful exoteric writings. His treatise On Fate was used in Muhammadan debates on determinism and free will.

In this late Hellenistic period the attempt to systematize the Aristotelian corpus was paralleled by the efforts of Plotinus and Porphyry to give a unified exegesis of the Platonic writings. PLOTINUS opposed as two extremes the current GNOSTICISM and the naturalism of the Aristotelian materialists and advanced his combination of rationalism and his own private mysticism. He severely attacked the Aristotelian categories, yet he incorporated Aristotle's act and potency and the separate intellect. He freed act and potency from confinement within the physical principles of matter and form and developed the doctrine of the limitation of act by potency, harmonizing it with Platonic participation theory; and he attempted a unified metaphysics of knowledge by locating the Platonic Ideas in the Aristotelian separate Intellect. He was able to take these steps by drawing upon that element in Aristotle himself that had always remained Platonist, the ultimate primacy of FINAL CAUSALITY.

PORPHYRY moved closer to Aristotle with a commentary on the *Ethics* and his important harmonization, On the Unity of the Doctrine (*αἵρεσιν*) of Plato and Aristotle, works known through Arabic channels but lost in

the original. He developed the theme that their apparent disharmony stems from the fact that Aristotle began with sense knowledge and physics, whereas Plato started higher, with the mind of man and went further in divine matters. In weakened form this harmonization became a commonplace of the tradition of *philosophia perennis,* for example, the prologues of Aquinas and Albert the Great to their commentaries *In de divinis nominibus* (and recently, J. Wild's defenses of classical philosophy against K. Popper). Porphyry regarded the Aristotelian categories more favorably than had Plotinus. His chief legacy to the Aristotelian tradition was his treatise On the Five Predicables, or the *Isagoge.* It was later used as an integral part of the Organon, though some avowed Aristotelian logical purists, notably William of Ockham, have claimed that it obscures the realistic beginnings in the matter of Aristotelian logic by substituting as initial the Neoplatonic dialectical form—that is, the context of logical relations, the PREDICABLES, which are second intentions—for the original starting point in first intentions, the CATEGORIES OF BEING.

In the 4th century, IAMBLICHUS preserved most of Aristotle's early introduction to philosophy, the *Protrepticus,* by quoting almost all of it, in his own work of the same name. Themistius (fl. *c.* 387), who wrote incisive paraphrases of most of Aristotle's chief theoretical works, enkindled Aristotelian studies in Constantinople. His commentary on the *De anima* was of great value to Thomas Aquinas in arguing against its Averroist interpretation.

5th and 6th Centuries. Members of the 5th-century Neoplatonic school at Athens stemming from Porphyry and Iamblichus were PROCLUS and Syrianus (fl. *c.* 430); Syrianus is often cited by Boethius. Among them Platonic convictions replaced Aristotle's critical suspension of judgment on certain transcendental matters, for example, life after death, prophecy and divine inspiration. In contrast the more economical Alexandrian school of the late 5th and 6th centuries advocated rationalism in natural theology and regarded the various religious revelations as symbolic manifestations of the one transcendent truth evidentially accessible only through the rigors of philosophical discipline. This notion of levels of communication was articulated by considerable reflection upon the so-called Aristotelian modes of discourse: demonstrative, dialectical, rhetorical and poetic. *The Rhetoric* and *Poetics* were relocated as extensions of the *Topics* and *Sophistical Refutations* and therefore as parts of the Organon. Simplicius explained them Neoplatonically as degrees of participation in the maximal type, absolute demonstration. This Alexandrian idea of an expanded Organon, passing westward via the Arabs, became another commonplace of perennial philosophy (see Thomas Aquinas, *In 1 perih.* 1, *In 1 anal. post.* 1). This development of a theory of symbolic forms was an important work of the Alexandrian philosophers. Alfarabi continued this line of inquiry among the Arabs.

The moving spirit of this late Alexandrian school was the Aristotelian commentator Ammonius Hermeae (fl. 485), who is said to have studied under Proclus in the Athenian Academy. Upon returning to Alexandria, he taught John Philoponus, Simplicius (fl. *c.* 533), and Olympiodorus (fl. *c.* 535). Simplicius, in his prologues and his commentaries on the *Physics* and the *De caelo,* shows himself the master doxographer of this school. He followed courses in the Academy of Athens and taught there until it was closed in 529 by decree of the Emperor Justinian. Then he and the scholarch Damascius sought refuge at the court of the Persian Emperor Chosroes, bringing with them the teachings of the Alexandrian school.

Some of Ammonius's disciples had become Christian, notably JOHN PHILOPONUS, who holds a central place in the long history of the interpenetration of Christianity and Aristotelianism. Upon his conversion, Philoponus took independent positions against the Aristotelian doctrine of the eternity of the world and Alexander's doctrine of a separate agent intellect and he taught the creation of matter and the immortality of the personal soul. His commentary on the *Physics* advanced, in dynamics, the theory of IMPETUS, which was destined to play an important role among the Latins of the 14th century. Remotely preparing the way for both the Muslim dialectical theologians and the Latin scholastics, John entered the Christological dispute. Though his solution tended to MONOPHYSITISM, theological controversy was henceforth inseparable from the technical equipment of Aristotelian logic and metaphysics.

BYZANTINE PERIOD

The Latin Church Fathers generally distrusted Aristotle, of whom they knew little more than the *Categories.* Typically, Jerome said that it is characteristic of heretics to quote Aristotle. Laymen such as MARIUS VICTORINUS and Boethius were exceptions. But in the East the theologians were forced by the learned climate of controversy to use Aristotle more and more. This tendency is already present in NEMESIUS (fl. 400), Bishop of Emesa, whose treatment of the soul and human acts shows study of the *De anima* and *Ethics.* But it was the full theology of St. JOHN DAMASCENE that became a channel for the importation of Aristotelian ideas and terms into Latin theology, counterbalancing the earlier importation of theological Neoplatonism via PSEUDO-DIONYSIUS. In the Byzantine Church the tradition of a sort of Aristotelian scholasticism, side by side with a stronger Platonism continued,

following the authority of the Damascene and the educational reform of the patriarchal academy by PHOTIUS, through Michael Psellus and his pupil Michael of Ephesus (fl. 1090), down to the controversies at the Council of Florence and during the Renaissance. During these centuries the defensive military position of the Byzantines against the Muslim advance did not dispose them to be receptive to developments in Islamic Aristotelianism; the openness of the West explains in large part the superior growth of Latin scholasticism. (*See* GREEK PHILOSOPHY; PLATONISM; NEOPLATONISM.)

Semitic Aristotelianism

This section discusses the influence of the ideas of Aristotle on Syrian, Arabian and Hebrew philosophies.

SYRIAC TRANSLATION

The relatively small but formative Roman absorption of Greek philosophical literature and thought, particularly Stoic, in the late Republic and the Augustan empire was far exceeded by the Syriac, which took place from the 5th to the 8th century. It divided itself along religious and linguistic lines into the East Syriac and Armenian absorption by the Nestorian academic centers of Mesopotamia and northward, chief among them Edessa and Jundi-Shapur (Gandisapora); and the West Syriac and Coptic absorption by the Jacobite and smaller Orthodox or Catholic centers in the great cities of the Levant and Egypt. When Simplicius and Damascius were at the court of the Emperor Chosroes, *c.* 529, the Persians and the Syrians within their empire had shown considerable interest in Greek philosophy and their school at Jundi-Shapur was already in existence. The Nestorian Probus (fl. 480) and the Monophysite physician Sergei of Reshaina (fl. 530) had done early translations and commentaries on Aristotle in Syriac. Sergei, along with many other early Syrian scholars, had studied in Alexandria. Paul of Persia (fl. 570) dedicated to the same Emperor Chosroes, a still extant treatise on the Organon. Thus the entire Syriac tradition bears the impress of Ammonius and his Alexandrian disciples at the end of the pagan period.

But with the fall of this whole area to Islam, the Arab reception of Greek philosophy took place on a scale dwarfing both of the earlier cultural absorptions and remains unsurpassed, at least in range and quantity, even by the Latin West of the 12th and 13th centuries. The beginnings of the reception of Greek philosophy can be traced back as early as 150 years after the HIJRA (622); it took place full scale between 800 and 1000. It bears three features: (1) a motivation that is strongly theoretical and scientific, but even more strongly political and religious; (2) a powerful Neoplatonic impetus toward the One—toward seeing Aristotle as the thoroughly methodic teacher of a nearly complete system, which yet is open at the top and in doctrinal continuity with the transcendental philosophy of Plato and Plotinus; (3) the order in which the books of Aristotle came into Arabic: (*a*) what the Latins were to call the *logica vetus,* namely, the *Categories, On Interpretation,* and schematic digests of the beginning of the *Prior Analytics,* appeared first; (*b*) next was the *logica nova,* the full *Prior Analytics* and the books on the degrees of proof as grouped together by the Alexandrians, namely, *Posterior Analytics* through *Poetics;* (*c*) the translation of the rest of Aristotle did not begin until the founding of the Beit al-Hikma, or House of Wisdom, in 830 under the Caliph of Baghdad, al-Mamun. Here certain scientific and theoretical works seem to precede the practical.

ARABIAN DEVELOPMENT

The medical, astrological and transcendental interests of the first major Muslim philosopher, al-KINDI, ibn-Ishāq, court philosopher of the Baghdad caliphate, are shown by the works made available to him in Arabic: the main zoological writings, *On the Heavens, Meteorology, Metaphysics,* and the so-called *Theology of Aristotle;* the last two works expressly translated for his use. The last is one of two mistaken ascriptions that bedeviled the medieval philosophical interpretation of Aristotle in both Islam and Christendom. The Arabs generally so take for granted the Neoplatonic harmonization of the Stagirite with Plato that they credit him with Neoplatonic works. The *Theology of Aristotle* is a reedited selection from Proclus's *Elements of Theology.* (The other false ascription, a paraphrase of Plotinus's *Enneads,* is the *LIBER DE CAUSIS,* whose authority was not questioned until St. Thomas Aquinas.)

The work of translating became highly organized under the Nestorian Hunayn ibn-Ishāq (the scholastic Johannitius) and his son Ishaq ibn-Hunayn. They showed a scholarly prudence by their care to establish critical Greek and Syriac texts before translating into Arabic.

ALFARABI began his studies with Nestorians in Khorasan, then continued in Baghdad with teachers in filiation from the Alexandrian academy. He taught in Baghdad and Aleppo. His propaedeutic works, the Introduction to the Philosophy of Plato and Aristotle and the Enumeration of the Sciences, were the highroads to philosophy for generations in Islam. He was a master of the liberal arts in the broad sense, ranging from Arabic grammar to the mode of communication of divine law, all seen in the light of the Aristotelian modes of discourse. He was accomplished even in the quadrivial arts, having written a major commentary on the *Almagest* of Ptolemy. He was more Aristotelian than Platonic, except in the domain of political philosophy. His scholastic associates, Abu Bishr

Matta ibn-Yunus (*c.* 870–940) and the Jacobite Yahya ibn-'Adi, also are interesting. The former did treatises on the *Prior Analytics* and on conditional syllogisms. The latter proposed a rationalistic Aristotelian ''trinity'' as the philosophical way of stating what Christians express symbolically as the Triune God.

In regard to his sources in practical philosophy, Alfarabi is typical of the Islamic philosophers. Though there are occasional references and even quotations from the *Politics,* no Arab ever wrote a commentary on it. In the late 12th century, AVERROËS sought in vain for a copy. All this points to the likelihood that the Arabs had only a digest of its chief sentences. In this respect Islam was in just the reverse position to that of Latin Christendom, which possessed the *Politics* but lacked the *Republic* and the *Laws* until the Renaissance. The Arab world lacked also the *Eudemian Ethics,* the *Magna Moralia* and the dialogues, except for fragments cited mainly by Alexander, Iamblichus and Simplicius.

The two greatest Islamic philosophers, who became most thoroughly known to the Latin West, were the Persian Avicenna and the Spanish Moor Averroës. The logic of AVICENNA is like that of Al-kindi, that is, it shows the Stoic preference for the hypothetical syllogism. Avicenna attempted a systematic harmonization of Aristotle, Neoplatonism and Muslim belief. He made substantial contributions to psychology and wrote a *Metaphysics* that is both Neoplatonic and Aristotelian in inspiration but is not a commentary on Aristotle's *Metaphysics.* He accepted the Aristotelian definition of the soul as first act and form of the body but maintained also that the individual human soul is an incorporeal substance and hence, as the Qur'ān teaches, immortal. He anticipated Descartes with his mental experiment of the ''flying man,'' that is, thinking away one's body until one is simply thinking that one is thinking. He elaborated a theory of the internal senses that was in large part taken over by St. Albert the Great and Aquinas and that culminated in his theory of imagination as elevated by prophetic inspiration.

In metaphysics Avicenna is more the Platonist and Averroës the Aristotelian, although Averroës rejected Avicenna's distinction between the *forma partis* and *forma totius,* thus making it necessary to affirm that the soul of man and the species man are one and the same (*see* QUIDDITY). Moreover, Avicenna tried to balance necessary and contingent aspects of the natural world, preparing the way for the Thomistic real distinction between ESSENCE AND EXISTENCE; whereas Averroës is more immanentist and necessitarian in his view of the relationship between God and the world. Their metaphysical influence increased with the Renaissance, when they were frequently reprinted.

With respect to the agent intellect, Avicenna maintained a separate agent intellect less than God and identifiable more with the demiurge of the *Timaeus* and a personal possible intellect proper to each individual man; Averroës maintained a separate agent intellect that is, in a sense, a separate possible intellect as well. This is the human species, identified as the intelligence of the lunar sphere. Such a doctrine seems to leave individual men with nothing more than acutely receptive animal imaginations. It appeared again in the late Latin AVERROISM of Italy. Avicenna favored a hypothetico-mathematical astronomy in the tradition of Eudoxus, the *Timaeus* and Ptolemy, which Averroës rejected for a physical astronomy that is a celestial physics and a star theology, similar to that of the *De caelo.* Echoes of this controversy were heard in the opposition between Adelard of Bath and the Mertonians at Oxford, on the one hand, and the Parisian Aristotelians, on the other; and later in the Galileo-Bellarmine controversy.

In logic Averroës emphasized the *Posterior Analytics* and, accordingly, attacked Avicenna's preference for the hypothetical syllogism. This was a renewal of Alfarabi's criticism of al-Kindi and the Stoic logic of the Kalam: unlike Aristotelian demonstration the hypothetical syllogism lacks terminal resolution since it fails to display through an explicitly defined middle term the causal force of the nature under discussion.

Like Alexander and Alfarabi, Averroës was also known as the Commentator and became a model for the scholastic art of commenting. He brought to perfection three types of exposition that reflect forms of teaching current in the late Hellenistic Empire. The short commentary, or epitome, seeks to give the student guidance to an intelligent first reading of the text. The middle commentary is a paraphrase, a close second reading and reexpression of the text, accompanied by fresh and effective examples. The long commentary is a thorough reading of the text, which has been broken down into small passages, each of which is thoroughly analyzed and related structurally to the whole of the work. Other texts of the author are correlated with it; controversies over special passages are examined and solutions proposed. This last is the genre in which Thomas Aquinas wrote his commentaries on Aristotle.

Other notable Arabian thinkers of Aristotelian inspiration were the sociological philosophers al-Baruni, who analyzed Indian religion and culture and Ibn Khaldun, who analyzed world culture. ALGAZEL objectively summarized philosophical views, particularly those of Alfarabi and Avicenna, in On the Intentions of the Philosophers. As doxography this had wide circulation among the Latins; however, they lacked his sequel of ref-

utation, the Destruction of the Philosophers. Averroës's Spanish predecessors, AVEMPACE and Ibn Tufail, are also significant. (*See* ARABIAN PHILOSOPHY.)

HEBREW PHILOSOPHY

Medieval Hebrew philosophy benefited from both Islamic and Christian speculation, but it benefited Christian philosophy even more by serving as the conveyor of texts and ideas. CRESCAS was a strong critic of Aristotelian physics; of more significance to the West was AVICEBRON, whose *Fons Vitae,* translated at Toledo by DOMINIC GUNDISALVI with either Abraham ibn Daoud or JOHN OF SPAIN or both, was influential especially among the 13th-century Franciscans. It is important for its anti-Aristotelian doctrines of spiritual matter and plurality of forms and for the scriptural inspiration of its assigning a powerful role of efficient causality to these forms and their divine author. Most important was MAIMONIDES, whose *Guide for the Perplexed* influenced Albert the Great and Thomas Aquinas. (*See* JEWISH PHILOSOPHY; FORMS, UNICITY AND PLURALITY OF.)

Latin Aristotelianism

The absorption of the Aristotelian corpus by the Latins extended over a much longer period than that of the Arabs, that is, from the 4th to the 13th century.

THE CLASSICAL PERIOD

The Romans of the first centuries B.C. and A.D., for example, CICERO, Varro and SENECA, read Aristotle in the original, mainly his exoteric writings; their understanding of him was colored by the syncretism of the Middle Stoa. Cicero is significant for his enrichment of Latin philosophical language through his invention of Latin parallels to Greek technical terms and for his *Topics,* destined to play a central role in the long and confusing history of rhetoric and dialectic in the Latin West.

With the decline of Greek cultural dominance at the extremities of the Roman Empire a period of translation into Latin set in, from the 4th to the 6th century. MARIUS VICTORINUS, who had become a Christian *c.* 355, translated the *Categories* (lost) and Porphyry's *Isagoge* (partly preserved). Adaptations into Latin of Themistius's paraphrases of the *Analytics* (also lost) were made by Agorius Praetextatus at Rome. AUGUSTINE mentions having studied the *Categories*; and a paraphrase of it, also made about this time, was later incorrectly ascribed to him. Toward the close of the 4th century, Martianus Capella digested the *Categories* and *On Interpretation* in book 4 of his *De nuptiis philologiae et mercurii.* A hundred years later BOETHIUS set himself the task of rendering all of Plato and Aristotle into Latin, of interpreting them, and in the spirit of Porphyry, of showing their continuity with each other.

Of these four early translators, the two Christians, Victorinus and Boethius, were Aristotelianizing Neoplatonists in the more intellectual tradition of Porphyry and Proclus, rather than in the mystical tradition of Iamblichus. Boethius's ambitious project, far from finished at his death, was well begun with the *Isagoge* and *Categories,* each with a commentary, *On Interpretation* with two large commentaries, *Prior Analytics, Posterior Analytics, Topics,* and *Sophistical Refutations.* All this he completed with a highly significant personal treatment of argument in three works: *De categoricis syllogismis, De hypotheticis syllogismis,* and *De differentiis topicis.* In them the Aristotelian syllogistic laws are reformulated in Stoic rules; the treatment of the hypothetical syllogism shows the influence of Theophrastus and the Stoics; and the *Topics* shows study of both Cicero's and Aristotle's *Topics.* His posing of the problem of UNIVERSALS in his commentary on Porphyry's *Isagoge* is the *locus classicus* for the many-sided medieval debate on their ontological status.

Though laymen, Victorinus and Boethius each wrote a *De Trinitate* against the Arian heresy. In Boethius's treatise, his combination of Aristotelian and Neoplatonic terminology and definitions became a source within Latin Christian theology for Aristotelian theorizing. Noteworthy in this regard are his definitions of ETERNITY and PERSON, his definitions and divisions of NATURE and his briefly sketched division and methodology of the sciences commented on by Thomas Aquinas (*In Boeth. de Trin.* 5, 6) and later scholastics. On the whole, however, Boethius's influence in theology was that of a dialectical theologian, one who seeks to clarify and show the implications of theological positions but does not demonstrate.

12TH CENTURY

The fulfillment of the Latin aspiration toward scientific theology became possible with the translation of the *Posterior Analytics* by James of Venice. The *Physics, De anima, Metaphysics* 1–4, and the *Parva Naturalia* first came to the Latins through his hands. His translations, though revised in the next century by William of Moerbeke, remained the received texts until the Renaissance.

Besides translating into Latin two of the three Platonic dialogues known to the scholastics, the *Meno* and the *Phaedo* (the *Timaeus* had been done by Calcidius *c.* 300 and revived at Chartres), HENRICUS Aristippus translated book 4 of the *Meteorologica* and possibly the *De generatione et corruptione.* About this time anonymous renditions were made from Greek of the *De generatione et corruptione, De sensu et sensato,* and the *Nicomachean Ethics*; the *Posterior Analytics* and *Physics* were retranslated.

Translation of Aristotle from Arabic began slightly later, in Spain and in England. GERARD OF CREMONA at Toledo rendered into Latin the *Physics, De caelo, De Generatione et Corruptione, Meteorologica, Metaphysics* 1–3, and the *Posterior Analytics* accompanied by Themistius's paraphrase. ALFRED OF SARESHEL commented on the *Meteorologica* that he translated from Arabic and commented on the *De plantis* of Nicolaus of Damascus, believed then to be by Aristotle. Associated with Alfred was ADELARD OF BATH, the translator of Euclid, first among the scholastics to make current the Arabian commonplace that Aristotle represents science while Plato represents wisdom. At this time the works of the Arabian philosophers, largely commentaries on Aristotle, began to come into Europe through the Spanish translation centers.

13TH CENTURY

The frequent retranslation of the *Posterior Analytics* testifies to the intellectual effort being made during the course of the 12th century to capture the spirit of Aristotelian scientific explanation. At the beginning of the 13th century this key work received its first major Latin commentary from the hand of ROBERT GROSSETESTE; his was a somewhat Neoplatonizing interpretation influential throughout the Middle Ages, which continued to be reprinted even in the Renaissance. He gathered and translated from Greek the erroneously ascribed *De mundo* and the *De caelo* and *Nicomachean Ethics.* Chronologically, the scholastics distinguished among the Greco-Latin translations between an *Ethica vetus,* comprising books 2 and 3 and the first complete *Ethics,* that of Grosseteste. Likewise they spoke of a *Metaphysica vetustissima,* comprising books 1 to 4, the work of James of Venice; a *Metaphysica media,* comprising all but book 11; and finally the complete *Metaphysics,* done at Thomas Aquinas's request by William of Moerbeke.

An event of major importance for the subsequent evolution of philosophical thought was the introduction of Averroës into the Latin West in the second quarter of the 13th century. WILLIAM OF AUVERGNE and PHILIP the Chancellor were the first to quote the Arabian Commentator. Albert the Great used him about equally with Avicenna, being more Averroist in logic and natural philosophy but more Avicennian on the deeper problems of human psychology and metaphysics. St. Thomas was exposed to Averroës at the University of Naples. The principal translator of Averroës was Michael Scot at the court of Frederick II in Sicily between 1228 and 1235. Averroës's infiltration into the Western world was virtually complete by 1240, and the extent of his challenge to Christian faith had become evident. The chief points of conflict were three: (1) his doctrine of the eternity and necessity of the world opposed the Christian doctrine of creation; (2) the unity of the separate intellect, both agent and possible, conflicted with the immortality of the personal soul; and (3) his Latin interpreters' understanding that he taught a theory of DOUBLE TRUTH and the primacy of the philosophical over the theological mode of knowledge ran counter to the primacy accorded revelation by Christianity.

The vigor and originality of the scholastic intellectual response was in proportion to the profundity of the Averroist challenge. Members of the arts faculty at Paris, such as SIGER OF BRABANT and BOETHIUS OF SWEDEN, favored the Commentator's interpretations, whereas champions of theology, chiefly ALBERT THE GREAT and THOMAS AQUINAS, advanced their own resolutions of the problems. The challenge forced them to acquire more accurate translations of Aristotle, which were provided by their confrere WILLIAM OF MOERBEKE. He translated in their entirety and for the first time the *Poetics, Rhetoric,* and zoölogical books, though the first two works were almost totally neglected by scholastics. He also translated books 3 and 4 of the *De caelo;* books 1 to 3 of the *Meteorologica,* and retranslated book 4; books 3 to 8 of the *Politics;* and the theretofore missing book 11 of the *Metaphysics.* He also translated once again the *Categories* and *On Interpretation* and thoroughly revised the existing Greco-Latin translations, chiefly those of James of Venice.

During the 13th century, Aristotelianism was the object of several prohibitions by ecclesiastical authorities. But in 1255 a statute was enacted by the University of Paris legalizing the study of all the known works of Aristotle. Then in 1270 E. TEMPIER, Bishop of Paris, condemned the chief doctrines of Averroist Aristotelianism; on March 7, 1277, he summed up in a brutal, haphazard, pell-mell fashion (F. van Steenberghen) under 219 headings the doctrines to be rejected. Similar but less rash prohibitions were imposed on the philosophy of Aristotle at Oxford by ROBERT KILWARDBY and JOHN PECKHAM. With the more mature study of Thomas Aquinas's writings, the difficult but successful defense of Thomas by the early Thomistic school, notably by JOHN (QUIDORT) OF PARIS, and the canonization of St. Thomas (1323), the cause of Christian Aristotelianism was assured. Then the pendulous weight of authority swung the other way. The inceptor in arts at Paris was sworn during the 14th century to teach nothing inconsistent with Aristotle, and as late as 1624 the French Parlement threatened with death all who taught anything contrary to his doctrines. This was renewed by the University of Paris in 1687. Among the colleges of the New World there were some restrictions against Copernican astronomy and in support of the traditions of Aristotle and PTOLEMY. The surviving Domini-

can oath to teach according to the mind of St. Thomas is in this paradoxically voluntaristic tradition.

Thomas Aquinas distinguished between theology and philosophy, according to both the dignity of science; and in analogous fashion he distinguished between Church and State, according to each the dignity of being a perfect society. His commentaries on the *Ethics* and *Politics* won a lasting place for them in civil and ecclesiastical governmental theory. John of Paris, in *De potestate regia et papali*, championed the Aristotelian and Thomistic principles of natural law and the integrity and natural character of the State against the theory of absolute papal monarchy in temporal matters propounded by GILES OF ROME. The relevance of the *Ethics* and *Politics* to civil life was sufficiently appreciated by the middle of the 14th century for NICHOLAS ORESME, Bishop of Lisieux, to translate them into the vernacular. On the opposite side from Giles of Rome there soon appeared the *De Monarchia* of DANTE, who insisted on a world-state centering in the independent and supreme power of the emperor against the claims of the pope, and capable of achieving human happiness on earth. The imperial unity and world-state theme seems to owe something to the Arabian interpretations of Aristotle regarding the common agent and possible intellect.

Both the 13th and the 14th centuries saw advances in the empirical scientific side of Aristotelianism made principally at Merton College, Oxford, in the tradition of Robert Grosseteste; in France by JOHN BURIDAN, Oresme and others; and by the German Dominicans, for example, THEODORIC OF FREIBERG, in the tradition of St. Albert. (*See* THOMISM, 1; SCHOLASTICISM, 1.)

The Renaissance, Reformation and Enlightenment

The 14th to the 18th century was a period characterized by four developments respecting the authority of Aristotle: (1) the humanist movement; (2) psychological and methodological controversies; (3) naturalistic and scientific movements; and (4) development of political theory. The first and third are understood to be largely revolts against the Aristotle of scholasticism, the second is, by intention at least, in part pro-Aristotelian, and the third and fourth have both aspects. They began or centered in Italy.

HUMANISM, PLATONISM AND SECOND AVERROISM

The humanist revolt was a vengeance taken on the demonstrative logic and dialectic of the late scholastics by the practitioners of the so-called lesser modes of discourse, rhetoric and poetics, for scholasticism's neglect since the 12th century of these modes of communication in favor of what appeared to be the sterility of Aristotelian logic and methods. Though a late expression, Stefano Guazzo's *La Civil Conversazione* (Venice 1586) sums up this reaction. Already in the 14th century the humanist followers of the medieval *ars dictaminis* had begun to unearth unsuspected treasures of classical Roman history and literature, and the mid-15th century saw Greek letters come alive again in Italy. That the humanists were not unfriendly to Aristotle as such is shown by their continued interest in the ethical writings and the *Politics,* and by their studies and editions of the long neglected *Rhetoric* and *Poetics,* which the famous Aldine press in Venice first published in 1498 in the *Rhetores Graeci*, edited by Giorgio Valla. The influence of the *Poetics,* rightly or wrongly understood, is a whole chapter in early modern literature, culminating in the French classical theater.

Closely associated with humanism was the Platonic revival. A Christian Platonism flourished in the Platonic Academy at Florence. Its founder, Marsilio FICINO, was particularly concerned about defending the immortality of the soul against the Averroist Aristotelians. The humanists underestimated the degree to which Aquinas was able to master Aristotle while remaining, in a profound sense, a good Augustinian theologian. On substantive matters such as defense of the natural freedom of man, which had been attacked by LUTHER, ERASMUS quickly fell back upon the moral theology of St. Thomas and its philosophical base in the Aristotelian *Ethics.*

The humanist movement took place to a large extent outside the university framework. The revived Averroist tradition that began early in the 14th century was scholastic in the broad sense of the term. It arose within and came to dominate, the Italian universities, chiefly Bologna in the early period and Padua later. Remote inspiration came from the natural philosopher JOHN OF JANDUN and the political theorist MARSILIUS OF PADUA at the court of Ludwig of Bavaria. At Bologna were Gentile da Cingoli, his pupil Angelo of Arezzo and Thaddeus of Parma, who worked in the allied fields, for an Averroist, of astronomy and psychology. At Padua, Peter of Abano was more of a Galenian medical methodologist than an Averroist. In the 15th century the distinguished logician Paolo VENETO, an Averroist, taught at Padua. Sharing the scholarship of the Paduan school and well acquainted with its Averroism, was the celebrated Thomist philosopher and theologian Tommaso de Vio CAJETAN, who also commented on Aristotle.

The humanist appetite for belles-lettres and the university study of Aristotle were the primary and secondary conditions preparing the ground for the reception of Byzantine learning. The 15th-century Greek contribution to

Aristotelian scholarship was a substantial and permanent acquisition for all subsequent ages. The Council of Florence and the fall of Constantinople (1453) brought to Italy many learned Greeks, among them George of Trebizond, who, in a comparative study of Plato and Aristotle, opts for the latter; Theodore of Gaza; John ARGYROPOULOS, Bishop of Florence, who commented on the *Ethics* and translated Aquinas's *De ente et essentia* into Greek; and Cardinal BESSARION, who translated the *Metaphysics* into Latin, moderated Gemistos Plethon's criticisms of Aristotle and attempted anew the conciliation of Aristotle with Plato. Philosophical Greek was taught, new translations were made and many theretofore unknown Greek commentaries were printed and translated; finally in 1495 the Aldine press produced the *Editio princeps* of most of the Aristotelian works. Textual criticism, developed first by Lorenzo VALLA on historical documents, began to be applied to Aristotle and his commentators. In 1549 Robertellus produced the important second edition of the *Poetics* with Latin translation and commentary, and Fasolo translated Simplicius's commentary on the *De anima.*

PSYCHOLOGICAL AND METHODOLOGICAL CONTROVERSIES

All this sharpened the quest for an authentic interpretation of Aristotle and led to controversy in two chief areas: (1) psychology, centering on *De anima* 3, *Metaphysics* 12, and *De caelo;* and (2) methodology, centering on the opening chapters of the natural works and the prologue literature of the Greek and Arabian commentators.

The first controversy involved rival supporters of the interpretations of Alexander of Aphrodisias and Averroës, who differed over whether the separate agent intellect discussed in the *De anima* is in any sense human. According to the Averroists an impersonal but human immortality is attached to the separate intelligence of the species man, a sort of immortal overmind, or ''noosphere''; the Alexandrists denied human immortality, holding that the only overmind, or separate intellect, was God. Some historians regard the Averroists as attempting to de-Christianize the Aristotle of Thomistic interpretation, and the Alexandrists as attempting to demetaphysicize Aristotle in himself.

In 1516 Pietro POMPONAZZI, drawing support from Alexander, wrote a treatise against the immortality of the soul. The more important of the Averroists were Nicoletto Vernia, who taught at Padua from 1471 to 1499, Agostino NIFO, Leonicus Thomaeus, Alexander Achillini and Marco Antonio ZIMARA. J. ZABARELLA, who had studied Greek with Robertellus, developed Pomponazzi's position in psychology but in other parts of philosophy was much influenced by Averroës, as well as by Themistius and Simplicius. He made his chief contribution in methodology where, as a logician and natural philosopher, he opposed the moralist and metaphysician Francesco Piccolomini (1520–1604). His works and commentaries and those of his student Julius Pacius continue to influence modern scholarship on Aristotle. Pacius (1550–1635) edited and translated Aristotle's Organon and *Physics* (Frankfurt 1592, 1596) and edited the whole *Corpus Aristotelicum* (Lyons 1597). His *Institutiones logicae* (Sedan 1595) marks him as an extreme methodological pluralist, a humanist inclined to see the differences in texts, whereas Zabarella, a logician, had seen their structural similarities.

In the Protestant north, particularly in Calvinist circles, the anti-Aristotelian logic and methodology of the Huguenot martyr Peter RAMUS had great vogue. In his *Dialecticae institutiones* and *Aristotelicae animadversiones* (Paris 1543) and his two books on the *Posterior Analytics* (1553) he fused logic and rhetoric and reduced all methods to one. Historical Aristotelianism had begun in France with J. Lefèvre d'Étaples and was carried on after Ramus's attacks by Pacius. Ramus was opposed by J. Carpentarius (or Charpentier, 1524–74), a student of Greek mathematics who wrote a Comparison of Plato and Aristotle (Paris 1573) in the ancient tradition of their harmonization.

The controversy between Aristotelians and Ramists was continued in England and Germany. Oxford tended to be more Aristotelian, Cambridge more Ramist and later, Platonist. At Oxford the study of Aristotle remained an integral part of the university curriculum until the middle of the 17th century; particular attention was given to the reading and explication of the logical, ethical, and political works. Thomas HOBBES wrote a digest of the *Rhetoric* and was a keen student of its theory of the passions. Of varying strength among the representatives of declining Aristotelianism in this period were John Sanderson, John Case (d. 1600), whose Roman Catholic leanings forced him to teach privately, Richard Crackenthorpe, Thomas Wilson, Ralph Lever, Jacobus Martinus Scotus and the extraordinary Everard DIGBY. In 1620 Francis BACON published his *Novum Organum*, a work stressing induction and intended to replace the Organon of Aristotle. Nonetheless, an impressive strand of Aristotelian and Thomistic learning, tempered with humanism, continued in the clergy of the Anglican Church, particulary in matters of logic, ethics and politics. It flowered in Richard HOOKER (1554–1600), author of *Ecclesiastical Polity;* in the 18th century, in the ethics and natural theology of Joseph BUTLER (1692–1752) and the Bishop of Durham; as late as the 19th century in the logic of H. L. Mansel (1820–71); and in the 20th-century metaphysics of E. L. Mascall (1905–93). Especially worthy of mention is a

member of the dissenting ministry, Thomas Taylor (1758–1835), who single handedly translated nearly the whole Aristotelian corpus between the years 1801 (*Metaphysics*) and 1818 (*Nicomachean Ethics*). To these he added *Copious Elucidations from the Best of his Greek Commentators.* He was devoted to a Neoplatonism that, in the Alexandrian fashion, he regarded as capable of taking into its higher synthesis of wisdom all that is scientifically positive in Aristotle.

In Germany, despite Luther's opposition, the scholarly conciliator P. MELANCHTHON worked to ensure the continuance of Aristotelian learning, particularly the logic, where his authority prevailed over that of Ramus. However, the Aristotelianism he had in mind contained Stoic elements. A branch of early Lutheran theology, following Melanchthon, has been called Lutheran scholasticism. Jacob Schegk (1511–87), professor of logic and medicine at Tübingen, was an able Greek scholar and student of the *Analytics* who refuted Ramus. Others undergoing Aristotelian influence were J. Jungius, his student G. W. LEIBNIZ, who corrected the excessive attacks of the Italian Renaissance rhetorician M. Nizolio (1498–1576) on Aristotelian logic and theoretical philosophy and the systematizer Christian WOLFF. The decisive critic of Ramus was the progressive Aristotelian Bartholomew Keckermann (*c.* 1572–1609), whose work gained wide circulation on the Continent and in England. With the Germans must be mentioned the Dutch professor of theology at Utrecht, G. Voëtius, who, though Calvinist, was far from being a Ramist. He based himself on Aristotle in order to attack the new methodical monist R. DESCARTES. In the 16th and 17th centuries the German universities began the double tradition of metaphysical and philological penetration of Aristotle that was to flower in the 19th-century work of the Berlin Academy.

SECOND SCHOLASTICISM

This movement began mainly in Italy with the Dominican resurgence prior to and during the Council of Trent. The expositors of Aquinas commented also on Aristotle, for example, DOMINIC OF FLANDERS wrote on the *Metaphysics*; FERRARIENSIS on the *Posterior Analytics, Physics,* and *De anima;* G. C. JAVELLI on Aristotle's chief works (he also refuted Pomponazzi); and Cajetan on the *Categories, Posterior Analytics, De anima* and on Porphyry's *Praedicabilia.*

Soon the center of the second scholasticism became Spain and Portugal. At Salamanca F. de VITORIA revived and developed the Aristotelian-Stoic heritage of natural law and Domingo de SOTO commented on the Organon, *Physics* and *De anima.* The COMPLUTENSES, Carmelite professors at Alcalá, and the Conimbricenses, the Jesuits of Coimbra, did collective works on Aristotle's logic and physical philosophy. F. de TOLEDO, who had studied under Soto at Salamanca, taught there and in Rome and commented on Aristotle. In 1585, Benedict Pereira wrote a vast and free commentary on the *Physics,* showing study of contemporary Italian humanist and naturalist work as well as a slight Scotist influence. The chief scholarly contributions to Aristotelian studies were made on the *Metaphysics* by P. da FONSECA and F. SUÁREZ. Fonseca's work is considered the first erudite edition of the *Metaphysics* in the modern age by reason of its vast critical apparatus: collation of codices, discussion of the authenticity of texts, evaluation of variants and comparison of translations. Suárez' *Disputationes metaphysicae* (1597), not a commentary as such, develops according to his own outline but is doxographically helpful for all prior, particularly scholastic, views on Aristotelian metaphysics. To these should be added the useful paraphrases of Sylvester MAURUS on the chief works of Aristotle (1668). As a whole, however, the second scholasticism has been judged to have been too drawn in upon itself, too exclusively clerical and to have lacked the dialectical engagement with contemporary thought and science and the appreciation for empirical research that characterized the historical Aristotle and marks vital philosophizing in any age (F. Copleston).

NATURALISM AND SCIENCE

In Italy there arose a kind of natural philosophy, which conceived of nature as a more or less self-sufficient system, either independent of God once it had been created (*see* DEISM), or tending to be identified with God (*see* IMMANENTISM; PANTHEISM). To the Aristotelian HYLOMORPHISM it opposed ATOMISM and HYLOZOISM; to the Aristotelian intentionality of cognition, a mechanical theory of perception and even of intellection; to the Aristotelian view of the universe as finite, its extensive infinity. From the Aristotle of Averroës and Alexander it took a necessitarian view of the existence of the universe. Chief among these natural philosophers were G. Fracastoro (1478–1553), G. Cardano, B. TELESIO, G. BRUNO and T. CAMPANELLA. Using Aristotelian terms to oppose Aristotle, Bruno revived David of Dinant's identification of pure matter with pure act. G. C. Vanini (1584–1619), much influenced by Pomponazzi, also used Aristotelian language to maintain that Nature, which he divinized, is the prime mover and needs no prime moving principle outside itself. Two thinkers loosely associated with the Italian natural philosophy who explicitly attacked Aristotle were F. PATRIZI, in *Discussionum Peripateticarum Libri XV* (1571), and P. GASSENDI, in *Exercitationes Paradoxicae adversus Aristoteleos . . .* (1624).

The influence of these philosophers on the development of modern science was overshadowed by that of the

Aristotelian methodologists of Padua. However, it was chiefly the revival of pure Greek mathematics, mathematical physics and the tradition of hypothetico-mathematical astronomy, which in the Alexandrian and Arabic worlds had constantly rivaled Aristotle's *De caelo,* that set the stage for classical modern physics and astronomy. This revival began the refutation of Aristotle on falling bodies, the movement of the planets, the aether, or so-called crystalline quintessence, the speed of light, etc. Among its chief figures were COPERNICUS, G. GALILEI and S. Stevin.

Modern and Contemporary Aristotelianism

Aristotelian scholarship declined in the 18th century, was revived in the 19th century under the influence of the Berlin Academy, and flourished with the third scholasticism of the 20th century.

18TH CENTURY

The victory of classical modern physics had been interpreted to be so crushing that there was little activity in Aristotelian studies during this period. In epistemology some idea of the Aristotelian-scholastic theory of intentionality managed to survive the Enlightenment and the rise of idealism, through B. Bolzano. Only logic and to a greater degree, political philosophy received much attention.

No part of Aristotle's writings has a more extensive history of study than the *Politics.* From Aquinas and Moerbeke there is a continuous line through John of Paris, Cajetan, Bellarmine, Suárez, the founders of international law, Vitoria and GROTIUS, to the English common and natural law traditions of Blackstone (1723–80) and to others in the 20th century. The idea of division of powers found in MONTESQUIEU (1689–1755) is traceable to Aristotle and it appeared also in Thomas Jefferson (1743–1826). The direct influence of Aristotle and Aquinas on R. HOOKER, of Aristotle and Hooker on J. LOCKE and of all these on E. BURKE, J. ACTON and J. Bryce (1838–1922) is certain. The discovery of Aristotle's *Constitution of Athens* in 1890 intensified interest in his philosophy of the state.

19TH CENTURY

During the 19th century in France, Italy and especially Germany, the philosophical climate of nationalism and IDEALISM and the consequent interest in philology and the history of ideas and institutions combined with the continuity, maintained chiefly in England, of Aristotelian philosophical studies and a more traditional humanistic philology to bring about a revival of Aristotelian scholarship, with emphasis on the literary style of the treatises, their chronological order, the youthful fragments and the evolution of Aristotle's thought. The Berlin Academy sponsored a definitive edition of the *Corpus Aristotelicum* (1831) under the supervision of J. Bekker, who edited Aristotle's treatises (v.1, 2) and the Latin versions of the Renaissance (v.3); C. A. Brandis and H. Usener edited the scholia (v.4); and H. Bonitz edited the *Index Aristotelicus* (v.5, 1870). V. Rose's edition of the fragments in the *Corpus* was superseded by his third edition, *Aristotelis qui ferebantur librorum fragmenta* (Teubner 1886). Theodor Waitz edited the Organon with commentary in 1844–46. The Berlin Academy also sponsored the *Commentaria in Aristotelem Graeca,* completed in 1909 and a *Supplementum Aristotelicum* (1882–1903).

A. Trendelenburg along with his students C. Heider, F. Brentano and R. Eucken placed Aristotle at the base of their philosophical teaching as a result of their researches showing his formative role through Roman and scholastic translators in the whole history of Western philosophical vocabulary. Trained in scholasticism and by Trendelenburg, BRENTANO maintained that the true method of philosophizing is continuous with that of the science of nature, meaning by the latter to include both the Aristotelian organic and the modern positive approaches to nature. He tried to demonstrate this in the field of psychology, to which he introduced the Aristotelian and scholastic notion of INTENTIONALITY. This was continued in various ways by his followers in PHENOMENOLOGY, C. Ehrenfels, A. Meinong, E. HUSSERL, M. SCHELER and their existentialist successors. Other Germans who have studied the thought of Aristotle are H. DRIESCH, E. Zeller and H. Maier.

Aristotle's reception in France was less sympathetic. F. Ravaisson-Mollien (1813–1900) found that the Aristotelian characterization of being as ACT complemented his dynamic spiritualism. He influenced a whole generation of French philosophers, such as L. BRUNSCHVICG, O. Hamelin (1856–1907) and L. Robin (1866–1947), but their idealist and rationalist positions caused them to regard Aristotle merely as a rather prosaic follower of Plato. However, the appreciative work of the great French historians of science, P. Tannery (1843–1904) and especially P. Duhem, is indispensable for an understanding of the scientific role of Aristotle and his successors. A Platonic and idealistic judgment of Aristotle is present also in the work of the Englishmen J. Burnet, A. E. Taylor and A. N. WHITEHEAD, though less sharply than in that of their French counterparts.

20TH CENTURY

The neoscholastic movement, or preferably, the third scholasticism, was already underway at the time of Leo XIII's encyclical *AETERNI PATRIS* (1879), formally direct-

ed to revitalizing the teaching of Thomas Aquinas. But, by its admonition to return to the sources of Aquinas's teaching, the encyclical did much to direct the attention of scholars to Aristotle and to the problems of Aristotelian transmission, especially in the Latin, Arabic and Syriac periods. Especially noteworthy in this regard is the ambitious project of editing and publishing, with studies, the whole corpus of extant Latin translations of Aristotle made during the Middle Ages—*Aristoteles Latinus.*

The dominant problem of 20th-century Aristotelian studies, however, is not the place of Aristotle in the grand scale of development of human thought, but the personal evolution of his doctrines. W. Jaeger, in his monumental *Aristotle: Fundamentals of the History of His Development* (1923, Eng. tr. 1934), offered a creative solution and formulated problems for subsequent students. He concluded that Aristotle's development was a sort of fall from grace: from a wholly transcendental young Platonist, an extreme realist committed to the existence of the Forms and the immortality of the soul, through a stage of abandonment of the Forms and divinization of the visible heavens, to an old naturalist, empiricist and nominalist who regarded astral theology and metaphysics as ''conjecture'' (τὸ φαινόμενον ἡμῖν, *Part. animal.* 645a 5). The developmental hypotheses of the Jaeger school were received cordially but critically, by the more conservative Oxford scholars, such as W. D. Ross, G. R. Mure, E. Barker and in general the group that under the general editorship of Ross and J. A. Smith, has succeeded in translating the whole of the *Corpus Aristotelicum* into English. The difference between the Jaeger and the Oxford schools is not unlike that in English literature between the historical critics and the new or Aristotelian critics of the Chicago school.

The work of I. Düring has indicated that after an early and brief adherence to Plato's doctrine of Forms, Aristotle opposed his master with the thesis that οὐσία (substance, entity) is concrete; then, through the biological, psychological, and astronomical researches of his middle period, he found his way to a philosophical position much nearer to Plato's metaphysical doctrine, but on his own terms and out of, rather than in place of, his own sense of concretion and immanent final causality. The later works of the *Metaphysics,* particularly books 7 to 9, belong to this last period.

A recent characteristic of 20th-century textual study of Aristotle has been teamwork. The central organ of this is the *Symposium Aristotelicum.* One was held at Oxford in August 1957, and its papers were published by the University of Göteborg, *Aristotle and Plato in the Mid-Fourth Century,* ed. I. Düring and G. E. L. Owen (1960); the work of the second symposium, held at Louvain in August 1960, was published there in 1961, *Aristotle et les problèmes de méthode,* ed. S. Mansion.

See Also: PLATONISM; NEOPLATONISM; SCHOLASTICISM, 1, 2, 3; THOMISM, 1; NEOSCHOLASTICISM AND NEOTHOMISM

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[J. J. GLANVILLE]

ARISTOTLE

Philosopher of Stagira, a Greek colony in the Chalcidic Peninsula, and hence referred to as the Stagirite; b. summer of 384 B.C.; d. Chalcis in Euboea, autumn of 322 B.C. For 20 years a student of PLATO, Aristotle broke with Plato's successors in the Academy and founded his own school, later known as the Peripatetics. Very influential in the whole of Western philosophy, especially with the