THE PHILOSOPHY OF ARISTOTLE

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The question of value — whether we are better or worse off for the change — is not necessarily involved in the recognition of similarities in our situation with that of other Dark Ages, for the historian is quicker to recognize the remnants of a decaying culture than to remark the signs of a synchronous insurgent life.
What is involved indisputably is a deepening cultural break, which is making novelties of a fund of customary tale and legend, removing the traditional ring from familiar words and quotations, breaking a common background of history and ideas such as men need for the expression or understanding of common aspirations.

Aristotle in particular has fared badly, and we have fared badly to the same degree in these changes which have all but relegated the study of Aristotle to the college classroom, for few readers are led to his works today in even a broad circle of casual reading, and few serious investigators even in the sciences which he initiated or advanced find it necessary to go back of the repeated truisms that pass for his doctrine to the study of his works. In general, the writings of ancient writers are no longer read as a matter of course or as accustomed accident in intellectual development and education, but readers are attracted to the classics chiefly by episodes retold in the long record of men who have profited by lessons learned from them or who have simply enjoyed them. Homer and the Greek dramatists, Plato and the historians have left their traces through the ages in the works of those who sought insight into how men have lived and thought and spoken, and any of a vast number of echoing words, refurbished thoughts or unforgotten ideas first encountered in more recent literature might lead back to the Iliad or the Republic. But Aristotle, when he has been esteemed most, has been read as a scientist, and even the recognition that he originated many of the basic terms and distinctions of our scientific vocabulary is balanced by a long-ingrained bias concerning the influence of his scientific doctrines. The reader who has learned from histories of philosophy and of science that Aristotle enslaved men's minds and delayed the advance of science for a thousand years, in the more enthusiastic versions of the history, fifteen hundred or even two thousand years, is not likely to be inspired to study the philosophy and science of the man whom Dante called "the master of those who know."

The changes in our conceptions of science are not sufficient to account for what has happened to the reputation and influence of Aristotle, for if it were a question of theories and methods of observation and demonstration, the discussion would probably have had a closer relation to the works of Aristotle and the discovery, frequently made, that there is much in his scientific works which is commendable and suggestive might have been made more germane through the ages to the progress of science and the statement of scientific problems. The phenomena of Aristotle's influence and of the reaction against him are intelligible only in broader perspective. Despite the admiration expressed by many great scientists who professed to follow his method and to use his conclusions, Aristotle has been criticized, since the Renaissance, as an unsound influence in science; despite the efforts of some of the greatest theologians to make his doctrine an element of Christian philosophy, he was censured, through all the centuries of earlier Christian thought from apologists to Martin Luther during which religion supplied a touchstone for intellectual doctrines, as a source of all or most of the theological heresies; and despite the tempered praise of men like Cicero, he was scarcely more fortunate in Roman times, for the practical Romans - who were fond of urging the importance of
philosophy at least to prepare the spirit for labors, to fortify it against terros, and to console it against despairs, and who, to accomplish such ends, became Stoics and Epicureans in great numbers—thought of the Peripatetics as a meticulous and learned sect, but one without the spiritual scope or practical application of their favorite philosophies. If Aristotle enslaved men's minds, therefore, it was for a comparatively short time. For long periods his doctrines were all but unknown, and his works all but unread, always because the effort necessary to master his difficult language and his technically elaborated thought was great, while the doctrines themselves were popularly thought to be sometimes impractical, sometimes unorthodox, sometimes unscientific. But for at least one period of somewhat more than a hundred years extending from the middle of the thirteenth century, his influence was one of the chief forces that went into the making of a great civilization and the founding of sciences in which the mark of his doctrine has survived that age unrecognized. Aristotle has been remembered, since the Middle Ages, chiefly in terms borrowed from the Romans to express the more violent reaction of men of the Renaissance against the impracticality, inelegance and technical specificity of the scholasticism with which they lumped the philosophy of Aristotle. From this disrepute and opprobrium he has been rescued during the last fifty years by scholars who have applied a learned and delicate sensitivity to the task of discerning stages of development in his doctrine, but this new-found respectability is dearly bought, for the philosophy is distributed into periods at the cost of sense and pertinence except as the expressions in which ideas are stated happen to bear, not on those ideas, but on the newly constituted historical and philological problems.

That a doctrine should continue to be an issue and a subject of epithet and opprobrium for more than two thousand years suggests that the problems relevant to any decision concerning its influence and effects are not resolved, however ingenuous the assurance that no other considerations are relevant, simply by checking theories alleged to be part of the doctrine against canonical lists of practical consequences, or orthodox dogmas, or experimental facts. It is difficult to read far in Aristotle's works, and impossible to talk much about his doctrines, without taking some part in a dispute which goes back to Aristotle himself. Aristotle attacked some of the most important doctrines of his master Plato; and critics, historians, and commentators have laboured ever since to reconcile the two or to reprove or, occasionally, to justify the presumption of the pupil. The philosophy of Aristotle has been read most frequently as an expression of the same philosophy that Plato held and taught in the Academy where Aristotle was a student, usually as a flat and erroneous degradation of that philosophy; or, if his work is taken as it sometimes is in contrast and as supplement to Plato's philosophy, an opposition is made of a world of changeless things assigned for lofty contemplation to Plato and a world of changing things assigned for empirical investigation to Aristotle. Some form of this distribution of spheres of influence has been common from Plotinus' judgment of the relation of Aristotle to Plato down to Hegel's approbation of Plotinus, and only rarely has the tradition been interrupted by philosophers who, like Thomas Aquinas and William of Ockham, thought the philosophy of Aristotle
to be in need of no aid or completion from another's wisdom and the philosophy of Plato to be inexact or false. Boethius intended, in the sixth century, to complete his task by demonstrating that the two philosophies were in essential accord. Bonaventura, in the thirteenth century, thought they supplied the complementary parts, Plato the wisdom to treat of eternal things, Aristotle the science to treat of temporal things, which prepared for the formulation of a Christian philosophy by Saint Augustine. Even the famous statement of Coleridge, in the nineteenth century, that everybody is born either a Platonist or an Aristotelian, does not invoke an equal distribution, for although Aristotle is "the parent of science, properly so called, the master of criticism, and the founder or editor of logic," and although he is "the sovereign lord of the understanding - the faculty of judging by the senses," he is unable to "raise himself into that higher state which was natural to Plato, and has been so to others, in which the understanding is distinctly contemplated, and, as it were, looked down upon from the throne of actual ideas, or living, inborn, essential truths."(1)


In this age-long philosophic debate a perverse fate has determined that the scholarly study of Aristotle's philosophy should always, from antiquity to the present, be pursued most energetically and successfully by men whose convictions and enthusiasms were Platonic, but only in the last few hundred years has the operation of that fact begun to deprive Aristotle of his pretensions to science and scientific method, and only in recent past has it reached its final consequence by all but submerging Aristotle beneath the figure of Plato. (2)

(2) The aphorism of Whitehead, according to which the European philosophical tradition consists of a series of footnotes to Plato (Process and reality, New York, 1929, 63) takes the form, in application to Aristotle, of the gentle derogation of Burnet (Platonism, Berkeley, 1928, 6, 3) that "in reality, Aristotle has never been of the first importance in the history of philosophy except as a sort of appendage to Plato." Four possibilities are exemplified in modern judgments of Aristotle: his philosophy and science are distinct from those of Plato and important in themselves, or they are distinct and unimportant, or they are both Platonic, or the philosophy is Platonic and the science an original departure. (1) Thomas case is one of the few recent scholars who find (cf. his excellent article, Aristotle, in the eleventh edition of the Encyclopaedia Britannica (II, 1910, 501-522) both a philosophy and a science in Aristotle. "Turning now from the man to the philosopher as we know him best in his extant writings...we find, instead of the general dialogues of Plato, special didactic treatises, and a fundamental difference of philosophy, so great as to have divided philosophers into opposite camps, and made Coleridge say that everybody is born either a Platonist or an Aristotelian...Philosophic differences are felt best by their practical effects: philosophically, Platonism is a philosophy of universal forms, Aristotelianism a philosophy of individual substances: practically, Plato makes us think first of the supernatural and the kingdom of heaven, Aristotle of the natural and the whole world" (ibid., 502). (2) According to John Burnet, Aristotle rejected the
doctrine of Platonic Ideas because he was too little of a mathematician to be able to understand them fully, and apart from biology, his scientific conceptions, not only physics and astronomy but in politics were, after the work of the Platonic group, anachronistic (Platonism. 61-62), and indeed, even in the years of his closest association with Plato, he scarcely came under his influence: "But it so happened that, when Aristotle came there, Plato had become immersed in the affairs of Sicily, which we shall have to consider presently, and it is even probable that he was away from Athens when Aristotle arrived. It is certain at least that he went to Syracuse very shortly afterwards. In 361 B.C. Plato was once more called away to Sicily and he did not return till the next year. We see that, for the first ten years of Aristotle's membership of the Academy, the direct influence of Plato upon him can only have been intermittent at best. But there is no doubt at all that Aristotle was a voracious reader, and, in particular he found the Phaedo in the library of the Academy, and that it had a great influence on him. It would almost be true to say that, in his early years at the Academy, Aristotle was more of a Socratic than a Platonist" (ibid. 58-59). (3) Taylor (Aristotle, London, n.d., 27), at the other extreme treats both the science and the philosophy as a degradation of Platonism whenever it is not pure Platonist. "He (sc. Aristotle) is everywhere a Platonist "malgre lui", and it is just the Platonic element in his thought to which it owes its hold over men's minds." Or again (ibid. 53): "The result (sc. of Aristotle's half-hearted empiricism coupled with his equally half-hearted rejection of Platonism) is that Aristotle does little more than repeat the Platonic view of the nature of science." Or again (ibid. 65): "In no department of his thought is he so slavishly dependent on his master Plato as in the theory of the 'good for man!' and the character of 'moral' excellence;" or (ibid. 56): "The actual regulations which Aristotle lays down (sc. for education) are not very different from those of Plato."

(4) W.D.Ross (Aristotle, London, 1923, 2) expounds a medium doctrine according to which Aristotle was subservient in philosophy but independent in science: "Whatever the motive of his joining the school may have been, it is clear that in Plato's philosophy he found the master-influence of his life. It was impossible that so powerful a mind should accept implicitly all Plato's doctrines. Grave differences on important points became gradually more apparent to Aristotle. But of his philosophical, in distinction from his scientific works, there is no page which does not bear the impress of Platonism." This would seem also to be Werner Jaeger's interpretation of the relation of Plato and Aristotle. (Aristotle, Fundamentals of the history of his development, Oxford, 1934, 3): "Surely there can be only one positive standard for Aristotle's personal achievement, and that is not how he criticizes Plato but how he himself Platonizes (since that is what philosophizing means to him)." Cf. (ibid. 11): "It was his experience of Plato's world that enabled him to break through into his own. It was the two together that gave his intellect the marvellous tautness, speed, and elasticity, by means of which he reached a higher level than Plato had, in spite of the definite difference between Plato's unlimited and his own limited genius."
There is at least as good, and much more direct, evidence in the works of Aristotle that he tried with rare consistency and precision to differentiate his own philosophic method from that of earlier philosophers than there is for the thesis that his thought evolved slowly, in the works still extant, from a stage in which he follows his master to a stage in which he contradicts his own earlier doctrine and that of his master, or for the thesis that he is philosophically effective only when he repeats what his master had said. The history of his influence, on the other hand, would suggest that of the two families into which Coleridge divides mankind, the Aristotelian clan is the less numerous, or else only Platonists write about Aristotle. In any case the issue in the interpretation of his works today is reduced squarely to a question of philosophic and scientific method. A hallowed tradition of silly countersenses attributed to Aristotle and of commonly discarded errors obstinately retained by him, further complicated by an even longer history of almost innumerable interpretations attached to each of his works stand on one side of the issue, and on the other the evidence, displayed in the works themselves, of careful composition, precise statement, and a straining for logical consistency, rendered more pointed by repeated specifications, cautious, detailed, and extended to a degree uncommon even in books of philosophy and science, of the requirements for precision, compendency, and system. If the method developed by Aristotle is ignored, the countersenses and alleged errors are in his works, but by the same token Aristotle would not have seemed worth reading to centuries of cautious and learned searchers after knowledge if he were unable even to rise above simple-minded confusions, and a reader therefore is well advised to put off determining whether such difficulties as he finds should be ascribed to Aristotle's oversight or to his own errors of interpretation, and so to persevere in his study only of works in which he is able to detect the workings of the method.

The best introduction to Aristotle is found in the works of Aristotle, and if any other is needed it is only to anticipate difficulties and to forestall poorly grounded interpretations, against which Aristotle did not have the foresight or the interest to protect his statement of philosophy, by indicating the principles and the arguments by which the difficulties may be resolved and interpretations judged. The method of Aristotle has not passed without notice or understanding, for the history of literature and thought is rich in accounts of readers who have gained insight and inspiration from the study of his works beyond any expectation that would be justified by the accounts of his doctrines and achievements in textbooks and secondary sources. But the method has been broken into bits as the doctrine has been approved or disapproved, and since the grounds of approval have seldom been those by which Aristotle tested sound philosophic doctrine, the method has lost its distinctive character and peculiar effectiveness. It is not so much that Aristotle needs an introduction as that we have reached a point at which even his consistent use of a method and his reiterated attempts to call attention to the steps he has gone through in the use of that method, might pass unnoticed unless underlined and brought to our attention. Since the effort in this introduction will be to trace the method as it is applied to the various branches of Aristotle's philosophic inquiries, there will be no need to preface it with a recital, such as frequently passes for
introduction to a man's philosophy, of the odd or prophetic, interesting or true statements made by Aristotle, or to supplement it with a rearrangement according to chronological order of development or according to some novel insight into their significance, of doctrines that he believed or might be inferred to have believed.

The only purpose for which a philosopher can be read, commensurate with the intentions which led him to write, is insight into philosophic truth, and whatever the interest of other modes of interpretation - and they are frequently useful to that end - they either eventuate in or build substitutes for a philosophy. To interpret a philosophy like that of Aristotle is necessarily to assume the role of arbiter at least to the extent of attaching a single meaning to statements that have had many interpretations. Yet the construction of an unambiguous system would lie within the reasonable intentions of a philosopher, and to emphasize his method is to point out the road that must be travelled, if Aristotle has been to a degree successful in carrying out such intentions, to recover his philosophy in a fashion which leaves the reader to discover what it is and, indeed, to judge whether the road was right. It would be a questionable service if an introduction did more, since the reader might thereby be deprived of the edifying task of working his way through documents which have inspired much that has been great in more than 2,000 years of human speculation and inquiry, which have left unmistakable marks of influence on the thought even of men who had not read in them, and which have largely controlled the intellectual formation of the many critics who have devoted strenuous efforts to refuting and discrediting the doctrines they express.

2. THE LIFE AND TIMES OF ARISTOTLE

The few facts known of the life of Aristotle furnish a congruous and plausible background to his works, but they afford little help in the problems of interpretation which those works have posed. Until recently the paucity of external aids to interpretation was seldom subject for complaint, for Aristotle is unusually explicit in stating his criticisms of earlier philosophic opinions and his conception of their interrelations, and we have considerable portions of the erudition with which the early Greek commentators supplemented that information by placing Aristotle's doctrine in the context Aristotle himself supplied. But the interpretation and explanation of a philosophy may be "evolutionary" rather than "systematic," in which case a temporal order is sought in the development of the philosopher's thoughts instead of an order of premise and proof, and what he said of earlier philosophers is made to suggest stages of influence rather than contrasted premises or methods or conclusions. The meager outline of Aristotle's career has during the last century been seized on as a challenge to philological ingenuity engaged in finding stages in the doctrines expressed in Aristotle's writings. The one method of "interpretation" has notoriously "reconciled" Aristotle's doctrines by encasing them in systematic frames which he could not have suspected; the other depends on detecting an abundance of inconsistencies, almost beyond the vagaries of the least retentive memory or the most inconstant mind, to mark the periods of his development. Yet, however combined with the evidence of his works, the biogra-
phical data serve for little more than to divide his mature life into three periods: two lengthy visits to Athens and an interval between spent in travel and shorter residences in Asia Minor, the island of Lesbos, and Macedonia.

Born in 384 B.C. in the little town of Stagira (hence is sometimes known as "the Stagirite") on the peninsula of Chalcidice, Aristotle came to Athens at the age of seventeen in 368-7 B.C. and remained for twenty years, until Plato's death in 348-7 B.C., in close association with the Academy of Plato. Much speculation has been expended on such questions as Plato's influence on Aristotle, the significance of this long apprenticeship, if it was that, and even the nature of the activities, studies, and researches carried on by members of the Academy. In last resort the influence of Plato on the mature thought of Aristotle must be sought in his works, and the chief recent addition to the evidence concerning any of these questions, derived from speculation on the fragments of his lost early works, has led to the construction of three periods of doctrine corresponding to the three periods of his life: a "Platonic" period (of which only fragments survive); a transitional period, partly Platonic and partly critical of Platonism, devoted to scientific inquiries suggested by and consistent with Platonic interests (the fragments assigned to this period are supplement with bits and portions of the treatises which are supposed to show residual signs of Platonism); and a period of Aristotelian science, hostile to Platonism (to which the remaining portions of the extant works are assigned). With the aid of constructions built from the fragments, scholars have thus found evidence in Aristotle's works of an evolution from Platonism to Aristotelianism, while other scholars find on the same evidence that he is always, even to the end of his life, Platonic when his thought has scope and power, or that in all his extant works a distinct but subtle line marks the Aristotelian from the Platonic philosophy. The little ancient evidence concerning the relations of the two philosophies, even that from legendary sources, is no more decisive than the speculations of scholars from the time of the Romans to the present. Apart from the statements concerning Plato and the Platonists in the works of Aristotle, there are only a few sayings attributed to Plato, which probably originated after the deaths of both men: Plato is represented as having called Aristotle "the mind of the school," as having referred to his house as "the house of the reader," as having complained that he was like a colt that kicked the mother who had foaled him.

Aristotle's father was court-physician to Amyntas II, king of Macedon and father of Philip the Great, and therefore, as hereditary member of the guild of Asclepiads, he may have been intended for a medical career, may even have practised medicine, was probably trained in dissection, and doubtless early conceived an interest in the biological sciences. It is not impossible that this interest was fostered during his work in the Academy, for Plato's nephew, Socrates, who succeeded Plato to the headship of the Academy, was also a naturalist. In any case, when Aristotle left Athens after the death of Plato and traveled to Asia Minor and Lesbos, visiting Hermias, the tyrant of Atarneus and Assos who was probably once a member of the Academy, and Theophrastus, a native of Eresus and probably resident at Kitylenx, who was also an Academician and who was to be Aristotle's associate and successor in the Lyceum,
his interest in biology was so far advanced that he seems to have
devoted a considerable part of his leisure to the collection and
examination of animals and, particularly, of fishes. The references
to places in Greece in his Natural History and other biological
writings are few, but places on the coast of Asia Minor, on the
islands of the Aegean, and in Macedonia are mentioned rather fre-
cently. In 343/2 B.C., on the invitation of Philip of Macedon,
Aristotle went to Pella, accompanied by Theophrastus, to become
tutor to Alexander, who was thirteen years old at that time. The
possible influence of the teachings of the philosopher on the
character and formation of the boy who was to become Alexander the
Great has fascinated many writers over as long a period as that
which separated Plutarch and Hegel, but there is no sober historical
evidence of any influence. We know little of the program of studies
prepared by Aristotle; he is said to have revised the text of Homer's
Iliad (and if he introduced Alexander to a deeper study of this
staple of Greek education, his influence was enormous, not by way
of example for imitation furnished in the person of Achilles) and
to have composed for him works on Monarchy and on Colonies, neither
of which survives. The tradition that Alexander sent back from
the regions of his conquests zoological specimens to assist the
studies of his former teacher is likewise not supported by any
signs in his biological works of unusually accurate or detailed
information concerning Asiatic fauna. It is more probably, from
the evidence of those works, that Aristotle made shrewd use of the
royal grooms, gamekeepers, huntsmen, and nearby fishermen as
sources of information, and that since Alexander's studies probably
ended three years later, in 340 B.C., when he was appointed regent
for his father, Aristotle spent some considerable portion of the
next five years at Stagira in scientific research and biological
observation. Shortly after the death of Philip, Aristotle returned
in 335/4 B.C. to Athens.

The next twelve or thirteen years at Athens were for Aristotle
a period of extraordinary activity devoted to the organization of a
school, to the institution and pursuit of a program of investigation
and speculation in almost every branch of inquiry, and to the
composition of all, or most, or at least the more scientific por-
tions of those of his writings that are now extant. Little is
known of the organization and work of his school, the Lyceum. It
it supposed that some of the most distinguished members of the
Academy joined Aristotle, and it is conjectured from references
in Aristotle's works that an excellent library of manuscripts
was assembled, as well as collections of maps, instruments, biolo-
gical specimens and diagrams to illustrate the lectures. According
to an old tradition, Aristotle's teaching was divided into acro-
matic and exoteric discourses. The acromatic or advanced treatises
grew out of his morning discussion of abstruse problems (and
because he and his pupils walked while he spoke to them, or more
probably because the instruction took place in the "peripatos" or
covered portico or walk of the gymnasium, the group became known as
the "peripatetics"). The exoteric or popular treatises, on the
other hand, were based on his afternoon or evening lectures to a
larger audience. The extant works are, as a consequent of conjec-
tures concerning the manner of instruction in the Lyceum and under
the influence of analogies in later academic practice, usually sup-
posed, with somewhat questionable plausibility, to be the notes
for lectures prepared for delivery in the school, interspersed from

time to time with the notes of students from lectures that had

been delivered.

It was probably during this stay in Athens that his wife

Pythias, niece and foster-daughter of his friend Hermias, died and

Aristotle took a mistress, Hatyillis, a native of Stagira, who bore

him a son, Nicomachus, after whom the Nicomachean ethics was named.

When Alexander died in Babylon in 323 B.C., the anti-Macedonian

feeling which had been barely dormant in Athens during Alexander's

campaigns in the East broke out once more, and Aristotle as an

alien and as one who had been closely associated in many ways with

the Macedonian court was a natural subject for agitation and suspi-

cion. How important his philosophic activities were in turning

the Athenians against him may be matter for ingenious speculation.

He had attacked the principles of rhetoric taught in the school of

Isocrates, and he had opposed some of the most characteristic doc-

dtrines of the philosophy of Plato; these criticisms might have been

remembered and might have influenced the pupils and followers of

Isocrates and Plato who were now prominent in the city and in the

government. The specific charge brought against Aristotle, like

that on which Socrates was condemned, was impiety. The evidence

alleged for the crime was rather labored in interpretation and

rather distant in date. On the death of Hermias, who had been

betrayed and tortured to death at the instigation of the Persians

in 343, Aristotle had written a hymn and an epitaph in which he

attributed godlike virtues to his martyred friend, notwithstanding

that he was a eunuch. Unlike Socrates, Aristotle did not wait to

stand trial, but the example of Socrates was present in his mind

or in the mind of his biographer, since he is supposed to have

remarked that he fled "lest the Athenians sin twice against phi-

losophy". He took refuge in Chalcis in Euboea, where Macedonian

sympathies were still strong, under the protection of his friend

Antipater, who was regent for Alexander during the Eastern cam-

paigns and who was named executor in Aristotle's will. He died

in 322, in the mother city which had given its name to the Chalcidic

peninsula on which he was born, of a complaint which seems to have

been occupational even in Greece to men of his profession, chronic

indigestion rendered acute by overwork.

Aristotle lived in Athens an alien, subject at times to sus-

picion because of his Macedonian connections and to unrelated

attacks because of his doctrines. He was unable, since he was a

foreigner, to wield political influence in the city-state, and he

seems to have had little interest or effect, despite his relations

with the Emperor and the Court, in the empire of his day, yet his

scientific career was undoubtedly facilitated by the tradition of

learning and culture of Athens and by the unparalleled period of

peace and attendant prosperity which the absentee domination of

Alexander forced on Athens. When he came to Athens at the age of

seventeen, the hegemony of Greece was in balance between Sparta

and Thebes; the battle of Mantinea took place when he had been

there for five years (302 B.C.); he left almost within the year

of the battle of Olynthus (344 B.C.) and the first suspicious

Athenian embassy to Philip; during the period of his association

with the Academy, anti-Macedonian feeling had begun to grow and

Demosthenes had delivered his first Philippic. The second visit

of Aristotle to Athens, the period of his active teaching,
coincided with the reign of Alexander the Great. The conqueror who put into practice new conceptions of political organization and who tried to readjust the relations of the races of men, the orator who spent the best efforts of his career in opposition to the conqueror, trying to restore the Athenian ideals and life of an earlier age, and the philosopher who shows little if any awareness of the ideas and careers of either statesman or orator, all three died within a period of somewhat more than a year.

The political milieu of Aristotle's life differed greatly from that of two predecessors in political and moral philosophy, for Socrates and Plato were native Athenians and lived, the one during the Age of Pericles, the other during the period of reconstruction that followed the Peloponnesian War. The form which his reflections on political problems took was no less different than the milieu in which he lived and gathered data. Unlike Socrates he could not boast of his actions as a citizen or of his efforts to train citizens and unlike Plato he engaged in no utopian efforts nor even in high-flung political speculations. He treated political theory as science of a kind, not as precise as physics, but based on similar empirical inquiries, and therefore he collected, or caused to be collected by his pupils, information concerning the constitutions of 153 cities (of which only the Constitution of Athens survives). His Politics, based on such collections of data, is concerned with the multiple classifications of kinds of states suited to the possible varieties of man and conditions in such fashion that even the lineaments of the perfect state are determined inductively from considerations of man and nature, and are traced primarily in terms of limits of population, extent of territory, character of citizens, and a scheme of education.

The light thrown on Aristotle's political theory and on this philosophy in general by consideration of events contemporary with his studies and teaching is slight. At most such consideration may be, and has been, made grounds for alleging limitations in his political observations and thoughts; his sympathies (it is said) were outmoded and nostalgic, his information limited to the age just past, and his theory unaffected by and unsuited to the conditions consequent on recent and contemporary tendencies, but apart from inferences based on what he does not say, the condemnation rests wholly on two doctrinal points, his praise of the city-state and his defense of slavery. No other or additional information is usually needed when it is proposed to interpret his philosophy as a whole in terms of his times, and the illumination consequent on that effort is, if possible, slighter. The existence of a slave class has been supposed to explain the numerous hierarchies in Aristotle's treatment of nature, his contempt for the mechanical arts which have contributed to the advance of modern knowledge. His conception of the universe has been analogized to the city-state, finite in extent, orderly in arrangement (although admitting of fortune and chance), and hierarchized in powers under the ultimate domination of a First Mover.

One should not seek in a science, Aristotle has observed, more precision than is appropriate to its subject matter, and one may therefore without undue appearance of indolence pass over the interpretations that have been put on Aristotle's remarks about slavery and the city-state as well as the conjectures concerning their relation to the lessons scholars have read into the political
events of his times. But when the principles of his philosophy are in question it is pertinent to observe that these slight essays at explaining the philosophy of Aristotle make use of a conception of explanation which runs counter to the scientific method of Aristotle himself. Critical scholarly works, though they pass for factual and impartial history, are more frequently in the nature of a disputation with the subject whose thoughts they profess to treat. We are apt moreover to permit the scholar an undue, and unphilosophic, advantage, particularly when his subject is a philosopher, for the scholar's argument is usually original in the degree that it is tangential to any properly philosophic purpose - in the degree, that is, that it enumerates characteristics of the style, of the vocabulary, of the examples, of the simpler beliefs of the philosopher, or in the degree that it emends texts, demonstrates that passages or books are inauthentic, or splits up, reorders, and trivializes his works - and therefore it lends itself more easily to the task of enumerating errors than that of elucidating principles. A correct statement and considered judgment of the issues implicit in such studies would require that the methods of science and criticism of the philosopher be understood as well as the new principles of the critic. But an evolutionary method has the advantage of appearing in explicit statement or by analogical inference, at the expense of the past, to be the fulfillment of the ages. If the works are considered as products of an evolutionary process, the decision is with the future; if they are considered in confrontation with the modern treatment of their contents, the later date brings no advantage in the disputation, and the effort would defeat the purpose of any critic for the task of judging his debate with Aristotle would be more difficult than understanding Aristotle. Therefore a little description and praise of his new method of study, crediting it usually with a step in the progress of knowledge or the attainment or the preservation of some item of the free critical spirit are inducements enough to persuade us to yield to gullible credence to every critic who builds a "scientific" or "critical" scaffold around a dead author's works. Aristotle made use with careful restrictions, of analogical devices to set up scientific principles, but he was skeptical concerning their value for disclosing literal causes specific to particular circumstances or individual things. To seek the sufficient causes of Aristotle's philosophy in his life and times and to think his methods discredited by limitations which are supposed to have restricted his experience, is to refute his doctrine by assumption rather than by argument. It would be easier to find in the works of Aristotle formal critical analyses of such methods as those his critics use than to find in their arguments conclusions relevant to the grounds or contents of Aristotle's theories, and in much the same fashion, the philosophy of Aristotle presents rich information concerning many aspects of the intellectual life of his times, whereas our present historical information concerning social and economic conditions affords only meager correction for his doctrine.

The attempt to explain Aristotle's thought psychologically or psychoanalytically must necessarily be as imaginative, for all the muster of scientific pretense with which it has occasionally been practised, as the social and economic excursions. The writings of Aristotle afford as little information concerning his personal traits as the dialogues of Plato concerning Plato's life
and character, and such anecdotes as are used to fill in the outlines are of late date. He is reputed to have been bald, thin-legged, to have had small eyes, and to have spoken with a lisp. In the statues, busts, and intaglios supposed to portray him, he is represented as slight of stature and sensitive, or even handsome, of feature. He is supposed, at least as a student, to have been foppish in dress and to have affected gaudy jewelry. In one tradition of ancient historians of philosophy, noted for its tendency to report disreputable facts concerning the lives of philosophers, he is represented as effeminate and self-indulgent. He had a reputation for a mocking tongue and a ready wit. It has been inferred, since so much of his life was spent under the protection of guardians, masters, and powerful friends, that he was timid, indecisive and escapist in the conduct of his own life. His detailed and careful provision for members of his family and household in his will gives evidence of a prudent and considerate nature, even on points that bear on the vexed question of his attitude toward slavery, for he directs that some of his slaves be freed and that none of the rest be sold.

3. THE WORKS OF ARISTOTLE

What we know of the works of Aristotle may be fitted only loosely to the periods into which his life is divided for our sources of information are full of inconsistencies which set them at variance one with another and each with itself. The most important single source of such information is of course the works themselves, but they have for a long time been part of a body of writings, the Aristotelian Corpus, which contains in addition to undoubted works of Aristotle, many doubtful and spurious books. Some of these seem to be the work of Theophrastus, Aristotle's successor as head of the Lyceum, or of Strato, Theophrastus' successor, or of one or more early Peripatetics; some to have been written a century or two before or a century after the beginning of the Christian era, and some to be collections of Peripatetic bits from all ages, assembled and edited centuries later. Fortunately, there is a core of unquestioned authentic works, but there is always, nevertheless, in addition to all other difficulties that might be encountered in studying Aristotle's doctrine, the danger that a given work, or chapter, or sentence may be spurious, or corrupt, or later or earlier than would be consistent with one's interpretation. There are, in the second place, rather numerous "fragments" of earlier works culled, identified, and worked into patterns of relations to each other by scholars laboring, during the last hundred years, on works written by scholars who lived within a few hundred years of Aristotle, or more frequently, on the works of later scholars who quoted from scholarly works now lost. The form given these materials is usually determined by some conjecture in the service of a theory of the development of Aristotle's thought, and therefore they do not contribute to our knowledge of the philosophy of Aristotle, except in the negative way of suggesting that he once held doctrines at variance with his mature convictions, and therefore justifying the scholar in separating further bits from what might otherwise seem his doctrine on the grounds that they too are stages toward, not parts of, the final form of his thought. In the third place, three ancient catalogues
of his works survive, but they too have unfortunate defects which limit their use and make them subject to even more conjecture than our other sources of information, for they contain many titles of books which do exist, while many of their titles seem to be alternate titles for works we know, or titles of parts of works, or repetitions of titles that appear elsewhere on the lists, with the result that it is impossible to say how many, or in some cases even which of the 200-odd titles which seem to be distinguishable in the catalogues, refer to works we know. Finally, although almost all the ancient statements about Aristotle and his works are contained in books written a generation or more, or even a century or more, after the death of Aristotle, they frequently include, in quotation or paraphrase, statements that are of the time or shortly after the time of Aristotle himself, so that scholarly ingenuity may discover ancient authority to bolster modern interpretation or ancient statements of Aristotelians to supply lost doctrines of Aristotle, or ancient inspiration to reinterpret or to reverse attributions, sequences of development, or priority of statement and influence.

We have very little evidence concerning the character of the works Aristotle wrote during his first stay in Athens. Usually some of the lost dialogues are assigned to this period, On rhetoric or Grylus (because Grylus, the son of Xenophon, was killed in the battle of Mantinea in 362/1, and it is inferred that the dialogue was written shortly thereafter), Eudemus or on the soul (for like reason, since Eudemus of Cyprus died in 354/4, and the dialogue seems to have defended the immortality of the soul with arguments modelled on those of the Phaedo), the Protrepticus, an exhortation to philosophy (since scholars argue that it was very Platonic in character). Even less can be said of the remaining titles which may be names of dialogues composed during this period, the Statesman, the Sophist, Henexenus, the Symposium (since they repeat Platonic titles), or of the treatises to which we have references, On the good (which, if it was in any sense a work of Aristotle's, was probably a report of Plato's lecture), a treatise On ideas, a treatise on rhetoric referred to by Aristotle as the Theodectea, and a historical collection of "arts of rhetoric." With the possible exception of these, whatever that exception may signify concerning the development of his thought, all the works of Aristotle which survive in fragment or report and all the extant treatises seem to have been composed after his thirty-seventh year, that is, during the last twenty-six years of his life. The problem of discovering an evolution in his thought reduces therefore to two stages: first the identification of passages in the treatises which were written during the first thirteen years, and second, the discovery in those passages of doctrines different from those expressed in the works of the last thirteen years. Once a start has been made, of course, the order may be reversed, for once a character has been attached to works of either period, passages may be held to be late or early, and indeed doubtful works may be held to be genuine, because of their doctrine. Some of the dialogues are assigned to the earlier period, as On philosophy (since it is argued that the doctrine it expressed was largely Platonic and yet departed from Plato on important points), and the rest of the dialogues are hardly more than names with too little material attached to support much detail even of conjecture, On justice, On the poets, On wealth, On prayer, On good birth, On education, Herinthus, the Lover.
The works he wrote for Alexander On colonies and On monarchy would, on the other hand, if he wrote them, belong clearly to this period, since his tutorship fell within it; but we have no information concerning their contents.

The extant treatises were written during the second and third periods, the interval between the two visits to Athens and the period of Aristotle's work in the Lyceum. Scholars have recently engaged in the fascinating parts of those works, chronologically, making use for that purpose of relatively simple criteria: during the first period in Athens Aristotle followed Plato in doctrine, during the interval between the two visits he still followed him but was critical at points, during the second visit he had developed his own characteristic position; this distribution is somewhat simplified by the fact that the biological observations are assigned to the second period, and the third period is supposed to reflect the philosophic consequences of preoccupation with specific scientific problems and is therefore more empirical and skeptical in its predilections and preoccupations. The results of these labors are rather surprising: the works, as we have them, are snipped into rather small parcels which were arranged in their present sequence, it is inferred by Aristotle or more frequently by an editor, with no regard to chronology of composition and little concern with consistency of argument, since what seems, as one reads, a conclusion from premises, often turns out, as one reconstructs, to be an "earlier" Platonic position inconsistent with the "later" scientific considerations which one has read in the preceding book. It is significant that the lost works are as important and require almost as much space in these studies as the massive extant works, and therefore the points of philosophic argument and doctrine available for comparison or crucially relevant to the evaluation are few and seldom have more than very slight positive development in the mature expression of Aristotle's philosophy. The reader who approaches Aristotle for the first time, or who comes back to read some of his works for the first time, is presumably interested in what he says and why he says it; it is possible that there are major inconsistencies in his doctrine or in his expression of it or between it and the grounds on which he bases it, but it is well to look for the method of the Aristotelian investigations before establishing an order for their prosecution on supposed inconsistencies in their statement. In any case the reader cannot venture far in the literature about Aristotle without learning about the "order of the composition" of his works: the works are here to speak for themselves, and it seems more fitting therefore, by way of introduction, merely to list them and to describe them, particularly with respect to traits that bear on their inclusion in or omission from the present edition.

**THE ARISTOTELIAN CORPUS**

1. The Organon, comprising the logical works, consists of six treatises:
   a. Categories ( Categoriae).
   b. On interpretation (De interpretations).
   c. Prior analytics (Analytica priora).
d. Posterior Analytics (Analytica posteriora).

e. Topics (Topica).
f. On sophistical refutations (De sophisticis elenchis).

The authenticity of the last six chapters of the Categories was questioned in antiquity by Andronicus of Rhodes and is still doubted by some modern scholars; Andronicus likewise questioned the authorship of On interpretation, but it has been defended elaborately by modern scholars. The remaining four treatises are of undoubted authenticity. The Categories, On interpretation, and Posterior Analytics are reproduced in the text without omission; only the first of the eight books of the Topics and selections from the Prior Analytics and On sophistical refutations are included. Enough of the theory of syllogism and inference is retained in the selections from the Prior Analytics to serve as foundation for an understanding of Aristotle's theory of scientific demonstration, and enough of the Topics and On sophistical refutations to indicate at least in outline the differentiations of demonstrative, dialectical, and sophistical argumentation. A briefer (and somewhat different) treatment of the subject matters of the omitted portions of the last two treatises is to be found in the Rhetoric Book II, Chapters 23 and 24.

2. The natural Sciences are embraced in a group of books concerning progressively more complex functions and operations and requiring the elaboration and extension of principles, of concepts involved in them, and of their application, and the formulation progressively of more and more highly articulated and developed principles. They may be divided into the following scientific divisions which fit the ancient order of the treatises.

a. Physical Science

(1) Physics (Physica), considered undoubtedly genuine, and reproduced complete in this edition

(2) On the heavens (De caelo), considered undoubtedly genuine; the first, third, and fourth books are reproduced complete but most of the second book (chapters 1-12) has been omitted because of its concern with technical discussions of astronomical motions.

(3) On generation and corruption (De generatione et corruptione), considered undoubtedly genuine, and reproduced complete.

(4) Meteorology (Meteorologica), considered undoubtedly genuine, with the possible exception of Book IV, but omitted in its entirety from this edition, in spite of the importance of the problems it treats, because, within the limitations of space, the character, as well as the important theories, of the Aristotelian science is adequately presented in the preceding selections.

(5) On the world (De mundo), undoubtedly spurious treatise, written probably about 100 A.D., and associated with the treatise On the heavens during the Middle Ages under the joint title De caelo et mundo. Omitted.

b. Psychology

(1) On the soul (De anima), genuine and reproduced complete.

(2) The Short physical treatises (Prima naturalia), which are genuine, include the following treatises:
(a) On sense and its objects (De sensu et sensibili); omitted.
(b) On memory and reminiscence (De memoria et reminiscencia); included.
(c) On sleep and waking (De somno et vigilia); omitted.
(d) On dreams (De somniis); included.
(e) On prophesying by dream (De divinatione per somnum); included.
(f) On length and brevity of life (De longitude et brevitate vitae); omitted.
(g) On life and death (De vita et morte); omitted.
(h) On respiration (De respiratione); omitted.

(3) On breath (De spiritu), not by Aristotle, but it shows signs of his influence and may have been written by one of his early successors to the headship of the Lyceum, Theophrastus or Strato; omitted.

**c. Biological Sciences**

(1) History of animals (Historia animalium), a collection of observations of biological phenomena; considered genuine with the exception of Book X, and possibly Books VII, VIII, 21-30, and IX; short selections thought to have some general interest are reproduced in this edition.

(2) On the parts of animals (De partibus animalium), authentic; represented by short selections (including all of Book I in which Aristotle states his general views concerning the biological sciences).

(3) On the movement of animals (De motu animalium), early considered spurious, but more recently defended by scholars; omitted.

(4) On the progression of animals (De incessu animalium), undoubtedly genuine; omitted.

(5) On the generation of animals (De generatione animalium), authentic; selections.

(6) A number of short works, (Opuscula), all spurious, are grouped after the biological works: On colors (De coloribus), attributed to Theophrastus and Strato; On things heard (De audibilibus), attributed to Strato; the Physiognomy (Physiognomonica), written probably during the third century B.C.; On plants (De plantis), probably written by a Peripatetic during the time of Augustine; On marvelous things heard (De mirabilibus auscultationibus), a compilation of which the most ancient parts are probably from the biological works of Theophrastus while the most recent parts may have been composed as late as the sixth century; the Mechanical problems (Mechanica), written by an early Peripatetic, possibly Strato. All these treatises, since they are obviously not from the hand of Aristotle, have been omitted. Similarly, the treatise On indivisible lines (De lineis insecabilibus), which has been attributed to Theophrastus and to Strato, the treatise on The situations and names of winds (Veniendum situs et cognomina), ascribed to Theophrastus and the treatise On Melissus, Xenophanes, and Gorgias (De Melisse, Xenophane, Gorgia), a fragment on the history of philosophy probably based on a work by Aristotle, have all been omitted.
d. Problems (Problemata). Aristotelian in manner, though not by Aristotle, late in compilation (fifth or sixth century, A.D.) and of various periods over a span of centuries in composition, the work is concerned with a broad array of problems mathematical, optical, musical, physiological, and medical. Since it is spurious, it has been omitted.

3. First Philosophy.

Metaphysics (Metaphysica), a collection of treatises which seems to owe its name to Andronicus; the relation of its parts to each other and the order of their composition have been the subject of much scholarly speculation, but with the exception of Books II (a) and XI (K) their authenticity has not been questioned, and even those books have been judged spurious only to the extent of being thought student notes on Aristotle's statements. The work is reproduced complete.


a. Nichomachean ethics (Ethica nicomachea), genuine; reproduced complete.

b. The Great ethics (Magna moralia), probably of the second or third century B.C.; omitted.

c. Eudemian ethics (Ethica eudemia), considered by most scholars to be genuine and to have been written earlier than the Nichomachean ethics, but thought by others (among them Grant in the nineteenth and Shorey in the twentieth century) to be the work of a pupil, probably Eudemus. Omitted.

d. On virtues and vices (De virtutibus et vitiis), a reconciliation of Platonic and Aristotelian ethics, probably of the first century B.C. or the first century A.D. Omitted.

e. Politics (Politica), undoubtedly genuine; included complete.

f. Economics (Deconomica), sometimes attributed to Theophrastus; omitted.

g. The constitution of athens (Athenienseum respublica), genuine; omitted, in spite of its historical interest, since its contribution to philosophic doctrine is slight.

h. Rhetoric (Rhetorica). The authenticity of the third book has sometimes been suspected, but it is probably completely authentic. Books I and II are reproduced complete, and portions of Book III, particularly the chapters concerning style, have been omitted.

i. The Rhetoric to Alexander (Rhetorica ad Alexandrum), formerly thought the work of Anaximenes of Lampsaecus, but probably a Peripatetic work written at the beginning of the third century B.C. Omitted.

j. Poetica (De poetica), genuine; included complete.

4. ARISTOTLE AND HIS PREDECESSORS

Even if Plato's legendary reference to Aristotle as "the reader" did not make the scholarly qualities of the philosopher prominent in an ancient judgment of his method of work, they would be called to attention by the frequency with which Aristotle mentions the doctrines of previous philosophers, by the care with which he orders philosophers according to their doctrines, speculates on their influences on one another, and seeks motives for the directions of their inquiries and theories, and also by the expert precision he uses in long quotations, meticulous paraphrases, and speculative interpretations. These bits of information have been ransacked from Aristotle's works by historians of science and philosophy,