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ARISTOTLE THE SCHOLAR

Ingemar Düring

In 367, as a young man of seventeen, Aristotle came to Athens with the intention of devoting himself to theoretical studies. He died forty-five years later in Chalcis, his mother's home town, expelled from Athens by Demosthenes' followers, who after Alexander's death took vengeance on the man whom they regarded as the most prominent pro-Macedonian stranger in Athens.

In the interval between these two dates such remarkable events took place as to make an epoch in the history of the Mediterranean world. A culture which from a geographical point of view was provincial developed with explosive force into a world culture. Surely what first catches our imagination is Alexander's amazing achievements. Much more important, however, than the ephemeral empire created by him was the victorious progress of Greek thought. One of the most powerful driving forces in this cultural expansion was the activity carried on in the middle of the century in the schools of Athens. Here the fundamental forms of higher education were created. Here, too, the earlier type of brilliant but sporadic pioneer research was transformed into organized scientific collaboration, based on access to libraries and collections of study material, on archive research and field-work, and on the full use of a well thought-out scientific method. In this development Aristotle held a central position. In his life's work came together all the trends of the period before his time. From him and from the circle of his collaborators emanated an influence, the impact of which on Western civilization can hardly be over-emphasized.

Extraordinary achievements in science do not presuppose solely the creative power of individual scholars. The history of science and culture teaches us that, as a rule, great achievements are the outcome of a combination of brilliant minds and the favourable conditions of the age. This is particularly true if applied to Aristotle's life-work.

Aristotle was of Ionian birth and descended from a family of doctors. His father was the physician of Amyntas, king of Macedonia and grandfather of Alexander the Great. It is commonly said that Aristotle was strongly influenced by his father, and that his Ionic birth and his education in a physician's family

disposed his mind for empirical research. But we do not know anything more about his youth than the fact that, at a very early age, he was bereaved of his parents and that he was placed under a guardian with whom he stayed until he went to Athens. It is therefore safest to leave aside the speculations on Aristotle's birth for what they are worth and state that, at seventeen years of age, Aristotle found himself in the Academy in an unusually stimulating environment. Plato was now in his sixties and at the height of his creative power. His most famous pieces of dramatic and philosophical poetry, the *Phaedo*, the *Symposium* and the *Republic*, were a past chapter in his life. The leader of the Academy was no longer Socratic, but such as he is depicted in the well-known episode in the *Theaetetus*, absorbed in epistemological discussions.

Plato was not in Athens when Aristotle entered the Academy. In 367 Dion had invited him to Sicily and he stayed there during the whole of 366 and perhaps even longer, and returned there again a few years later. Apollodorus' Chronicle tells us that, during Plato's absence, Eudoxus was appointed scholarch of the Academy.[1] As a mathematician, astronomer and geographer, Eudoxus of Cnidos was one of the foremost scholars of his time, and now at thirty was in his ἀκμή. In later writings Aristotle mentions him with great respect and stresses his reputation as a man of noble character. It is very important to bear in mind that, at his most susceptible age, Aristotle came under the influence of this eminent scholar. As scholarch Eudoxus was expected to take up a position on the philosophical problems which at this time had come to the fore in the Academy, the theory of ideas and the basic ethical problems, especially the question of how to define and evaluate pleasure, ἡδονή, as an incentive of human actions. Now clearly Eudoxus was no philosopher. He was a typical scholar and φυσιολόγος with a bent towards positivism, and his chief aim was to find satisfactory explanations of natural phenomena, σώζειν τὰ φαινόμενα. It is probable that this expression, which we meet in many variations in Aristotle's writings and which, in fact, testifies to a certain attitude in his research work, was ultimately derived from Eudoxus. Eudoxus tried to reconcile Plato's theory of ideas with his own naturalistic conception of the world. This at once forced him to reject the Platonic conception of ideas as transcendent (χωρισταί) and eternal (ἀεὶ κατὰ ταὐτὰ ὡσαύτως ἔχουσαι, or, in Aristotle's language, ἄφθαρτοι). Instead he maintai-

[1] G. DE SANTILLANA, Isis 32, 1940, pp. 248—262, who quotes older literature. Especially important: H. KARPP, Untersuchungen zur Philosophie des Eudoxos von Knidos, diss. Marburg, Würzburg 1933, K. v. FRITZ, Philologus 82, 1927, pp. 1—26, and 87, 1932, pp. 40—62, 136—178.

ned that if ideas had to be accepted as effective causes of the existence of knowledge, they would have to be immanent in the particulars. This they cannot be without losing the essential character of Platonic ideas. Eudoxus' objections raised, or in any case intensified, the debate on the relation of the world of ideas to the phenomenal world, a standing theme in the Academy during the following twenty years.[1] Eudoxus' attempt at an explanation (the details of which I leave aside here) was doomed to failure, but it drew from the beginning Aristotle's attention to the main ἀπορία of the theory of ideas. In his evaluation of pleasure (ἡδονή) Eudoxus also took up a position widely differing from Plato's. It was quite natural to him to reason from the standpoint of a φυσιολόγος. He started from the contention that all living beings by nature strive after pleasure, and for this he gave a teleological explanation and concluded that pleasure must be a good. His hedonism was thus firmly rooted in his naturalistic view of life and very different from that represented by Callicles. In spite of disagreement on details, Aristotle later on adopted in principle Eudoxus' opinion on pleasure.[2] The difference between Eudoxus and Aristotle is quite clear. Aristotle acknowledged pleasure, not as τἀγαθόν, for he rejected the existence of an Absolute Good, but as ἀγαθόν τι (EN $1153^{b}5$), a good, a necessary ingredient of happiness.

I have mentioned these early relations with Eudoxus because of their significance for Aristotle's early development as a scholar. Among other scholars who, during the sixties, influenced the young Aristotle, Philistion must also be mentioned.[3] In a fragment of Epicrates, a writer of comedy, we have a caricature of a discussion in the Academy. »Trying to define natural phenomena, they classified animals, trees and plants in species and classes and inquired to what class the gourd belonged . . . and a Sicilian doctor who listened to them derided their silly nonsense.» The famous Sicilian physician was an old friend of Eudoxus, and Eudoxus had studied under him in Syracuse. Plato had invited him to come to the Academy, and he probably stayed there some years. We see that, during his apprenticeship years, Aristotle had ample opportunity of intercourse with

[1] See H. CHERNISS, The riddle of the early Academy, Berkeley 1945.

[2] Notice e.g. EN $1152^{b}19$ παιδία καὶ θηρία διώκει τὰς ἡδονάς and the answer given $1153^{a}28$ and $1172^{b}36$ (against Speusippus): those who deny that that which all creatures seek to obtain is good, are surely talking nonsense. It is certainly Eudoxus Aristotle has in mind when, in $1173^{a}4$, he admits the possibility that even the lower animals and not only beings endowed with intelligence possess τὶ φυσικὸν ἀγαθόν (the last word wrongly athetized by some editors); basically the same thought also in Phys. $199^{b}17$ and, still more important, in the early Protrepticus, Jamblichus p. 36,10 PISTELLI.

[3] W. JAEGER, Diokles von Karystos, Berlin 1938, p. 8 and 219. Also J. BIDEZ and G. LEOBOUCQ, REG 57, 1944, pp. 7—40.

two eminent scholars who, unlike Plato, were chiefly interested in natural science and familiar with the methods of empirical research.

Even outside the circle of scholars in the Academy, Aristotle found fuel for his intellectual curiosity. The foremost school of Athens in the eyes of the contemporary generation was headed by the orator Isocrates. In spite of the antagonism between Plato's school and his, there is no doubt that Aristotle was deeply influenced by Isocrates in the shaping of his theories of language and style and in his political philosophy.

Another factor, just as important as the personal intercourse with distinguished scholars, was the copious supply of literature available in Athens. Aristotle was probably the first great scholar who fully understood the importance of a thorough study of what his predecessors had laid down in writing and also the first for whom it was technically possible to realize such a programme. He collected a scientific library, which was later a model for those who organized the famous libraries in Alexandria. That his fellow scholars were struck by his new approach to studies is shown by the tradition that he was nicknamed »the reader», ἀναγνώστης. Of this literature we only possess the fragments collected by Diels and some treatises in the Corpus Hippocraticum. Aristotle had quite other opportunities. In many fields of science, learning and philosophy, important results had been reached. Vigorous forward moves had been made in three main directions: it is enough to mention three great names: Democritus, Hippocrates, Protagoras. The philosophical problems had been elaborated and refined, in metaphysics by the Eleatic school, in ethics by the sophists and by Socrates. The age was waiting for a man who could assimilate this material and who, with the attitude of a disinterested and objective scholar, could gain such a command of it as would enable him to achieve a synthesis of his own. The linguistic analysis of the sophists and the dialectic elaborated by the Socratic school had improved the language and moulded it into an efficient tool for advanced thinking. The conditions in the Academy admitted of research work free from all restraint, pursued solely for the sake of knowledge and with no other motive than that intellectual curiosity, that θαυμάζειν, which, in Aristotle's view and our own, is the chief incentive of science.[1] Communications were free in all directions and in Aristotle's life-time were extended far beyond the borders of the Mediterranean world. Pytheas reached Ultima Thule, Alexander India. In summing up we can safely maintain that external conditions were unusually favourable for a fruitful development of Aristotle's natural gifts.

[1] Metaph. *A* 2, 982b12, cf. Protr. fr. 11 WALZER, p. 49,9 ff.

Now add to this interplay of forces the extraordinary advantage of working in close contact with a man of Plato's stature. The twenty years of collaboration between these two giants of human thought, so essentially different in disposition and temperament, is one of the most beautiful examples in the history of science of a genius fertilizing another genius. The difference in age was considerable, 44 years. Even if the ancient tradition had not preserved an illuminating anecdote,[1] we should still have concluded that Plato early discovered the young student's ability. We possess a fragment of a poem which Aristotle wrote when he was about 50, which glows with a warm-hearted and unreserved homage to his old friend and master.[2] This admiration for Plato's personality by no means excluded strong and sometimes even intense differences of opinion in philosophical matters. Since JAEGER's well-known book of 1923 on Aristotle's development, there has been a tendency to draw a picture of the young Aristotle as entirely dependent on Plato.[3] It is a prevalent opinion that, up to Plato's death in 347, Aristotle not only accepted but also publicly defended Plato's theory of ideas [4] and his anti-hedonistic ethics. According to this view, he suddenly changed his opinions shortly after 347, presenting in the great dialogue *On Philosophy* a whole set of new opinions, often in outspoken opposition to what he had said himself in earlier writings. This view of Aristotle's development is not tenable. It is psychologically and *a priori* very unlikely, and, what is more important, it is not borne out by Aristotle's early writings or by the best ancient tradition. A penetrating analysis of Aristotle's writings from the period 360—350 shows that Aristotle never accepted the theory of ideas and that, in metaphysics, physics (in the ancient sense of the word) and ethics, at a very early stage of his development, he followed his own course. As a political thinker he is far more

[1] Philoponus in Procl. de aetern. mundi VI,27, p. 211,24 RABE: ὑπὸ Πλάτωνος τοσοῦτον τῆς ἀγχινοίας ἠγάσθη ὡς νοῦς τῆς διατριβῆς ὑπ' αὐτοῦ προσαγορεύεσθαι. Cf. Vita Marc., p. 428 ROSE.

[2] A. J. FESTUGIERE, La révélation d'Hermès Trismégiste II, 1949, pp. 219—20, with earlier literature. Entirely wrong is E. BIGNONE's interpretation, L'Aristotele perduto I, Firenze 1936, p. 216.

[3] BIGNONE I, p. 198, il platonizzante neofita, who followed (p. 168) le direttive dell' Accademia; this opinion repeated in numerous variations throughout his work, cf. II, p. 102. Further P. WILPERT, Zwei aristotelische Frühschriften über die Ideenlehre, Regensburg 1949; in the Protrepticus we find Aristotle still »werbend für das Lebensideal der Akademie und auf dem Boden der Ideenlehre», cf. p. 144.

[4] Reservations: R. PHILIPPSON, Riv. di Fil. 64, 1936, pp. 113—125, I. DÜRING, Eranos 35, 1937, pp. 120—145, E. KAPP, Mnemosyne 6, 1938, p. 188, E. FRANK, AJPh 61, 1940, p. 181. Also in K. v. FRITZ and E. KAPP, Aristotle's Constitution of Athens, New York 1950, Introduction p. 35.

impartial than Plato. As NEWMAN rightly says, he can hardly be said to have lived the life of a citizen. When the battle of Leuctra was fought, he was only thirteen. He had no personal experience of the oligarchic tradition. He judged the extreme democracy in Athens and the Spartan constitution with the same impartiality,[1] perhaps influenced by his friend and fellow-student Lycurgus, who after Chaeroneia came into prominence in Athens. When an eminent scholar like Sir ERNEST BARKER regards Aristotle's political writings as mere footnotes to Plato's *Republic* and *Laws*,[2] this is clearly a witty paradox of the same kind as when A. N. WHITEHEAD characterized the whole European philosophical tradition as a series of footnotes to Plato.[3] Quite another thing, and moreover only natural, is that, in discussing problems which Plato had dealt with, Aristotle always started from Platonic views and doctrines.

After Plato's death Aristotle went to Asia Minor and stayed three years in Assos and two years in Mytilene. Together with his young disciple Theophrastus he plunged himself into empirical biological research, especially marine biology. The deep insight into nature's workshop that these studies gave him had a considerable influence on his subsequent development as a scholar. His willingness to listen to and learn from Theophrastus, his junior by some fifteen years, is characteristic of his personality, always keen on collecting new information and widening his knowledge. Fifteen years later, he listened in the same way to the young astronomer Callippus and revised his cosmology in the light of his new theories. This readiness to assimilate new knowledge and revise old opinions and theories has left deep traces in his learned treatises, many of which are continually revised series of lectures.

When in 343/2 Aristotle was summoned to Mieza to become Alexander's teacher, Theophrastus accompanied him. Numerous Macedonian place-names in the biological writings tell us that they pursued their research in the field of natural sciences. But a new field of interest also opened up. The intimate relations with Philip and his court, especially his close friendship with Antipater, one of Philip's right-hand men in war and diplomacy,[4] gave him many opportunities to study, at close quarters, practical political problems which Plato and he himself had earlier ventilated theoretically. In Philip's expansive foreign policy he encountered problems that had not at all been discussed in the Academy or in

[1] See the remarkable passage Pol. $1333^{b}15-26$.

[2] Greek political theory, 4th ed. 1951, p. 382.

[3] Process and reality, 1929, p. 53.

[4] Thus Sir DAVID ROSS in the Oxford Cl. Dictionary.

Plato's dialogues. It was Isocrates who, in a great open letter in 346/5, had directed an appeal to Philip to take the lead and unite Greece in an effort to conquer the East, and had drawn up the outlines of the political programme which Philip and Alexander afterwards carried out point by point. Now it is often assumed that it was Aristotle who inspired and guided Alexander, and many legends have been woven about the famous philosopher as *spiritus rector* of the future conqueror of the world. Alas, the plain truth is quite different.[1] At this time of his life Aristotle was not particularly famous. And what is more important is this. We can find here and there in his *Politics* and other writings [2] a few passages which reflect his experience of Macedonian politics, but it is indeed a surprise to see how faint this influence was. In principle his political philosophy remained unaltered. Like Plato and Isocrates he never freed himself from the national Greek prejudice against the barbarians,[3] and his social and political outlook was determined by the conditions prevailing in the small city-state. We can say that, in his political philosophy, Aristotle was a *laudator temporis acti*. Alexander's revolutionary conception of the brotherhood of man and the unity of mankind and of his mission as a reconciler of the peoples of the world [4] never entered Aristotle's head, and when later he heard about it, he did not understand it and opposed it. But, as Eratosthenes says, Alexander did not follow Aristotle's advice.[5]

Aristotle spent three years with Alexander. We do not know what he did or where he was after that period, during the politically troubled years from Chaeroneia to the assassination of Philip. When in 339 Speusippus died, the young members of the Academy wanted to elect Aristotle to the scholarchate, but »he

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[1] Well summarized by W. W. TARN, Alexander the Great I, 1948, p. 2.

[2] E.g. EN $1181a_{12}$ διὸ τοῖς ἐφιεμένοις περὶ πολιτικῆς εἰδέναι προσδεῖν ἔοικεν ἐμπειρίας, cf. for the opposite view Protr. fr. 13 WALZER, p. 54,2, and the illuminating comments by v. FRITZ and KAPP, op.cit. in note 9, p. 33 ff.

[3] Plato Rep. 470 C πολεμίους φύσει εἶναι, Isocr. Panegyr. 184 τοὺς μέν φύσει πολεμίους καὶ πατρικὰς ἐχθρούς, Arist. Pol. *A* $1256b_{25}$ ἄνθρωποι πεφυκότες ἄρχεσθαι, $1252b_9$ βάρβαρον καὶ δοῦλον ταὐτὸ φύσει.

[4] Plut. de fort. Alex. I 8,330 D ἕνα δῆμον ἀνθρώπους ἅπαντας ἀποφῆναι βουλόμενος, and I 6,329 C κοινὸς ἥκειν θεόθεν ἁρμοστὴς καὶ διαλλακτὴς τῶν ὅλων νομίζων. See W. W. TARN, op.cit. II, pp. 399—449, and FESTUGIÈRE, op.cit. pp. 181—195. The most significant event, a premature realization of an idea about the fulfilment of which mankind is still dreaming, was the foundation, in the year 316, of the City of Heaven, Οὐρανόπολις, on the neck of the Athos peninsula, by Alexarchus, one of Antipater's sons, a world-state in miniature with a language of its own (Athen. III 98 E).

[5] Plut. de fort. Alex. I 6 = fr. 658 ROSE οὐ γὰρ ὡς Ἀριστοτέλης συνεβούλευσεν αὐτῷ. After Callisthenes' death the relations with Alexander were strained.

was then in Macedonia».[1] He probably stayed there until, in 336, he definitely returned to Athens and founded his own school in the Lyceum. He was now a man nearing fifty, a mature scholar.[2] His books tell us a good deal about his approach to study and about his personality as a scholar.

We very often find him expressing the pleasure it gives him to see, grasp, and acquire new knowledge. The beautiful phrase[3] μεθ' ἡδονῆς ἡ προσεδρεία, »it is pleasant to sit down to it», is a characteristic expression of his love of a scholar's labours and of persevering assiduity. Famous are the words with which he begins his *Metaphysics*: »all men by nature desire to know». The knowledge he has in mind is one which almost without exception lacks practical importance. Aristotle clearly comprehended the paradox that man is a being so disposed as to enable him to interest himself passionately in theoretical problems without any value for the struggle for life. From this source springs science. It is further characteristic of his rationalistic attitude that, in this desire for knowledge for its own sake, he saw the supreme quality and function of the human mind, that which removes man furthest away from the animals and brings him nearest to god.[4] It would, however, be a mistake to regard Aristotle as a closet-scholar. It is indeed remarkable that this master of abstraction and metaphysical deduction always demonstrates his sense of reality. The discussion of ἀπορίαι, so typical of his style,[5] always proceeds from a confrontation with current opinion, κοιναὶ ἔννοιαι, and the theories of specialists. He freely illustrates his arguments with examples and ἐνθυμήματα from everyday experience. He trod new paths in organizing scientific collaboration and team-work. He had records made of public archives and monuments. He sent out young students on field-work, instructing them to collect material and gather information from

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[1] Acad. philos. index Herc., MEKLER 1902, p. 38 οἱ δὲ νεανίσκοι ψηφοφορήσαντες ὅστις αὐτῶν ἡγήσεται Ξενοκράτην εἵλοντο τὸν Χαλκηδόνιον, Ἀριστοτέλους μὲν ἀποδημήσαντος εἰς Μακεδονίαν. PH. MERLAN, Trans. of the Am. Philol. Ass. 77, 1946, pp. 103—111, saw the importance of this reliable piece of information, which proves that, at forty-five, Aristotle was still considered as the most prominent member of the Academy.

[2] It is amusing to notice that, as a πεντηκοντούτης, he thus fulfilled Plato's requirements, Rep. 540 A: »at the age of fifty those who have survived the tests and approved themselves altogether the best in every task and form of knowledge must be brought at last to the goal», an opinion echoed by himself Rhet. II 14,1390b11: »the mind is most fully developed at about forty-nine years of age.» The allusion to the popular belief in seven-year periods is obvious.

[3] Protr. fr. 5 a WALZER, p. 30,20.

[4] Protr. fr. 6 WALZER, p. 34,6—13, also p. 36,7 PISTELLI, not included in WALZER's collection, and EN 1178a2—3

[5] Metaph. *B* 1, 995a33—b2, 996a15—17.

hunters, fishermen and, in general, from experienced people.[1] He stresses how necessary it is for the scholar to »make selections from written books and draw up reference tables of arguments on each several kind of subject, putting them down under separate headings, e.g. On Good or On Animal, and systematize those references and indicate the opinions of individual thinkers».[2] This was the beginning of what was later called doxography, an important discipline in antiquity. During Aristotle's time and, to a considerable extent, under his immediate direction, the foundations were laid for a classification of the elements of human knowledge and of the different branches of science and learning. Around Aristotle flocked together numerous scholars, coming from all parts of the Mediterranean world. The first scientific textbooks were produced in his school. He gave final shape to the objective and unemotional language of science.[3] He systematized earlier terminology, and in many fields he created a new terminology. Keenly alive to the fact that each branch of science needed its own methods, he stimulated his fellow scholars to start research in new and hitherto unknown fields or study. This was at the same time the first step towards a specialization which, later on in Alexandria, resulted in a departmentalization of studies and research. Aristotle was conscious of the fact that, during his time, science and philosophy were advancing enormously,[4] and he was proud of it. But he never forgot the Socratic heritage, the deep respect for the boundless infinity of knowledge.[5] Aristotle was an absolute innovator with his historico-critical method,[6] which enabled him to fit in his own results in a wider perspective. It is perhaps not surprising that, in using this new instrument, he made many grave mistakes, on which I shall comment later. In introducing a new problem he regularly begins with a survey of the opinions of his predecessors, with special emphasis on their solutions and the difficulties they present. »It is well to examine these

[1] For (EN 1143^{b}12) »the inproved assertions and opinions of experienced and elderly people or of prudent men are as much deserving of attention as those which they support by proof. For experience has given them an eye for things, and so they see correctly», διὰ τὸ ἔχειν ἐκ τῆς ἐμπειρίας ὅμμα ὁρῶσιν ὀρθῶς.

[2] Top. 105^{b}11, cf. 142^{b}32 and B. EINARSON, AJPh 57, 1936, p. 38, note 23.

[3] I. DÜRING, Aristotle's de part. an., Göteborgs Kungl. Vetenskaps- o. Vitterhets-Samhälles Handl. VI A, vol. 2:1, Göteborg 1943, p. 72 on Aristotle's scientific prose, and *eiusdem* Aristotle, the founder of scientific method and language, Lychnos 1943, pp. 43—66.

[4] See Protr. fr. 8 WALZER, but this fragment probably belongs to the Περὶ φιλοσοφίας, and the words in Cic. Tusc. III 69 *brevi tempore philosophiam plane absolutam fore* cannot be Aristotelian. For the opposite view see BIGNONE II, p. 340, and for quite new aspects, the interesting discussion in FESTUGIERE, op.cit., Append. I.

[5] Metaph. α 993^{a}30—^{b}3, De caelo 270^{b}19—21, EN 1098^{a}24—26.

[6] See Top. 105^{b}11 quoted above, in note 25.

difficulties (ἀπορίαι), since the refutations advanced by those who challenge them are demonstrations of those theories that are opposed to them.»[1] His is a remarkable capacity for setting problems, formulating them rationally and penetrating them perseveringly. The object of his aporetic discussion is to endeavour to relate the fact or phenomenon he is inquiring about to a rational series of causes,[3] enabling him to give a comprehensive explanation of a whole complex of related phenomena, or, in his own language, συνορᾶν τὰ ὁμολογούμενα (De gener. $316^{a}5$). He likes to express himself in the potential mood, and he created or cultivated a number of impersonal idioms, intended to keep himself as speaker in the background. There is therefore good reason to prick up one's ears when, in a chain of arguments, one suddenly comes upon an authoritative ἡμεῖς δέ φαμεν, for such passages are always important.[3] When he has reached a final conclusion, he is anxious to add necessary reservations in order not to seem too dogmatic. This is especially noticeable in his ethical speculations, where he is very careful and always has a keen eye for human weakness.[4] To do him justice one must recognize his balanced judgement and his power of weighing impartially different opinions against one another, of raising his eye from the small special problem to look out[5] over wide horizons, of erecting great constructions of thought without losing contact with reality. In our eyes it is a matter of course to appeal to experience and to rely on observed facts, and compared with our standards, Aristotle's empiricism is certainly very moderate. It is more often an appeal to books and hearsay evidence than to facts observed by himself. Yet his methods decidedly imply a great advance. Let us hear what he says in a polemic against Plato:[6] »Lack of experience diminishes our power of taking a comprehensive view of the admitted facts. Hence those who dwell

[1] EE $1215^{a}7-8$, the principle defined Top. $113^{a}24$.

[2] A favourite expression is ἵσταταί που, »it is a stop somewhere», somewhere we reach the final cause, Protr. fr. 12 WALZER, p. 51,6, Anal.post. $72^{b}10$, $83^{b}35$, $95^{b}22$, Metaph. *B* 4, $1000^{b}28$, EN $1094^{a}19$, $1142^{a}27$.

[3] E.g. Anal. post. *A*3, $72^{b}18$ (late), Phys. *A*8, $191^{a}34$ and $^{b}13$, on the significance of which see F. NUYENS, L'Évolution de la psychologie d'Aristote, 1948, p. 66.

[4] Already noticeable in Protr. fr. 9 WALZER, p. 42,21 τοῖς μὲν οὖν πολλοῖς πολλὴ συγγνώμη, EN $1109^{a}29$ and $^{b}18$, »we must often content ourselves with ὁ δεύτερος πλοῦς, cf. $1104^{a}8-11$. But also in the biological works, PA $677^{a}17-19$, $664^{a}18$, also Pol. $1255^{b}2-4$ and $1259^{b}1-4$.

[5] From the ἀκρόπολις τῆς φιλοσοφίας, Protr. fr. 10c WALZER. The phrase has survived only in Latin, in Augustin. de trin. 14,19,26 *in his arcibus* (p. 47,10 WALZER) and Lucr. II 8 *edita doctrina sapientum templa serena*, see BIGNONE II, p. 94. Is this the origin of the »ivory-tower»?

[6] De gener. et corr. $316^{a}5$, cf. Phys. $253^{a}33$ »to disregard sense-perception in an attempt to show this theory to be reasonable, would be an instance of intellectual weakness», cf. De caelo $293^{a}25$, $308^{b}13$, EN $1104^{a}13$, and the probably very early passage Pol. $1328^{a}19$.

in intimate association with nature and its phenomena grow more and more able to formulate, as the foundation of their theories, principles such as admit of a wide and coherent development: while those whom devotion to abstract discussions has rendered unobservant of the facts are too ready to dogmatize on the basis of a few observations.»

Aristotle's power of vigorous synthesis has always been misinterpreted, and since antiquity there has been a tendency to ascribe to him a philosophical system, a tendency which culminated in St. Thomas Aquinas.[1] The conception of such a σύστημα was unknown to Aristotle. What he attempted to reach was a general integration of problems, not a closed system of dogmatized knowledge. He was bewitched by the idea of tracing the final cause behind a series of phenomena and of explaining almost everything from this teleological standpoint. Yet even here he sometimes checks himself: »there is no reason for always trying to discover a purpose».[2] Most important of all is the fact that he never became rigid. He was always prepared to revise his opinion in the light of new facts.[3] In his surviving writings, which date from a period of about forty years, we can see how he gradually shifted his opinions. To understand and unravel this development of thought from the early years in Plato's Academy till his time as *primus inter pares* in the Lyceum has, since the 1920's, been the main object of Aristotelian research. A lasting result of thirty years of intense discussion of this problem is that the hope of finding a doctrinal unity in Aristotle, in the sense in which it was understood by the scholastics or by EDUARD ZELLER or LÉON ROBIN, has been for ever dashed to the ground.[4] It is true that »the attempt to trace the development of Aristotle's thought is still in its infancy»,[5] but we are steadily building up a new picture of Aristotle. We are in the process of rediscovering Aristotle as he was, a brilliant thinker with the limitations of his age, a professor rather than a philosopher, a scholar always ready to learn more and to revise his opinions, a man with a burning passion for truth.

We are very far from seeing in him an infallible authority, or, to speak with the scholastics, *regula natura, iustitiae norma, veri pulcherrimi forma.* Our eyes are

[1] See I. DÜRING, Von Aristoteles bis Leibniz, Antike und Abendland IV, 1954. Also (in Swedish) in Lychnos 1952, pp. 55–95.

[2] See PA $677^{a}16-19$, cf. EN $1098^{b}33$.

[3] The passage De gener. an. $760^{b}3$, dating from his last years, is, as far as I know, his most pointed pronouncement of this principle.

[4] A. MANSION, in Rev. néo-scol. de philos. 29, 1927, and in his Introduction à la physique Aristotélicienne, 2:e éd., Louvain 1946, is more cautious: (une étude doctrinale d'Aristote) est, à l'heure actuelle, impossible ou, du moins, prématurée.

[5] Thus Sir DAVID ROSS in his Aristotle Selections, New York 1938, p. XIV.

open for his shortcomings. Let us listen to one of his most severe critics in modern times, the Sorbonne professor LÉON ROBIN.[1] According to him Aristotle was a typical sophist, more a propagator of other's opinions than an original thinker. What Aristotle achieved is the outcome of a didactic, rather than of a philosophic mind. The dominant feature in his writings is a presumptuous dogmatism. He catches the auditor in a network of syllogisms and in a learned apparatus which impresses him by its precision and stringency, but which is nothing but a disguise protecting a sterile argument. He is *une machine à penser*. His work has a splendid façade, but in the building prevails a profound disorder. As a thinker he is undecided, as a philosopher he makes a halt before the real difficulties, as a scholar he is a petty controversialist. He has taken nearly all his material from others, and his own contribution is mainly the synthesis. Thus ROBIN. The American scholar HAROLD CHERNISS,[2] on the basis of an extremely penetrating philological and historical analysis of the way in which Aristotle deals with his predecessors, especially Plato, has strongly censured his methods and questioned his honesty as scholar. His main thesis is that Aristotle very often misinterpreted Plato and other philosophers and contemporary scholars, or even that he quite consciously distorted their opinions.[3]

Every sentence in ROBIN's criticism, as summarized above, contains a grain of truth, and CHERNISS has proved beyond all doubt that, in many cases, Aristotle made mistakes, when, for the first time in history, he consistently applied a historical approach to philosophical problems. I believe, however, that the critics have gone too far when they contend that Aristotle did this out of bad judgement or ill-will or that, if measured by the standards of his own time, he displayed bad scholarship. The qualities which, with so much skill and erudition, ROBIN and CHERNISS have brought out into full relief, are the seamy side of his character: they show us the less attractive aspects of his richly faceted personality, and they should be admitted into the picture so that we may escape the danger of unjustified idealization.

In concluding this sketch of Aristotle's personality as a scholar, I would like

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[1] Aristote, Paris 1944, p. 291 ff.

[2] Aristotle's criticism of presocratic philosophy, 1935. Aristotle's criticism of Plato and the Academy I, 1944. The riddle of the early Academy, 1945.

[3] Riddle, p. 51: »this is Aristotle's invariable procedure: to recast into the terms of his own philosophy the statements of other philosophers and then to treat as their »real meaning» the implications of the statements thus translated». In operating with the conception »his own philosophy», CHERNISS, however, sometimes proves his argument from another which rests on it for proof — the dangerous vicious circle.

to dwell on what ROBIN has called his *indécision troublante* and ANDRÉ BREMOND[1] *le dilemme Aristotélicien*, and venture an explanation.

When at seventeen Aristotle began his studies in Athens, he came straight into a serious discussion on the nature of being. In the Academy he was encouraged to turn himself away from the empiricism of the naturalists and »take refuge in the world of thought and through it behold the true nature of things».[2] The environment in the Academy was such as to make his thinking gravitate towards metaphysical speculation. His intercourse with Eudoxus and Philistion and his wide reading, on the other hand, brought him into immediate contact with the latest achievements in empirical science and medicine, and it is not unlikely that he had a natural bias towards those domains of knowledge. Quite obvious is his admiration of Democritus. The philosopher from Abdera is at the opposite philosophical pole to Plato, and Plato never mentions him. Aristotle frequently quotes him and always with high esteem. It is highly probable that, in the discussions in the Academy, Aristotle at an early stage developed a critical attitude. We need not pay too much attention to the slanderous tradition,[6] but there is no smoke without fire. As to Plato's alleged dictum »he kicks me like a colt», we must say: *se non é vero é ben fatto*. In his early writings, the *Topics*, the first two books of the *Rhetoric*,[4] and the *Protrepticus*, we are already confronted with an Aristotelian protophilosophy [5] with unmistakably independent traits and in fundamental opposition [6] to Plato. Just as Plato was possessed with his transcendent, imperishable and unchangeable ideas, so Aristotle was possessed with the idea that movement and change were the primary phenomena. In his treatise *On Ideas* Aristotle took up for discussion the main problem of the Academy. One of the most remarkable results of recent research [7] is that

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[1] Archives de philosophie 10:2, 1933.

[2] Phaedo 99 E εἰς τοὺς λόγους καταφυγόντα ἐν ἐκείνοις σκοπεῖν τῶν ὄντων τὴν ἀλήθειαν.

[3] E.g. the story of the dissension in the Academy in 361—360, during Plato's journey to Sicily together with Speusippus and Xenocrates, when Heracleides was acting-scholarch, see Ael. Aristid. or. 46, II 324 DINDORF, cf. Ael. Var.hist. IV 9, Vita Marc. p. 428,8 ROSE and Vita vulg. p. 438.15,

[4] Book II 23—24 are manifestly later additions, and it is in this section we find those passages which are generally quoted as proving that the Rhetoric was written after 335. Apart from this substantial addition, there are, both in the Topics and the Rhetoric I—II, small interpolations, made during repeated revisions of these popular sets of lectures.

[5] See G. BOAS, AJPh 64, 1943, pp. 172—193.

[6] See E. FRANK, AJPh 61, 1940, pp. 34—53, 166—185.

[7] P. WILPERT's book, quoted in note 8, based on a number of previous contributions. Of equal importance is that new light has been shed on Aristotle's notes on Plato's lecture Περὶ τἀγαθοῦ (see Plat. ep. VII 341 B, and E. FRANK, AJPh 61, 1940, p. 175, note 49), but we should

we now possess large fragments of this early treatise. The old opinion, from time to time revided,[1] that Eudoxus' criticism of the theory of ideas and the main arguments contained in Aristotle's Περὶ ἰδεῶν were answered by Plato in the *Parmenides*, has always been rejected, in spite of its intrinsic probability. Recent advances in our knowledge of Aristotle's early writings render it necessary to reconsider the whole problem without conservative prejudices. In any case it is a fruitful working hypothesis to treat all the material which tradition has preserved to us and which, with any degree of certainty, can be dated to the period between Plato's return from his third journey to Sicily in 360 and his death in 347 as contributions to a continuous discussion between the members of the Academy.[2] The four earliest Aristotelian writings of which we know enough to enable us to analyse his attitude to the theory of Ideas are the Περὶ ἰδεῶν, the *Topics*, the *Protrepticus*[3], and his notes on Περὶ τἀγαθοῦ. It is impossible to find in any of these a single argument in favour of the current opinion that Aristotle believed in the theory of ideas. But it is certainly wrong to say with G. Boas [4] that it was never one of his major problems. On the contrary, he could never free himself from this problem [5] and he suggested successively various solutions to it, culminating in his hyle-morphistic concept of nature and the creation of the new word ἐντελέχεια. The interesting thing in this development is that he started from ideas which Plato had let fall in passing but had never cared to develop, and that, in the metaphysical sphere, Plato's influence was so overwhelming that he never succeeded in freeing himself from it entirely. Guthrie [6] gives a very striking example of Aristotle

observe that this lecture was held between five and ten years after the debate contained in the Περὶ ἰδεῶν and the *Parmenides*.

[1] Lastly by R. Philippson, Riv. di Filol. 64, 1936, pp. 113—125, and I. Düring, op.cit. in note 9, rejected, although seemingly with some hesitation, by Cherniss, Crit. of Plato I, p. 489. Cf. E. Frank, op.cit. in note 49: »The question has always been raised whether it is mere chance that the youngest participant of this dialogue whom Parmenides addresses in presenting his masterly dialectic is also called Aristotle; but this cannot be decided with certainty.» Ph. Merlan, Trans. of the Amer. Philol. Ass. 77, 1946, p. 163: »It will forever be tempting to see in Aristotle, one of the interlocutors in Plato's *Parmenides*, Aristotle the philosopher. Alas, not a bit of evidence can be produced in favor of such an interpretation.» Of earlier literature on this problem, A. Diès, Autour de Platon, pp. 332—351, is important.

[2] It is necessary to include Isocrates' *Antidosis* and the pseudo-Isocratean *To Demonicus*.

[3] See I. Düring, Problems in Aristotle's Protrepticus, Eranos 52, 1954, pp. 139—171.

[4] AJPh 64, 1943, p. 178.

[5] It is still a problem for Theophrastus in his Metaphysics: ἀρχὴ δὲ ποτέρα συναφή τις κκαὶ οἷον κοινωνία πρὸς ἄλληλα τοῖς τε νοητοῖς καὶ τοῖς φύσεως ἢ οὐδεμία, ἀλλ' ὥσπερ ἑκάτερα κεχωρισμένα συνεργοῦντα δέ πως εἰς τὴν πᾶσαν οὐσίαν.

[6] In his introduction to De Caelo, Loeb Library, 1953, p. 35.

»taking himself to task for the materialistic trend of his earlier arguments and rousing his Platonic conscience to activity». He is often in this dilemma, deeply rooted in a fundamental divergence of opinion between him and Plato. To Plato the object of knowledge was the Unchangeable Being, and between his world of ideas and the phenomenal world lay the abstractions of mathematics which enabled man to catch a glimpse of the ideas. Aristotle approached the problem from the opposite end, from a common-sense conception of τὰ φαινόμενα. Matter, or as he preferred to say, nature is an ever-moving force without beginning or end, and time is the ἀριθμὸς (or λόγος) κινήσεως, the non-spatial dimension of movement.[1] In the admirable eighth book of the *Physics* Aristotle reached a final solution of the problem of movement, and for once he is not undecided: »this hypothesis alone solves all the problems and brings our whole discussion of the nature of movement to a conclusion».[2] In their attitude to mathematics there is this fundamental difference between Plato and Aristotle. To Plato mathematics was a method by which he could attain knowledge of true being. Aristotle held that the phenomenal world was governed by mathematical laws and that only through an intense study of the phenomena could we find out these laws. He believed that both Democritus and Plato had fallen victims of the same error, although from opposite starting-points. Democritus had regarded everything as matter, even thought itself. The relation between mental and physical phenomena was, in Aristotle's opinion, similar to the relation of the concave and convex, i.e. two aspects of the same phenomenon. He claims to have been the first to recognize the psycho-physical nature of mental phenomena. But when finally he formulated his theory of matter as a »complete reality», ἐντελέχεια, the components of which were δύναμις and ἐνέργεια, he refrained from extending its consequences to his noetics. He maintained that reason alone has nothing to do with bodily activities, that it is divine and enters the body from outside, θύραθεν εἰσιών. These words,[3] written more than twenty years after Plato's death, tell us something essential about Aristotle's dilemma. He did not develop from a devoted Platonist, soaked in metaphysical and ethical speculation, through a middle period of undecided vacillation, into a scholar absorbed in empirical and factual research and sure of his ground. NUYENS[4] who

[1] Thus F. CORNFORD, The Physics, Loeb Library, 1929, p. 218^{b}21 ff.

[2] See K. REIDEMEISTER, Das exakte Denken der Griechen, Hamburg 1949, especially p. 75 ff.

[3] De gener. an. 737^{b}28 and 744^{b}22. In book III of De anima we find the doctrine of νοῦς alongside the psycho-physical conception which contradicts it.

[4] F. NUYENS, L'Évolution de la psychologie d'Aristote, Louvain 1948 (thesis in Dutch 1939), with the critical remarks put forward by J. LÉONARD, Le Bonheur chez Aristote, Acad. Belg. Mémoires de la Cl. des lettres, 44:1, 1948, Appendice III.

followed up JAEGER's main thesis and tried to solve the problem by applying one single criterion to all[1] the Aristotelian writings, showed the limits of the genetic method. Aristotle has a peculiar method of approaching one and the same problem successively from different angles, ἄλλην ἀρχὴν ποιησάμενος, and in each instance he often consciously omits all references to other aspects of the question. MANSION[2] called this »successive approximations». Now, in applying the analytic or genetic method, it is tempting to isolate such passages and interpret them as representing different stages of development of opinion. The truth is that, in Aristotle's writings, we can always expect to meet side by side the two dominant trends: Platonic abstraction and biological empiricism.[3] Aristotle never distinguished descriptive natural science (ἱστορία) from the philosophical interpretation of its results (αἰτίαι), the enquiry into the causes and essence of things, and probably never fully grasped the importance of making such a distinction. The distance to Plato is no sure argument for dating any passage.[4] In each separate field of study he gradually widened his horizon and revised his opinions accordingly, and it is not likely that this development ran parallel in all fields. It is but natural that the atmosphere of the Academy and Plato's dominating personality should strongly influence his youthful mind. But from the beginning he also wrestled with and fought against Plato's conception of being and his approach ἀπὸ τῶν ἀρχῶν, for to Aristotle it always seemed more natural to proceed in the other direction, ἐπὶ τὰς ἀρχάς.[5] His subsequent studies led him far away from Plato and metaphysical problems, to empiricial research in biology and other fields. As he grew older and took up the metaphysical and ethical problems for renewed examination, he returned to Platonism, especially in one central point: the doctrine of the supremacy of the intellect.[6] A precious fragment,[7] probably extracted from a letter to his

[1] Curiously enough NUYENS omitted the Rhetoric.

[2] Op.cit. in note 39.

[3] MANSION, op.cit., quoting the famous passage PA 644b31—33, has some fine comments on the privilege of a brilliant mind to combine opposite trends into a higher synthesis.

[4] Thus convincingly W. WILI, Probleme der aristotel. Seelenlehre, Eranos-Jahrbuch 12, Zürich 1945.

[5] Cf. Plato Rep. 521 C: »to turn the soul from a day whose light is darkness to the veritable day, that ascension to true being which we affirm to be true philosophy». In finding our way to the first principles, we are guided by ψυχῆς ὄμμα (533 D). It is characteristic that Aristotle says διὰ τὸ ἔχειν τὸ ἐκ τῆς ἐμπειρίας ὄμμα ὀρῶσιν ὀρθῶς, cf. EN 1143b14 and 1144a30.

[6] Beautifully formulated by the aged Plato in Laws 875 C ἐπιστήμης γὰρ οὔτε νόμος οὔτε τάξις οὐδεμία κρείττων, οὐδὲ θέμις ἐστὶ νοῦν οὐδενὸς ὑπήκοον οὐδὲ δοῦλον, ἀλλὰ πάντων ἄρχοντα εἶναι.

[7] Demetr. de interpr. 144 = fr. 668 ROSE. Se also J. BIDEZ, A propos d'une manière nouvelle de lire Aristote, Acad. Belg. Bull. de la Cl. des lettres 5:30, 1944, pp. 43—55.

old friend Antipater, written after he had fled from Athens and shortly before his death, proves that the old scholar still adhered to the ideas which he had expressed so eloquently in his early dialogues and in the *Protrepticus:* ὅσῳ γὰρ αὐτίτης καὶ μονώτης εἰμί, φιλομυθότερος γέγονα.