CHAPTER I

THE ACADEMY AT THE TIME OF ARISTOTLE'S ENTRANCE

ACCORDING to the evidence of his biographer, which is reliable, Aristotle wrote to King Philip of Macedon that he had spent twenty years with Plato Since he was a member of the Academy down to the time of the latter's death (348/7), he must have entered it during 368/7 At that time he was a youth of about 17 years [1] When he left he was approaching his forties

These acknowledged facts have aroused far too little remark That a man of such profoundly original talent should have remained for so long a period under the influence of an outstanding genius of a totally different complexion, and should have grown up wholly in his shadow, is a fact without parallel in the history of great thinkers, and perhaps of all independent and creative natures whatever There is no safer index to a disciple's powers of assimilation, and at the same time to the strength and sureness of his creative instinct, than his relation to a great master to whom he dedicates his youthful affections The impersonal spiritual force that works through such a master frees the pupil's powers by constraining them, and ripens him until he is ready to stand alone Such was Aristotle's intellectual development 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 Thereafter, to retreat from that level would have been to turn the wheel of fate backwards

Right down to the present day, Aristotle's philosophical relation to Plato has frequently been supposed to be like that of a modern academic philosopher to Kant That is to say, in a

[1] The letter is mentioned in the Vita Marciana (Rose, *Aristotelis Fragmenta*, p 427, l 18, see also Ps Ammon, ibid, p 438, l 13, and the Latin trans, p 443, l 12) The figure 17 does not appear in this passage, but had been linked up with it at least as early as the Alexandrian biographer, cf Dionys Hal *ad Amm.* 5 (R 728)

mechanical way, he accepted certain bits of his master's doctrine and rejected others. Plato's uniqueness, and his pictorial way of philosophizing, naturally gave rise to the suspicion that Aristotle failed to understand his archetype. It was supposed that he missed the mythical, the plastic, and the intuitive in Plato, and, because they omitted these fundamental aspects, his criticisms seemed almost entirely beside the point. Being thoroughly abstract, they really involved a transition to another genus (μετάβασις εἰς ἄλλο γένος).

What a shortsighted and pettifogging charge! It is clear from several passages that Aristotle was well aware of this feature in Plato's thought before he ever began to criticize him. How could the founder of psychology, and of its application to intellectual and aesthetic processes, possibly have been ignorant of it? It was precisely Aristotle who first described, in short and telling words, the poetic and prophetic elements which the moderns suppose they were the first to discover in Plato, and his definition of the aesthetic nature of the dialogues is better than most of theirs. He never for a moment imagined that in describing the logical and ontological difficulties of Plato's theory he had disposed either of its historical significance or of the absolute value of its contents. This assertion does not need to be supported by quotation. It is self-evident to any one who knows that Aristotle did not approach Plato's views in a cold and critical spirit, but was at first spellbound for many years by the overwhelming personal impression that they made on him as a whole.

It is, however, one thing to understand, and quite another to want to imitate and perpetuate in its entirety, such a complicated world as Plato's, so manifold in its intellectual tendencies and so individual in its presentation. Here is where profitable and unprofitable Platonism part company. It is unprofitable to cultivate an 'aesthetic' and insincere aping of the Platonic spirit, making great play with its favourite images and expressions. It is profitable to work at its problems, and this, which Plato himself recognizes as the most important thing, necessarily leads beyond him. It is also profitable to realize the onesidedness of our modern thought, inevitable though this onesidedness is, by surveying with Aristotle the contrast between our sciences

and Plato's irrecoverable spiritual unity. Aristotle's attitude to this problem was different at different times. Beginning by naïvely trying to imitate and continue the Platonic manner, he came to distinguish between the abiding essence and the outward formulation, the latter of which is either determined by the accidents of the age or unique and so inimitable. He then sought to remove the form while retaining the essence. From being a perfected form the Platonic philosophy became to him the matter or ὕλη for something new and higher. He had accepted Plato's doctrines with his whole soul, and the effort to discover his own relation to them occupied all his life, and is the clue to his development. It is possible to discern a gradual progress, in the various stages of which we can clearly recognize the unfolding of his own essential nature. Even his latest productions retain some trace of the Platonic spirit, but it is weaker than in the earlier ones. His own notion of development can be applied to himself. However strong the individuality of the 'matter', the new form finally overcomes its resistance. It grows until it has shaped the matter from within in accordance with its own law, and imposed its own shape upon it. Just as tragedy attains its own special nature (ἔσχε τὴν ἑαυτῆς φύσιν) 'out of the dithyramb' by leading the latter through various forms, so Aristotle made himself out of the Platonic philosophy. The history of his development—and the order of the documents for this can be determined with certainty—represents a definite scale of graduated progress in this direction, although he never got beyond compromises in some matters. In these matters his pupils very often understood him better than he did himself, that is to say, they excised the Platonic element in him and tried to retain only what was pure Aristotle. The specific Aristotle is, however, only half the real Aristotle. This his disciples failed to grasp, but he himself was always conscious of it.

The Academy that Aristotle entered in 367 was no longer that of the time of the *Symposium*, around whose table Plato in the full tide of his enthusiasm had imagined the leaders of art and science and the representatives of Hellenic youth gathered to hear from the lips of the prophetess the great mystery of the birth of the intellect out of Eros. The essence of Plato's philosophy had long ceased to lie in the figure that he had created in

his early works, the central figure of the philosopher Socrates In content and method it was now far beyond the Socratic field of problems It was only by reading, and not through any living presence of the Socratic spirit in the Academy of the sixties, that Aristotle learnt what Socrates had meant to Plato and his early disciples The *Phaedo* and the *Gorgias*, the *Republic* and the *Symposium*, were now the evidences, already classical, of a closed chapter in the master's life, and they towered above the busy realities of the school like motionless Gods Any one whom these dialogues had drawn from distant places to enjoy Plato's actual presence must surely have been surprised to find no mysteries celebrated among the philosophers They certainly radiated a revolutionizing force and a new seriousness, and these Aristotle found in the Academy also, but their classic doctrines about the Ideas, about unity and multiplicity, about pleasure and pain, about the state, about the soul and virtue, were by no means inviolable sanctuaries in the discussions of the students They were constantly being tested, defended, and altered, in the light of acute distinctions and laborious examinations of their logical validity The distinctive feature was that the learners themselves took part in this common effort The images and myths of the dialogues remained Plato's most characteristic and irrecapturable work, but, on the other hand, the discussion of conceptions became along with the Academy's religious tendency the essential principle of the school These were the only two elements in Plato's thought that were transferable, and the more students he attracted the more they preponderated over the artistic side of his nature Where the opposing forces of poetry and dialectic are mixed in a single mind it is natural for the former to be progressively stifled by the latter, but in Plato's case the school carried him irresistibly in this direction

The set of Aristotle's mind was decided by the fact that he entered the Academy just as this momentous alteration, the development of Plato's later dialectic, was beginning to make headway Thanks to the recent advances of research we can follow this process with chronological exactitude in the great methodological dialogues that Plato wrote during these years, *Theaetetus*, *Sophist*, *Statesman*, *Parmenides*, and *Philebus* The first dialogue of the group, the *Theaetetus*, was written soon after

the death in 369 of the famous mathematician whose memory it honours [1] It is the more characteristic of the Academy at the time of Aristotle's entrance because in this and the following dialogues (*Sophist* and *Statesman*) the work of the school, which had been almost entirely concealed in the writings of the classical period, begins to press Plato's whole literary activity into its service, and has thus left a picture of itself that lacks no essential feature [2] In order to understand Aristotle and his relation to Plato it is important not to set out from the vague notion of 'Plato' as a whole, but to substitute the precise conception of his last period, the abstract and methodological period that began about 369 This gave Aristotle a definite direction, and opened up a field of work suitable to his particular disposition /Socratic thought always kept close to real life, and the early Plato was a reformer and an artist In contrast to this, Aristotle's thought was abstract, and his attitude was that of the pure scientist But these traits were not his private property, they were common to the whole Academy during the time when he belonged to it In the *Theaetetus* we have the apotheosis of the un-Socratic philosopher of Plato's later days The machinery of the dialogue gives the delineation of the type to Socrates, but the picture he draws has no resemblance to himself, according to his own faithful characterization of himself in the *Apology*, but to the mathematical recluse, and it is obvious that the new con-

[1] For the external reasons for this date see the conclusive arguments of Eva Sachs, *De Theaeteto Atheniensi Mathematico*, Berlin, 1914, pp 18 ff The main evidence, of course, comes from the stylistic and philosophical analyses of the dialogue both of which confirm the external arguments for lateness The *Sophist*, which is the positive development of the problem of the *Theaetetus*, retains its setting as does the *Statesman* but no one nowadays considers the *Sophist* an 'elementary dialogue coming at the beginning of Plato's development, as did Zeller and those who preceded him Campbell's fundamental researches took some time to make their way into Germany, but have since been confirmed on all sides by later investigations The final touch has been given by the history of the development of Plato's dialectic, which is a later addition, see especially J Stenzel's *Studien zur Entwicklung der platonischen Dialektik* (Breslau, 1917), to which I am much indebted

[2] Since the appearance of the German edition of this book Friedrich Solmsen has tried to determine more exactly how far the picture presented by the dialectical dialogues agrees with the actual philosophical activities of the Academy, and how far it falls short of it See his 'Die Entwicklung der aristotelischen Logik und Rhetorik' (*Neue Philologische Untersuchungen*, ed by Werner Jaeger vol iv Berlin, 1929), p 240 His observations form a valuable addition to what is said above

ception of the 'theoretical' life has helped to determine its features Socrates had concerned himself solely with man, and not with that which is above the heaven or under the earth The *Theaetetus*, on the other hand, speaks of the philosophical soul as 'geometrizing' and 'astronomizing' [1] She is indifferent to what is near at hand, she despises precisely those practical activities that occupied the lives of Socrates' favourite hearers, and she roams in lofty distances, as is solemnly quoted from Pindar

The *Theaetetus* unmistakably refers to the forthcoming appearance of the *Parmenides* The latter was pretty certainly written before the former's sequels, the *Sophist* and the *Statesman*; hence it was probably finished when Aristotle entered the school, and cannot in any case be much later Those who suggest that Aristotle was the author of the objections which this dialogue raises to the theory of Ideas, are making the unlikely supposition that he took the initiative in a revolutionary manner while he was still extremely young and had only just entered the society The dialogue shows that before Aristotle the Academy had already gone far in criticizing the hybrid character of the Ideas, half substances and half abstractions It could not be long before the two were separated Plato himself, indeed, thought that he could overcome the difficulties, nevertheless he prepared the way for what happened when he recognized it as in principle correct to make laborious logical and ontological examinations of the Ideas, as is done in this dialogue and in later ones Aristotle's speculations cannot be linked up with the *Phaedo* or the *Republic* and the Idea-theory as it appears in them

In the *Theaetetus* Theaetetus and Theodorus are opposite types One represents the young generation of mathematicians, who are interested in philosophy, the other the old, who will not hear of it, though they are experts in their own subject It was not an accident that Plato's relations to famous mathematicians found expression in a dialogue precisely at this time For about the year 367 Eudoxus of Cyzicus brought his school to Athens, in order to discuss with Plato and his followers the problems that interested both parties [2]

[1] *Theaet* 173 E–174 A

[2] Tannery's conjecture (*Histoire de l'astronomie*, p 296, n 4) is confirmed by

This event attracted a good deal of attention, and from that time on we constantly find members of this school of mathematicians and astronomers in communication with the Academy Helicon and Athenaeus are examples As early as the *Republic* we can observe the effects of Theaetetus' discovery of solid geometry After their intercourse with Eudoxus, Plato and his followers took a very great interest in the attempts of the Cyzicenian school to explain the irregular movements of the planets by simple mathematical suppositions This was not the only way in which Eudoxus stimulated them He tremendously enlarged their notions of geography and human culture by bringing exact reports of Asia and Egypt, and by describing from extended personal experience the status of astronomy in those parts His contribution to ethical questions was also important The problem of the nature and meaning of pleasure and pain, which was to be so central in Aristotle's ethics, led to one more great debate within the Academy in Plato's later years Xenocrates, Speusippus, and Aristotle contributed works *On Pleasure* to it, Plato contributed the *Philebus* Many years afterwards Aristotle, who met Eudoxus right at the beginning of his stay in the Academy, could still speak of his personal impression with real warmth, when he was recalling the stimulus that Eudoxus gave Eudoxus also raised difficulties about the Ideas and suggested an alteration of the theory [1] In every field Plato's school began to attract more and more strangers, some of them of the most diverse types His travels had brought him into close connexion with the Pythagoreans gathered round Archytas at Tarentum Their influence reached as far as Sicily, and in Sicily at this time there flourished the medical school of Philistion, whose importance was so great that we must reckon

the *Life* (Rose, p 429, l 1) according to which Aristotle entered the Academy under Eudoxus Some excerptor must have misunderstood the statement and taken Eudoxus for an archon What his authority told him was simply that Aristotle's entry coincided with Eudoxus presence Cf Eva Sachs (who follows F Jacoby), op cit, p 17 n 2

[1] For Aristotle on Eudoxus' character and theory of pleasure see *Eth Nic* X 2 For the latter's proposed reformulation of the Idea-theory see *Metaph* A 9, 991[a] 17, and at greater length in the second book *On Ideas* (Rose, frg 189), which has been preserved by Alexander in his commentary on the passage Eudoxus proposes to regard participation as the immanence of the Ideas in the things, and to this Aristotle strongly objects That participation was the most debated problem of the time is clear from Plato s later dialogues

among its spiritual members such an author and physician as Diocles of Carystus in Euboea. Plato must have had relations with Philistion The author of the spurious second letter appears to know that Plato visited Philistion, and even seemingly that the latter was invited to Athens If not Philistion himself, at any rate some real member of his school is concealed behind the unnamed 'Sicilian doctor' whose impatience at the logical hair-splittings of the Academy is described by a contemporary comic poet [1] Incidentally this story shows that, although Plato was accustomed to converse with specialists in all fields, the result was often merely to reveal the unbridgeable gulf between Ionic or Sicilian science and what Plato understood by that word The fact that he makes copious use of the latest researches in medicine, mathematics, and astronomy, in order to construct his story of creation in the *Timaeus*, must not blind us to the independent manner in which he handles this material

The Academy of Plato's later days did indeed get through a great mass of material, and this environment no doubt made it possible for an Aristotle to learn by his own efforts the significance of empirical facts, which later became so integral to his researches, but the present universal custom of speaking of an 'organization of the sciences' in the Academy is wrong [2] Modern academies and universities cannot claim Plato as their model The notion of a systematic unity of all sciences was totally foreign to him, and still more so was its realization in an encyclopaedic organization of all subjects for purposes of teaching and research Medicine, mathematics, astronomy, geography, and anthropology, the whole system of historical sciences, and that of the rhetorical and dialectical arts, to mention only the main channels of Greek thought, arose each by itself, though several were sometimes combined in one person, and went each on its own way undisturbed To a Theodorus or a Theaetetus it would have seemed a very peculiar notion to combine into one universal system of sciences their mathematics and the researches that some sophists were making into Greek

[1] Epicrates frg 287 (Kock) See also M Wellmann's *Fragmente der sikelischen Ärzte* (Berlin, 1907), p 68, and my article 'Das Pneuma im Lykeion' (*Hermes*, vol 48), p 51, n 3

[2] It has been universal since H Usener's now famous article in vol 53 (1884) of the *Preussische Jahrbücher*, reprinted in *Vorträge und Aufsätze*, p 69

culture or archaeology The physicians also stood quite alone Democritus, and after him Eudoxus, who to some extent anticipates the type that Aristotle represented, are abnormal phenomena Eudoxus was marvellously manysided To mathematics and astronomy he joined geography, anthropology, medicine, and philosophy, and was himself productive in the first four fields

Plato was concerned exclusively with 'Being' If we are to give him his place in the tradition of Greek thought, he is one of the representatives of the speculation about substance (οὐσία) With his theory of Ideas he gave it a new turn, in fact, he really restored it to life Starting from the Ideas, and being concerned solely with unity and the supersensible, he does not at first touch the manifold and empirical world at any point The direction of his inquiries is away from phenomena towards something 'higher' The sheer necessities of his speculation about concepts did indeed lead him to develop the method of division, which later became enormously important for Aristotle's attempt to get an empirical grasp of plants and animals, as well as of the mental world But Plato himself was not concerned to reduce individuals to a system They lay below the realm of Ideas, and, being completely infinite (ἄπειρον), were unknowable His notion of the individual (ἄτομον) was that of the lowest Form, which is not further divisible and lies on the border between phenomena and Platonic science and reality The many classifications of plants, &c, that Epicrates speaks of, which were generally felt to be the most characteristic and peculiar occupation followed in the Academy (even Speusippus' great *Resemblances* was apparently concerned solely therewith), were pursued not from interest in the objects themselves, but in order to learn the logical relations of conceptions, this is illustrated by the quantity of books put forward in the school at this time with the title of *Classifications* In classifying plants the members no more aimed at producing a real botanical system than Plato in the *Sophist* aims at a historical study of the real sophists.[1]

[1] In the fragment previously referred to Epicrates does not imply that the Platonists pursued botanical inquiries in a positive spirit What he is laughing at is the enthusiasm for classification that led them to hold relations between conceptions more important than the things themselves 'They were *defining* the world of nature and *dividing* the life (βίον) of animals and the nature of trees

It is no great distance from such classifications of the real to the notion of a single science embracing as many departmental sciences as there are departments of reality (ὄν) And although the articulation of the positive sciences was not effected until Aristotle's notion of reality had replaced Plato's transcendental being,[1] it remains a remarkable fact that the idea of a systematization of the departmental sciences, each of which had arisen independently, was an afterthought due to the Attic philosophy of conceptions and its enthusiasm for classification It is almost too late now to estimate the advantages and disadvantages of carrying this systematization through in detail Presumably both have been pretty large At no period when research was truly flourishing has the general spirit of a particular philosophy ever thoroughly permeated all the sciences, and this is natural since each science has its own spirit and its own principle Only through dual natures, or where the lead in philosophy has been taken by famous scientists who imbued it with the spirit of particular branches of research, has a partial permeation occurred Aristotle, Leibniz, and Hegel, very different types, are the most important examples of this

Plato himself had some specialized understanding of mathematical questions, which enabled him to follow the important contemporary developments of the science He was also interested in astronomy so far as it could then be treated mathematically In later life he devoted himself seriously to the physics of the elements, hoping to be able to give a mathematical derivation of the qualitative differences between the so-called

and the *species* of vegetables and among these latter they were examining what is the species of the pumpkin

> Περὶ γὰρ φυσεως ἀφοριζόμενοι
> διεχωριζον ζῳων τε βίον
> δένδρων τε φυσιν λαχάνων τε γένη,
> κἄτ' ἐν τούτοις τὴν κολοκυντην
> ἐξήταζον τίνος ἐστὶ γένους

Here βίος does not mean the habits of animals which would be δίαιτα It is the same as 'nature' and 'genus', and these are actual terms from Plato's dialectic, as are definition', 'division', and 'examination' of conceptions The fragments of Speusippus' Ὅμοια have been collected by P Lang *De Speusippi Academici scriptis* (Bonn, 1911, Diss) The title itself shows what the aim of the book was

[1] 'There are as many parts of philosophy as there are kinds of substances', Arist *Metaph* Γ 2, 1004ᵃ 2

elements of Empedocles, which he regarded as mere phases His only other interests in phenomena lay in the sphere of medicine and in that of ethics and politics In the latter he collected, especially for the *Laws*, extensive material on criminal law and the history of civilization It was thus during the period when Aristotle was a member of the school that he turned his attention to particulars And the stimulus that his collection of new historical and political matter gave to Aristotle is clear from the numerous coincidences between the *Laws* and the *Politics* On the other hand, Aristotle lacked the temperament and the ability for anything more than an elementary acquaintance with the Academy's chief preoccupation, mathematics, while the Academy, contrariwise, could not stimulate him in the field of biological science in which his own true genius lay

Fruitful and congenial as was the youthful Aristotle's experience of the strict and methodical procedure of the various sciences, the impression made upon him by Plato's personality was the strongest of all Plato surveyed all those fertile plains from the high vantage-point of his own creative spirit and inward vision, and Aristotle was wholly preoccupied with him

It is not our purpose here to discuss the influence of Plato's personality on his contemporaries, or to reduce his position in the history of knowledge to a formula, although to a man like Aristotle this latter question was naturally the kernel of his whole attitude to Plato The elements out of which his work arose did not include either Ionic ἱστορία (inquiry) or the rationalizing Enlightenment of the sophists, although these two, in spite of their disparity, together constituted the forms of knowledge *par excellence* at the time The first of these elements was (1) the *phronesis* or wisdom of Socrates This bore only a superficial resemblance to the rationalism of the sophists Essentially it was rooted in the realm, hitherto undiscovered by Greek science and philosophy, of an ethical consciousness of absolute standards It demanded a new and superempirical conception of intellectual intuition The second and third elements, which were also foreign to contemporary thought, were two new additions to the Socratic philosophy, produced by giving *phronesis* a supersensible object and making this a 'form' These were (2) the Idea, which was the result of a long process

of visual and aesthetic development in the Greek mind, and (3) the long-neglected study of οὐσία or substance, to which Plato gave new material by the problem of the one and the many, and living and tangible content by the invention of the Ideas The last element was (4) the dualism of the Orphic myth of the soul, to which his whole constitution inclined him, and which, watered by his fertile imagination, took firm root in the new conception of being

When we consider these four elements it is not difficult to suppose that he affected the ordinary educated person as a mixture of poet, reformer, critic, and prophet (The strictness with which he imposed his new method on himself would not at first make any difference to this impression) Hence it is not surprising that, in view of the gulf between him and all other science, both ancient and modern, he has been called a mystic and expelled from the history of thought If this simple solution were right, however, it would be very hard to understand why he has had such a great influence on the destinies of human knowledge, and the fact that he was the sun around which revolved persons like Theaetetus, Eudoxus, and Aristotle, that is to say, the most talented pioneers of scientific research that the fourth century produced, is sufficient to condemn the cheap wisdom whose notion of the complexity of intellectual currents is so inadequate that it would strike the most revolutionary of all philosophers out of the history of knowledge, because he discovered not merely new facts but also new dimensions

Aristotle saw as clearly as Eudoxus that Plato, in his philosophical work, had welded together scientific discoveries, elements of myth, and mysterious spiritual realms to which the eye of knowledge had never penetrated This weld was by no means the mere result of the creator's subjective inclination, it was necessarily determined by the historical situation, the elements in which were later analysed by Aristotle with a profound understanding alike of the creation and of its creator At first, however, he abandoned himself without reserve to this incomparable and indivisible world, as is shown by the fragments of his early writings, and it was precisely the non-scientific elements in Plato's philosophy, that is, the metaphysical and religious parts of it, that left the most lasting

imprint on his mind He must have been unusually receptive for such impressions It was their conflict with his own scientific and methodical tendencies that later gave rise to most of his problems, and their strength is beautifully shown by the fact that he never sacrificed them, although in scientific matters he went beyond Plato at every point In Plato he sought and found a man to lead him in a new life, just as in his dialogue *Nerinthus* he makes the simple Corinthian countryman, enthralled by the *Gorgias*, abandon his plough to seek and follow the master

Plato explains the connexion between knowing the good and following it in his seventh letter The knowledge which according to Socrates makes men good, and that which is commonly called scientific knowledge, are distinct The former is creative, and can only be attained by souls that have a fundamental affinity to the object to be known, namely, the good, the just, and the beautiful There is nothing to which Plato right down to the end of his life was more passionately opposed than the statement that the soul can know what is just without *being* just [1] This, and not the systematization of knowledge, was his aim in founding the Academy It remained his aim to the end, as is shown by this letter that he wrote in his old age Let there be a communion (συζῆν) of the elect, of those who, once their souls have grown up in the atmosphere of good, are able by virtue of their superior equipment to share at last in the knowledge that is 'like a light kindled by leaping fire' It seems to him, Plato says, that the search after this knowledge is a thing not for the mass of mankind, but only for the few who with a slight hint can find it for themselves [2]

[1] *Ep* VII 344 A

[2] Ibid 341 C–E