

Cosmic Religion in Aristotle

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THE ARGUMENTS of Aristotle's book on theology, *Metaphysics* XII (*Lambda*), have a strongly consistent logical construction in their favour, but may raise doubts as to the authenticity of Aristotle's religious feelings. As early as Aristotle's own times his pupil Theophrastus noticed that certain theories seemed to be no more than an 'invention in words'.¹ In this paper I shall discuss the question whether Aristotle may be regarded as an authentically religious thinker.

The problem is susceptible of various formulations. Maintaining, as a general background, our doubts about the religious value of Aristotle's way of thinking, we may ask whether Aristotle set out to find proofs for the existence of a Prime Mover only because he felt invited to do so under the influence of the teaching of his master, Plato. Or we may ask whether Aristotle drafted these rational proofs at a moment when his philosophical system seemed to ask for it, that is, when the general lines of his system had already taken form and had to be completed by a natural theology. In this case Aristotle's theology would stand as a disastrous example of structural violence within a philosophical system. The mere consistency of the arguments would have compelled him to construct a theological system without any personal inspiration. If the question is put in this form, we must also ask at what moment of his development Aristotle may have composed his treatise on the Prime Mover.

Parallel to these critical problems runs the question of what is to be understood by authentic religiosity. Our judgement on this point may, in the case of Aristotle, be impeded by our idea that there is an unbridgeable opposition between the 'naturalistic turn of mind' or the 'scientist's way of thinking' on the one hand, and, on the other, personal religious experience, in which the influence of all kinds of human emotions may come through. This opposition is traditionally felt to have existed between an early Aristotle, working under the

¹ Theophr. *Metaphysics*, ed. Ross-Fobes (Oxford 1929, repr. Hildesheim 1967) 7b18: *λογῶδες*, a 'construct'.

spell of Plato, and a later and more Aristotelean Aristotle, who is said to have developed more sober ways of thinking. It is found, in the wake of Jaeger's work, in the well-known book on Aristotle by John Herman Randall Jr. Randall's views were the subject of a sharp criticism by Whitney Oates, which in its turn was answered by Troy Organ.² The discussion aroused by Randall's book hinges upon the question whether a naturalistic mind could possibly produce well-founded views on religious matters.

To begin with the most general problem two points may be put forward:

(a) Roughly speaking, we can divide religions into two types: some religions have incorporated a principle of authority, others have no such principle. The latter type mostly centres either on a veneration of the all-pervading life in the universe, as does the Buddhist religion, or on meditating on the soul's purification and its survival after death, as did the Pythagoreans and also Buddhism. The former type is inclined to put a strong accent on morals, and recognizes a personal and omnipotent ruler or rulers. Generally these rulers are described in cosmological terms or identified with cosmic forces or heavenly bodies. We may say that, depending on the type of religion an individual adheres to, any authentic religiosity on his part must imply either a feeling of dependence upon and veneration of a power which is greater than human, or a feeling of confidence as to his survival after death.

(b) The existence of this superhuman power and of survival after death must be considered as real, even in the face of rational arguments to the contrary. This is another way of saying that to the believer God or the gods or our survival must not be a product of human thinking or emotions, or be a 'projection' of them. When, for example, the Homeric warriors describe their own aggressive or lustful impulses as a *daimon* who takes possession of them, we do not speak of authentic religiosity. The objects of our belief must possess a sort of unassailable status, which, seen from the outside, can often be characterized as mythical.

The distinction made here has been formulated with a view to a trend observable in the religious consciousness of the earliest genera-

² J. H. Randall Jr, *Aristotle* (New York 1960); Whitney J. Oates, in *New York Times Book Section*, 9 Oct. 1960; Troy Organ, "Randall's Interpretation of Aristotle's Unmoved Mover," *PhilosQ* 12 (1962) 297-305.

tions of philosophers. The history of cosmic consciousness starts with Thales. If the words, as Aristotle gives them, are a literal quotation, a saying by Thales must have become proverbial: "Everything is full of gods."³ The principles of the universe, or *ἀρχαί*, were described by some of the earliest philosophers by means of a carry-over of cosmological images from mythology. The concepts arrived at in this process preserved their religious overtones. Anaximander's *ἄπειρον* is characterized by features that leave no doubt as to its original status as a world-ruling deity. It is "never-aging, eternal, immortal," it "embraces the whole universe," and all things pay tribute to it, because, in passing away, they must redeem their having come into being.⁴ In the same terms the all-pervading Being is described by Parmenides in verses that still betray the mood of religious veneration in which the philosopher had meditated about it.⁵ In Parmenides we find, next to the divine and fundamental Being, the cosmic principles of Justice, *Δίκη* and *Ἀνάγκη*,⁶ and of creative Love, *Ἔρως*.⁷ The latter principle is found in Empedocles by the name of Aphrodite or simply Love, *Φιλότης*.⁸

As is well known, Plato gives more or less a synthesis of his religious feelings in the last books of his last work, the *Laws*. The arguments given in these books are considered by Plato convincing enough to persuade everybody to see that a divine presence manifests itself in the visible cosmos (966E). In Plato's creed, as expressed in *Laws* 967DE, two fundamental convictions are declared to be absolutely necessary if a person is to live a saintly life: belief in Soul as the ruling force of all bodily life and belief in a World Reason governing the heavenly bodies. In Plato's religious consciousness Soul probably has

³ Arist. *De An.* 1.5, 411a8. That the expression must have been proverbial may be seen from *Part.An.* 645a19.

⁴ Diels-Kranz, *Vorsokr.*⁶ 12 A 11 and 15, 12 B 1 (I cite frgg. as numbered in the 6th and later editions of *Vorsokr.*)

⁵ Cf. W. Jaeger, *The Theology of the Early Greek Philosophers* (Oxford 1947) 96: "the particular type of religion which underlies Parmenides' description, where we encounter a highly individual inner experience of the Divine."

⁶ Diels-Kranz 28 B 1 v.14; B 8 vv.14, 30; B 10 v.6.

⁷ Diels-Kranz 28 B 12-13.

⁸ Diels-Kranz 31 B 17 v.20; B 20; B 22 v.5; B 26 v.5; B 35 v.4; B 71; B 98. To the same category of translated mythological concepts we may reckon Empedocles' four elements, originally gods ruling the several realms of the earth. See the chapters on Anaximander and Empedocles in Th. G. Sinnige, *Matter and Infinity in the Presocratic Schools and Plato*² (Assen 1971).

the older rights of the two. In his early years he may have absorbed his belief in metempsychosis from the Pythagoreanizing circle that gathered around Sokrates, and, later on, his visits to the Pythagorean school or schools in South Italy must have reinforced his beliefs on that point.

Probably in his later development a shift of accent produced itself as a consequence of the growing systematic consistency of the theory of Forms. In the so-called metaphysical and later dialogues the stress is laid not so much on the soul's ethical purification in order to survive the death of the body as on its ascent to the higher spheres of a noetic world. This ascent of the human soul is described in the myth of the *Phaedrus* in extensively cosmological imagery. Even in cosmology itself Plato follows the spell of his veneration of Soul. In *Timaeus* 30B he declares that no Reason can exist unless in a Soul, which means that *Noûc* or World Reason can govern the world only if it is in a World Soul. The *Nous* described here was derived by Plato from Anaxagoras. It is the all-pervading World Reason, ruling the universe and governing its evolution, as Anaxagoras takes it, or, as Plato sees it, directing all things to what is best (*Ti.* 29E–30B and cf. 36E). Both in the doctrine about *Nous* and in that about the World Soul the description of the highest divine government is given by Plato in terms of cosmology.

Our first conclusion may be that in some of the Presocratic philosophers as well as in Plato a tradition is found of describing the world order in cosmic images inherited from mythical sources. These descriptions still bear their full emotional content of *religiositas*. To the thinkers of this tradition it was impossible to conceive of any highest deity without bringing it in relation to the order and government of the universe and describing it in cosmological terms. Against this background we must place Aristotle's ideas about God's being and his relation to the universe and to man.

Of the two types of religious consciousness described above, it is certainly not the Pythagorean type that stands foremost in Aristotle's sympathies. He probably considered the Pythagorean theories as a rather arbitrary collection of unanalysed superstitions, though he considered them interesting enough to devote a thorough investigation to them, the early work *On the Pythagorean Doctrines*. If we are to look for authentic religiosity in Aristotle, we must surely not expect to find any anxiety as to the fate which is to befall our souls after death. What Aristotle intends to convey to his readers is an outspoken

kind of cosmic consciousness, and it is only the formula in which it is presented which may cause the reader some uneasiness and also asks for critical questions to be put.

The first striking point in Aristotle's descriptions is that his consciousness of a divine action in the universe does not carry any moral implication with it. In Aristotle there is no tendency to unite the moral order with the order of the universe, as we find it so beautifully expressed by Kant—even less to see both orders as flowing from the creative will of one and the same God. Maybe with this point we are at the very root of our mistrust. In our tradition of Western morals we have difficulty in accepting a form of religion in which the human individual as a moral person is not involved.

A related point is that Aristotle does not attribute any providential care for the world to his God. God must move the universe as its Prime Mover, but nevertheless his action on the universe is not that of an efficient cause for its existence, but that of a power of attraction. The result is that God becomes so infinitely perfect and stands so infinitely aloof that he can only be loved and desired by the circling spheres and by man's highest faculty, that of knowing. Randall puts this in a very mild form: he must be a God standing to the world as the Beloved stands to the Lover.⁹ This expression inevitably leads to misunderstanding, because in mystical language the relations of Love are the highest expression of God's concern for us and of our desire for him. But in Aristotle this love-relation is a one-way relation. The First Mover does not reciprocate our feelings, because it is absorbed in the meditation of its own perfection, which is, to Aristotle's point of view, the only object worthy of God's meditation: he is to himself the object of his own thought. The moving spheres, animated by divine souls, move in a circle because they try to imitate and contemplate God's uppermost and eternal happiness. In the introduction to his edition of the *Metaphysics*, Ross has given full attention to this unsatisfactory conception of a God, in whom no providence or loving care for his creation is to be found, nor any connection with our moral order, nor even a real government of this universe or a creative act maintaining it in existence. There is only a very high transcendence on His part, and on our side only a poor kind of knowledge.¹⁰

⁹ Randall, *op.cit.* (*supra* n.2) 139.

¹⁰ W. D. Ross, "Aristotle's Theology," in *Aristotle's Metaphysics I* (Oxford 1924) cxxx–cliv, esp. cliii–cliv [henceforth: Ross, *Ar.Met.*]

The problem may even be described in formulas taken from Aristotle's system itself. Plato's World Soul had as its successors two divergent principles in the philosophical system of Aristotle, *viz.* the principle of Nature (*Physis*) and the principle of a First Mover. The division of functions between the two is, within the system, an undecidable problem. If a thing moves and grows by Nature, it has the principle of its movement within itself, and this explanation fits best for all biological processes. If, on the contrary, we concentrate on the theory that slumbering potentialities, by definition, cannot bring themselves into movement, then an external agent is needed to bring them to life.¹¹ The arguments for seeing things the first way are of a biological kind, whereas the second way of describing the process is based on metaphysical theory. Both explanations were intended to be made operational as a scientific theory. We must ask then: was it any rational consideration or was it a religious need that prompted Aristotle to look for the explication of natural processes outside Nature and to find the ultimate explanation in a transcendent Mover outside the universe?

The work in which Aristotle probably for the first time placed himself in opposition to Plato with a full-blown theory of his own is the treatise *De Caelo*. It was written during the same period when Plato was writing his *Timaeus*. The differences between *De Caelo* and the *Timaeus* are obvious and very numerous. One of them is the way in which Aristotle tries to put forward arguments for his theories. Any reader of the first two books will reap a golden harvest of arguments, given as substructure for the theory. The logical quality of these arguments is, on the whole, disappointing. Obviously, Aristotle tried to give arguments instead of myth, and he must have considered Plato's way of explaining things a good deal too mythical. But the difference resulting is only that, by giving a wealth of inconsistent arguments, he leaves us with the impression that he was led not by scientific interest but by the desire to explain theological truths about the universe. Evidently the decisive point was not logic but religion. The philosopher was led by the desire to give a theoretical foundation to a set of beliefs, no less than his universe itself is moved by a desire to contemplate its First Mover.

The inconsistency of the arguments was pointed out by Gigon¹² in a

¹¹ Cf. Friedrich Solmsen, *Aristotle's System of the Physical World* (Ithaca 1960) 101 and 232.

¹² Olof Gigon, "Aristoteles-Studien I," *MusHelv* 9 (1952) 113-36. Gigon tries to explain the

detailed analysis published in 1952, and by Ingemar Düring¹³ in his monumental work on Aristotle published in 1966. An unbiased reader must be baffled by Aristotle's ingenuity in constructing arguments to his purpose and by the ease with which he allows himself to contradict his own statements. The explanation can only be that to Aristotle the purpose was more important than the logical consistency. He proceeded in his usual apodeictic manner, and we may figure him as very much satisfied with the broad variety of proofs by which his cosmology is ornamented.

It is not only the formal side of Aristotle's scientific theory which may contain a hint as to his prevailing intentions, but also the contents of his theory. Though Aristotle eliminates Plato's World Soul, yet his universe too is endowed with knowledge and emotions such as are found in living beings: it is moved by love and desire for its Prime Mover. This also points to our conclusion that Aristotle's philosophy never lost its connection with a religious vision. It cannot be explained as a form of mere rationalism.

At this point a misunderstanding is apt to emerge which must by all means be avoided. There exists a certain tendency to identify religious experience with human emotion in general, and, more particularly, with the romantic kind of human emotion. The implication is latent in most authors on religious experience within our Western tradition. In current terms it means that being open to the right kind of emotion, being moved by the hidden meaning of things, and having the awareness of a divine presence in surrounding nature are taken as essential to any authentic religiosity. In the more official terms of the mystical tradition, the formula is about the inner experience of the "voice of God within us." If the occurrence of this phenomenon is taken as a necessary condition for religiosity, religious experience is restricted to and determined by the emotional receptivity of the subject.

Jaeger took this line in his interpretation of Aristotle's thought, following the theories of Schleiermacher and Kant, whom he men-

inconsistencies as an indication of different redactions of the text. This is attractive only so long as we do not take into account the numerous parallels in other works of Aristotle.

¹³ Ingemar Düring, *Aristoteles, Darstellung und Interpretation seines Denkens* (Heidelberg 1966) [henceforth: Düring, *Aristoteles*] 355: "Es ist fast unbegreiflich, dass Aristoteles die logischen Widersprüche in seiner Lehre vom *prōton sōma* nicht erkannte." See also Düring's article "Aristoteles" in *RE Suppl.* XI (1968) 244.

tions as having clearly formulated the distinction between feeling and understanding *in religiosis*.¹⁴ He thinks the introduction into Greece of an emotional and therefore authentic religiosity was begun by the mysteries. He says (p.161): "The mysteries showed that to the philosopher religion is possible only as personal awe and devotion, as a special kind of experience enjoyed by natures that are suitable for it, as the soul's 'spiritual traffic with God.'" As far as the mysteries go this is debatable, but I think Jaeger is on the wrong track when he takes this view as his guiding principle in his interpretation of Aristotle. In fact Jaeger's argument is supported only by a very few lines in two or three fragments. The only text which may downright suggest that Aristotle intended to speak of inner experiences is fr.15 (Ross) of *De Philosophia*, where Synesius says that "to be receptive and in the right disposition" was taken by Aristotle as the necessary state of mind for those who wanted to be initiated into the mysteries. In fact the intuitions which are passively received in the soul must have formed an important part of Aristotle's argument in *De Philosophia*. In the fragment where this is explained most circumstantially (fr.12a Ross, coming from Sextus), however, what Aristotle has in mind is a kind of prophetic experience in the soul (*μαντεία*) resulting in dream-visions.

Probably Jaeger was led to his misinterpretation by the influence of the XIXth century romantic inheritance. The romantic emotions are not the only kind of religious experience. We had better not expect Aristotle's views to imply that any real religion should be founded on a highly personal kind of inner experience. We can see from the fragments of *De Philosophia* and from *De Caelo* and *Metaphysics* XII that from his earliest publications Aristotle was convinced of the reality of a divine life pervading the universe. His attention was directed towards the outer world and not concentrated on the soul's spiritual traffic with God, or on the "voice of God within us," as Jaeger puts it. It is true that Aristotle attributed a divine character to our intellect which enables us to penetrate the mysteries of the universe and to see that, in the movements of the stars and in the works of nature, it depends on a divine causality. But the intellect here is not the seat of a divine presence inhabiting the innermost recesses of our personality. It is an instrument, a superior and most excellent instrument, enabling us to break away from the bounds of our human existence and to obtain

¹⁴ W. Jaeger, *Aristotle* (Oxford 1948) 160–61.

our modest part of knowledge about the working in the universe of a divine causality.

This leads us to another question. In his rightly famous commentaries on Aristotle's three works on ethics, Dirlmeier develops a quite consistent view of Aristotle's ethical doctrine. In Aristotle's philosophy, Dirlmeier says, God is immanent not only in the universe but in our intellect which contemplates it.¹⁵ This would certainly be a highly questionable interpretation if it were taken to mean that God and our human intellect were simply identified with each other by Aristotle. Verdenius adduces convincing arguments¹⁶ to refute this interpretation, making use of a distinction, established by him in an earlier study, between the Greek use of the concepts 'divine' and 'God'.¹⁷ It is true that Aristotle is deeply convinced of the divine character of our intellect, which for this reason he designates as our highest faculty.¹⁸ In line with current Greek use of the term, Aristotle formulates this view by saying that our intellect (or 'faculty of intuition', which is a better rendering for *νοῦς*) is something divine (*θεῖον*). Aristotle may have deviated from this rule in some places, substituting the term 'God' for the adjective 'divine', notably so in the passage from the *Eudemian Ethics* discussed by Dirlmeier (1249b14–22). It seems, however, a bit too much of a divinization, if this is taken to imply that, even in the passages where Aristotle makes use of the adjective, we should interpret the text in the sense that our human reason is hypostatized into a real God by Aristotle. Indeed this would mean that in the soul of the philosopher not only a divine faculty of contemplating the highest truths is found, but even that the philosopher's intellect is to be considered as a god in its own right. This is nearer to a German

¹⁵ Arist. *Eudemische Ethik*, übersetzt von Franz Dirlmeier (Aristoteles, *Werke* VII, Darmstadt 1967) [henceforth: Dirlmeier, *EE*] 498–500.

¹⁶ W. J. Verdenius, "Human Reason and God," in *Untersuchungen zur Eudemischen Ethik, Akten des 5. Symposium Aristotelicum*, hrsg. von Paul Moraux und Dieter Harflinger (*Peripatoi* I, Berlin 1971) 285–97, esp. 290–91.

¹⁷ Verdenius, "Platons Gottesbegriff," in *La notion du divin depuis Homère jusqu'à Platon* (*Entretiens* I, Vandoeuvres-Genève 1952) 241–93. See also Verdenius, "Traditional and Personal Elements in Aristotle's Religion," *Phronesis* 5 (1960) 56–70.

¹⁸ e.g. *Eth.Nic.* 1177a16–19, where our intellect is called our "divinest faculty," and 1177b27–33, where reason is described as "divine according to human standards." In 1179a27 it is called that which is in us most akin to the gods. See also 1179a23 about the *θεραπεῖα* of this divinity within us (to be compared with *Eth.Eud.* 1249b20). At 1179a30 Aristotle says that the lovers of wisdom who cultivate their intellect are for this very reason beloved of the gods, which clearly implies that our intellect is below the hierarchy of the gods.

tradition of a 'Gott im Busen', a 'God within us', than to the traditions of Greek philosophy, and it would certainly lead us far from Aristotle's true intentions. Even in the commentaries by Dirlmeier we find it clearly expressed that the 'God of the Universe' is not directly present in us.¹⁹ Within us there is something divine, which is identical with *νοῦς* or *λόγος*. In his introduction to *Eth.Eud.* 8.3 he says that this is the only chapter in which Aristotle could designate our speculative reason as a god without having to fear for misunderstanding.²⁰

Our discussions may have made it clear that Jaeger's view of the 'inner devotion' as a characteristic of Aristotle's religiosity lacks evidence. We find a clearly religious attitude in Aristotle, but it is directed outward, towards the divine powers that are at work at all levels of the universe. Aristotle's theology is not marked by romantic feeling but by an extroverted admiration of the hierarchy of the universe. That this by no means excludes a personal appeal to the philosopher may be seen from the fragments of *De Philosophia*, and even more from the curious mixture of scientific theory and happy certainty about theological truths which we find in *De Caelo*. These two works, moreover, share with *Metaphysics* XII the common feature of a more inspired language at every point where theological convictions come to the fore.

The work *De Philosophia* was written by Aristotle in his Academic period. The fragments prove that many of the convictions laid down here have a Platonic background, while at the same time Aristotle develops very outspoken views of his own on points in which he came to disagree with Plato.²¹ Aristotle must have felt from the outset that Plato's search for first principles in a realm of transcendent Forms was an undertaking in which he could not follow his master. This undertaking had culminated in the theory of a highest Good at the top of the world of Forms, or, in the terminology of Plato's later years, in the theory of the One as first principle of all Being. Aristotle rejected this way of thinking, but not the religious impulse from which it had drawn its inspiration.²² Quite on the contrary, he took over the impulse and systematized it.

¹⁹ Dirlmeier, *EE* 490: "Der Gott im Kosmos ist nicht in uns direkt anwesend. In uns ist das *theion*, das mit *Nous* und *Logos* identisch ist."

²⁰ *ibid.* 500.

²¹ See P. Wilpert, "Die aristotelische Schrift 'Über die Philosophie'," in *Autour d'Aristote: Recueil Msgr A. Mansion* (Louvain 1955) 99–116.

²² Konrad Gaiser, "Das zweifache *Telos* bei Aristoteles," in *Naturphilosophie bei Aris-*

The fragments of the early work *De Philosophia* make it clear that here already Aristotle aimed at building up a systematic explanation of the universe in which the existence of gods should be fully acknowledged. In the first book he prefaced the systematic exposition by a historical survey of the evolution of mankind. At the end of this evolution, he says, a level was reached at which humans could devote themselves to the study of the supramundane and divine things; this kind of knowledge was considered as wisdom in its truest sense (fr.8 Ross). As a preamble of his own exposition Aristotle made use of the simile of the Cave, but he made a characteristic change in the tenor of the argument. Plato's simile had implied that, in his ascent from the Cave, the philosopher would emerge into the light of a spiritual, other world. In Aristotle's use of it, humanity itself is represented as emerging from a dark cave, and as coming into the light of this our own world. The result achieved is that these human beings, when seeing the admirable order in this universe, would recognize this as a sure proof of the existence of gods (fr.13 Ross).

The change in the use of the simile is very characteristic. Aristotle uses Plato's imagery, but to him it does not suggest that a philosopher should direct his attention to a realm of Forms outside this universe. On the contrary, this visible universe has in itself overwhelming evidence for the existence and the working of the gods. At the same time Aristotle constructed his argument on stricter lines of reasoning, going step by step from premises to conclusion. The last point may also be observed in another version of the cosmological proof for the existence of gods. If one sees a well-ordered army or a vessel with full-blown sails, one cannot suppose it can have been equipped and be directed so well only by chance. In the same way, humanity has observed the regular movement and the splendour of the heavenly bodies and concluded that a god must be the author of such beautiful splendour and movement (fr.12ab Ross). In another fragment, also from the early work *De Philosophia*, an elementary form of the later so-called *argumentum ex gradibus* is found (fr.16 Ross).

We may observe that three points must have been characteristic for the young Aristotle. He rejects the Platonic method of looking for the principles of things in a world of Forms. At the same time he

toteles und Theophrast (IV Symposium Aristotelicum, Heidelberg 1969) 97–113. See esp. Gaiser's conclusion, p.113.

accepts Plato's view that one of the central aims of philosophy must be that of developing fundamental evidence for the divine causality within this universe. Thirdly, he undertakes to bring the evidence into a system of well-defined arguments.²³ The second and third points are of interest to us. The second point is that of Aristotle's religious convictions, and the third point that of the organized system of reasoning, which may obscure the fact that the theological theories were a matter of authentic personal appeal to Aristotle. We find these two points in a somewhat later stage of Aristotle's development, the work *De Caelo*. This work must have been written not long after *De Philosophia*. Düring considers it as a rewriting in doctrinal form of the cosmological theses of the earlier work.²⁴ It has two chapters which may be supposed to have been transplanted from the dialogue to the treatise, viz. 1.9 and 2.1. Walzer even prints them as genuine fragments of the third book of *De Philosophia*.²⁵

The work *De Caelo* presents a curious mixture of physics and theology. Aristotle tries to work out a physical theory on strictly physical principles. He takes as his starting point that a physicist should build on what he empirically observes, and he tries to put his data into a system of purely physical theory. For this reason he explicitly rejects Plato's method of constructing hypotheses, because Plato made use of mathematical formulas when introducing physical theories. Aristotle states that local movement is observable in all physical bodies, and takes this as the essential characteristic of body *qua* body. He claims that simple (*i.e.* homogeneous) movement goes with simple (*i.e.* homogeneous) bodies, by which he understands the elements. Movement is intrinsic to physical bodies in the same way as nature is intrinsic to living bodies, and the movement of every physical body is directed by this nature to its specific goal, viz. its

²³ In the article by Gaiser (*supra* n.22), attention is drawn to a fundamental way of arguing about theology underlying Aristotle's theories at every stage of his development. It is the distinction between the final aim of any being, seen from without and determined by its nature, and the special aims which this being may propose to itself, especially when making use of certain means to reach certain ends. In the first sense, a general finality pervades the whole universe, and an ultimate finality is constituted by the Prime Mover as object of contemplation. In the places where Aristotle makes use of the distinction he usually adds that the theory of this distinction had been treated in his work *De Philosophia*. This gives indirect support to the conclusion that a conviction of divine teleology working in the universe as a whole must have accompanied the philosopher through every stage of his development.

²⁴ Düring, *Aristoteles* 347.

²⁵ Ricardus Walzer, *Aristotelis Dialogorum Fragmenta* (Hildesheim 1963) 94–96.

natural place. These two claims about simple bodies and intrinsic movement are not arbitrarily chosen. They are the concepts that were available to Aristotle in his attempt to formulate theory on a strictly physical basis, at the level of scientific development he had to work at. On the basis of his newly formulated concepts and pursuing the logical lines of his theory, Aristotle goes on to prove that outside our earthly sphere a fifth element, unknown to us, must exist. He gives it the name of *αἰθήρ*. The reason for this hypothesis (as we should call it from a modern standpoint, but Aristotle is less cautious and thinks his proof conclusive) is that every element is characterized by its own movement. The elements here on earth have a rectilinear movement, the heavy ones downward, the light ones upward. Now the outermost heaven moves in a circle, which means that an extraterrestrial element, different from the four elements known to us, must be the subject of this movement.

So far, everything is all right from the standpoint of a correct construction of a scientific theory. At this moment, however, Aristotle jumps out of the network of his own logic. He argues that a circle is superior to a straight line, thus violating two of his own principles: he introduces a mathematical consideration into a physical argument,²⁶ and he introduces a scale of values into a physical theory.²⁷ The superiority of the circle implies that the first heaven must be of a superior kind, and, Aristotle adds, must have a divine nature (*Cael.* 1.2, 269a31). This breaking from the bonds of logic into the realm of theological doctrines is observable at many places in *De Caelo*. It is clear proof that, while at work to build up a physical theory on a scientific basis, Aristotle was so much under the spell of his theological convictions that in the written treatise they come through as self-evident propositions, needing no more than the shadow of an argument. Once the premises are granted, the argument for the existence of a fifth element is exact and scientific, with just the exception of the theological addition. This can only mean that theological convictions, whether or not inherited from Plato, did not come under the focus of critical analysis. They form an unanalyzed part of Aristotle's personal way of thinking and thus prove the authenticity of the religious attitude underlying them.

²⁶ A procedure he himself condemns at 3.7, 306a10–12.

²⁷ A method of theory formulation he explicitly condemns in the Pythagoreans at 2.13, 293a30–33.

A completely different approach to theological problems is found in *Metaphysics* XII, the so-called "Treatise on Theology." Aristotle here sets out to build up a coherent system of arguments to prove the existence of a First Unmoved Mover. In the earlier work on cosmology the argument for the existence of divine beings had been superimposed on the physical theory. In *Metaphysics* XII theology is no longer an addition to cosmology, it is the substance of the treatise itself. This brings us back to the question with which we started this essay: the problem whether the scientific structure of the argument was worked out by Aristotle only in order to complete a theoretical metaphysics and not as a response to an inner religious impulse.

The development of Aristotle's theology in his earlier work may by now have made it clear what should be the answer to this question. The construction of a systematic theory can by no means be interpreted in the sense that the philosopher had resorted to theoretical argument for want of authentic personal inspiration. On the contrary, his personal convictions must have acted as the driving motive to Aristotle for setting out to build a theoretical system, a task he must have seen as the proper task for a philosopher. Aristotle at any rate did not start his career as an incredulous philosopher or a purely technical theorist. He took over very willingly Plato's fundamental inspiration: the search for the higher principles on which the existence of this world rests, while at the same time developing a different system of argument in order to give form to his own theories. We now must ask whether there was a point in Aristotle's development at which he abandoned this fundamentally religious search for a highest Being.

For a moment we shall take as our hypothesis that such a breaking-point indeed came, and that *Metaphysics* XII offers symptoms of this break. It might be the case that Aristotle's growing interest in science had by this time gradually superseded his religious inspiration. In that case we should expect that in writing Book XII he achieved no other aim than that of filling up a gap left in the otherwise complete construction of his metaphysical system. In order to find a clue to an answer, the best thing is to begin with a short analysis of the book.

In chapters 1 through 5 Aristotle gives the outlines of his theory of substance as it had already been developed in other works and in other books of the *Metaphysics*. Aristotle does not treat it here for its own sake but in order to have a survey of the principles and first elements

for the arguments to be developed. The theological argument starts with chapter 6. We may eliminate for the moment chapter 8, not only because it may be a later addition, but because its argument runs on a line which is not essential to Aristotle's main intention in chapters 6, 7, 9 and 10. These four chapters then constitute the *nucleus* of Aristotle's theological argument. It is built on the distinction of act and potency and makes use of the principle that, to bring any potency to actuality, it is necessary to assume the prior existence of an actual being. By definition potency cannot give itself its actuality. The actual existing being must moreover possess power to set movement going: in other words it must possess causality in relation to other beings which exist on the lower level of potency only. Causality implies that what acts as a cause must possess by itself the effect it imparts. From these premises Aristotle deduces consistently (1) that there must exist a First Mover, which does not receive, in its turn, movement from another mover; (2) because we see the heavens turning round in a never changing and continuous movement, the First Mover must be eternal; (3) from the law of causality and the distinction of the more perfect level of actuality as against the imperfect one of potency, he deduces that the first cause must have a being which is actuality only, that it must exist by necessity and that it is the first principle of the universe.

Up to this point the theory is, though presented only in its essential lines, completely consistent. Later on, at the end of chapter 7, an additional view is given which has an argument of its own. Aristotle here proves that the first principle must be immaterial, because if it were material it should either have to be of infinite or of finite dimensions, and neither of them is possible. In between, however, a theological exposition is given which, though very attractive and convincing in itself, has no connection with the theoretical argument on which Aristotle was building his proof. The exposition begins at 1072a26 where Aristotle says that movement can find its first beginning only in what is desirable and what is object of thought. This is a proposition which has a certain plausibility within the context of the whole of Aristotle's philosophy, but within the context of *Metaphysics* XII it is not a conclusion following from the premises developed there. The breach of the continuity is fairly obvious, because on the ground only that the first cause belongs to the positive side of a column of opposites, Aristotle goes on to give a whole series of divine predicates

which must be acknowledged in the First Mover. It has the best kind of life. The exercise of its faculties is pure happiness and consists in contemplation. Contemplation constitutes the very essence of its life and being.

Not only is the continuity of the logical argument broken, but at the same time the style of the argument grows lyrical. The hymnic praise of the highest Being comes to a first conclusion in the line where Aristotle exclaims: "From such a principle heaven and nature derive their existence" (1072b14). This line is interesting for yet another reason. It testifies to the continuity of Aristotle's religious inspiration, because the same line is found in *De Caelo* (1.9, 279a29) in a chapter which Aristotle must have borrowed from his earlier work *De Philosophia*. The hypothesis, adopted for a moment about Aristotle starting as a Platonist and developing into a more empirically minded philosopher, is untenable as far as concerns his theological doctrine in *Metaphysics* XII.

At this point the question might be raised whether that part of chapter 7 where we find the hymn to the highest Being breaking the continuity of the logical argument should not be considered as a fragment from the early dialogue. This can invalidate our argument only if it could be proved that the whole of *Metaphysics* XII dates from an early period. If the book as a whole was written in Aristotle's middle or later period, the presence in it of paragraphs transposed from earlier work could even form strong evidence for Aristotle's unchanged opinions on certain fundamental points.

It seems, however, rather improbable that the text of *Metaphysics* XII as we have it should be ranged with other early works in which Aristotle had not yet entirely renounced certain Platonic theories. It makes every difference whether this last point is taken as a criterion for the chronology of the work, as Jaeger did, or as a conclusion to be drawn from an independent analysis of the text. From our analysis of Book XII we have seen that the argument of it rests on the fully developed theory of hylemorphism, which is found with all its essentials in the summary given by Aristotle in chapters 1 through 5. These chapters contain a number of expressions by which we can see that the present text may have been used by Aristotle in his lectures. The expressions are mostly of the kind of short notes intended to guide the lecturer through his exposition, such as e.g. "at this point explain that . . ." (1069b35, 1070a4) or "The argument should be

added that . . .”²⁸ It is hardly thinkable that these notes could summarize so many essential points of Aristotle’s well-developed system of metaphysics if the lecture, given with the aid of these notes, was composed in a very early phase of Aristotle’s philosophy.²⁹

From the relevant texts of *De Philosophia*, *De Caelo* and *Metaphysics* XII we have seen by now that Aristotle’s main concern was the creation of consistent theoretical systems to support his argument. The question then was raised to what extent the theoretical constructions might have superseded the inspiration, or even might have taken its place. It seemed possible that authentic religious emotion, as an inspiring force in the construction of the theoretical system, had been totally absent. The problem presented itself whether the arguments could have been constructed for theory’s sake only. Careful analysis of the texts, however, made it clear that Aristotle was by no means lacking in religious inspiration. It transpires at many places. It is very significant that it is found at critical points where the order of the logical construction is abandoned for a stream of theological arguments.

In order to make this result more convincing we may point to a theory which is found both in *De Anima* and in *De Generatione Animalium*. These two works are almost unanimously recognized as late. The theories found in these works are central in Aristotle’s later development, in which he is so often said to have followed a more empirical course and a more truly scientific method.

In the last chapter but one of the early work *De Generatione et Corruptione* Aristotle explains why the processes of nature must continue forever. The reason is that to exist is better than not to exist, and

²⁸ ζῆτι: 1069b7 and *passim* in this book.

²⁹ See Sir David Ross’s introduction to John Warrington’s transl. of the *Metaphysics* in Everyman’s Library, p.xxvi, and Ross, *Ar.Met.* pp.xxvii–xxix. See also H. J. Krämer, “Zur geschichtlichen Stellung der aristotelischen Metaphysik,” *Kant-Studien* 58 (1967) 313–54; Krämer takes the doctrine of *Met.* XII to be on a level with the philosophy of Xenocrates (pp.323ff) and to belong to a rather advanced stage in Aristotle’s thinking, though solidly rooted in Academic discussions. Düring (*Aristoteles* 453 n.138) thinks Book XII is one of the earliest works written by Aristotle; on pp.202–14 he gives an extensive analysis of the contents. I think this analysis could not comprise such a wide range of theories if the book were really of a very early date. Moreover it seems to me that Düring overlooks the principles which make Book XII a unified whole: the attempt at constructing a consistent theory and the driving impulse to find an ultimate and divine cause, which at the same time could be described as a necessary conclusion from the arguments of the theory. Cf. A. Mansion, “La genèse de l’œuvre d’Aristote d’après les travaux récents,” *Revue Néoscholastique* 29 (1927) 307–41, 423–66.

nature always aims at what is best. Many existing things are subject to change and destruction. They pass away within a short time. This is because they are "too far away from their first cause." For these beings, who are too frail to exist for long, nature must repeat existence by the process of reproduction. This is what comes nearest to being in the full sense, *i.e.* eternal being. In the process of reproduction the lower beings imitate the perfection of eternal being (*Gen.Corr.* 2.10, 336b28–34).

It is clear that this theory is in substance Platonic. The theory of an imitation of eternal Forms in a process of reproduction, which is kept going by Nature in this imperfect world, hardly deviates from Plato's way of seeing things here as imperfect imitations of perfect Being yonder. In the theory a scale of values is introduced determining the activity of Nature, and Nature in its turn is an abstract idea hypostatized into a divine principle. The theory could serve as an example of the Platonizing character of Aristotle's early thought, were it not found, in the same central position, in such late works as *De Anima* and *De Generatione Animalium*.

In the first chapter of *De Generatione Animalium* II Aristotle tries to give a philosophical explication of procreation in animals and men.³⁰ He begins by giving the general reason for its existence. The divine is always cause of what is best, but only to the degree in which things are capable of receiving it. Now to be is better than not to be and to live is better than not to live. For this reason there is reproduction in animals. Animal nature has not sufficient strength to be eternal—therefore perishable things are eternal in their own restricted way, by propagating their *species*. Individually they cannot reach eternal existence but, while the individuals pass away, their *species* subsists. In comparison to the earlier work *De Generatione et Corruptione*, what is added is only the explanation of the existence of biological *species*. They represent the eternal Form, which must persist while the individuals come and go.

We can see from this that the adherence to Platonic ways of thinking is by no means a characteristic of only the young Aristotle. The works of his mature years still display this characteristic to the full. To our argument it is important that also the tendency to see the universe

³⁰ *Gen.An.* 2.1, 731b26–36. About the chronology of this work see Jaeger, *op.cit.* (*supra* n.14) 329; Düring, *Aristoteles* 52 and 513; and F. Nuyens, *L'évolution de la psychologie d'Aristote* (Louvain-La Haye-Paris 1948) 256–63.

permeated by divine forces survives. Clothing his conviction on this point in the strictly woven texture of a scientific theory, Aristotle gives expression to his awareness of a divine presence in every cosmic force. This confirms our conclusion that Aristotle's scientific theories cannot be interpreted as specimens of empiricism, as they are often taken to be. At the core of the scientific theory itself the consciousness persists that, at bottom, things are more than heaps of matter to be observed empirically. They are a manifestation of a divine presence and creative activity.³¹

Aristotle's convictions about the presence of a divine causality in the life of the universe found their maturest formulation in *De Anima*, generally recognized as a late work. Nuyens even thinks it was written by the philosopher in the last years of his life.³² In *De Anima* we find the same philosophical explanation of reproduction: to mortal beings it is the only way of participating in eternity. All things without exception strive after eternity. Every living being tries to obtain its share in eternal existence by a struggle for survival. It lacks the means to attain survival by itself, but it manages to survive by reproduction. In orthodox Aristotelean terms: living beings are unable by themselves to partake of eternal and divine existence to the full. They therefore partake of it to the measure of their possibilities. As a result, a living being does not subsist itself, but Aristotle says, "as it were itself," i.e. as the persisting *species* (*De An.* 2.4, 415a30–b8).

In the wording of the passage three terms are remarkable: the two expressions of 'partaking' and 'participating' (*μετέχειν, κοινωνεῖν*), which were the standard expressions used by Plato in his metaphysical dialogues, and the term 'to strive after' (*ὀρέγεται, ὀρεξίς*). This is the same expression used by Aristotle in *Metaphysics* XII in the chapter where he describes how all things are moved or rather attracted by their first cause. The excellence of the first cause imparts movement to them because it awakens them to love it and to strive after it.³³ This is the way in which the universe is dependent on, or rather clinging to, its first principle, the Unmoved Mover.³⁴

³¹ This is Aristotle's own wording in *De Caelo* 2.12, 292a19–22.

³² Jaeger, *op.cit.* (*supra* n.14) 331. Nuyens, *op.cit.* (*supra* n.30) 215–17. Düring, *Aristoteles* 52.

³³ 1072a26, *ὀρεκτόν*.

³⁴ 1072b14, *ἠρρηται*. Aristotle probably found the inspiration for this theory of love and attraction in the philosophical cosmology of Eudoxus, as was argued by Wolfgang Schade-waldt in a fine article, "Eudoxus von Knidos und die Lehre vom unbewegten Beweger," *Satura Weinreich* (Baden-Baden 1952) 103–29.

By now we may have left behind us two more or less current views about Aristotle's development, the view that Aristotle started as a Platonist and gradually developed theories of his own, and the view that these later theories were characterized by a more empirical method. We had better be fully alive to Aristotle's attempts at constructing theoretically consistent systems. Such attempts are found in works as early as *De Caelo*. For every new subject which he sets out to study Aristotle tries to construct a systematic framework to guarantee the scientific character of his explanations. We can observe that from the very first the philosopher focuses his attention on this work of formulating theory. When observing this we may ignore for the moment the question whether the contents of his theories are Platonic or not. In fact, whole blocks of Platonic theories survive in very central places up to the end of Aristotle's career.

As regards the more special problem of Aristotle's religious convictions, the current prejudice of a more empirically minded later Aristotle left us with a philosopher who had finally lost hold of his theological principles. As the texts quoted above from such late works as *De Anima* and *De Generatione Animalium* may have made clear, there is no warrant for such a development.

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October, 1972