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Aristotle's Metaphysics as Mysticism

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Abstract

In this paper I shall argue that there are two reasons for thinking that the current widespread understanding of Aristotle's metaphysical thought is in need of revision. In part one, I shall attempt to show that Aristotle's metaphysics belongs to a mystical tradition in ancient philosophy both in regard to its principles and its method; and in part two, I shall make use of Aristotle's own principles in order to attempt to demystify his metaphysics.

Part I

In the history of western philosophy we are familiar with the statement that Thales was the first philosopher. His famous statement that everything is water, that everything comes from water and will return to water, makes him a philosopher because his statement is said to constitute a rational explanation of the universe.[1] It may be doubted, however, that the mythological explanations of the universe in the time before Thales were irrational. They were formulated by

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1 Cf. Frede, *Aristotle's Account*...317: "Thales had at least the ambition to account in this way for all there is (983b8)..."

human beings and so were *a priori* rational. Mythological explanations have an internal logic of their own. But these explanations involve a degree of imagination, such as the actions of gods and goddesses that we do not find in Thales. We cannot say that Thales did not use his imagination, far from it. Having seen that water evaporates and becomes air (as he thought), and having seen that water freezes and becomes hard, Thales used his imagination to conclude that earth could come from ice. There is no empirical evidence that earth can come from ice, and the postulate of Thales clearly involves use of imagination. The difference between Thales and the mythological frame of mind widespread at his time is not that Thales was rational, but that he used a lesser degree of imagination in his explanations. This lesser degree of imagination is reflected in his use of an empirical element, namely water, in his cosmological explanation. Thus the widespread notion that Thales was rational in contrast with his mythological predecessors is naïve and incorrect.

It hardly needs repetition that imagination is by no means eliminated in scientific thought. Science is not a fixed body of thought, but one that is constantly in need of revision, and hypothesis is an essential part of the method required and involves imagination. The important point is that the degree of imagination used in philosophy is to be situated between the degree of imagination used in mythological thought and that used in science. A well-known example will suffice to confirm this point. According to Aristotle the order in the universe is as perfect as possible, an *a priori* judgement he inherited from Plato and originally from Pythagoras. Therefore, he concluded that the heavenly bodies must move in circles, since circular movement is closer to the eternal and perfect than rectilinear movement. And therefore the heavenly bodies must be composed of a fifth element, namely ether that naturally moves in a perfect circle. The reasoning of Aristotle clearly involves imagination, but less than that found in mythology and more than that required by science.

The tradition founded by Thales (c.625 – c.546 BC) was continued by Anaximenes (c.585 – c.525 BC), who held that the universe is

essentially air, that everything comes from air and will return to air. Air is invisible and so more divine than water, and one can argue just as well that everything comes from air. The tradition is continued by Heraclitus (c.540 – c.475 BC), who argues that the universe comes from fire and will return to fire. It appeared to him that fire is not only the source of all that exists and essential for life, but is more divine than air due to its unpredictability and unification of opposites. It is doubtful whether any philosopher argued that earth is an *arche* or source of all that exists. But Empedocles (c.495 – c.432 BC) argued that the universe can best be explained by his famous four elements, a theory that dominated western physical thought until the seventeenth century. This tradition was continued by Anaxagoras (c.500 – c.428 BC), who held that there are equal parts of everything in everything, a theory better known as that of *homoeomeria*. The final member of the tradition is Democritus (c.460 – c.370 BC), who held that all of reality is composed of atoms. This whole tradition is criticised by Aristotle, who held that it is one-sided, because it explains reality in terms only of the material cause.[2] Aristotle objected strongly to the notion that reality can be explained merely in terms of matter or what things are made of.

In ancient Greek philosophy there is, however, a second tradition. But this tradition is not recognised as such by Aristotle. Historians of philosophy have also failed to recognise this second tradition and its implications. The tradition begins with Anaximander (c.610 – c.540 BC), the immediate successor of Thales. Anaximander explained the universe by means of the indeterminate or infinite (*to apeiron*). There has been much discussion as to the meaning of Anaximander's indeterminate, and this discussion has obscured his importance as the founder of a second philosophical tradition in explaining the universe. The evidence available leaves it uncertain what exactly he meant by

[2] *Phys.* II, ix, 199 b 34-35.

the indeterminate.[3] But it is quite clear that his indeterminate was not a sensible and empirically tangible element such as water, air, fire or material atoms.

The second member of this tradition is Pythagoras, who held that all of reality is number. Pythagoras, like Descartes in a later age, was strongly influenced by the power of mathematics and believed that numbers are points and that all of reality is composed of points. Thus he did not merely believe that reality can be explained in mathematical terms, but that things really are numbers. Clearly we are dealing here with a powerful use of imagination, one paralleled by the theology of Proclus or in modern times by Leibniz with his theory of monads. When this type of theory is elaborated into a system whereby the head is number one, the heart number two and certain numbers are even abstractions, such as holiness (number 3), justice (number 4), marriage (number 5), the opportune moment (number 7), and perfection (number 10),[4] we must speak, I believe, of a kind of mysticism, in the sense of the intuitive that goes beyond reason. It is a theory inspired by the mystical Orphic religion and widely believed to have its origins in India.

The tradition is continued by Parmenides, who held that everything "is", that reality is Being. This theory led Parmenides to hold that change and movement are impossible, a theory that he admitted was remote from empirical reality. Parmenides' explanation of the universe is thus remote from the first tradition that explained reality by means of empirically verifiable elements.

When we come to Plato, we find that he explains all of reality by means of two theories. He accepts that all of material reality is derived from the four elements of Empedocles. But this theory is

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3 Aristotle, *Phys.* III, iv, 203 b 3-15 writes that it is unlimited, ungenerated and indestructible (thus immaterial), governs all things, and is divine. Thus it seems to foreshadow the deity of Xenophanes (c. 570 – c. 470 BC) and later of Anaxagoras. Cf. further Reale, *A History of Ancient Philosophy...*, I, 39-41.

4 Alexander, *in Met.*...38, 10 sq.

of entirely secondary importance when it comes to the explanation of ultimate reality.[5] For Plato the material universe is composed of changeable things, and it may be noted that he has no word for a changeable thing. However, Plato holds *a priori* that science must be possible. Changeable things can only be understood in terms of unchanging realities, since knowledge or science is by definition unchanging. Hence Plato concludes that there must be a second unchanging and hence immaterial world of Ideas that really exists. The world is ordered to an extraordinary degree of perfection, which only a cosmic artisan or demiurge could have brought about. The universe was originally in a state of chaos before the intervention of the demiurge, who used the real world of Ideas to reduce the chaos to order. Thus ultimate reality consists for Plato of immaterial and unchanging Ideas and in the second place of chaos that has been reduced to order in which ever-changing things are discernible as imitations of the eternal Ideas. With this analysis of ultimate reality Plato belongs clearly to the second tradition, what we may call the mystical tradition, that of Anaximander, Pythagoras, and Parmenides who explain all of reality in terms of abstractions.[6]

Aristotle is usually classified as a realist philosopher in comparison with his master Plato. The most obvious reason why is referred to as a realist is that he did not accept Plato's idealism or explanation of all of reality in terms of Ideas. For Aristotle the world around us is real. However, an examination of his metaphysics might lead us to question his realism. According to Aristotle's metaphysics ultimate reality consists of substances (*ousiai*). Aristotle is the first philosopher to have a word for what we call a "thing", namely

5 For Plato physics or the study of nature is not a science at all, since there cannot be a genuine science of changing things, and hence the analysis of physical reality into four elements is not strictly scientific.

6 Cf. Frede, *Aristotle's Account*...305: "...a review of the earlier history of philosophy shows that a number of important philosophers thought that some of the principles we have to appeal to in order to account for the physical world are not themselves perceptible or material."

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this word "substance". Even his God, the Unmoved Mover, is a substance.[7] Science for Aristotle depends on the existence of real substances. Everything that exists in the universe is a substance. The substances in the world together make up the world, and hence the world itself is not a substance, a view that would later be adopted by Kant, although for different reasons.

For Aristotle metaphysics, according to his well-known definition, is the study of being as being, meaning the study of the existence of everything that exists from the lowest substances to the highest, namely God.[8] It is also the study of the first and supreme causes and principles of substances.[9] In his physical theory Aristotle explains all material substances on earth by means of the four elements of Empedocles. These four 'primary' or 'simple' bodies are what actually exist. But going beyond physics, in his metaphysical theory, Aristotle studies (among other topics) the question raised by the teaching of Parmenides as to how change is possible.[10] The question is how substances are real, how they are what they are and at the same time can change. To answer this question Aristotle holds that the 'primary' or 'simple' bodies presuppose prime matter and opposites as their elements.[11] Aristotle holds that all substances are compositions of form and matter, with the single exception of his God, who is pure form.[12] Form is Aristotle's distillation of Plato's Forms or Ideas and tells us what a real, existing substance is. Aristotle holds that forms or essences, as realised in substances, are real.[13] However, the same form is usually found in many existing substances and is therefore an abstraction when perceived by the human intellect.

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7 *Met.* (XII), vii, 1072 a 31.

8 *Met.* (VI), i, 1026 a 27-32 ; (XI), vii, 1064 b 9-14.

9 *Met.* (I), ii; (IV), ii, 1003 b 5-19.

10 Cf. *Phys.* I, viii-ix.

11 *Gen. et Corr.* II, I, 329 a 24-35. Cf. Joachim, *Aristotle, On Coming-to-be and Passing-away*…189, 193, 198-9. For a comparison of physics and metaphysics and their objects cf. my book *Aristotle's Concept of Change*…Chapter IV (a)(xi).

12 Prior to the *De Anima*, Aristotle also appears to have held that soul is a reality independently of matter and is "pure form".

13 *Met.* (VII), iii, 1029 a 3-7.

Matter, the other component part of substances found on earth, is Aristotle's distillation of Plato's chaos. Plato's chaos, when ordered by the Demiurge, did not give existence in its own right to the things in the world, but made them shadowy images of the real Ideas whose existence they imitated. Aristotle's matter made his perceptible substances possess existence in their own right.[14] However, his matter was also a principle of potentiality and made it possible for his substances to change either accidentally or substantially. The two causes of change are, then, the efficient and final causes.

Strikingly Aristotle's form could not exist without matter except in the case of the Unmoved Mover, and his matter could not exist without form.[15] Thus Aristotle claimed that perceptible substances are real, but composed of principles (*archai*) that cannot exist in their own right.[16] This is a most extraordinary theory and yet never seems to have evoked the kind of indignation that one might expect. If we suppose for a moment that hydrogen and oxygen did not exist each in their own right, then one would not expect to find any scientist who would accept that hydrogen and oxygen in combination could form real water. How could one have a cake composed of "principles" that could not exist separately? We must surely conclude that that which cannot exist on its own does not exist. Abstractions cannot be the cause of what is real. Thus the form in the mind of the builder does not become real in the house he builds, although the house resembles this form. The components of what is real must themselves be real,

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14 In *Met.* (VII), xvii, 1041 b 28: This statement is to be understood as meaning that in a composite perceptible substance form is the primary component that makes the substance a substance – cf. *Met.* (VII), iii, 1029 a 3-7; xvii, 1041 b 7-9.

15 Aristotle calls matter a substance in *Met.* (VIII), I, 1042 a 32-34, but only in the sense of a reality that is a component part of an existing individual (principle that makes real and at the same time principle of potentiality). In *Met.* (VII), iii, 1029 a 26-28 he points out that matter cannot be a substance, since it lacks separability and individuality.

16 Aristotle's form and matter are not at all like a black hole, which is discovered by analysis of data although it is imperceptible. The difference is that a black hole really exists.

and to hold the contrary surely goes beyond reason and is a kind of mystical insight, similar to that of Pythagoras and Plato.[17]

It would appear, then, that Aristotle belongs to the second tradition of explanation in ancient philosophy, the mystical tradition, the tradition of Anaximander, Pythagoras, Parmenides, and Plato. He is sharply critical of the tradition of explanation by means of the material cause, the tradition that runs from Thales to Democritus.

However, it is not just the explanation of reality in Aristotle's metaphysics that is beyond reason, since the method he claimed for this science also appears to have a mystical aspect. Aristotle is the founder of the theory that there are three theoretical sciences, namely metaphysics, physics and mathematics. Metaphysics is called 'first philosophy' and also 'theology' by Aristotle. He defines metaphysics, as we have seen, as the study of being as being, by which he means the study of the existence of everything that exists. For Aristotle, however, there is a hierarchy of beings or substances in the universe. The least valuable beings are those that are not alive, such as stones. Among living beings the least valuable are plants, followed by animals and then human beings. However, human beings are not the most valuable beings in the universe. Aristotle considered the heavenly bodies, the moon, the sun, the planets and the stars to be superior to human beings, since he believed they are eternal and also alive and intelligent and not subject to passions like human beings. For Aristotle the most important being is the Unmoved Mover, his God, who is a cause of movement, but does not move himself. Aristotle's God is immaterial, eternal, alive, supremely good and intelligent.[18] His activity consists in contemplating himself, since he is himself the Supreme Being and could not be interested in anything except the best object of thought. Since God is the Supreme Being, the study of God is the most important part of first philosophy or theology.

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17 Most mediaeval thinkers also accepted that Aristotle's form and matter cause the reality, although not the existence of material beings.

18 For the attributes of Aristotle's God cf. my book *Dio e contemplazione in Aristotele, Il fondamento metafisico dell' "Etica Nicomachea"*, Milan, 1999.

The method of this theology and likewise of mathematics, according to Aristotle, is deduction from first principles which are reached by induction.[18] This method yields certain unchangeable knowledge. We may be very surprised to hear Aristotle classify metaphysics together with mathematics, since mathematics is the science about which there is probably the greatest degree of agreement among specialists, whereas metaphysics must be among the areas about which there is the least agreement. Most people would not think that we can reach metaphysical truth by means of deduction, and most people also would not think that we possess certain and unchangeable knowledge in the field of metaphysics. Unfortunately Aristotle provides us with very little information about the method he recommended in metaphysics. But the method he uses in his own metaphysical books is certainly not deductive. It is more dialectical in nature.[20]

The question arises as to how Aristotle could hold that the method of metaphysics is deductive in nature. It is totally unhistorical to imagine that Aristotle's idea of method in the area of metaphysics is a deductive system like that of Spinoza.[21] But if not, we must ask ourselves what possible type of deductive model with the certainty of mathematics Aristotle could have had in mind. It would appear that there is only one possible answer, and that is that Aristotle envisaged something resembling the mystical second metaphysics

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18 Cf. *Part. An.* I, i, 639 b 7-10 on mathematical method. On the method of science cf. *Et.* V (=*NE* VI), iii, 1139 b 25-36; *APo* I, ii, 71 b 9 - 72 b 4.

20 On the meaning of dialectic for Aristotle cf. my article "Dialectic, Language and Reality in Aristotle".

21 The Hegelian Joachim defended the view that the method in all of the theoretical sciences is identical, namely purely demonstrative, as in mathematics. Cf. Joachim, *Aristotle, On Coming to Be*....Introduction. Kullmann, *Wissenschift und Methode*...is also convinced of the Cartesian view that theoretical science implies mathematical method. Düring, *Aristotle's method*...217-21 attempts to show to what extent Aristotle used *a priori* reasoning and tried to make the facts fit this reasoning in his physical works – but this attempt shows merely a *tendency* and not mathematical method.

of Plato which was based on the Pythagorean mathematical model and referred not to the method used in discovering truth, but to the internal relationship of truths when they had already been discovered. It may certainly be objected that the evidence for such a hypothesis is deficient, but in the same way the evidence for the mathematical second metaphysics of Plato was also secret, and this secrecy was part of the nature of the mysticism it involved.

Part II

In the second part of this paper I would like to discuss briefly the possibility of a demystification of Aristotle's metaphysics.

One of the most important questions in philosophy may be said to be the question 'What is there'? Thomas Aquinas answers: The world is made up of beings. Plato answers: The world is made up of shadowy imitations of and participations in Ideas. It is widely thought that Aristotle believed that the world is made up of substances. In section *(a)* of *Part II* I aim to show that Aristotle did not attribute the term 'substance' without distinction to all of those things later called 'beings' by Aquinas. Rather, Aristotle believed in an analogy of substance. My thesis is that this analogy, if it had been noticed or understood in Aristotle's time or even in later centuries would have had a major influence on modern and contemporary philosophy.

(a) Aristotle's analogy of substance

It is to be observed that in a number of passages Aristotle states that substance pertains in the first place to living beings. Thus in *Metaphysics Z*, in his discussion of modes of generation, Aristotle writes:

> Natural generation is the generation of things whose generation is by nature. That from which they are generated is what we call matter. That by which they are generated is something which exists naturally, and that which they become is a man or a plant

> or something else of this kind, which we call substance in the highest degree.[22]

Thus for Aristotle a substance is in the first place a natural substance, and then in particular a living natural substance, such as a man, a plant or an animal.[23] In the following chapter of the *Metaphysics* Aristotle again states that living beings are most of all substances.[24] In accordance with this view, he also gives animals as an example of his doctrine that for every substance that is generated there must be another substance which pre-exists it in actuality. Thus it appears that living beings for Aristotle are substances in the primary sense.

Again, in his account of nature in *Physics* II, i, Aristotle divides up the moving universe into that which is by nature and that which is due to other causes.[25] As examples of natural substances, he then gives "animals and their parts and plants and simple bodies, such as earth, fire, air and water."[26] All natural beings are said to differ from non-natural beings by having within themselves a principle of movement (implying change) and absence of movement (implying staying unchanged).[27] For Aristotle, therefore, the essential division of the moving universe is that between substances which have within themselves a principle of change and staying unchanged, i.e. an internal source of purpose and those things upon which purpose is conferred from without.

The source of purpose conferred on substances from without is man. Thus the essential division of the moving universe is that between natural objects and artefacts. Whatever is not an artefact is a natural object. Aristotle classified living substances (namely

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22 *Met.* (VII), vii 1032 a 15-19.

23 Cf. Reale, *Aristotele, La Metafisica*...Vol. I, 591 *ad loc* "Arist. pensa, in genere, a tutti quegli esseri, che sono organismi viventi."

24 *Met.* (VII), viii, 1034 a 4. On the question of which things are substances for Aristotle cf. my book *Aristotle's Concept of Chance*...Chapter IX (iii) (a); Waterlow, *Nature, Change and Agency*..., 52-3. Cf. also *Cat.* V, 2a 11-14.

25 *Phys.* II, i, 192 b 8-9.

26 *Phys.* II, i, 192 b 9-11.

27 *Phys.* II, i, 192 b 13-14. Cf. also *Met.* (V), iv, 1015 a 13-15.

animals and plants) and inanimate natural beings (e.g. the four terrestrial elements) together. Both groups are natural beings, as both are said to have within themselves a principle of change and staying unchanged.

Thus it would appear that non-living things, such as those composed of the four elements are also substances for Aristotle. However, they are not substances in the primary sense. They are substances (although not as adequately as living beings) because they have an internal principle of change (that makes them seek their proper place), which is due to the presence in them of soul-principle,[28] a reality that has not previously been recognised in Aristotle. This soul-principle or soul in general is doubtless Aristotle's distillation of Plato's world-soul. Thus non-living natural substances also have a principle of permanency, but this is greatly deficient in comparison with that of living beings, which retain their identity even though every particle of their bodies changes regularly.

Art imitates Nature,[29] e.g. a human being who develops a weapon or a medicine is imitating what nature does without intellect. Thus the products of art are substances by imitation. They are not living beings, but bear a resemblance to living beings, since they have no internal principle of change and staying unchanged, but have a form and a purpose given to them by man, not by nature.

Thus for Aristotle only living beings are substances in the full and primary sense. Inanimate beings are substances by analogy, and artefacts even more remotely, to the extent that their purpose is conferred on them by man and their unity and permanence, relative to the duration of human life, makes them significant to man. It may be said, therefore, that Aristotle believed in an analogy of substance of this kind.[30] However, his standpoint is to a large extent implicit.

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28 Cf. *De Gen An.* III, xi, 762 a 18-21.

29 *Phys.* II, ii, 194 a 21-22; II, viii, 199 a 15-17; *Protrep.* B 13 Düring.

30 One may contrast Descartes' analogy of substance, in which God is the *primum analogatum*, given that substance is defined as an existent thing that requires nothing but itself to exist.

The fact that he did not explicitate his position, and his attempt to classify both living and non-living natural beings together (to contrast them with art) doubtless facilitated Descartes' task of classifying both under extension.

For Aristotle it does not appear that there are any other substances than the hierarchy of (a) living beings, (b) non-living natural substances, and (c) the products of art. Aristotle does not call a field, a river, a lake, an ocean, a mountain, or the world itself a substance, since they are not a determined something.[31] Thus what really exists in the first place for Aristotle are living beings. To be (for them) is to be alive. The very meaning of existence is life.[32]

The consequence of this position is that the only real form for Aristotle should be soul. Aristotle had the great merit of rejecting Plato's Forms and accepting such forms as reality only as they are found in concrete individuals. He always held, like Plato, that the soul is an immaterial reality. Until later in life, however, he did not identify the soul with the form of living beings. He reached this position only in *De An.* and did not take the next logical step, which would have been to hold that the *only* real form is the soul. In accordance with his analogy of substance, all other forms are so only by analogy. The same conclusion arises from Aristotle's understanding of teleology, as will now be seen.

(b) Teleology

In a famous passage in *De An.* II, iv Aristotle speaks of the aim of all living beings:

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31 For Plato the world itself is the greatest and most beautiful living being. However, Aristotle rejected Plato's world-soul and therefore rejected the world as a substance, – since a substance is essentially a living being –. Hence for Aristotle the world is just the concept of the collection of all the things in the world. This is the view that would later be adopted by Kant, for whom the world is a transcendental idea of pure reason.

32 Cf. *De An.* II, iv, 415 b 13-14. The proximity of this position to that of Heidegger is, of course, striking.

> For it is the most natural function in all living beings...to reproduce another individual similar to themselves – animal producing animal and plant plant –, in order that they may, so far as they can, share in the eternal and the divine. For it is that which all things strive for, and that is the aim of the activity of all natural beings...Since, then, individual living beings are incapable of participating continuously in the eternal and divine, because nothing perishable can retain its individual unity and identity, they partake in the eternal and divine each in the only way it can, some more, some less. That is to say, each survives, not itself, but in a similar individual, which is one in species, not identically one with it.[33]

In this passage Aristotle writes that the aim of the activity of all living beings is to share in the eternal and divine. Because the individual cannot survive, it seeks to survive by reproducing itself. When Aristotle says that all living beings seek "the eternal and the divine", it is to be understood that this is a dialectical way of saying that they seek the eternity of Aristotle's God, the Unmoved Mover.[34]

For Aristotle every living being – thus every substance in the primary sense – not only struggles to exist/survive, but seeks its perfection or the full development of its form and to retain this condition for as long as possible.[35] The acorn seeks to grow into a fully-grown oak-tree. This is its highest good. The ultimate good of the universe is the Unmoved Mover.[36] When living beings strive for their full development, they are striving for the goodness of the Unmoved Mover. But because they cannot remain in a condition of full development, they reproduce, in order to reach the eternity of the Unmoved Mover in the species.

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[33] *De An.* II, iv, 415 a 26 – 415 b 6; likewise *De Gen. An.* II, i, 731 b 24 – 732 a 1.

[34] On dialectical method in Aristotle cf. my book *Dio e Contemplazione in Aristotele* 12-17.

[35] *Phys.* II, i, 193 b 11-18; ii, 194 a 27-33.

[36] Cf. *Met.* (XII), x. 1075 a 11-15.

It is to be noted, however, that intellect is not required for these purposes. Aristotle holds that it is absurd to think that intellect or deliberation is a prerequisite of teleology.[37] Witness the bird that builds a nest, the spider that weaves a web and the plant that produces leaves to protect its fruit. All of these activities are manifestly teleological, because they, clearly parallel to human teleological activities, occur without the aid of intellect or deliberation.[38] Teleology is accordingly an intrinsic part or aspect of nature.[39] Still more important is the fact that the teleology in nature is primary, and the teleology experienced and recognised by human beings when they consciously aim at goals is a secondary exemplification of the primary teleology in nature. As Aristotle writes in *Phys.* II, viii: "In general, art either imitates the works of nature or completes that which nature is unable to bring to completion. If, then, works of art [i.e. projects involving deliberate teleology] are for something, clearly so too are the works of nature."[40]

For Aristotle, primary teleology, as found in nature, is a characteristic of that which is alive and is due to a principle in all living beings. This principle is soul, not intellect. In other words, teleology is caused by soul, which neither needs to calculate to achieve its goals, nor even requires the body which it inhabits to possess any nervous system,

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37 *Phys.* II, viii, 199 b 26-28. Cf. Charles, *Teleological Causation*...116.

38 *Phys.* II, viii, 199 a 20-30. Cf. Shields, *Aristotle*...80-1: "...when Aristotle seeks to illustrate the teleology of nature in terms of a doctor doctoring himself, it is because he takes it for granted that human actions are for the sake of something,... Now, the eliminativist, who austerely rejects *all* appeal to teleological causation, needs to deny that such appeals have any role to play in the explanation of the activity we observe. That much does seem extreme, and needs some sort of powerful argument, if it is to be taken seriously, an argument showing that any appeal to goal-directedness is incoherent, or that all purposive explanation is as such somehow outmoded or incomprehensible."

39 Cf. Charles, *Teleological Causation*...117: "At this point one reaches bedrock in Aristotle's defence of teleological causation: it must be a genuine form of causation, because if it were not, the world would contain no natures and no natural processes."

40 *Phys.* II, viii, 199 a 15-18; ii, 194 a 21-22; *Protrep.* B 13 Düring.

as in the case of plants. Thought, which is teleological in a secondary and dependent way, provides human beings with privileged access to the kind of thing nature (meaning natural beings) is doing for a purpose without the use of reason.[41]

The existence of soul follows from the difference in behaviour between that which is alive and that which is not alive.[42] Teleology is explicable only in terms of a principle called soul, which makes all living beings strive to stay alive. The aim of life is life itself, i.e. survival in the best possible condition. But the reason why living beings strive to stay alive is because they are striving to attain the eternity and perfection of the Unmoved Mover.

Thus Aristotle held that it is inadequate to attempt to explain living beings by means of the material cause only (as do contemporary mechanicism and dialectical materialism). Teleology implies the existence of soul and soul implies teleology (and hence it is eminently reasonable that evolutionary biologists, who do not accept soul, also do not accept teleology as a reality).

Accordingly, there is a second reason why Aristotle, to be consequent, should have held not only that living beings are the best examples of substances, but that they are the only real substances.[43] We come now to the realist consequences of my thesis.

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41 For a defence of Aristotle's view on natural ends cf. Johnson, *Aristotle on Teleology*... 207, 290-1.

42 In Aristotle's judgement the struggle to survive and develop to the fullest possible degree – thus teleological orientation – cannot be explained in material terms. The inbuilt avoidance of death, the capacity of self-defence and of self-healing, as well as the fact (as opposed to the process) of reproduction (not found in any non-living being), i.e. the combination of the characteristics of everything alive requires more than matter to explain it. In contemporary terms, the extraordinarily complex chemical composition found in all living beings is not life, but that which underpins life. One might say that the extreme complexity of living beings, all parts of which collaborate in a subtle way, shows the existence of an immaterial coordinating principle.

43 Cf. Ross, *Aristotle*...172: "But it is right that Aristotle, in rejecting the Platonic doctrine of transcendent form, should lay stress on the equally immaterial nature of the immanent form in which he himself believes."

(c) Realist form and matter

According to the view I have proposed, all of perceptible reality should be divided into three: substances (animate nature), artefacts, and inanimate nature.

In the case of substances (animate nature), the form (soul) imposes recognition of its biological nature and aim of life on the human mind, whereas in the case of artefacts the source of the form and its goal is the human mind, which imposes on reality forms and goals that have no existence of their own. These forms are contingent.

In the case of inanimate nature, the mind is presented with ordered matter, such as elements, atoms and subatomic particles. But this ordered matter has no inbuilt form or purpose.[44] In order to understand it and to think about it, the human mind imposes form and purpose on it, since the human mind is unable to think of anything real except as having a form and serving a purpose. Thus instead of saying that matter cannot exist by itself (without form), as Aristotle held, we should say that matter cannot be known as it is in itself. Thus ordered matter in itself is a noumenon. In a similar way the human mind imposes form and purpose on nature in the case of a mountain, ocean, field or hedge. Thus the human mind substantifies inanimate nature.

It follows that the only true form is soul, which, since it is real, does not depend on matter for its existence. Matter, likewise, is a reality that does not depend on soul for its existence. It exists and is ordered, but is unformed until it is substantified, i.e. receives form and purpose from the human mind. Based on this realist standpoint, I come now to some conclusions.

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[44] A distinction must be made between teleology and the order in the universe that is a prerequisite of life and the possibility of human thinking.

Conclusion

Aristotle implicitly expresses in his works a view that may be called the "analogy of substance". The only true substances are living beings because they alone have a real form, namely soul. The term substance in the proper sense should be used only for living beings and not for artefacts. From this standpoint it follows logically that form is not a univocal term and should be understood to mean the soul in living beings, although it can be used for non-living things by way of analogy.

In reply to the fundamental philosophical question: "what is there?" (in the universe) we may reply, therefore, that what there is is soul, unformed matter, and living beings, which are a remarkable combination of both (not forgetting that these realities do not appear ultimately self-explanatory and point to the existence of God). Matter does not exist in the Heideggerian sense, it does not ex-ist. To be is to be something. But everything that is not alive is not a thing except by analogy, except by the thingness or reification given it by the human intellect. We may say that Plato rightly emphasized the semi-unreality of matter in its own right.[45] Can something be a substance without real form? Clearly not, as there would be no subject of existence. But the only real form, as implied by many passages of Aristotle, is soul.

It is clear that many mediaeval thinkers implicitly understood the dilemma if one understands Aristotle to have held that all existing things are substances. Many of them attempted to solve the problem,

[45] It might be objected that such a realist adaptation of Aristotle's metaphysics would no longer be a metaphysics at all, and this is partly correct, since I would hold that metaphysics in the traditional sense is a kind of mysticism or intellectual exercise that comes close to reality and turns around reality, but failed to draw the correct realist conclusion from Aristotle's analyses. But the foundation of Aristotle's metaphysics, namely the existence of immaterial substances, remains. Cf. Frede, *Aristotle's Account*...522: "Obviously the existence of non-perceptible, immaterial substances, which are principles of the sensible world, is crucial to the enterprise of metaphysics or primary philosophy, as Aristotle conceives it in the *Metaphysics*. They are the special domain of primary philosophy."

but provided less satisfactory solutions. The best-known solution is that of Aquinas, who proposed an analogy of being, rather than of substance. The widely held theory of the multiplicity of forms in creatures was another attempt to solve the problem. By far the simplest and most satisfactory solution is that proposed implicitly by Aristotle.

At the start of the modern period Descartes eliminated the Aristotelian concepts of form and of teleology in the world surrounding man and in so doing became one of the fathers of modern materialism and mechanicism. It would have been much more difficult for him to do so, if the concept of 'form' had already been accepted as referring properly only to 'soul', and if it had been accepted that this form is found only in living beings.

The importance of this standpoint is that not everything that the human mind recognises is a substance. Only that which has real form, namely soul, is a substance. If a distinction is not made between real objective form and the analogy of form imposed by the human intellect, then everything in the universe is a substance or thing to an equal degree. Form then ceases to be anything special and we can ignore it and fall into materialism. This is precisely the widespread situation we witness in the contemporary world.

It may be observed also that Kant was led to develop his theory of the noumenal world because, as a follower of the Cartesian view that everything we perceive is extension without distinction, he could not grasp that there must be a real foundation of substance, namely soul. Without soul as its foundation, where substance becomes a mere category of the understanding, reality can no longer be known as it is in itself and becomes noumenal.

My thesis, therefore, is that Aristotle's metaphysics of form and matter represents a kind of mysticism, since his form and matter cannot exist on their own and therefore cannot constitute real substances in combination. Only when form is limited to soul, as Aristotle in many passages implies that it should be, and only when

matter is understood as an unformed reality that exists independently of form, can we speak of a realist philosophy.

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