

A revised interpretation of the mediaeval reception 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 this paper 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 the mediaevals would have welcomed this analogy if they had understood it, and that it would have had a major influence on modern and contemporary philosophy.

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 ($\alpha\delta\eta\ \mu\acute{\alpha}\lambda\iota\sigma\tau\alpha\ \lambda\acute{\epsilon}\gamma\omicron\mu\epsilon\nu\ \omicron\upsilon\sigma\acute{\iota}\alpha\varsigma\ \epsilon\acute{\iota}\nu\alpha\iota$).¹

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.² In the following chapter of the *Metaphysics* Aristotle again states that living beings are most of all substances.³ 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

¹ *Met. Z* (VII), vii 1032 a 15-19.

² Cf., ARISTOTELE, *Metafisica*, a cura di G. Reale, Milano 1993, vol. III, p. 347: «Aristotele pensa, in genere, a tutti quegli esseri, che sono organismi viventi».

³ *Met. Z* (VII), viii, 1034 a 4.

into that which is by nature and that which is due to other causes.⁴ As examples of natural substances, he then gives «animals and their parts and plants and simple bodies, such as earth, fire, air and water».⁵ 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).⁶ 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 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 beings, 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 (ψυχική; ἀρχή).⁷ They are also said to 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,⁸ 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. However, his standpoint is to a large extent implicit. 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.⁹

⁴ *Phys.* II, i, 192 b 8-9.

⁵ *Ibid.*, 192 b 9-11.

⁶ *Ibid.*, 192 b 13-14. Cf. also *Met.* Δ (V), iv, 1015 a 13-15.

⁷ Cf. *De Gen An.* III, xi, 762 a 18-21.

⁸ *Phys.* II, ii, 194 a 21-22; II, viii, 199 a 15-17; *Protrep.* B 13 Düring.

⁹ 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 —

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.¹⁰

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 be seen in the next section.

Teleology

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

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.¹¹

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.¹²

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.¹³ 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.¹⁴ 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.

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.

¹⁰ Cf. *De An.* II, iv, 415 b 13-14: «τὸ δὲ ζῆν τοῖς ζῶσι τὸ εἶναι ἐστίν, αἷτια δὲ καὶ ἀρχὴ τοῦτων ἢ ψυχῆ».

¹¹ *De An.* II, iv, 415 a 26-415 b 6; likewise *De Gen. An.* II, i, 731 b 24-732 a 1.

¹² On dialectical method in Aristotle cf. my book *Dio e Contemplazione in Aristotele, Il fondamento metafisico dell'Etica Nicomachea*, Introduzione, traduzione di G. Reale, con la collaborazione di V. Cicero, Milano 1999, pp. 12-17.

¹³ *Phys.* II, i, 193 b 11-18; ii, 194 a 27-33.

¹⁴ Cf. *Met.* Λ (XII), x.

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.¹⁵ 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, which are manifestly teleological, because clearly parallel to human teleological activities, occur without the aid of intellect or deliberation.¹⁶ Teleology is accordingly an intrinsic part or aspect of nature.¹⁷

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.¹⁸

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, 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.¹⁹

The existence of soul follows from the difference in behaviour between that which is alive and that which is not alive.²⁰ 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

¹⁵ *Phys.* II, viii, 199 b 26-28. Cf. D. CHARLES, *Teleological Causation in the Physics*, in L. JUDSON (ed.), *Aristotle's Physics: A Collection of Essays*, Oxford, 1991, pp. 101-128, 116.

¹⁶ *Phys.* II, viii, 199 a 20-30. Cf. C. SHIELDS, *Aristotle*, London/New York, 2007, pp. 80-81: «[...] 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 austere 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».

¹⁷ Cf. D. CHARLES, *Teleological Causation*, cit., p. 117, n. 15: «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».

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

¹⁹ For a defence of Aristotle's view on natural ends cf. M. R. JOHNSON, *Aristotle on Teleology*, Oxford 2005, pp. 207; 290-291.

²⁰ 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.

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).

Thus 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. For Aristotle teleology is immanent in Nature. Teleology is found only where there is soul. Teleology is not to be found in the material cause.²¹ The goal-orientation found in artefacts is due to the human soul, which gives purpose to the artefacts it creates. But whatever is a mere imitation is not to be confused with the work of the soul in nature. When the human soul reifies or substantifies parts of nature such as a mountain, a field or an ocean, that is also because the human intellect is incapable of envisaging anything except as serving a purpose, given that the soul is essentially goal-orientated. Thus the goal-orientation of artefacts, and the understanding of non-living beings as serving a purpose depend on the human soul. From the fact that teleology is essentially dependent on soul, and that nothing can be understood except as serving a purpose, it follows that soul is the only real form.

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.

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, 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 around 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.

²¹ A distinction must be made between teleology and the order in the universe that is a prerequisite of the possibility of human thinking.