

How, and how successfully, does Aristotle's analysis of change respond to the following dilemma?

'*What is* cannot come-to-be, since it-is-already, and nothing can come-to-be out of *what is not*, since there must be some *underlying subject*'. *Physics* 1.8.

In *Physics*, Book I, ch. 7, 'change' is described in order to resolve two dilemmas: that change can only occur from nothing, and that consequently no change occurs at all. Such dilemmas come from our everyday intuition that in every such case something does change, while something persists.

I shall expose here first the origin of the problem, which derives from the Eleatic conception of reality. It will then follow a brief introduction of Aristotle's answer to the problem. It will be then possible to analyse his theory in depth and move to some possible objection relating his formulation of the notion of *substance*.

The problem of the *perfect being* and brief introduction to Aristotle's theory

An important challenge in Aristotle's and Plato's metaphysics has been to solve the problem aroused by Parmenides' theory of the *perfect being*, in which *perfect identity* is established in the whole reality. From this it follows that change itself becomes logically impossible: if we can conceive the notion of being, that of non-being is ultimately fallacious. Consequently, if change requires the passage from not-being to being (in *x*'s coming-to-be) and from being to not-being (in *x*'s ceasing-to-exist), then no logical possibility is left for the account of the changing of *x*.

To solve the problem, Aristotle introduces the *multiple conception* of the being, for, although it is true that *what is* cannot come from non-being, this doesn't imply that a being cannot come from a being ('We say that one thing comes to be from another thing [...]'¹). This is supported by the further distinction between being in *act* and being in *potency*: if we can't say that being in act cannot come from being in act, (for 'what is cannot come-to-be for it-is-already) it is still possible to consider a being in potency that becomes being in act; so that the alternative to being is no more the non-being, but the *being in potency*.

The *multiple conception* of the being is then a division of the unity of the being into: *matter* (which represents the object's potentiality); *form* (namely its actuality) and *composite* (the 'unity' of matter and form).

Briefly we can then summarise Aristotle's solution as follows: change is given in a persistent matter *x* which is actually *g* and only potentially *f* at *t*₁, that acquires its actuality of being *f* at *t*₂ through the form of being *f* and the loss of being *g*.

Given these premises, it is now possible to analyse his theory of change in depth.

Aristotle's theory of change

It is possible to picture the concept of persistence and change in the theory of Aristotle through the example of Michelangelo's *David*. We imagine a block of marble that through the work of the artist becomes the sculpture as we see it. In Aristotle's words, we say that between the object 'block' and the object 'David'

¹ *Physics*, 189b, 33-34

something persists, namely the marble, which is the subject, the matter ('[...] the real nature, which persists continuously through the process of making'²). Initially its *actual* form was that of being a block; but it *potentially* had the form of being *David* in itself. Through Michelangelo's work such potentiality was eventually actualised.

Change is then composed by the following elements: that of *difference* (i.e. x is f ; x is g); of *incompatibility* $\sim(Gx \ \& \ \sim Gx)$; and the more contemporary one of *individuation* (x is the same f as y). In Aristotle's words, this is to say that for something to change: there must be something new that comes to be, something old that passes away, and something that stays the same throughout (for the purpose of this paper, we can simply apply the concept of individuation to Aristotle's theory by considering the conception of *primary* and *secondary* substances, where the determination of the former, namely a specific concrete particular, is equal to the picking out of *that* particular).

However, this can only explain *one* possibility of the process of change, namely, *accidental* change; in other words, change of the accidents in an object x that persists through time. But what seems to be left over is a proper explanation of the coming-to-be and ceasing-to-exist of a being, namely: the *substantial* change. This is at a first glance problematic, for if we suppose the existence of an object from t_1 to t_2 , where any accidental change will be, as Aristotle claims, in its form, but not in the matter, we are still in need of clarification for what concerns the passage from t_0 to t_1 , and from t_1 to t_2 , where no matter supposedly persists.

Keeping in mind that the challenge here is that: '*What is* cannot come-to-be, since it is-already, and nothing can come-to-be out of *what is not*, since there must be some *underlying subject*', Aristotle finds that the underlying subject is indeed still the matter itself. This is properly defined in *Categories* [1a,24-25] where it is said that, if something is the *kind* of thing that occurs in a subject, then there is *at least* something, at least one *subject*, without which it cannot exist; or in other words: nothing exists without primary substances existing.

This can be inferred from both his biological and theological theory: from a biological point of view, we can consider the case of reproduction in animals; briefly: from the unification of the female menstrual blood, which is the matter, and the male sperm, which is the form, a 'new being' is created. However, we cannot talk of a 'new being' in the strict sense, for it is only a passage from something that already exists, the blood, but 'human-being-formless', to something with a form.

From a metaphysical point of view, this is justified by Aristotle's conception that there is no beginning or ending in the history of things (and therefore in time); the only limit we obtain is the 'vertical one' namely that from us to the *prime mover*.

Then, if there is such a thing as accidental change, where accidents are the properties predicated of a subject, which is a substance with potentiality; and substantial change, where substance is that to which properties apply, it would then follow that the only way to consider substantial change is that of potentiality itself, where only the nature of a thing is involved.

This view can be complete by introducing two further elements, that of causes, or 'kinds of explanations available for anything'; and that of *substance*.

Change itself can be also seen as that of *motion* ('[the substance] is immediate material substratum of things which have in themselves a principle of motion or

² *Physics*, 193a, 16-17.

change³), in which each change corresponds to a specific category. Precisely four of them are here in question: that of substance (which brings generation and corruption); that of quality (alteration); and of quantity and place (bearing in mind that ‘In respect of substance, there is no motion, because substance has no contrary [...] nor is in respect of relation [...]’ [*Physics*, 225b,10-13]). In relation to this, we can say then that generation is the *assuming of a form* by the matter, while corruption is the loss of it. From this, we then establish that material and formal causes are intrinsic causes of being, where to ‘become’ is never a coming from nothing to something, but ‘from something *incomplete* to something *complete*’⁴. But from this it follows the fourth of the Aristotelian causes: the final one; for when the *telos*, or ‘object of the final cause’, is reached it becomes fully actual, i.e. its potentiality is fully realised.

The second of the topics that need to be analysed is that of *substance*. Two are the kind of substances offered by Aristotle. We have previously seen that we ought to distinguish between essential and accidental properties: the former are things ‘said of’ while the later are things ‘present in’. From this we derive the distinction between *primary substances* (those that are neither said of, nor present in any subject), namely concrete particulars; and *secondary substances* (those that are ‘said of’ a subject) which specify what kind of thing something is. The former can be intended as a proper individual, as claimed by Frede, if and only if, ‘it is the subjective part of something, and it itself has no subjective parts’⁵. While the latter is what supposedly gives to the concrete particular its generality. With this picture in mind, we can now formulate the problem from a different perspective to obtain the same answer: if primary substances are what persist, how can they begin, or cease to exist?

The solution for Aristotle is given by avoiding any *absolute conception* of coming-to-be or ceasing-to-exist. For in any change there is always an underlying entity, which is the *substantial matter*.

We can then conclude by ‘translating’ the source of the main problem in the following way:

‘what is actually an *f*, i.e. ‘being an *f*’ is said of the *primary substance*, *x*, cannot become an *f*, since it-is-already an *f*, i.e. ‘being an *f*’ is said of *x*. And if a concrete particular, *y*, is not even *potentially* an *f* (even though still is, for instance, a *g*) for it is not possible for *f*, to be ‘said of’ *y*, then *y* cannot be *actually* an *f*, for nothing can come-to-be an actual *f* out of *what is not* potentially an *f*, since there must be some *underlying subject* that is potentially an *f*.

This I believe, is the general picture of how Aristotle resolves the problem of change, clarifying what we stated at the beginning of this paper: although it is true that *what is* cannot come from non-being, this doesn’t imply that a being cannot come from being.

³ *Physics*, 193a, 28-29.

⁴ G. Reale, (2004), p.110

⁵ See: M. Frede, *Essays in Ancient Philosophy*, Individuals in Aristotle.

Some problems related to Aristotle's view

A confusion arises when talking about nature of things. In *Physics* 2, ch.1, Aristotle proposes two completely different ways of considering it: either as its matter, or as its form. The latter case is justified by the fact that, in the case of a tree: it is a bed only *potentially*; after acquiring the form it is an *actual* bed. So that the object's nature is identified in its form, which is said to be the 'definable element in the composite'⁶.

In regard of the former case, that of nature interpreted as matter, we have, as noted by Charlotte Witt⁷, a distinction between: the *proximate matter* (the wood that constitute the bed) (materialist account) 'where the object's matter is the origin of those motions which it undergoes owing to its nature'; and the *ultimate matter* (water and earth in wood) (the reductive materialist account) where all proximate matter is seen as reducible⁸. Witt argues then that, to better appreciate Aristotle's account we should opt for the materialist view, so that matter can be better seen as the 'inner origin of a natural being's behavior'.

However, we are then left with an idea of *form* that is far from being clear. As Frede noticed: while in Plato the only necessary distinction was between *general* and *particular* entities, so that the dilemma over change could be simply justified by applying it to the world of senses, interpreted as a 'copy' of the unchangeable world of Forms; in Aristotle we are forced to add the further distinction between objects and properties, where the latter can be either general or particular. This inevitably produces the acceptance of *individual properties* that much confusion bring in clarifying the concept of generality, for when we say, for example, that 'Socrates is a man', two are the substances in question: 'Socrates' and the 'species man' both interpreted as individuals, which cannot be strictly true, for 'a *secondary substance* is not an individual, but a class with a certain qualification'⁹.

In *Metaphysics* VII, ch. 13, is claimed that: 'As the substratum and the essence and the compound of these are called substance, so also is the universal. [...] [but] it is impossible that any universal term should be the name of a substance' [1038b, 1-9]. Clearly, then, there are such things as universals which are not substances, and therefore non-persistent. However in the *De Interpretatione* [17a, 37-40] is said that 'by the term universal I mean that which is of a nature as to be predicated of many subjects'. Now this brings us to a contradiction, for we are lead by the latter claim to consider the form of a thing as universal, while in the former it is stated that universals are not names of substances. This clearly collides with what has been said so far: that forms are part of substances as much as matter is. They are indeed secondary substances and can be seen in some respects as prior to matter itself ('[...] the form has a certain priority of explanatory value, for it accounts for the matter being in a certain configuration'¹⁰).

⁶ This last view is inspired by Plato's theory of forms, with the difference that no aristotelian form exists separately from the composite whose form it is.

⁷ C. Witt, *Substance and Essence in Aristotle*, 1989

⁸ *Physics*, 193a, 17-23.

⁹ M. Frede, *Essays in Ancient Philosophy*, Individuals in Aristotle.

¹⁰ Missing reference.

Different solutions have been proposed so far, such as that of Lasher in D. Graham's *Aristotle's Two Systems* (where it is admitted a mere contradiction in Aristotle's view); or that of Frede, where we can take a case like that of 'wisdom' in 'Socrates is wise', where 'wisdom' is to be taken as individual as much as 'Socrates' is (for it is Socrates' wisdom and not Plato's, the one to which we refer), but under the concept of non-substance individual, so that its persistence is still valid.

I assume that the origin of the problem lies in the interpretation of *matter* as representative of the potentiality of the object, for this necessarily introduces a principle of generality or universality within the boundaries of something that ought to be taken as particular and therefore individual. In this respect, I suppose that a distinction between two types of realms (one constituted only by mere particulars, and the other only by universals) is still needed.

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