

# ON THE NOTION OF IDENTITY IN ARISTOTLE

Mario Mignucci

## 1.

As is well known, a chapter in the first book of the *Topics* is dedicated to exploring the various senses or uses of the word 'same' (*tauton*), and its style is to a certain extent reminiscent of the famous lexicon of the philosophical terms in *Metaphysics*  $\Delta$ . The reason for its insertion after the definition of predicables probably lies in the fact that a reference to identity is made not only in relation to definition, where it is said that checking a definition in most cases consists in testing identity and difference,<sup>1</sup> but also in relation to *genus*, where the question whether two things fall under the same *genus* is relevant in many ways.<sup>2</sup> If we stick to the received view that the *Topics* is one of Aristotle's earliest works,<sup>3</sup> the analysis of identity we find in I 7 is probably his first attempt to make a map of the senses of sameness.<sup>4</sup> He starts by introducing a tripartite division of the use of '*tauton*'. Let us read the passage:

(A) We may regard the same as being divided, in outline, in three parts, for we are accustomed to describe what is the same as in number or in species or in *genus*. Those are the same in number which have several names but the thing is one, for example cloak and coat. Those are the same in species which, though many, are indistinguishable with respect to species, for instance a man and another man and a horse and another horse

(for those things are said to be the same in species which fall under the same species). Similarly, those are the same in *genus* which fall under the same *genus*, as horse and man. (*Top.* I 7, 103<sup>a</sup>7-14, translation by Robin Smith slightly modified, see Smith (ed.) [1997])

This is not the only place where an examination of the word '*tauton*' is offered,<sup>5</sup> or where this tripartition of the uses of 'sameness' is mentioned.<sup>6</sup>

Numerical identity is probably the only kind of identity that one would expect to find under the heading of sameness, so much so that, below, when referring to numerical identity, we shall simply call it 'identity' without any further qualification, unless this is required by the obvious necessity of following Aristotle's terminology.

Aristotle claims that  $\mu$  and  $\xi$  are (numerically) the same if they have different names denoting one thing. To formalise his characterisation of identity and the ways in which, according to him, '*tauton*' is used, we must make use of a language slightly richer than the usual one adopted in a standard first order calculus with identity. We have to introduce not only '*a*', '*b*', '*c*', ..., as arbitrary names for individuals and '*x*', '*y*', '*z*', ..., as variables ranging over a domain of individuals, but also ' $\mu$ ', ' $\nu$ ', ' $\xi$ ', ..., as arbitrary names for general or individual entities, and ' $\rho$ ', ' $\sigma$ ', ' $\tau$ ', ..., as variables ranging over a domain of general or individual entities. Then, if we take Aristotle's words as a sort of definition of identity, we can say that  $\mu$  and  $\xi$  are the same, *i.e.*

- (1)  $\mu = \xi$  if
- (i) ' $\mu$ ' is a name for  $\mu$
  - (ii) ' $\xi$ ' is a name for  $\xi$
  - (iii) ' $\mu \neq \xi$ '
  - (iv)\* ' $\mu$ ' and ' $\xi$ ' denote one thing

We can express condition (iv)\* more elegantly by stating

- (iv) ' $\mu$ ' and ' $\xi$ ' are co-referential

This characterisation of identity deserves some comment. First of all, one should be aware that in Aristotle's view identity is a relation between things and not between names, despite the linguistic approach chosen here. It is not that the names 'cloak' and 'coat' are the same. In

fact, they are not the same: 'cloak' is a different name from 'coat'. It is what is denoted by 'cloak' that is the same as what is denoted by 'coat'. Therefore, identity holds between things, *pragmata*, and not linguistic entities. As we shall see, this observation is crucial for the development of our analysis.<sup>7</sup>

There are, however, at least two disturbing aspects of this way of putting things. The first depends on the example of numerical identity offered by Aristotle in the text. We would expect him to quote the case of an individual with two names, as for instance 'Tullius' and 'Cicero' for Cicero. But he mentions 'cloak' and 'coat', which are general terms. For those of us raised in the protective shadow of Frege it may be shocking to accept an identity relation between the denotata of non-individual terms. The impression that Aristotle is not interested in distinguishing the case of sameness among individuals and sameness among general or abstract entities is confirmed by the fact that elsewhere he states a proposition expressing sameness of a particular with itself as an example of (numerical) identity.<sup>8</sup> I will not discuss here this apparent anomaly of Aristotle's approach to identity. Let me only observe that his view does not seem to be conditioned by the context in which the analysis of identity is carried out in the *Topics*. In the *Metaphysics*, where he seems very concerned to avoid assigning an ontological import to the denotata of general terms, we find the same free attitude towards the bearers of the identity relation: they can be not only individuals but also what is referred to by universal terms.<sup>9</sup>

Let us concentrate on the second awkward feature of Aristotle's way of characterising identity in text (A). The linguistic aspect of it should not by any means go unnoticed. Identity is said to occur when the names of the entities involved by the relation refer to one and the same object. As Paolo Crivelli in his comments has acutely observed, this approach to identity implies that things to which identity applies must have a name, and this assumption is not at all obvious. Worse than that, identity seems to apply only to things which have at least two possible names, as condition (iii) in (1) suggests. Apart from the fact that it is not at all clear that we can give a name to a grain of sand in the sea, although we can claim that it is self-identical, Aristotle is well aware that names cannot match things, since the former are finite and the latter infinite in number.<sup>10</sup> Even if we include definite descrip-

tions in the notion of an Aristotelian name we do not solve the problem. All possible combinations of a finite number of names are themselves finite and they cannot equate the number of infinite things to which sameness applies. Of course, identity has a linguistic aspect. We cannot express identity without referring to a language and a way of picking out things since, as we have seen, identity holds between things. But this obvious remark does not entail that we are compelled to assign a name (or a definite description) to any object of which we say, for instance, that it is identical to itself. In a natural language we have quantifiers and expressions such as 'thing', 'object', 'entity' to help cope with the limited number of names at our disposal, and some refined versions of these devices are used in formal languages.

Needless to say, (1) cannot be counted as a definition of sameness. Condition (iv) (or (iv)\*) contains a clear reference to identity and the same probably holds for condition (iii). Therefore, conditions (i)-(iv) cannot be taken as a proper *definiens* of sameness, since they include what must be defined. As one should expect, (1) can be considered only as an *elucidation* of the notion of identity, and this elucidation naturally depends on the context in which sameness is supposed to operate. The context of Aristotle's analysis is dialectic, *i.e.* the technique of discussion between two opponents. It is from this point of view that definitions are examined and, as we have seen, discussion about definitions and *genera* is one of the main reasons for appealing to identity. For instance, a definition can be disproved if one is able to show that its alleged *definiens* is not the same as the *definiendum*. Similarly, we can reject the claim that  $\mu$  is the *genus* of  $\nu$  and  $\xi$  if it can be maintained that  $\pi$  is the *genus* of  $\xi$ ,  $\mu$  is the *genus* of  $\nu$ , and  $\mu$  is different from  $\pi$ .

If this is the context of Aristotle's use of identity it should not surprise us too much that he has recourse to a linguistic approach in his elucidation of this notion. In some sense *definiens* and *definienda* can be taken as names of entities, and *genera* can be considered in the same way.<sup>11</sup> This view is confirmed by the fact that when Aristotle treats identity in the context of his ontology, his approach changes. Consider for instance the following passage:

(B) The same has several meanings: we sometimes mean the same numerically; again we call a thing the same if it is one both in definition and in number, *e.g.* you are one with yourself both in form and in matter; and again if the definition of its primary substance is one, *e.g.* equal straight lines are the same, and so are equal and equal-angled quadrilaterals – there are many such, but in these equality constitutes unity. (*Metaph.* I 3, 1054<sup>a</sup>32-<sup>b</sup>3, Oxford revised translation modified, see Barnes (ed.) [1985])

For our purposes, it is sufficient to underline the different perspective according to which identity is characterised. It is no longer explained in terms of sameness of names' denotata, but in terms of sameness of the ontological constituents of the bearers of the relation, matter and form. The details of the passage are far from clear. It is not obvious in what sense numerical identity differs from unity of definition and number. Maybe, as the pseudo-Alexander thinks,<sup>12</sup> Aristotle is here hinting at the distinction between accidental and essential identity.<sup>13</sup> Nor need we find perspicuous the example of the equal straight lines as a special case of sameness in definition, *i.e.* specific identity. However, what really matters for us is the ontological shift in the characterisation of sameness with respect to the approach in the *Topics*. We find the same ontological commitment in characterising identity in other passages of the *Metaphysics* in which no mention of the co-referentiality of names is made.<sup>14</sup>

There is however an aspect in which the ontological characterisation of identity and the linguistic coincide, and this is the attempt that Aristotle makes to reduce sameness to oneness. In the *Topics* it is said that  $\mu$  and  $\xi$  are the same if their names denote one thing and in text (B) it is oneness in number that establishes sameness. More explicitly, in another passage of the *Metaphysics* Aristotle clearly says that identity is a kind of oneness.<sup>15</sup> It is difficult to evaluate the meaning of this reduction. One might be tempted to take it seriously and spell it out in terms of indistinguishability:  $\mu$  and  $\xi$  are the same if they are one, *i.e.* if they cannot be distinguished, and, of course,  $\mu$  and  $\xi$  cannot be distinguished if they share all properties and attributes.<sup>16</sup> We could express this by positing

$$(1^*) \quad \mu = \xi \quad \text{if} \quad \forall F (F(\mu) \leftrightarrow F(\xi))$$



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Individuals, Essence and Identity

Themes of Analytic Metaphysics

Bottani, A.C.; Carrara, M.; Giaretta, P. (Eds.)

2002, XV, 501 p., Hardcover

ISBN: 978-1-4020-0548-0