

A NOTE ON ARISTOTLE'S NOTIONS OF UNIVERSALITY AND NECESSITY

Demetrius John HADGPOULOS

M.M. Mulhern (1) sets herself the task of showing (quite successfully, I think) the historical inaccuracy of Lukaciewicz' account of Aristotle's notion of syllogistic necessity in terms of the universal quantifier, and Hintikka's contention that Aristotle equates necessity with omnitemporal truth.

It is the purpose of this note to give further support to Mulhern's claim against Hintikka's contention by considering a passage in which Aristotle distinguishes very clearly necessity from omnitemporality.

Mulhern bases her argument on a passage found at *Analytica Posteriora* 73a21-74a3. Here Aristotle, before discussing the nature of demonstrative premisses, distinguishes «three kinds of predicate assignment to subjects» (2). His purpose is to elucidate the nature of the necessity of demonstrative premisses and conclusion, since immediately before the passage cited above he writes:

Since the object of scientific knowledge in the absolute sense cannot be otherwise than it is, that which is known according to demonstrative science must be necessary. Now knowledge is demonstrative when we possess it by having a demonstration; therefore demonstration must proceed from necessary premisses. (73a21-25)

The three kinds of predicate assignment to subjects are:

- a) Assignment κατά παντός.
- b) Assignment παρ' αὐτό.
- c) Assignment καθόλου.

Concerning a) Aristotle writes:

I apply the term «predicated of all» to whatever is not predicated of one instance but not of another, or predicated at one time but not at another (73a28-29)

This definition is different from the definition of κατά παντός which Aristotle gives in the *Analytica Priora* 24b29-30:

We say that one term is predicated of all of another when no instance of the subject can be taken of which the other will not be predicated.

The difference is that Aristotle's definition in *Analytica Posteriora* adds the further requirement of what is called nowadays «omnitemporality». Thus we have that A is predicated of all B if and only if A always belongs to all B. The requirement of omnitemporality excludes such A-propositions as:

All trees in my yard are elms

All animals in this room are human beings:

For the attributes «being an elm» and «being a human being» may be predicated at one time but not at another of the subjects «tree in my yard» and «animal in this room» respectively.

Concerning b) Aristotle distinguishes four senses of καθ' αὐτό predication two of which are pertinent to our discussion: 1) An attribute belongs καθ' αὐτό (*per se*, essentially to a subject if it is an element in the essential nature of the subject, or if it is an element in the definition of the essence of the subject.

2) An attribute belongs καθ' αὐτό to a subject if in the definition of its essence the subject to which it belongs is included (73a35-40, 74a5-10).

Now Aristotle goes on to say that attributes which belong to their subjects in the above two senses belong to them of necessity (73b16-19, 74b5-10). These passages as well as Aristotle's purpose make it clear that for him an attribute necessarily belongs to a subject if and only if it is either an element in the definition of the essence of the subject or it is an attribute in whose definition the subject to which it belongs is included. In other words, Aristotle identifies necessary predication with καθ' αὐτό predication. Thus I think that Ross is wrong when he writes that «the conditions which any proposition must fulfill if it is to be necessary (are) that it be enumeratively true, and that it state a connexion which is καθ' αὐτό»⁽³⁾, for Aristotle would surely say that the proposition «Some numbers are odd» is a necessary one although not a universal proposition. On the other hand Mulhern is right

when she writes that «Aristotle distinguishes from assignment *κατά παντός* a notion of necessity-assignment *καθ' αὐτό* — which seems . . . to be independent of assignment *κατά παντός*, since the two are required for assignment *καθόλου*, . . .» (4).

I will not discuss the third kind of predicate assignment to subjects («By a *καθόλου* attribute I mean one which belongs as «predicated of all» to its subject, and belongs to that subject *per se* and *qua* itself», 73b26-27), since, as Ross writes, «the third characteristic, that it enunciate a connexion which is ἡ αὐτό, commensurately universal, while it is a characteristic of a perfectly scientific proposition, it is not a precedent condition for its being necessary» (5)

Now we come to the passage where we find that Aristotle, by using the distinctions already mentioned, clearly differentiates omnitemporal predication from necessary predication. This is:

Since in each genus it is the attributes that belong *per se* to that particular genus that belong to it of necessity, it is evident that scientific demonstrations are concerned with *per se* attributes and proceed from them. For accidental attributes are not necessary and therefore we do not necessarily know why the conclusion is true; not even if the attributes belong always (*ἀεί*), but not *per se* (*καθ' αὐτό*) as in syllogisms with signs. For one will not know the *per se* attribute to be a *per se* attribute or know why it belongs to its subject. (75a28-34).

From the above passage we gather that some *ἀεί* attributes are not *per se* attributes, but since *per se* attributes are necessary attributes and vice versa, it follows that some *ἀεί* attributes are not necessary attributes. In other words there are omnitemporal truths that are not necessary truths, thus it is false to say, as Hintikka does, that Aristotle equates necessity with omnitemporality. If *ἀεί* attributes were necessary, Aristotle would not write in the above passage that with premisses that state *ἀεί* connections but not *per se* connections one will not know that the predicate in the conclusion belongs *per se* to the subject or that he will not know why it belongs to its subject. In other words Aristotle says that it is possible to draw a

necessary conclusion from premisses that are not necessary but state an $\acute{\alpha}\epsilon\acute{\iota}$ connection, but knowledge of such premisses is not sufficient for knowing that the conclusion is necessary.

FOOTNOTES

(¹) MULHERN, M. M.: Aristotle on Universality and Necessity. *Logique et Analyse*, Nouvelle serie, 1969, pp. 288-299.

(²) Ibid., p. 290.

(³) Ross, W. D.: *Aristotle's Prior and Posterior Analytics*. Oxford, At the Clarendon Press, 1965, p. 62.

(⁴) MULHERN, p. 299.

(⁵) Ross, p. 62.

Wayne State University

REFERENCES