Notre Dame Journal of Formal Logic Volume XX, Number 1, January 1979 NDJFAM

## ARISTOTLE ON PREDICATION: AN ANALYSIS OF ANAL. POST. 83a

## KWAME GYEKYE

In his Anal. Post. 83a 1-23, Aristotle draws a distinction between what he calls proper (or, genuine) predication  $(\alpha\pi\lambda\omega s \kappa\alpha\tau\eta\gamma o\rho\epsilon\hat{\iota}\nu)$  and what he calls improper (or, accidental) predication  $(\kappa\alpha\tau\dot{\alpha}\,\sigma\nu\mu\beta\epsilon\beta\eta\kappa\dot{\delta}s\,\kappa\alpha\tau\eta\gamma o\rho\epsilon\hat{\iota}\nu)$ . He gives as an instance of the former the statement: (A) "The timber (or log) is large"  $(\tau\dot{\delta}\,\xi\dot{\nu}\lambda o\nu\,\mu\dot{\epsilon}\gamma\alpha\,\dot{\epsilon}\sigma\tau\iota\nu)$  and as an instance of the latter kind of predication the statement: (B) "That large thing is timber"  $(\tau\dot{\delta}\,\mu\dot{\epsilon}\gamma\alpha\,\dot{\epsilon}\kappa\epsilon\iota\nuo\,\xi\dot{\nu}\lambda o\nu\,\dot{\epsilon}\sigma\tau\iota\nu)$ . Aristotle says that statement (B) could also called not predication at all  $(\mu\eta\delta\alpha\mu\dot{\omega}s\,\kappa\alpha\tau\eta\gamma o\rho\epsilon\hat{\iota}\nu)$ . Thus, either he thinks he is making a concession by regarding (B) as a predicate statement even if it is an accidental one, or he is not sure whether indeed it is a predicate statement at all. It is my aim in this paper to show that (B), like (A), is a proper (or, genuine) predicate statement.

One might be tempted to suppose, prima facie, that, as regards (B), the referent of the expression "that large thing" is "the" timber, and hence the statement reduces to "the timber is the timber", which is an identity, not a predicate, statement. If this were so, Aristotle would be right in calling (B) not predication at all  $(\mu\eta\delta\alpha\mu\omega s\ \kappa\alpha\tau\eta\gamma\rho\rho\epsilon\hat{\iota}\nu)$ . But this is not so, for Aristotle does not say that "that large thing is the timber", nor does the form of expression of (B) admit of such an analysis. The reason is this: in a Greek sentence like "Wisdom is a virtue", or "Wisdom is virtue"  $(\dot{\eta}\ \sigma o\phi\ \iota \alpha\ \dot{\alpha}\rho\epsilon\tau\eta\ \dot{\epsilon}\sigma\tau\iota\nu)$ , the definite article is not attached to the predicate, viz.  $\dot{\alpha}\rho\epsilon\tau\eta$  (virtue). Consequently, when Aristotle writes that " $x\ \xi\dot{\nu}\lambda o\nu\ \dot{\epsilon}\sigma\tau\iota\nu$ , he can only be taken to mean that "x is timber" or "x is a timber"—which is a predicate statement.

Let us see how each of the following three statements can be analysed:

The timber is large  $(S_1)$ That large thing is (a) timber  $(S_2)$ That large thing is the timber  $(S_3)$ 

There is no difficulty with  $S_1$ , for it is an obvious instance of a predicate statement, with "the timber" as its subject and "is large" as its predicate.

There is no difficulty with  $S_3$  either, for it is an instance of an identity statement. But, as it has already been observed,  $S_3$  is not intended by Aristotle. The difficulty is with  $S_2$  which is regarded by Aristotle either as no predication at all or, at best, as an improper (or, accidental) predication. I intend to show that Aristotle is wrong in so regarding  $S_2$ .

Let us begin with the predicate expression "timber" (or, "a timber") in S2. The term "timber" is a universal term and as such, and according to Aristotle's own doctrine of the categories, functions as predicate, although it may function also as a grammatical subject. Aristotle, in the present instance would, I think, want "timber" to function as grammatical subject as in S<sub>1</sub> where in the Greek the definite article is properly attached to "timber", making the expression a definite description. But it must be pointed out that while with the definite article the expression "timber" becomes a complete symbol, i.e., a primary substance  $(\pi \rho \dot{\omega} \tau \eta \ \sigma \dot{\upsilon} \sigma \iota \dot{\alpha})$ , it becomes a secondary substance  $(\delta \epsilon \acute{v} \tau \epsilon \rho \alpha \sigma \acute{v} \sigma \acute{\iota} \alpha)$  i.e., universal, without the definite article. Thus when one says of something x that it is timber, or it is a timber, what he means is that x is a member of the class of things described or named by the expression "timber". Aristotle fails to make a distinction between "the timber" which is a singular expression and is functioning in  $S_1$  as the subject expression, and "timber" (or, "a timber) which is a universal expression, and is functioning in S<sub>2</sub> as a predicate. He probably thinks that the definiteness of "the timber" in S<sub>1</sub> can be transferred to "timber" in  $S_2$  (which is indefinite). But this is a mistake.

Now, the subject expression, "that large thing" ( $\tau \delta \mu \acute{\epsilon} \gamma \alpha \acute{\epsilon} \kappa \epsilon \hat{\iota} \nu o$ ). For the expression "that large thing" I shall write "L". Now, L is a definite description, and although not all definite descriptions have references, when L occurs in a statement it must have a reference, particularly because of the force of the deictic word "that". That is to say, L, being a uniquely identifying expression, must here identify something. We do not say "that building" or "this man" when there is no building or man to indicate or point to by those expressions. Consequently, a person who uses such a definite expression as "that building" or "this man" can be said to presume that something fits or answers to that description. Thus, L uniquely identifies a spatio-temporal existent, a primary substance  $(\pi \rho \omega \tau \eta) \sigma \sigma \sigma u \omega$  which, in Aristotle, is the ultimate subject of predication.

According to the doctrine of the categories, it is something that is "large"; "large", being an attribute, must be an attribute of something. As a matter of fact, in *Anal. Post.* 73b7, Aristotle says: "I also describe as (existing) *per se* whatever is not asserted of something else as subject. I mean, for example, that "the walking" ( $\tau o \beta \alpha \delta i \zeta \sigma \nu$ ) is *something else* ( $\epsilon \tau \epsilon \rho o \nu \tau \iota$ ) which walks, and similarly "the white" (see also *Metaphysics* 1028a 17-23.) All this is basic to Aristotle's logic and ontology. The fact, however, is that this "something else", undoubtedly a substance, does not always have to be linguistically expressed or picked out by substance-designating terms and that a denominative or quality-signifying term may be used *if* in that context it can be understood as referring to a substance (see below). And when Aristotle adds the demonstrative pronoun "that"

 $(\dot{\epsilon}\kappa\epsilon\hat{\imath}\nu o)$  to "the large", he makes the definiteness or the identifyingness of that expression even more pronounced; the expression can only refer to a primary substance, a real independent entity, which would turn out to belong to the same category as the predicate expression if the proposition "that large thing is (a) timber" were true.

Inter-categorial predication is, of course, accepted by Aristotle, and rightly so, and it is correct to say "man (species) is an animal (genus)", both "man" (the grammatical subject) and "animal" (the grammatical predicate) being in the same category, i.e., of substance. Similarly, it is correct to say "red is a colour", where both the subject and the predicate are in the category of quality; and it is also correct to say "Socrates (who is an instance of man) is a man". From the Tree of Porphyry and Plato's method of logical division ( $\delta \iota \alpha i \rho \epsilon \sigma \iota s$ ), we learn that all higher concepts are predicable of lower concepts. Now, it is a certain thing or object, specifiable spatio-temporally, that is being referred to by L. Of this thing many facts can be asserted; to this thing many properties can be attributed: it can be said of this thing that it is burning, that it is red, that it is not gold, that it is not a human being. Similarly, it can be said of it that it is timber (or, a timber), meaning that it belongs to the class of things called "timber", or that it has the property (of) being timber. In this case the predicate is appropriately applied to it, and the statement is a true statement. All this may be symbolised thus:

(i)  $(\exists x)$  (L refers to x)

and (ii)  $(\exists x)$  (Tx), where T stands for the property (of) timber.

or,

(i)  $(\exists x)$  (L refers to x)

and (ii)  $x \in T$ , where T stands for the class of timber.

If it turns out that the reference of L is not any kind of timber at all but a snake or a brick, then the statement "that large thing is timber" (i.e.,  $S_2$ ) is a false statement. But whether S2 is true or false it is surely a proper and genuine predicate-statement. Aristotle is wrong in thinking otherwise.

Now, before we conclude the discussion, let us give some indication as to why Aristotle took the line he took. For instance, Aristotle must have surely known that in Greek the definite article can be joined to an adjective (or a participle) to make it a substantive, so that  $\tau \hat{o} \mu \hat{\epsilon} \gamma \alpha$  in our context must be rendered as "the large *thing*" or "the large *object*". The crucial

<sup>1.</sup> In Greek, however, το μέγα can also mean "Largeness". But in our context to say that "Largeness is (a) timber" would be meaningless. In other words in taking το μέγα whether as "the large thing" or as "Largeness", we must bear in mind the conditions of meaningful sentences demanded by syntax. Incidentally, all the Alexandrian commentators (John Philoponus and others) whose remarks on Anal. Post. 83a I have read take το μέγα to mean "largeness". They followed Aristotle in making a mistake. (Liddell and Scott say that 'εκεινος can mean "the person there", "that person or thing".)

question, then, is this: why did not Aristotle understand that Greek phrase in this way, that is, as "the large thing", but took it as fulfilling its primary and original function of designating a quality? Aristotle thought that the subject of a proposition must always be expressed or picked out by a term which immediately and directly designates a primary substance, e.g., "this horse", "this man", "Socrates". This seems to me to be an undue restriction on the scope of possible subject expressions in the language.

Suppose, you and I go to a horse race in which two horses, one white the other black, are competing for the Presidential Cup. I ask you: "which of the two horses do you think will win the race?" Then, you reply: "I think the black would win". Then I ask: "why do you think so?" And you reply: "Because the black has longer feet". This brief dialogue indicates that in a context where a substance, like horse, is known to possess a quality, like black, we can without any violence to semantics, use the quality-word to designate this substance. That is to say, the same semantical relation that would hold between the linguistic expression "horse" and the non-linguistic entity (substance) horse would also hold between the linguistic expression "the black" and the non-linguistic entity horse. Thus, although "black" and "horse" belong neither to the same ontological category, they may, in the appropriate context, belong to the same semantical category: "the black" may refer to horse, and "the horse" also to horse. Thus, while "the black" and "the horse" have different senses they may have the same referent, i.e., in a particular context like the one above. Similarly, when the saint said that "the just shall live by faith" he was using "the just", a quality-expression, to refer to substances-in this case, persons. However, the difference between "the black" and "the horse" in their use as subject expressions is this, that whereas the significance of the former is contextually dependent, that is, whether it designates a substance or non-substance depends on the context, the significance of the latter expression is not contextually dependent, for "the horse" would always, except when it is used metaphorically, designate horse. Nevertheless, this difference is not really important for in our normal linguistic activities, in our normal discourses, we talk-do not we?-within the framework of some appropriate context or other. Aristotle, it seems, viewed the relation between the substance (independent) categories, and the other dependent categories as vertical; one category cannot be used in place of another; each category has its appropriate function in the language (and also in the real world), and this, he thinks, should be observed if we are to avoid category mistakes. Yet the verticalness of the relation is not strictly and absolutely adhered to, for Aristotle does allow that the secondary substances  $(\delta \epsilon \hat{\upsilon} \tau \epsilon \rho \alpha \iota \ o \hat{\upsilon} \sigma \hat{\iota} \alpha \iota)$  can be both subjects and predicates (Cat. chp. 5). That is to say, a secondary substance can perform the function of a dependent category-it can be predicated. This surely detracts from the *polar* relation he wants to establish between substances and their predicates. Why, then, cannot a quality-indicating predicate expression be used in the appropriate context to signify the subject of a proposition? Aristotle has allowed too much of his ontological distinctions into his semantical analyses of propositions of ordinary language, with unfortunate consequences.

University of Ghana Legon—Accra, Ghana