

## IS SINGULAR PROPOSITION CATEGORICAL?

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There is a long tradition of taking the following argument as the most typical of syllogisms :

All men are mortal  
Socrates is a man  
∴ Socrates is mortal

Granted that this argument is intuitively valid, we can still ask whether it differs in any essential respect from Syllogisms formed by A.E.I. or O propositions. In other words, is a Singular proposition a special case of a universal or particular proposition. There may be four possible alternative answers to this question.

- (i) A singular proposition may be taken to be the same as a universal proposition.
- (ii) A singular proposition may be taken to be the same as a particular proposition.
- (iii) A singular proposition may be taken to be the conjunction of both universal and particular.
- (iv) A singular proposition is taken neither to be universal nor to be particular.

Let us examine the four alternatives. The first alternative i.e. a singular proposition may be taken to be the same as a universal proposition has got its support in traditional logic. In traditional logic propositions like "Socrates is a logician" or "This man is a logician" are treated as universal because a single individual like 'Socrates', 'This man' etc. can be looked upon as constituting a class by itself, what is called a unit class and this unit class formed by a single individual, here 'Socrates' or 'This man' in the subject position of the proposition is in inclusion relation with another class in the predicate position, say 'logician',

Kant remarked, "Logicians are justified in saying that, in the employment of judgments in Syllogisms, singular judgements can be treated like those that are universal" (*Critique of Pure Reason*, trans. N. K. Smith, B. 96 A71).

I admit that in some ways a singular proposition resembles a universal proposition. It obviously subalternates : from 'Socrates (or this man) is a logician', it certainly follows that "Some men are logician". It also obeys the law of contrariety; at least if its negation is looked upon as a contrary, for example, if 'This man is a logician' is true, its negation 'This man is not a logician' cannot be true. Here, however, we begin to run into trouble. If 'This man is a logician' and 'This man is not a logician' are true contraries and related as A and E propositions, then their truth is incompatible with the particulars that are their contradictories. But this is by no means necessarily true for singular propositions. 'This man is a logician' is not at all incompatible with the truth 'Some men are not logicians'. But if the Singular proposition is the same as universal, it should be. Thus we see that if a singular proposition is taken to be the same as universal, it will violate the law of contradictory opposition.

In fact, with respect to the law of contradictory opposition a singular proposition acts more like a particular proposition. The truth of either its affirmative or negative form is sufficient to deny the opposite universal proposition : If 'This man is a logician' is true then 'No man is a logician' is obviously false. Considering this, some may be inclined to take singular proposition to be the same as particular. But in that case there would be a violation of the law of distribution of terms. In a singular proposition like 'This man is a logician' the subject term 'man' is distributed but if this proposition is taken as particular, that term should remain undistributed. So the second alternative that a singular proposition may be taken to be the same as particular is not acceptable.

According to some, a singular proposition contains more information than is contained in any one of the four categorical propositions of A,E,I, or O form and if a singular proposition is taken to be the conjunction of a universal and a particular proposition, all the informations contained in it can be retained. As I. M. Copi said that to retain the aspect of existential import of singular proposition it is to be taken as particular and to retain the universal aspect of singular proposition, which distributes its subject term, it is to be taken as universal.

Moreover, taking a singular proposition as the conjunction of a universal and a particular proposition, one may think, may help us to avoid the difficulties due to violation of the law of contradictory opposition and the law of distribution of terms.

But I do not accept this view because to say that singular proposition is the conjunction of a universal and a particular propositions is to say that a singular proposition is equivalent to the conjunction of a universal and a particular propositions. This means : This man is a logician  $\equiv$  (All men are logician and some men are logician.). But this equivalence cannot be maintained. Let us symbolise the above equivalence :

$$Lt \equiv [(x) (Mx \supset Lx) \& (\exists x) (Mx \& Lx)].$$

By definition of equivalence :

$$(Lt \supset \{(x) (Mx \supset Lx) \& (\exists x) (Mx \& Lx)\}) \&$$

$$\{[(x) (Mx \supset Lx) \& (\exists x) (Mx \& Lx) \supset Lt].$$

In the first conjunct of the above conjunction  $Lt$  (This man is a logician) is true then  $(\exists x) (Mx \& Lx)$  is true no doubt but  $(x) (Mx \supset Lx)$  is false and consequently,  $Lt \supset \{(x) (Mx \supset Lx) \& (\exists x) (Mx \& Lx)\}$  is false. Now, as the first conjunct is false, the whole conjunctive proposition is false and so the above equivalence cannot be maintained. In other words, truth of a singular proposition is not the necessary and sufficient condition for the truth of the conjunction of the universal and particular proposition.

In fact, the logical import of a singular proposition is quite different from the logical import of categorical proposition. In a singular proposition a relation between an object or individual placed in the subject position and a class placed in the predicate position is expressed and this relation is a membership relation. But in a categorical proposition a relation between two classes placed in the subject and the predicate position is expressed and this relation is an inclusion relation. The concept of membership relation is different from the concept of inclusion relation. So a singular proposition which involves the concept of membership relation cannot be equivalent to a categorical proposition which involves the concept of inclusion relation.

Let us consider the differences between membership relation and inclusion

relation to bring out the difference between a singular proposition and a categorical proposition more clearly. Membership relation is intransitive but inclusion relation is transitive. Any three termed syllogism illustrates the transitivity of inclusion e.g.  $(A \supset B \ \& \ B \supset C) \supset (A \supset C)$ . But this fails to hold for membership relation e.g.  $(A \in B \ \& \ B \in C) \not\supset (A \in C)$ . To make it clear let us take the following substitutions : A/ this American, B/ united States, C/ United Nations. It can be true of this American that he is a member of the United States and also that the United States is a member of the United Nations; Yet the consequent, that this American is a member of the United Nations, is false, since the United Nations take nations only and not individuals, as its members. Again the membership relation unlike inclusion relation is irreflexive. A relation is reflexive if a term is capable of having that same relation to itself. Thus, inclusion is reflexive, since  $a \supset a =$  which by the definition of inclusion is equivalent to  $a \ \& \ \bar{a} = 0$  - is obviously true. But membership relation cannot be reflexive, since its two terms are of different types. Furthermore, in case of membership relation, the relation can never be reverse. This American  $\in$  the United States, but the United States  $\notin$  this American. Thus membership relation is an assymetrical relation. But inclusion relation sometimes allows such a reversal : there are cases where both  $a \subset b$  and  $b \subset a$  are true. Thus inclusion relation is non-symmetrical i.e., neither assymetrical like membership nor symmetrical like equality.

From the above it is clear that the membership relation is different from the inclusion relation in many respects. Consequently, a singular proposition in which there is membership relation between the subject and the predicate is quite different from a categorical proposition in which there is inclusion relation between the subject and the predicate. So a singular proposition is neither Universal nor particular. In fact, a singular proposition because of its different logical import cannot be a categorical proposition in the true sense of the term.

#### REFERENCES

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**Notations used :**

$\&$  = Conjunction.

$\supset$  = Material Implication.

$\equiv$  = Material Equivalence.

$\equiv 0$  = Emptiness.

$\subset$  = Inclusion.

$\in$  = Membership.

$(x)$  = Universal Quantifier.

$(\exists x)$  = Existential Quantifier.

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