Notre Dame Journal of Formal Logic
Volume XIX, Number 4, October 1978
NDJFAM

MULTIPLE QUANTIFICATION AND THE USE OF SPECIAL QUANTIFIERS IN EARLY SIXTEENTH CENTURY LOGIC

E. J. ASHWORTH

I have three reasons for writing this paper. In the first place, I want to explain the early sixteenth century practice of using the letters 'a', 'b', 'c', and 'd' as special signs governing the interpretation of terms within sentences.[1] In the second place, I want to investigate the analysis which logicians in the medieval tradition gave of such sentences as "There is somebody all of whose donkeys are running", "Everybody has at least one donkey which is running", and "At least one of the donkeys which everybody owns is running".[2] In the third place, I want to show that, despite what Geach has suggested,[3] logicians in the medieval tradition were capable of offering good reasons for rejecting such inferences as "Every boy loves some girl, therefore there is some girl that every boy loves". My discussion will be based mainly on the work of a group of logicians who were at the University of Paris in the first two decades of the sixteenth century, in particular Fernando de Enzinas, Antonio Coronel, and Domingo de Soto.

In order to make sense of the non-standard cases I shall be investigating, it is first of all necessary to describe how logicians of the period in question analyzed standard propositions of the form "Every A is B", "No A is B", "Some A is B", and "Some A is not B". Their main tool was the doctrine of personal supposition; and there were said to be four kinds of personal supposition, distributive, collective, determinate, and merely confused. If a term had distributive supposition, then the sentence in which it appeared was said to be equivalent to a conjunction of sentences, each of which contained a different singular term in place of the term with distributive supposition. Thus, "Every donkey is running" is equivalent to "Donkey$_1$ is running and donkey$_2$ is running and . . . and donkey$_n$ is running". If a term had collective supposition, then the sentence in which it appeared was said to be equivalent to a sentence in which the term with collective supposition was replaced by a conjunction of singular terms. Thus "All the apostles are twelve" is equivalent to "Apostle$_1$ and apostle$_2$ and . . . and apostle$_n$ are twelve". Collective supposition was little used. If a term had determinate supposition, then the sentence in which it

Received August 8, 1974