

Mary MULHERN
Aristotle's Formal Language

Over the last half-century and more, a number of attempts have been made to disengage Aristotle's own logic from the logic that dominated the schools from antiquity forward--the so-called traditional logic. Most of the scholarly attention has been focussed on the system of inferences (e.g. J. Corcoran 1974 "Aristotle's Natural Deduction System"). It remains to be shown how the propositions, which furnish the premisses and conclusions of the inferences, themselves are to be construed, and this paper considers several possibilities.

Aristotle's analysis of propositions in the *Prior Analytics* differs from his analysis in the *Categories* and *On Interpretation*. In the *Categories* and *On Interpretation*, Aristotle analyzes propositions into verbs and nouns, and this approach suggests a modern function-argument analysis. A distinctive feature of the *Prior Analytics* analysis, on the other hand, is Aristotle's use of *huparchein* as a second-order expression to convey the relation that the terms--not the designata of the terms--of a syllogism have to one another. In the *Prior Analytics*, Aristotle's treatment of propositional structure, in which *huparchein* is not a vague but a deliberately minimal meaning, is framed to accommodate to the syllogistic the propositional structure of the other works in the *Organon*, especially both types of predication distinguished in the *Categories*, *On Interpretation*, and *Topics*--descriptive and definitory.

The present paper argues that, in the *Prior Analytics* treatment of propositional structure, Aristotle employs a notation consisting at least of his basic three-term schemata of Greek capital placeholder letters (L. Rose 1968 *Aristotle's Syllogistic*), but able to be supplemented. For the three authentic figures, these schemata are ABG, MNX, and PRS. These schemata are a limiting case of schema, consisting as they do entirely of blanks, although of blanks in a spatially-ordered arrangement. The paper goes on to suggest that Aristotle himself probably used connecting lines in his diagrams to exhibit the relations of the terms to one another, perhaps elaborating these into lune-and-triangles proof forms of the three figures, such as appear from Ammonius forward. The paper also describes and presents the most likely connecting arcs and the lune-and-triangles diagrams. I urge that, in the notation that Aristotle used in diagrams, the connecting lines occur where he might have used inflections of *huparchein* in writing or speech.

The examination of Aristotle's formal language and of his meta-theoretical remarks presented here corrects the view that his logic uses propositions of the subject-copula-predicate form and that the intended interpretation of his syllogistic is a logic of class inclusion and exclusion.