

Formatives

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Abstract An answer to the question of ‘sentential unity’ (What makes a sentence a single linguistic unit rather than just a string of words?) is one of the goals of any theory of logical syntax. A ‘Fregean’ theory claims that a sentence is a function (unsaturated expression, containing gaps) whose gaps are filled with either arguments (saturated, gap-less) or other functions which have already been saturated. A ‘Leibnizian’ theory construes a sentence as a syntactically complex subject (quantified term) plus a syntactically complex predicate (qualified term). Subjects and predicates just naturally fit one another to form sentences. An ‘Aristotelian’ theory takes a sentence to consist of a pair of terms connected by a binary formative expression (functor), whose only role is to connect terms to form more complex expressions (e.g., sentences). After an examination of the formal nature of such functors, it is argued that this third sort of theory not only answers better the question of sentential unity, but it also provides a better account of the nature of logical constants in general.

I want to survey here three distinct theories of logical syntax. For reasons that should become apparent, I shall label them Fregean, Leibnizian, and Aristotelian. In spite of this atavistic order, there is more here than simple reverse chronology; among other things, this order represents a scale of increasing clarity about the ultimate nature of logical constants, or formatives.

I It is an essential first task for any formal logic to make a distinction between those elements that determine the logical form of a sentence¹ and those that do not. For the modern mathematical logician logical formatives are functions on expressions. The most basic kind of function, however, is not logical. To see this we need to look at Frege’s answer to the question of “sentential unity”. The question is: What makes a sentence more than just a list of terms? What makes the terms of a sentence combine to form a single logical unit? Frege’s solution was to distinguish between two kinds of expressions—those

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