

THREE SUBSTITUTION-INSTANCE INTERPRETATIONS

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1 *Abandoning nominalism* The substitution-instance interpretation of quantifiers is often associated with some form of nominalism. Leśniewski, who developed his logical systems with a substitution-instance interpretation in mind, was a nominalist. (The connection between Leśniewski's philosophical views and his logical systems is explained in [10].) And when Henkin discussed the relation between the substitution-instance interpretation and his completeness proof for quantificational logic, his paper had the title "Some Notes on Nominalism." This association is unfortunate. I know of no view which might be called nominalistic which seems plausible to me. Yet I find myself "taken" with the substitution-instance interpretation of quantifiers. When the substitution-instance interpretation is separated from a nominalistic outlook, we can see that there are different substitution-instance interpretations of quantifiers. In this paper I will discuss three important interpretations. Not all of them are compatible with nominalism (perhaps none of them is), but each *is* ontologically less committing than the usual (referential) interpretation.

The initial motivation that I can offer for accepting substitution-instance interpretations is connected with certain purposes that a formal language can be used to achieve. If a formal language is to be used for studying the logical structure of a natural language, or of some sublanguage of a natural language, it must have certain similarities with the language(s) it will be used to study. But it is also helpful to treat the formal language (in certain respects) as one would treat the natural language. Think of that part of a natural language which consists of sentences composed of names and predicating expressions, and of (nearly truth-functional) compound sentences formed from these. This sublanguage is part of a going concern which exists before we can study it. In this sublanguage, some sentences are true and others are false. And the sentences of the sublanguage exemplify certain forms. Some forms are such that every sentence exemplifying them is true, while others are exemplified by both true and false sentences. In a formal language that corresponds to this natural sublanguage, substitution-instance quantifiers can be used to indicate facts