

## TARSKI'S 1936 ACCOUNT OF LOGICAL CONSEQUENCE

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Much has been made in the recent literature of Alfred Tarski's seminal 12-page paper, "On the Concept of Logical Consequence" [Tarski 1936]. However, there are two puzzling aspects of Tarski's paper which thus far have avoided adequate explanation: (1) Tarski's claim that his semantic account of consequence captures *logical* inferences (involving  $\omega$ -incomplete theories and Gödel sentences) that the syntactic account does not; and (2) Tarski's seemingly false claim that in a language consisting of purely logical terms the relation of formal consequence coincides with that of material consequence. The resolution of these conundrums requires a clear understanding of the differences between the current model-theoretic project and that developed by Tarski in the 1930s, in particular, with respect to the notion of logical form.

That this notion is of central importance in determining the scope and definition of logic is clearly stated by Russell in 1903. His remark helps point the way towards an exegesis of Tarski's early work and motivates the present discussion:

I confess, however, that I am unable to give any clear account of what is meant by saying that a proposition is "true in virtue of its form." But this phrase, inadequate as it is, points, I think, to the problem which must be solved if an adequate definition of logic is to be found. [Russell 1903, xii]

The notion of logical form plays a key role in Tarski's expressed goal to define the proper concept of logical (read formal) consequence. I will argue that in his 1936 paper, Tarski employed an expanded notion of formality, distinct from the one in current usage, in developing and supporting his original model-theoretic definitions. Once I have outlined Tarski's logical program, I will be able to show, regarding (1), why Tarski considered his semantic account to be successful in cases where the syntactic account fails