

## WHAT IS NEOLOGICISM?

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**§1. Introduction.** Logicism is a thesis about the foundations of mathematics, roughly, that mathematics is derivable from logic alone. It is now widely accepted that the thesis is false and that the logicist program of the early 20th century was unsuccessful. Frege's [1893/1903] system was inconsistent and the Whitehead and Russell [1910–1913] system was not thought to be logic, given its axioms of infinity, reducibility, and choice. Moreover, both forms of logicism are in some sense non-starters, since each asserts the existence of objects (courses of values, propositional functions, etc.), something which many philosophers think logic is not supposed to do. Indeed, the tension in the idea underlying logicism, that the axioms and theorems of mathematics can be derived as theorems of logic, is obvious: on the one hand, there are numerous existence claims among the theorems of mathematics, while on the other, it is thought to be impossible to prove the existence of anything from logic alone. According to one well-received view, logicism was replaced by a very different account of the foundations of mathematics, in which mathematics was seen as the study of axioms and their consequences in models consisting of the sets described by Zermelo-Fraenkel set theory (ZF). Mathematics, on this view, is just applied set theory.

Recently, 'neologicism' has emerged, claiming to be a successor to the original project. It was shown to be (relatively) consistent this time and is claimed to be based on logic, or at least logic with analytic truths added. However, we argue that there are a variety of positions that might properly be called 'neologicism', all of which are in the vicinity of logicism. Our project in this paper is to chart this terrain and judge which forms of neologicism

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