

1080-03-376

Mark Lance*, lancem@georgetown.edu, and **K J Mourad**, kjm57@georgetown.edu. *On W.W. Tait's Finitism and Hilbert's Program.*

Is Hilbert's program unsalvageable? The conventional answer is 'yes', not merely as a consequence of Godel's 2nd Incompleteness theorem, but also on the basis of an influential analysis of Hilbert's conception of finitism by W.W. Tait. His analysis in the landmark paper "Finitism" has been one of the pillars of our current picture of the foundations of mathematics, and has largely functioned to define the terms in which questions of the viability of Hilbert's program are posed. It has even been suggested that this characterization is analogous to Turing's analysis of the notion of computation. Tait himself, however, warns us against such a facile conclusion, at least not until a more careful and thorough evaluation is given of his paper and its ideas. We propose to give "Finitism" as well as Tait's other work on this theme the attention they are due. We offer a careful reading of the argument of "finitism" and related papers - including Tait's arguments against some of Godel's views concerning finitism - and suggest that the prospects for carrying out Hilbert's program are not as grim as is commonly thought. (Received January 31, 2012)