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# Kalmár's Argument Against the Plausibility of Church's Thesis

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## Abstract

In his famous paper, 'An Unsolvable Problem of Elementary Number Theory,' Alonzo Church (1936) identified the intuitive notion of 'effective calculability' with the mathematically precise notion of 'recursiveness.' This proposal, known as Church's Thesis, has been widely accepted. Only a few papers have been written against it. One of these is László Kalmár's 'An Argument Against the Plausibility of Church's Thesis' from 1959, which claims that there may be effectively calculable functions which are not recursive. The aim of this paper is to present Kalmár's argument in detail, and to give an insight into Kalmár's general views on the foundations of mathematics. In order to do this, first I will survey Kalmár's papers on the philosophy of mathematics, 'The Development of Mathematical Rigor from Intuition to Axiomatic Method' (1942) and 'Foundations of Mathematics - Whither Now?' (1967). Then I will present his argument against Church's Thesis in detail. After that, I will attempt to make his argument more appealing drawing on the core views he expresses in his other papers on the philosophy of mathematics.

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