

“Wynn’s experiments and later Wittgenstein’s philosophy of mathematics”

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Abstract

This essay explores the possible connections between two issues. The first has to do with recent work in experimental psychology on the early development of arithmetical abilities. The experiments I’ll be discussing have been designed and performed by the psychologist Karen Wynn, and are part of a series of several somewhat similar experimental studies on infants. (My focus here, however, is on Wynn’s now famous 1992 paper ‘Addition and subtraction by human infants’). The second issue is a cryptic remark by Wittgenstein, namely, that arithmetical propositions emerge by “hardening” certain empirical regularities “into rules”. In a nutshell, the connection I envisage is simply the following: Wynn’s empirical discoveries “of certain regularities of behavior, or psychological ‘facts’” fit surprisingly well into a certain reconstruction of Wittgenstein’s views on arithmetic (due to Mark Steiner and Robert Fogelin), and thus, somewhat surprisingly, increase the credibility of their interpretation of Wittgenstein’s insights. I begin with a brief presentation of the experiments, sprinkled with some comments on their methodology and conclusions. Then, after I sketch the Steiner-Fogelin reconstruction, I elaborate on what I take to be the relation between these experimental results and this reading.