

# Mathematical Practice as a Philosophy of Mathematics

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On the one hand biologists and psychologists, among others, talk about the biological origin(s) of numbers and number concepts in man and animal. On the other hand philosophers and mathematicians discuss the relevance of the use of the Axiom of Choice in Zermelo-Fraenkel set theory. Are these topics worlds apart or are bridges between such distinct issues imaginable, possible, desirable? In this presentation we want to defend the thesis that looking at mathematics as a connected set of practice(s) provides the ideal basis for integrating both the bio-psychological features of (the use of) mathematical concepts and the ontological-epistemological issues concerning these very same concepts, thereby, of course, emphasizing that such integration is desirable. The talk will be largely based on the recent paper by both authors, “Mathematical Practice and Naturalist Epistemology: Structures with Potential for Interaction”, in: Gerhard Heinzmann & Manuel Rebuschi (eds.): *Aperçus philosophiques en logique et en mathématiques, Philosophia Scientiae*, volume 9, cahier 2, 2005, pp. 61–78.