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## Hegel's quantitative infinity and differential calculus

Hegel's *Science of Logic* is not an easy read in itself, but hidden within it is an even more obscure text consisting of three remarks and hundred pages that almost all the readers feel the need to skip and ignore as a mere white noise. Yet, one wants to ask, is not even this text on differential calculus an important part of Hegel's presentation? If one can skip hundred pages so easily, why not skip the whole book and be done with it?

Even scholarly works are rarely of use in deciphering the meaning of these pages. Historical connections have been discovered and many philosophers have pointed out that Hegel's criticism of the early attempts to make differential calculus more systematic are quite to the point. Some enthusiasts have been eager to remark of a possible connection with the developments of differential calculus in the work of Augustin-Louis Cauchy.<sup>1</sup> But after all this historical work, nothing much of worth for understanding Hegel's own position has been left.

The attempt of this article is to provide exactly such elucidation. I want to not just do another historical survey of various figures mentioned and possibly implied by Hegel in his account of differential calculus (although some mention of the history of differential calculus must be undoubtedly given), but to answer few simple questions. What does it all mean? What is Hegel's opinion on differential calculus? And what sense do these hundred pages make in the context of the whole *Science of Logic*? To answer these questions, I must first look at what the three remarks are supposedly about.

The three remarks I am speaking of are annexed to a passage on the infinity of quantum and this passage is a part of a larger passage dedicated to the topic of quantitative infinity. Furthermore, first of these remarks itself is explicitly said to deal with conceptual determinateness of mathematical infinity. It seems then quite clear that quantitative or mathematical infinity has something to do with these remarks.

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<sup>1</sup> Classic example of this approach is Michael Wolff's "Hegel und Cauchy. Eine Untersuchung zur Philosophie und Geschichte der Mathematik". In: R. P. Horstmann/J. M. Petry (Eds.), *Hegel und die Naturwissenschaften*, Stuttgart 1986, 197–263.