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Joseph W Dauben* (jdauben@att.net), Herbert H. Lehman College, The City University of New York, 250 Bedford Park Blvd. West, New York, NY 10468. *The Actual Infinite and Infinitesimals in the 19th Century—Boon or Bane?*

Without trying to rationally reconstruct a view of either the infinite or infinitesimals made rigorous in the 20th century by Zermelo-Frankel set theory or Abraham Robinson's nonstandard analysis, the problem of continuity is fundamental to the problems in analysis faced by those who sought to consider the problem not in terms of "limit-avoidance" as Cauchy's approach has been described by Ivor Grattan-Guinness, but by embracing the concept of infinitesimals, although mathematicians who did so in the late nineteenth century adopted a number of different perspectives. Among the luminaries of Baltimore at the newly-founded Johns Hopkins University was the mathematician-philosopher Charles Sanders Peirce. He held rather controversial views in many areas, including mathematics and the twin problems of the infinite and infinitesimals in particular. As for infinitesimals, Peirce approached the subject in terms of logic and the syllogism of transposed quantity, which led him to embrace infinitesimals. Mathematicians were more conflicted; a few accepted them, others vehemently rejected them. Focusing on the contributions made du Bois Reymond, Cantor, Stolz, Veronese, and Peirce, the different views maintained by mathematicians at the time will be evaluated on their own terms. (Received September 16, 2013)