

1139-01-212 **Eugene Boman*** (ecb5@psu.edu), 777 W. Harrisburg Pike, Middletown, PA 17057. *The History of Calculus as a Guide to Teaching Calculus.*

Most Calculus texts written since the mid 1950s invert the history of the subject by first presenting concepts and definitions which were developed after the fact, solely to "rigorize" the topic. Thus, for example, the modern definition of the limit, first stated by Weierstrauss in the late 1800s, is the first topic in a modern textbook, whereas Leibniz's "useful fiction" of a differential quantity (dx) is normally ignored completely, despite the fact that it was the defacto foundation of Differential Calculus (hence the name) for nearly 200 years.

My intention is to present the idea and goal of using the history of Calculus as a guide to its teaching. I will discuss why I believe this is a useful, even natural, approach.

Robert Rogers of SUNY, Fredonia and I have taken on the task of writing a Calculus text which specifically incorporates the history of the topic into its teaching. This will serve as a framework for our discussion. (Received February 11, 2018)