

1014-I1-1492 **Vicky W Klima*** (klimavw@appstate.edu), Department of Mathematical Sciences, Appalachian State University, Boone, NC 28607. *A Different Sort of Calculus Debate*. Preliminary report.

A problem that faces many beginning calculus students is their desire to focus on computations rather than concepts. Such a struggle between computation and conceptualization is not new. This talk will focus on projects asking students to consider two historical methods, which preceded the work of Newton and Leibniz: Fermat's method for finding maxima and minima and Barrow's theorem. Some historians credit these men with being the grandfathers of differential and integral calculus respectively and other historians say that the methods were clever, but lacked the key concept of calculus: a clear understanding of the limiting process. The projects allow students to continue this debate. (Received September 28, 2005)