1003-P1-830 **Robert E Bradley*** (`bradley@adelphi.edu`), Adelphi University, Dept. of Mathematics & Computer Science, 1 South Ave., Garden City, NY 11530. *Object and Attribute: the case of Curves and Equations.*

Does a curve have an associated equation, or does an equation have an associated curve (its graph)? Engaging this question can shed light on the nature of mathematical objects and the evolution of mathematical practice.

There was a time in the history of mathematics when the answer would not have been subject to debate. In the mid 17th century, the curve was the object and its equation was the attribute. We will argue, however, that by the late 18th century the point of view had been reversed. In fact, the paradigm shift seems to have taken place in the years between the publication of L'Hôpital's *Analyse des Infiniments Petits* and Euler's *Introductio in Analysin Infinitorum*, as is indicated by the treatment of singular points of curves. This change in point of view concerning mathematical objects is a reflection of the success of differential calculus, which in this period amounted to a collection of algorithms operating on algebraic expressions. (Received September 30, 2004)