

1014-A1-1010 **Martin E. Flashman*** (flashman@axe.humboldt.edu). *The Square Root of 2, Pi, and the King of France: Ontological and Epistemological Issues Encountered (and Ignored) in Introductory Mathematics Courses*. Preliminary report.

Students in many beginning college level courses are presented with proofs that the square root of 2 is irrational along with statements about the irrationality and transcendence of pi. In Bertrand Russell's 1905 landmark article "On Denoting" one of the central examples was the statement, "The present King of France is bald." In this presentation the author will discuss both the ontological and epistemological connections between these examples in trying to find a sensible and convincing explanation for the difficulties that are usually ignored in introductory presentations; namely, what is it that makes the square root of 2 and pi numbers and how do we know anything about them?

If time permits the author will also discuss the possible value in raising these issues at the level of introductory college mathematics.

Dedicated to the memory of Jean van Heijenoort. (Received September 28, 2005)