1077-62-13 **Bradley Efron***. *A 250-year argument: Belief, behavior, and the bootstrap.*

The year 2013 marks the 250th anniversary of Bayes rule, one of the two fundamental inferential principles of mathematical statistics. The rule has been influential over the entire period, and controversial over most of it. Its reliance on prior beliefs has been challenged by frequentism, which focuses instead on the behavior of specific estimates and tests under repeated use. Twentieth Century statistics was overwhelmingly behavioristic, especially in applications, but the Twenty-First Century has seen a resurgence of Bayesianism. I will use some simple examples to show what's at stake in the argument. The bootstrap, a computer-intensive inference machine, helps connect Bayesian and frequentist practice. No advanced statistical background is required. (Received April 07, 2011)