



Department of Biostatistics

BIOSTATISTICS SEMINAR

Revisiting an Old Topic; Probability of Replication

Dr. Susan A. Murphy
H.E. Robbins Professor of Statistics & Research
Professor, Institute for Social Research and
Professor in Psychiatry
University of Michigan

ABSTRACT

A crucial tenant of science is the confirmation of conclusions via replication. This has been emphasized by leaders in the statistical and behavioral sciences such as Tukey and Cohen among others. Consequently researchers have searched far and wide for high quality estimators of the probability of replication. It is tempting for many to interpret $1-p$, where p is the p -value, as a probability of replication. However as discussed by Goodman (1991), the true replication probability can be grossly overestimated by $1-p$. Recently in a series of highly controversial papers in psychology and related journals, begun by P. Killeen and followed up by scientists across the field of psychology, estimators for the probability of replication have been proposed and debated. In this talk we provide a clear definition of the estimand(s), discuss why Killeen's estimator has merit and discuss how we might proceed going forward.

**The Johns Hopkins Bloomberg School of Public Health
Department of Biostatistics, Wednesday, September 23, 2009
Room W2030 School of Public Health, 4:00-5:00pm (Refreshments: 3:30)**

For disability access information or listening devices, please contact the Office of Support Services at 410-955-1197 or on the Web at www.jhsph.edu/SupportServices. EO/AA