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In This Issue

This issue honors two statistics giants who died recently at the peak of their careers. Morris H. DeGroot would have been 59 and Rupert G. Miller 58 at the time of this publication. Both had long struggles with cancer. And both produced some of their most influential work at the end of their lives, DeGroot creating this journal, *Statistical Science*, and Miller completing his book, *Beyond ANOVA, Basics of Applied Statistics*. These publications will affect statistical thought for the foreseeable future. Morrie and Rupert shared other similarities, especially the high personal esteem in which they were held, their integrity, humor, wisdom and generosity.

Morris DeGroot's colleagues, his wife Marilyn and his daughter Jenny have compiled a biography of him and their reminiscences on his life and work. That article, dedicated to him by the Institute of Mathematical Statistics, appears here. John Lehoczky's contribution deserves special note, for in addition to writing a major part of the article, he also provided the coordination and editorship.

Rupert Miller's biography also appears here, as prepared by four of his Stanford colleagues in statistics and biostatistics. His friends endowed "The Rupert Miller, Jr., Annual Lecture." The second such lecture appears with Rupert's biography as it was given by John Tukey in 1989. It is on multiple comparisons, to which Miller contributed substantially. Tukey discusses some of the main issues about multiple comparisons, what they are for and how they are communicated.

Geoff K. Robinson, an Australian who does statistics in animal breeding, discusses BLUP (best linear unbiased prediction), a foundational model for statistics pertaining to the estimation of random effects. BLUP is a linear regression model with fixed and random effects that may be solved by traditional multivariate methods for normal distributions with known covariance structure. Applications to a variety of fields are described by the author and the discussants. This is a useful model for statistical thinking and practice. Its limitation to the normal case, and to known covariances, often will require widening, and that can be accomplished through hierarchical and empirical Bayes models.

Richard Royall discusses an ethical issue in clinical trials that conflicts with the need for randomized experiments. Physicians subscribe to the *personal care principle*, requiring that they put the patient's well-being above the future benefits of knowledge gained from any trial. They must use the treatment that they believe to be the most effective—not one determined at random. Thus Royall argues the need for further development and reliance on methodologies for nonrandomized studies. Some of the discussants disagree, because one cannot deny the advantages of randomized trials, and because of the value of medical information to future populations. The discussants bring out an array of issues, pro and con, pertaining to this controversy.

Stephen Stigler describes work by three nineteenth-century scientists: De Forest, Darwin and Galton. All studied statistical procedures by generating artificially normally distributed random variables. Not having modern computers, each developed his own device. De Forest drew cards to test the goodness of fit between observed and expected outcomes. Darwin (son of Charles Darwin and Galton's cousin) devised a spinner. And Galton developed some special dice to produce normally distributed variates.

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