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In This Issue

This issue contains more articles than usual on the people and history of statistics, research and how-to-do-it and the needs of researchers.

Ingram Olkin interviewed Allen Wallis in 1990. Wallis has contributed much to statistics, partly through his book with Harry Roberts, and also administratively as Editor of *The Journal of the American Statistical Society* and as President of the American Statistical Association. More than most people in statistics, Wallis' career also has lead to significant contributions in government, business and universities, including his deanship at the Graduate School of Business at the University of Chicago, his chancellorship at the University of Rochester and his role as advisor to several federal government administrations and presidents, since Eisenhower. During World War II, Wallis was part of the Statistics Research Group at Columbia University, one of the most interesting collections of statistical scientists that has been convened. Later he helped found the Department of Statistics at Chicago. His career also provided contact with many other statisticians and so this interview touches on a substantial segment of the history of statistics in the United States.

Lotteries in the United States and in many other countries trace their origins back to the Genoese lotteries in Genoa, Italy, 1610. David Bellhouse reports on the history of the Genoese lottery and the contributions of sicentists to its analysis since its inception. Analyzing this lottery led to various developments in probability and combinatorics, which also are discussed in this very interesting article.

The Department of Statistics at the University of Connecticut organized a panel in 1990, consisting of Peter Kempthorne, Pranab Sen and Shelly Zacks, and moderated by Nitis Mukhopadhyay, to discuss research and education in statistics. These panelists represent a variety of seniorities, academic experiences, outlooks and backgrounds. Mukopadahyay organized the preparation of this delightful discussion for the benefit of *Statistical Science* readers. Readers will enjoy knowing the panelists' views on how one obtains research ideas, on what has most influenced them, on how to get research projects started and stopped and on future directions for research in statistics. Our profession owes its thanks to the University of Connecticut, which not only sponsored this discussion that benefits all of us, but which also contributes to the common good in many other ways, e.g., by hosting the Distinguished Statisticians Video Tape Series for the American Statistical Association.

The IMS Council asked 10 young statisticians to consider the needs of new researchers. One result of that work is the article published here by the committee, chaired by Naomi Altman. They discuss a number of issues likely to affect new researchers, especially where the IMS can be helpful. Also covered are publications, professional meetings, funding, family issues, computer literacy, writing skills, teaching, consulting, mentoring and a synopsis of the *New Researchers' Survival Guide* (1991), edited by two of the committee's members, David Banks and Janis Hardwick. I believe new researchers also should involve themselves in some real and significant interdisciplinary applications, thereby to gain a perspective of what is important in statistics and to the future development of statistics. This applies even for those who wish principally to contribute to the development of statistical theory, whether they seek university, think-tank or industrial employment.

Statistical Science is willing to publish more comments on the needs of new researchers in a future issue. Contributions, which will be subject to editorial approval, should be submitted to this journal by September 1, 1991.

DNA profiling makes it possible for forensic labs to make inferences about whether a sample of blood or clothing, for example, found at the scene of a crime or in the possession of a suspect, can be identified with a particular suspect or victim. Don Berry points out, in his article, the weaknesses of the commonly used "match/binning" approach in the forensic setting, and he describes an alternative method for calculating the likelihood ratio of guilt to innocence for a suspect. By assessing also prior odds based on evidence external to the DNA data, the likelihood and prior probabilities can be combined to yield the probability of guilt. This approach to DNA analysis is discussed in the paper in context of a case of a New York murder case and in a case of disputed paternity. Proposals to use probabilistic arguments in court are not universally permitted and are subject to further analysis and discussion of their validity. The discussants, from the fields of biomathematics, statistics, law and forensics, comment on Berry's probabilistic approach. We statisticians, by producing methods like those proposed here, have much to contribute to the law, and we also can learn much from the public's attempts to use and calculate probabilities as measures of uncertainty. Let us hope that Berry's paper will encourage further contributions by statisticians to the law.

Elizabeth Scott was one of statistics' leading women