

In This Issue

This issue features some wonderful papers, the first by Cliff Clogg, Professor of Sociology and Statistics at Penn State, also recently editor of *Sociological Methodology* and of *JASA Applications*. Clogg traces the parallel developments of quantitative sociological methodology and of statistical methodology. As often happens, the best theories and the best applications arise in science when they meet together: the applications challenging theory, and the theory extending applications. *Statistical Science* most endeavors to emphasize this interface, and does so with this paper, wherein Clogg and the four discussants focus on new methods in sociological methodology that have widened statistical practice beyond sociological boundaries.

Steve Fienberg's article on the history of statistics and probability reviews these topics since the 17th century work of Pascal and others on mathematical foundations, and then covers the history of such topics as life tables, the censuses, human development, agriculture, astronomy and many other scientific developments. Fienberg's paper expands on one he wrote earlier for *Historical Methods*, being made available here for statisticians. The history of probability and statistics, now a significant area of research, has been the focus of at least seven books published since 1986, which Fienberg reviews and integrates.

"Meta-analysis" is a recent term for the theory and the methods to combine and to synthesize results of independent studies. The table provided by Ingram Olkin in his Editor's Introduction shows that the number of published meta-analyses in medicine alone has grown steadily from almost none a decade ago to 80 in 1990, and further growth is facilitated by improving library computer search methods. Many ticklish theoretical and practical issues arise in such analyses, some of which are addressed in the three papers published here, which were presented at the joint 1990 meeting of the IMS and the Bernoulli Society in Sweden. The papers are by Fred Mosteller and Tom Chalmers, who have a large collection of meta-analytic clinical trial data sets; by Keith Dear and Colin Begg, who address the ticklish problem of assessing publication bias when searching for appropriate studies (*Statistical Science* published in 1988 a paper by Iyengar and Greenhouse on the file drawer problem); and by Larry Hedges, who also considers, and models, publication selection effects. Anyone who has to do a meta-analysis will appreciate the difficulty of defining the appropriate population of studies to be combined and of accounting for the tendency of journals not to publish statistically insignificant results. Despite all these problems, meta-analysis is an important, and inex-

pensive, way to get new information, to assess variation and to develop information for planning new studies.

We published the IMS New Researchers' Committee report in the May 1991 issue of *Statistical Science*. Comments were invited on that report, now being published here. We are pleased to have invited comments by Judith Sunley, Peter Arzberger, Keith Crank and Nell Sedransk for the National Science Foundation and by James Maar for the National Security Agency concerning the efforts these two agencies are making to improve the situation of young researchers: through research, mentoring, and postdoctoral awards; through their support of cross-disciplinary research and through support for conferences, workshops, institutes and other groups. We also have opinions on new researchers' issues from four individuals—Michael Chernick, Cindy Christiansen, Agnes Herzberg and R. L. Tweedie—who discuss refereeing, graduate student concerns, writing and presentation skills, identifying fertile research areas, the value of consulting projects and others.

As a second part of our effort to help special groups in statistical science, we also have an article by Deborah Nolan (writing on her own, but who happens to be the current chair of the New Researchers' Committee) on the value of mentoring to women in statistics. Nolan observes that women, because they are underrepresented in the sciences, especially require the active support of senior faculty as mentors. She gives criteria and examples for good mentoring, including helping the mentee recognize her strengths, accepting differences, recognizing difficulties and accepting mistakes.

Finally, Nozer Singpurwalla and Richard Smith, with the help of Dimitri Gnedenko, interviewed Boris Gnedenko of Moscow State University when he visited the United States in May 1991. That interview appears here. Most probabilists and statisticians have been exposed to Gnedenko's beautiful writings in probability, on independent random variables and on other topics. This interview is part of an effort by *Statistical Science* and the IMS to recognize Russian probabilists and statisticians, and follows interviews of Ildar Ibragimov (August 1990), Yuri Prokhorov (February 1992) and two remembrances of A. N. Kolmogorov (August 1991). Peter Ushakov, a long-time friend and colleague of Gnedenko, also provides his memories of Gnedenko's career in a post-script appearing with the article. Gnedenko, now 80, remains quite active, and is a most interesting conveyor of our subject's history.

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