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Editorial

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Statistical Science calls itself a "review journal." Of course, it is more, but I would like to take this opportunity to extol the virtues of review articles, for I feel they can be among the most important produced in scientific literature.

First, and most obviously, good review articles efficiently summarize information. In any field that is rapidly evolving, there is a tendency for knowledge creators and disseminators to become specialized and lose touch with important developments outside their own areas of expertise. In probability and statistics, largely due to enhanced computational ability, we are currently enjoying and suffering this fate: there is much activity in many areas, and it is increasingly difficult to stay on top of the way the work is proceeding. Yet, the need to do so remains. In research, ideas often transfer from one domain to another, at least by analogy, with new ways of thinking not only being pleasant to experience, but also being potentially productive in unanticipated situations. Furthermore, we must be aware of the various methodologies available for solving statistical problems so that we can discuss them with our students and consider using them in our scientific collaborations. Review articles help us fill the gaps that have been created in our comprehension of our discipline.

But many review articles not only summarize, they synthesize. Themes may be noticed and perspectives introduced. Through selective emphasis, and occasional criticism, ideas may be sifted so that some emerge as central while others are portrayed as flawed. Ambitious reviews characterize alternative approaches and establish a framework for cognition, thereby serving to define an area. They may, importantly, help future research effort avoid diversions by illuminating paths that seem likely to lead toward the solution to key problems. And, since the usual limitations of space and urgency no longer push to excessive extremes the appropriate restrictions of concise exposition, review articles may exhibit more leisurely and thorough scholarship. In addition, invited commentary can sharpen the discussion, balance its viewpoint or broaden its scope.

In my opinion, a great purpose of *Statistical Science* is to encourage the writing of such reviews. Before its advent, there had not been an adequate forum for publication of these articles and, thus, the Institute of Mathematical Statistics (IMS) as a professional society did not act to value them highly. The immediate success of *Statistical Science* changed the situation, and I think it is fair to say that many articles published here are among those held in the highest esteem by the bulk of the membership. Writing a good review article is recognized not only as real work, but also as "honest work" in the best intellectual sense. The encouragement this recognition gives to potential authors is, and will continue to be, a fundamental contribution of *Statistical Science* to the growth of the discipline.

Beyond its service as a home for scholarly reviews, *Statistical Science* plays a special role in fostering communication of a variety of ideas among its readership. I perceive and would like to encourage a sentiment of collective interest in this journal. Many people have ideas for topics they would like to see treated here, and I sincerely hope all readers will feel free to make suggestions to me or one of the other Editors. This would include, for example, passing on to us information about a lecture that might furnish the basis for an interesting paper. The Editors actively seek out speakers to try to get them to become authors, but the journal will gain substantially from participation by IMS membership in the process. This request applies to all of the contents of *Statistical Science*, including the interviews, which, by adding a personal touch to the very human pursuit of statistical science, contribute to our understanding of important developments from the recent past and are widely enjoyed; the book reviews, which allow an essay on a topic area to be focused through a discussion of one or several books; and the reprinting of old papers,

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which reveal prior states of development of statistical thinking and the way particular ideas made important contributions to our progress.

I should emphasize that the concept of "review article" applied here continues to be comprehensive enough to include many that provide an overview primarily of developing work rather than previously published material. Indeed, we will be happy to consider the submission of *any* expository article that the author or authors believe would be of wide interest, stressing broad conceptual issues rather than more narrowly focused technical arguments. Submissions describing new application areas, and "case studies" that highlight strengths and limitations of available methodology, will, in particular, be welcomed. For the sake of editorial effectiveness, I would encourage potential authors to submit detailed outlines of papers they would like to write, so that feedback can be provided in the early stages of manuscript production. All articles, once submitted in full draft form, will be evaluated by the editorial board (with the assistance of external referees) to determine suitability of both content and presentation for the wide readership of *Statistical Science*.

I am looking forward to the next three years. It should be a time of great edification for me, personally. I hope it will also be so for readers of this journal.