ing to summarize critically wide and significant areas of endeavor, we may as well dispense with symposia and operate within the ordinary framework of our professional societies and journals. Not that this framework is particularly good. Far from it. But at least papers get refereed and ten-minute contributions last ten minutes ($\pm\epsilon$).

There are now too many good, competent, and even excellent practitioners of the art of probability and statistics to allow oneself the luxury of a "free" symposium. Unless something drastic is done, symposia will become simply additional meetings and their proceedings just supplements to existing journals.

Science and Information Theory (2nd ed.). By Léon Brillouin. 351 pp. Academic Press Inc., New York, 1962. $9.00. *Reviewed by Charles M. Gottschalk, Library of Congress.*

THE second edition of this outstanding primer by a distinguished physicist is a welcome addition to the rapidly growing literature on information theory. It arrives on the scene after a second printing in February 1957 followed, less than a year later, the well-received and highly commended first printing of April 1956.

The general structure of the first edition has been retained, with improvements, corrections, and explanations added to the first chapters, which provide a clear presentation of the standard results used in communication theory. Two completely new chapters, concerned with the line of research followed by the author during the last few years, some of which was first published in the journal *Information and Control,* of which the author is one of the editors, account for most of some thirty pages added to this edition. One of these chapters considers the inevitability of experimental errors and points out the impossibility of strict determinism in scientific prediction by exorcising Laplace's demon. Both the uncertainty principle and the negentropy principle of information render such demons completely unrealistic, and they prove that the smaller the experimental error, the greater the price that must be paid for the observation.

The problem of very small distances is briefly treated in the last chapter, and the author observes that their measurement requires an enormous expenditure of energy, in fact more than any big nation can afford to give. He consequently suggests that this practical limitation be introduced in the theory by means of a convenient probability coefficient that would represent the difficulty of obtaining too high amounts of energy.

All the chapters are eminently readable, even to one untrained in the terminology of the field. The assumptions and simplifications being made are explicitly stated as well as the author's viewpoint concerning the relationships among classical and modern physics and mathematics. One of the book's greater accomplishments lies in its attempt to make the reader aware of the multitude of problems yet to be investigated.