Other papers include an excellent account of the results of the application of diagrammatic perturbation methods to equilibrium statistical mechanics (written by Meeron) with particular attention to the current status of Debye-Hückel theory; accounts of the classification of amplifying and decaying waves in plasmas (by Sturrock and Buneman); a review of magnetohydrodynamics with a discussion of some aerodynamic problems (by Yoler); and articles written on the Bennett pinch, the stability of relativistic self-focusing streams, and on topics relating to microwave interactions with plasmas.

Space does not allow a complete treatment of all the papers in this volume, but they are all at a uniformly high level. I wish that astrophysical plasma phenomena had been discussed and that the same level of generality had been maintained throughout the book. However, these are minor criticisms of an otherwise well executed venture.

GEORGE WEISS
University of Maryland

Developments in Mathematical Psychology. Information, learning, and tracking. R. Duncan Luce, Ed. Free Press, Glencoe, Ill., 1960. 294 pp. $7.50.

This volume surveys three areas of recent emphasis in mathematical psychology: information, learning, and tracking. It should have been published about 5 years ago when most of it was written. Many portions are condensed and fragmentary, in the manner of contemporaneous reporting such as is found in the *Annual Review* series. Fortunately, other portions are more didactic and render the volume useful in spite of the time lapse.

The article on information is by R. Duncan Luce; it is divided about evenly between a section on theory, in the Shannon-Wiener tradition, and a section on applications, addressed to many topics in psychology. The section on theory seems rather advanced for a beginner, yet rather sketchy for a professional. An asset is the inclusion of some interesting developments by G. A. Miller, W. R. Garner, and other behavioral scientists, which appeared in the wake of the famous Shannon and Wiener treatments. The section on applications runs the gamut from studies that are direct consequences of information theory (for example, statistical approximations to English) to studies that show little influence beyond an exchange of digital counts for logarithms to the base 2. There is also a sensible treatment of whether or not information theory really earns its keep in behavioral science.

The article on learning, by R. R. Bush, seems particularly out of date. Unlike the other two topics, learning is a central concern in general experimental psychology and has attracted many new efforts, mathematically oriented and otherwise. Bush himself has done later work that contributes to the obsolescence of his article. The presentation is organized as it should be to point up the substantive content of learning research: acquisition, extinction, generalization, and so forth. Models of the Bush-Mosteller variety receive primary emphasis, with the Estes-Burke approach running a close second. Hull is relegated to an appropriate place in history, but there is little indication of later developments by the Hullian school. The article seems just right for a specializing student of learning, who can profit from its many pertinent observations without depending upon it as an overview of the field.

J. C. R. Licklider did the article on tracking, a slice of engineering psychology in which the engineering is far more conspicuous than the psychology. Studies of tracking generally view the human operator as a component in a man-machine system, whose stimuli are mathematically describable inputs from the system and whose motor responses are similarly describable outputs. The Licklider article does well at placing the results of tracking experiments in their appropriate mathematical context. The context itself is developed from the ground up in the first ten pages only; beyond that there is a too-rapid cascading of much that is standard mathematical background for the engineer but not for the psychologist. Well-educated engineers should find the going easy and the treatment informative.

In spite of the limitations indicated, the volume as a whole will probably serve to acquaint a wider audience with some major developments of the past decade. It is welcome.

MYMON GOLDSTEIN
Department of Psychology,
Princeton University

Nuclear Forces and the Few-Nucleon Problem. vol. 1 and vol. 2. T. C. Griffith and E. A. Power, Eds. Pergamon Press, New York, 1960. xx + 712 pp. Illus. $30.

As channels for disseminating scientific information, conference proceedings published in book form, are problem children. A scientific conference itself has, in the order of their importance, three aspects, for it enables participants to discuss their work, to hear about the newest developments in the field, and perhaps to hear some general lectures. Thus the most important aspects of a conference—the private discussions between conference participants and the reports on the latest developments—are either not available for publications (the private discussions) or they should be published quickly while the "recent" developments reported still deserve to be called "the latest" (many papers will be published after the conference in the scientific journals). Conference proceedings should, therefore, be published as rapidly as possible in order to report fully on the newest developments in the field. Unfortunately the proceedings under review are the report of a conference held over 1½ years ago (July 1958). Thus, it is to be expected that their novelty value will be somewhat worn. This cannot be denied. But a considerable amount of information is contained in the volumes, and an appreciable fraction of it is up to date.

A major portion of the conference was devoted to the nuclear two-body problem. There were introductory lectures on the phenomenological description of the forces by phase shifts and by potentials, on the meson theory of the nuclear forces, on the dispersion relation approach to nuclear forces, and on the experimental status of the nucleon-nucleon interaction.

Furthermore, there were several papers summarizing the work of particular groups and an assortment of shorter reports on experimental and theoretical aspects of the two-body problem. The three- and four-body problem is treated in a large number of shorter papers. Also, more or less extensive treatment is given to the scattering of all pairs of particles with mass between two and four. Finally there are a few papers on the binding energy of some nuclei up to O^{16} as well as some other contributions.

Workers in the field, especially new-