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cally inclined reader to skip this chapter.

It should be stated that Källén's treatment avoids all analytic continuations into the complex plane and, because of its publication before the recent resurgence of interest, almost all group theory. It is of course, a reflection on the speed with which knowledge is acquired rather than on the author's ability to foresee future developments if the section on the decay of the neutral K meson, which assumes CP invariance, is now obsolete. The student who is aware of these limitations is not likely to find a better mentor than Professor Källén.

The book has an inadequate subject index, but the quality of the printing is very high.

The Language of Nature. An Essay in the Philosophy of Science. By David Hawkins. 372 pp. W. H. Freeman, San Francisco, 1964. \$7.50.

Reviewed by R. B. Lindsay, Brown University.

It is generally agreed that the philosophy of science is a very important branch of scholarly activity, but as is the case with other interdisciplinary subjects, there is no single interpretation of its essential character. Some would see in it merely the logical analysis of the language of science, while others believe that its task is the thoroughgoing examination of the basic concepts and hypotheses of scientific theories, particularly with reference to their relations to the world of experience and to each other. Still another view stresses the historical evolution of scientific ideas and in particular the influence of successful concepts in one branch of science, e.g., physics, on the development of another branch, e.g., psychology or sociology. Finally, a detailed development of some interpretation of a scientific theory, e.g., the theory of measurement in quantum mechanics, which many will consider to be quantum mechanics, and hence an investigation in physics may by others be treated as essentially philosophical in character. It is clear that the discipline provides considerable scope for operation, and this doubtless explains the relatively large numbers of works on the philosophy of science which now claim readers' attention.

The book under review represents to a certain degree a synthesis of the various approaches to the philosophy of science, though in his preface the author asserts that it has also been his aim to "show that the content of positive knowledge reacts upon the ways of thought from which that knowledge evolved". Thus he covers a very wide range of topics from the nature of mathematics to the theory of the soul, with way stations on measurement, motion and its laws, probability, quantum physics, thermodynamics, biology, ethics, and economics. In such a wide-ranging study, it is obviously a major task to make clear to the reader the relevant connections, and not all would agree that this has been done with complete success. So far as physical ideas are concerned, the author evidently bases his considerations in general on a sound knowledge of the subject with the possible exceptions of inadequate definition of wave motion, as well as of entropy in thermodynamics, and a misleading reference to the history of the origin of quantum theory.

The presentation is rather heavily laden with metaphors, which, though they add to the freshness and novelty of the discussion, tend to provide in some cases an obstacle to the reader's clear understanding of what the author is trying to say. This is unfortunate, since the book contains much material of interest to scientists in general and to physicists in particular.

Structure and Function in Biological Membranes, Volume I. By J. Lee Kavanau. 321 pp. Holden-Day, San Francisco, 1965. \$10.95.

Reviewed by George Weiss, National Institutes of Health.

It is fashionable these days to try to account for all biological phenomena in terms of physical or chemical processes. Particular examples for which clear answers are not yet available include the analysis of how and why cells become differentiated and combine in limited configurations. At least some of the explanation must be sought in the physical and chemical properties of cell membranes.

It is apparently the purpose of Kavanau's book to bring to the attention of biologists results in phys-