

and anthropological books and papers in Chinese, Japanese, and Western languages. Under present circumstances, however, this is rather like looking a gift horse in the mouth. If and when a means is established whereby our own scholars can pursue research in China, we will begin to develop real knowledge and insight into this great, if alarming, experiment. Even then we will continue to be indebted to Yang for this thoughtful and provoking set of studies.

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**Dosimetrie und Strahlenschutz.** Physikalische und technische daten. R. G. Jaeger. Georg Thieme, Stuttgart, Germany, 1959 (order from Intercontinental Medical Book Corp., New York). xii + 282 pp. Illus. \$11.80.

This collection of basic data, formulas, tables, and diagrams fills an urgent need for material on radiation dosimetry and radiation protection. Selection and arrangement of the material reflect the great experience of the author, an expert in the field for many years. There is no doubt that this monograph will become a standard work in every radiation laboratory.

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**Levels of Knowing and Existence.** Studies in general semantics. Harry L. Weinberg. Harper, New York, 1959. xiv + 274 pp. \$4.50.

General semantics emphasizes the symbolic transformations which all of our experiences must undergo in the process of being evaluated. The most crucial of these transformations is the passage from the nonverbal (sensory) to the verbal (categorized) level of cognition. Essentially, then, the latter is a "map" of the former and, by extension, a map of the "real" (objective) world. Since verbal knowledge is cast in language, and since language has its own structure (syntax, analogies, conventions, and so forth), it follows that the verbal levels of cognition can and do bring serious distortions into our picture of the world.

This outlook has obvious relations

both to the philosophy of language and to the philosophy of science; indeed, the intimate relation between language and cognition has been pointed out in other schools of thought (for example, in logical positivism). However, Alfred Korzybski, who gave the name "general semantics" to this outlook, has put special emphasis on its psychiatric implications. He believed he had outlined a general theory of sanity, applicable not only to individuals but to cultures and to the whole human race.

Perhaps because of this emphasis, general semantics has attracted relatively wide attention in the United States, where a public concerned with problems of self-help and mental health is always potentially present. Some of this interest has been siphoned off into cultist activity, but there have also been salubrious and constructive results. A number of gifted and devoted teachers have used general semantics as the central idea in a philosophy of communication with excellent pedagogic results. Accordingly, several popularizations of general semantics have appeared, each using the "system" as leverage for expounding ideas in the study of language, psychology, human relations, the arts, and even medicine and law.

The present volume follows the pattern of the previous popularizations and is, perhaps, closer to Korzybski's formulation than any of the others. In a way, this faithful account is one of the book's merits, for it allows the reader to follow Korzybski's ideas as originally stated without wading through the atrocious verbiage of *Science and Sanity* (the principal source book) in constant danger of mistaking obscurity for profoundness. But in this close adherence to the teachings of the Master lies also the book's shortcoming. Together with Korzybski's challenging insights and tantalizing conjectures, Weinberg carries along the shaky generalizations and, most unfortunately, the scientism—that is, the appearance of scientific rigor assumed by reference to technical investigations—which bear, at best, an analogical relation to the matter at hand.

Happily, Korzybski's treatment of neurological and "colloidal" aspects of behavior is omitted. A factual account of current methods of "semantotherapy" is informative and welcome, and so is the chapter on religion, particularly the reference to Zen Buddhism (a statement on existentialism might also have been included to advantage). Here Weinberg comes closest to stating convincingly the

principal theme of his book and the ethical meaning of general semantics: Both direct experience and rational cognition are attributes of human condition; both must be open to man. In order that the one should not exclude the other, we should become aware of their distinct modalities and of their relation to each other and to the external world. This awareness is the content of sanity.

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**Readings in Linear Programming.** S. Vajda. Wiley, New York, 1958. vii + 99 pp. \$3.

This little book is something of an expository tour de force. In less than 100 pages, its 24 chapters give a representative collection of worked out examples of problems in which linear programming can be used. The references (approximately 100) will enable the interested reader to go more deeply into the literature of the subject.

Linear programming deals with maximizing or minimizing an "objective function," which is a linear function of a set of variables subjected to linear equations or inequalities (referred to as constraints). Nontrivial cases arise when there are more variables than equations. It is remarkable what a large variety of practical problems can be treated by this technique. Personnel allocation, smooth patterns of production, blending of aviation gasolines, product selection, ship scheduling, airlift, warehouse, and transportation problems, maximal flow through a network, and trim loss reduction are a representative rather than an exhaustive list of applications. Even zero-sum, two-person games can be solved (in the sense of von Neumann's theory) by methods of linear programming.

A feature of the book is the use of elementary mathematics throughout; the examples are generally worked out almost entirely by simple arithmetic. The exposition is generally clear, although its conciseness may cause difficulty to readers with limited mathematical background. The worker in the field of operations research will find the book a simple, readable introduction to the varied problems and literature of the subject. Managerial personnel may find it useful in developing a feeling concerning justifiable uses of oper-