Psychosomatic Research. Roy R. Grinker. New York: Norton, 1953. 208 pp. \$3.50.

"A critical analysis of existing theories and hypotheses of any field of science becomes necessary from time to time to counteract complacency and stimulate thinking." Dr. Grinker has attempted such a "challenging appraisal" of psychosomatic research based on a rough analogy from physical field theory. He begins with a review of psychosomatic concepts both historical and current. Many modern workers are considered. Their contributions are given due credit while their shortcomings are viewed from a "transactional" framework. Dunbar is seen making disease a stereotype and profile a statistic. Alexander's thinking appears as hampered by concepts such as the assumption that specific emotions have specific vegetative patterns. In general, the basic failure is the lack of an operational multidisciplinary longitudinal approach. The author feels that the two most needed methodological procedures are genetic (longitudinal and developmental) and transactional (prolonged simultaneous and multidisciplinary).

All this is justified by viewing psychosomatic research in terms of field theory analogy. Health and disease make up a continuum. The environment boundaries of the organism are not sharp. Growth is the process of development by which part functions of the organism specialize. This specialization begets increasing part function autonomy in dealing with stress until an overwhelming stress produces a return to a less differentiated mass reaction. Because of the crucial role of infant-mouth-breast-mother relationship (or transaction) in the process of differentiation and subsequent regression, orality is considered in some detail. At this point the book is at its best with some empirical reference to breathe life into the abstract. Several psychoanalytic concepts that are losing their value are discussed. In general, Dr. Grinker feels that psychology has accepted mouth function too literally. The book closes with chapters on "integration and field theory" and "anxiety and psychosomatic transaction." Transaction is seen as taking place between nodes in a field. Form becomes function as spatial observation becomes temporal. Causality is a fallacy for there exist only circular transactions.

To summarize this brief review of the book's content, one can say that the author points out some of the overgeneralizations that have grown up in psychosomatic research. He voices the widely felt need for multidisciplinary and longitudinal research and also restates some ideas about development and regression in an interesting way. Unfortunately the book is not clearly written, and it is often needlessly abstract. Perhaps worst of all is the use of the catchword "transactional" to support the thesis that all variables should be studied simultaneously. This is hardly what Cantrill had in mind. One must admit that a whole host of variables affect any process going on in the organism. On the practical side, however, the experimenter who fails to narrow his observation down to the pertinent variable fails to obtain sufficient data on the important factors and ends up with an interesting narrative rather than a useful correlation. In other words, to determine a transaction, the process must be studied in both directions, but to claim that this must be done simultaneously and to neglect limiting the aspects of the transaction under study is most impractical.

Psychiatric Institute

ENOCH CALLAWAY III

University Hospital, Baltimore, Maryland

Biochemical Preparations, Vol. 2. Eric G. Ball, Ed. New York: Wiley; London: Chapman & Hall, 1952. 109 pp. \$3.00.

Biochemical Preparations is a logical much-needed series, patterned after Organic Syntheses which has been appearing for many years. The organization is the same. Each method submitted from one laboratory has been checked by another laboratory. For each material, a statement of the principle of the method is provided with equations as required, the detailed procedure with the yield obtained, discussion of the properties and purity of the product, and comment about other methods of preparation.

The methods range from isolations from natural sources, one method employing photosynthesis in Canna leaves, to alterations of available biochemical materials by more or less involved organic chemical procedures or, in one instance, by microbiological oxidation.

The current interest in derivatives of phosphoric acid and processes of oxidation and reduction is recognized by inclusion of methods for inositol monophosphate, phosphoryl-enolpyruvic acid, L- α -glycerophosphoric acid, glucose-6-phosphate, fructose-1,6-diphosphate, phosphorylcholine, crystalline lactate dehydrogenase, sodium pyruvate, cytochrome C, and reduced diphosphopyridine nucleotide. Other methods are for glutathione and three precursors in a synthetic sequence; cucurbit seed glubulin, phosvitin, and the modified protein oxycasein; DL-glutamic acid monohydrate and L-aspartic acid; oleic acid, methyl oleate and methyl ricinoleate; C¹⁴ uniformly labeled sucrose, and myo- and DL-epi-inosose-2.

The index is cumulative, comprising material for both this and the preceding volume. A valuable supplement is a listing of the 58 compounds of biochemical interest which have appeared in the first 27 volumes of *Organic Syntheses*.

The present volume appeared three years after the first one. It is hoped that subsequent numbers will appear at shorter intervals. The third volume is already well under way.

RALPH C. CORLEY Department of Chemistry, Purdue University