requirements of the species, and his actual analysis of social institutions reveals a quite different theory. This is the above-mentioned view of function as pertaining to the interrelatedness of institutions and the contribution of any part of a culture to the persistence of the whole. This kind of functionalism was pervasive in the development of both anthropology and sociology, and it was clearly enunciated by Durkheim, who long antedates Malinowski. Malinowski's meticulous functional analysis of the institutions of Trobriand society set a high standard for ethnographic reporting and synthesis, however, and his lasting contribution lies here and not in his theory of needs.

One aspect of Malinowski's theory dealt with the obvious and the other with the tried, and Goldschmidt's book suffers from the same problems. Terminological confusion is hardly swept away, nor is any underlying unity disclosed, by his grand inclusion of the stock market and primitive gift-giving under the rubric of the "sharing function." And when Goldschmidt goes on to show that the differences between "goods-sharing institutions" in different societies are functions of the imbeddedness of these institutions in other institutions, we may well ask where lies the "bold, new approach." The basic dilemma arises from the juxtaposition of two unreconciled concepts of function, and this is aggravated by a failure to provide a rigorous definition of function or even a partial inventory of functions. The reader's quandary as to "functionalism" is intensified by the fact that the "comparative" half of Goldschmidt's title is hardly brought into question. We are left in doubt not only as to what he is comparing, but how and why as well. *Comparative Functionalism* is best understood as a long programmatic statement and not the promulgation of a theory. That this is not just a critic's interpretation is attested to by the author, who writes: "Indeed, what will be presented here is not a model in the true sense, but rather a schema for a model, a general plan or program within which the detailed model —or sectors of such a model—can be constructed" (p. 33). Now that Goldschmidt has written his prolegomenon, we may look forward to the book he has promised us.

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Development of Psychiatry

Franz G. Alexander and Sheldon T. Selesnick are both psychoanalysts. They consequently divide their **The History of Psychiatry: An Evaluation of Psychiatric Thought and Practice from Prehistoric Times to the Present** (Harper and Row, New York, 1966. 487 pp., illus. $11.95) into three parts: the dark ages ante Freud (164 pp.), the Freudian age (186 pp.), and the present (135 pp.). In the same vein, so-called predecessors of Freud—St. Augustine (8 pp.), Spinoza (4 pp.), the romantic Heinroth (3 pp.)—fare much better than such essential psychiatrists as Pinel (1½ pp.), Kraepelin (2 pp.), or Griesinger (3½ pp.). Bias is not a good foundation for history writing.

It is obvious from the contents that the authors only rarely have read all the "predecessors" and nonpredecessors they discuss. They have mostly compiled from older histories of medicine and psychiatry. Unfortunately, the actual historical part of this book—about one third of it—cannot even be called a successful compilation. Sometimes the sources are bad, sometimes things have been mixed up while being copied or seem invented to fill the numerous gaps in actual knowledge. Thus we "learn," for example, that the cult of Aesculapius declined in the 7th century B.C. (p. 27), whereas actually it flourished 200 years later, in the 5th century B.C.; that Thessalus "promised a doctor's degree" in the 1st century A.D. (p. 42); that Soranus of Ephesus (2nd century A.D.) was a Roman and the teacher of Caelius Aurelianus (5th century A.D.) (p. 47); that the older Vesalius was a Belgian from "Wessale" (p. 73). Even the exile of Freud is incorrectly dated (p. 210).

The second part, The Freudian Age, which properly speaking is no longer history, is better. Here the authors are familiar with the material they handle: Freud's own evolution, the psychoanalytic pioneers (Abraham, Jones, Ferenczi), the "dissenters" (Adler, Jung, Rank), and the "contributors outside psychoanalysis" (E. Bleuler, Piaget, Binet, Rorschach, A. Meyer). Especially the two latter groups are handled with a commendable and benevolent objectivity.

The third part, Recent Developments, is the most undogmatic, readable, and informative part of the book. Seven main trends are reported and discussed: the organic approach (including among other things biochemistry, neurophysiology, and psychopharmacology), psychological developments (learning theory, psychotherapy), social psychiatry (with important chapters on addictions and law), child psychiatry, psychosomatic medicine (which has been strongly influenced by Alexander in the United States). Short chapters deal with existentialist psychiatry and the "culturalist" school. The authors leave open the question which of these channels the main stream of development will turn into.

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Environmental Carcinogenesis

Cancer of the respiratory system occupies a unique position in the field of environmental cancer in that it is the first major instance in which an etiological association of environmental agents with cancer involves more than just a unique population group or a restricted geographical area. Further, economic considerations have had an unprecedented influence on the initiation and implementation of measures to control what is essentially a problem in public health. Finally, the habit of cigarette smoking, certainly a significant factor in the increasing incidence of cancer of the respiratory tract, has broad social, physical, and legal implications. Because of these as well as other reflections of the problems of respiratory cancer, publications purporting to evaluate the problem scientifically should be rigorous and disciplined in their facts, assessments, and conclusions.

Occupational and Environmental Cancers of the Respiratory System (Springer, New York, 1966. 226 pp., illus. $8.50) by W. C. Hueper would more appropriately be titled "Occupational Cancer of the Respiratory System" because of its glaring failure to discuss and assess the role of cigarette smoking, a major environmental, respiratory, carcinogenic experience. Hueper, an acknowledged pioneer and authority in the field of occupational cancer, has written a book that, though comprehensive, is uneven in its critical approach to the several areas of the subject. It is understandable that in a relatively brief text many complex mat-

ters must be condensed into single sentences or short paragraphs. This significantly increases the demand for a critical evaluation and presentation of data. Too often, however, Hueper makes little distinction between substantive evidence and data that have only a highly speculative relation to the causation of lung cancer by environmental agents.

To compensate for the brevity of the text, the author has appended an extensive bibliography. The use of the references is complicated in that they are not clearly identified with particular statements in the text, authors' names often being grouped seriatim at the ends of sentences. The bibliography at the end of the book is organized by subject and chapter, so that it is difficult for the reader to associate text references with sources, particularly when several papers of any given author are quoted.

The book is organized into sections, the largest of which is Specific Occupational Cancers and Their Environmental Counterparts, comprising approximately 90 percent of the book. The presentation of several of the topics in this section is difficult to rationalize in the light of existing knowledge. For example, iron is presented in an individual section, though substantive experimental or epidemiological evidence supporting its role in the pathogenesis of clinical lung cancer is as yet lacking. In subsection 12, "Miscellaneous respiratory carcinogens," some seven groups of agents are discussed, although evidence as to their pulmonary carcinogenicity is almost totally lacking. I am wholly in sympathy with the inclusion of suspect environmental carcinogens and the plea that they be studied in greater detail, but surely they merit presentation in a separate section of the book appropriately designated with some such conservative title as Potential Hazards or Areas in Need of Investigation.

The book, though well motivated, is replete with positive assertions, some almost evangelical. The denigration of the idea that cigarette smoking is a possible contributory factor in occupational lung cancer is difficult to comprehend, particularly in light of growing recognition of multiple factors in the causation of cancer. In a discussion of beryllium cancers, the author comments (p. 101) on possible co-factors and says, "The main effect of such unwarranted speculations [about cigarette smoke as a co-factor] is added undesirable confusion of the ill-informed on the relative significance of the multiple causal agents involved in the production of cancer of the lung in man, impediment of badly needed epidemiologic, clinical and experimental research into the numerous actual and potential environmental causes of cancers of the respiratory tract (Hueper), on which rational control measures may be based, and obstruction of justified compensation claims for cancers of the respiratory organs contracted by occupational exposure to recognized respiratory carcinogens, by misleading courts and compensation commissions through a reckless and irresponsible promotion of exaggerated claims on the role of cigarette smoking."

Similarly, in discussing coal tar, tar oils, soots, and so on, the author says that "In view of the widely promoted allegation that cigarette smoking is the predominant cause of lung cancer, although cigarette tar does not seem to induce cancer of the fingers stained with it, it is noteworthy that coal tar workers develop cancer at such sites (Link; Oppenheim; Epstein)." Certainly the data supporting a carcinogenic role for tars, oils, soots, and combustion products of coal are sufficiently recognized that polemical "refutation" of cigarette smoking in the etiology of lung cancer adds nothing.

There are a greater number of errors in the references than one would expect in a well-edited text. A serious defect is the lack of critical distinctions between responsible and irresponsible speculation in the Sir MacFarland Burnett concepts of the term. For workers in the field, the book does provide a comprehensive presentation of useful information on the established occupational lung cancer hazards. Its usefulness is most limited when discussing questionable environmental respiratory carcinogens.

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Photochemistry of Organic Molecules

In view of the burgeoning interest in the photochemistry of organic molecules over the past two decades, there is a need for up-to-date systematic texts in this area. Nicholas J. Turro's **Molecular Photochemistry** (Benjamin, New York, 1965. 300 pp., illus. $12.50) is intended "to familiarize chemists with the important concepts involved in organic photochemistry and to present a number of representative examples of organic photochemical reactions which can be understood and interpreted in terms of previously developed principles." It assumes some background in elementary quantum mechanics and is written for "advanced undergraduates, first-year graduate students . . . and to serve as a reference book for those who are doing or who anticipate doing work in the field." Turro succeeds in some aspects in this enterprise, but the book has a number of shortcomings.

The first three chapters "review and explain" various quantum mechanical and spectroscopic results such as the classification of states, types of molecular orbitals, transition probabilities, lifetimes, and Franck-Condon effects. These chapters are the weakest in the book. It is not a question of rigor or completeness, but merely of clarity. The discussions of symmetry and of spin-orbit (termed spin-orbital) coupling, matters which indeed lend themselves to intuitive or pictorial treatment, are particularly opaque. Even with some background, the reader who attempts to study these chapters by himself will surely bog down in statements like "These three components, R_x, R_y and R_z, have symmetry properties which may be represented by arrows, parallel to the x, y and z axes respectively."

Chapters 4 and 5, which deal with the photochemically relevant characteristics of electronic states, are considerably better and will probably be useful to organic chemists. A good general picture is given of the pathways of energy flow following excitation, of radiationless transitions, and of intermolecular energy transfer. The discussion is sufficiently detailed to permit some understanding of the nature of the various processes, and ample references are given to key papers. Surprisingly, there is no explicit discussion of quenching mechanisms (as distinguished from electronic energy transfer).

Chapters 6 through 9 present numerous examples of organic photoreactions. Chapter 6 ("Photoreduction") is essentially limited to hydrogen abstraction reactions of carbonyl compounds.