

who have already "bridged the gap" will find in this book a wealth of practical information on techniques as well as excellent documentation of current knowledge in most of the areas of photobiology. Such researchers may overlook the minor inconsistencies and problems in organization and find the book very useful as a reference work or as a means of broadening their own horizons in photobiology.

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Biochemistry

Comprehensive Biochemistry. vol. 6, *Lipids and Amino Acids and Related Compounds*. Marcel Florkin and Elmer H. Stotz, Eds. Elsevier, New York, 1965. xvi + 323 pp. Illus. \$17.

As part of section 2 of *Comprehensive Biochemistry*, this volume, *Lipids and Amino Acids and Related Compounds*, is mainly concerned with the organic and physical chemistry of naturally occurring compounds, in this case, of lipids (part A) and of amino acids, peptides, and amines (part B). The subject matter is most readily summarized by the chapter titles, which are (together with the names of the authors): "Fatty acids, long-chain alcohols and waxes" (by J. F. Mead, D. R. Howton, and J. C. Nevenzel), "Neutral fats and oils" (by J. A. Lovern), "Phospholipids and glycolipids" (by D. J. Hanahan and H. Brockerhoff), "General chemistry of the amino acids" (by R. J. F. Nivard and G. I. Tesser), "Nitrogenous bases" (by N. van Thoai), "Melanins" (by J. Harley-Mason), "Peptides: Synthetic methods and applications" (by G. W. Anderson), "Capsular polypeptide" (by G. Ivanovics), and "Synthesis of bacterial glutamyl polypeptides" (by V. Bruckner).

Unlike all the other chapters, which are limited to organic chemical aspects of the compounds in question, the chapter on nitrogenous bases describes the formation of these substances (that is, amines, betaines, and guanidine derivatives) by "biochemical methods" as well as by "chemical methods." Consequently, that chapter per se provides a survey of the presently available knowledge of the biochemistry of nitrogenous bases, and it can serve as a supplement to Guggenheim's classic, *Die biogenen Amine*.

All the chapters present up-to-date summaries of their fields, with references to literature published as recently as 1964. Although many of the chapters are very well done, the need for a volume such as this one is open to question; all the material presented has been covered in greater detail, and often by the same authors, in one or more recent books or review journals. It is doubtful whether, for example, an organic chemist, or an organic biochemist, interested in the methods applicable to the synthesis of a given polypeptide would choose this volume as his reference source. And, one must admit, the excellent chapter on peptide synthesis is too highly technical to appeal to the nonspecialist.

The volume suffers from a number of defects, not the least of which is its extremely high price. Although American readers will appreciate the fact that the entire text is in English, it is obvious that several chapters were originally written in another language, and in several instances, the translations are barely adequate. The index is not as complete as it should be: For example: there are two entries under "5,6-dihydroxyindole," both of which refer to chapter 6 where the structural formula also is given; however, the same compound is mentioned, and its formula is shown, in chapter 5, albeit under the name "5,6-dihydro-oxyindole" (a term that is *not* listed in the index).

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The Modjokuto Series

The Social History of an Indonesian Town. Clifford Geertz. M.I.T. Press, Cambridge, Mass., 1965. vi + 217 pp. Illus. \$7.50.

This impressive book dealing with culture change in an Indonesian town is a continuation of the "Modjokuto Series" published by M.I.T. Press. The present work represents an attempt to portray the social history of one Javanese community from about the middle of the 19th century to the middle of the 20th century. Geertz is well known to specialists for his previous studies in Indonesia, and with the present book he once again proves his skill in portraying the changing social patterns of one Indonesian town. The author's goal is to present the processes of the "in-

teraction of ecological, economic, social structural, and cultural factors over a reasonably extended period of time" and at the same time to reach some conclusions about the "relative importance of these factors in shaping human life" in Modjokuto. In so doing he is not writing a history of that town, but he is presenting us with a controlled analysis of processes of social change by means of the formulation of several theses. One of Geertz's contentions is that the village pattern of mid-1954 Java, characterized by "over-crowded settlements, hyperintensive wet-rice agriculture, a rather flaccid social structure, and widespread cultural disorientation," was the result in some significant measure of interaction between capital-intensive commercial agriculture in Dutch hands and labor-intensive subsistence agriculture by the Javanese. Geertz further holds that urbanization in Modjokuto is not the result of the conversion of the village into a town by gradual elaboration of local customs and institutions, but rather has taken place through the integration of extra-local groups into a new pattern of social organization. Cosmopolitanism in Indonesia, Geertz believes, grew out of the intrusion of already highly cosmopolitan groups into the local setting, rather than being the result of an increased sophistication among the leading elements in the local population. It may be added that, with increasing rapidity of acculturation as part of a universal trend of urbanization, this type of social change and urbanization is taking place in many parts of the developing nations.

In tracing the development of Modjokuto from the colonial to the "free" period, the author attempts to show that as far as this particular Javanese community is concerned, the major development in the postindependence era was the emergence (although halting and often most frustrating) of a novel pattern of political, social, and cultural organization. I feel, however, that rather than being a new form of sociopolitical organization, this development may equally well represent a reformulation of existing structural units made possible by the availability of new post-independence choices for action; the town's people surely recognized new alternatives and possibilities for action, as well as an increased range for restructuring their ideological affiliations.

By way of validating the processes of change in Modjokuto, Geertz uses a local election to document the realignment and the emergence of new be-

havioral patterns. By using an election in this fashion he intends it to validate his "inside" view of a people's perception of the content and structure of their own society.

This book is impressive. The methodological and theoretical constructs are hard to argue with. And yet, when one has finished with this social history of an Indonesian town, when one has thought over the results of the local election, one misses the human actor in this picture of social change. One might perhaps feel that rather than taking part in the life in a Javanese town, one is presented primarily with a series of theoretical constructs.

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Psychology

The Prediction of Academic Performance: A Theoretical Analysis and Review of Research. David E. Lavin. Russell Sage Foundation, New York, 1965. 182 pp. Illus. \$4.

This volume appears to be one of several planned by the Russell Sage Foundation on the broad topic of the use and effects of standardized psychological tests in our society. Its seven chapters discuss the general problems, in academic performance, of criterion choice and measurement; the choice of predictors; the results of prediction studies using intellectual factors, personality measures, and sociological variables; and, finally, a set of proposals for future research that will combine both psychological and sociological variables in a predictive matrix.

The research literature cited appeared primarily during the period 1953 to 1961. Wherever possible, prediction studies from all levels of education are reviewed for each set of independent variables. The book's expected audience, in addition to sociologists and psychologists, includes high school counselors, college admissions officers, and educational administrators.

After pointing out that grades are at best intermediate, not ultimate, criterion measures of the outcomes of education (chap. 1), Lavin discusses their sources of unreliability and some of the methodological problems in their prediction (chap. 2). In a companion chapter he discusses a few of the complex problems associated with choice of predictor

or independent variables. These first three chapters are, unfortunately, unsophisticated and elliptical discussions of quite complicated psychometric problems; the extensive theoretical literature on validity, reliability, cross-validation, selection ratios, significance tests, types of validity, and factor analytic methods is not adequately utilized.

Chapter 4 devotes 12 pages to prediction of achievement by intellectual measures; chapter 5 devotes 47 pages to annotations of studies using a wide range of personality variables as predictors; chapter 6 covers demographic, ecological, and role-relation variables as predictors, in 28 pages. In these three chapters, so much literature coverage is attempted that adequate overview is lost in excessively brief summary comments on specific studies.

The concluding chapter, which touches on research designs that include a strategy of interaction analysis of sociological and psychological variables, is the best chapter, although its message has been presented more extensively and more effectively in the psychological literature.

In summary, Lavin has undertaken to do too much in this slender volume; he obviously knows the literature and the theoretical issues, but he fails to display them adequately for his intended audiences, and he oversimplifies problems of crucial social importance.

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Silicon Organic Compounds

Organosilicon Compounds. vols. 1 and 2. vol. 1, *Chemistry of Organosilicon Compounds* (516 pp.); vol. 2, parts 1 and 2, *Register of Organosilicon Compounds* (pt. 1, 699 pp.; pt. 2, 544 pp.). Vladimír Bažant, Václav Chvalovsky, and Jiří Rathouský. Translated from the Czechoslovakian by Arnost Kotyk and Jiří Salák. Czechoslovak Academy of Sciences, Prague; Academic Press, New York, 1965. Illus. \$25 each; \$70 set.

When *Organosilicon Compounds* was begun in 1952, about 2000 publications made up the literature of this branch of chemistry. In the next ten years more than 4000 additional papers were published. Bažant states in his preface that "as the avalanche-like

accretion of material continued we had to decide whether to publish an imperfect monograph or none at all." Fortunately for those of us who work in this area, Bažant decided to continue, and this three-volume English translation, published jointly by the Czechoslovak Academy of Science and Academic Press, is a monument to his efforts.

Bažant began 1 year after the publication of Rochow's *Introduction to the Chemistry of the Silicones* (ed. 2, 1951), and since that time several related volumes have been published—Andrianov's *Organosilicon Compounds* (1958), which was translated by the Air Force; Eaborn's *Organosilicon Compounds* (1960); *Synthesis of Organosilicon Monomers* (1961) by Petrov and others, which was translated by Consultant's Bureau in 1963; Ebsworth's *Volatile Silicon Compounds* (1963); and most recently Sommer's *Stereochemistry, Mechanism, and Silicon* (1965). The work reviewed here manages, however, to be unique—Bažant and his coauthors at the Institute for Chemical Process Fundamentals (Prague) have compiled an encyclopedia.

Volume 1 begins with a 350-page discussion of silicon and its organometallic chemistry. This survey is duplicated in some ways by all of the previously published books, but Bažant writes from the vantage point of multilingual *Mittleuropa* where research from Russian, English, and German laboratories is equally well known, a balance not found elsewhere. Bažant's own investigations on the Rochow reaction are summarized here for the first time in English. The volume ends with the references to the register of compounds in the next volumes. The references are listed by journal in chronological order, an open-ended system that allows for future expansion of the series.

It is difficult to determine just what compromise with quality and thoroughness of coverage was made. More than 250 journals were read, and the list includes conference reports, patents, and even dissertations. In addition, certain leading chemists in several countries communicated their unpublished results, and their compounds appear in the registry. Russian names are repeated in the Cyrillic alphabet, and not only the reference, but its citation in *Chemical Abstracts*, *Chemische Zentralblatt*, and *Referativnyi Zhurnal Khimiya* is also given.