

fishing grounds and assisted them after typhoons and other natural disasters.

Alkire provides a great deal of useful statistical data on agricultural production, work schedules, canoe-building, inter-island voyages, and other subjects. However, some additional general statements would have been desirable. For example, the reader has no way of knowing to what extent the funeral described on pages 103–110 was typical, or how the land disputes mentioned in several places (for example, on page 85) were resolved.

This study of Lamotrek is a significant contribution to the social anthropology of small, autonomous communities, whose organization is often astonishingly complex. The author suggests that this complexity is partly functional, constituting a form of insurance against catastrophe, and partly the result, as Lévi-Strauss would put it, of multiple expressions of a single underlying structure.

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## Chemical Reference Book

Publication of the **Polymer Handbook** [J. Brandrup and E. H. Immergut, Eds. Interscience (Wiley), New York, 1966. 1276 pp., illus. \$19.50] marks another significant milestone in the growth of macromolecular chemistry since its inception early in this century. It points up the fact that the synthesis and production of polymeric materials now take approximately one-third of the total manpower and capital resources of the chemical industry. The *Polymer Handbook* deals with the specialized facets of theoretical and experimental polymer science in much greater depth than has been possible in existing handbooks of chemistry. It is a much-needed addition to the polymer literature and merits a place beside the standard chemical reference works.

The primary sectional headings are polymerization, solid state properties, solution properties, miscellaneous properties, physical constants of some important polymers, physical data of oligomers, and physical properties of monomers and solvents. Major compilations of data pertain to such subjects as decomposition rates of organic free radical initiators, transfer constants, copolymerization reactivity ratios, crystallographic data, viscosity-molecular

weight relationships, sedimentation and diffusion constants, specific refractive index increments in dilute solutions, and solvents and nonsolvents for polymers. Among the miscellaneous properties covered are activation energies and products of thermal degradation, permeability constants, radiation chemical yields (*G*-values), nuclear magnetic resonance, and optical activity. A 29-page subject index facilitates location of specific information on 250 topics.

An introductory chapter on "Nomenclature rules" provides a useful guide to the system used in classifying and naming the polymers for the purpose of listing them alphabetically within groups in the tables. This is particularly helpful in the case of the confusing situation with regard to the naming of polyurethans, polycarbonates, and copolymers. The editors admit, and inspection of the tables reveals, that in an initial compilation of this type, involving over 50 contributors, many inconsistencies are bound to occur. For example, vinyl ether polymers are placed under polyethers in one table (III-24) and under vinyl polymers in another (IV-195). Polyformaldehyde is listed under polyoxides in most instances (for example, Table III-26), but is under polyethers occasionally (IV-207). It is obvious, as the editors point out, that the problem of polymer nomenclature is one which needs extensive further work, both nationally (by the American Chemical Society) and internationally (by the International Union for Pure and Applied Chemistry). Progress in applying sound chemical principles to the naming of polymers would certainly be greatly facilitated if major chemical firms would abandon the practice of bastardizing standard chemical terms by labelling new polymers with such misnomers as acetal, phenoxy, and polyvinyl dichloride.

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## Word Associations

James Deese's **The Structure of Associations in Language and Thought** (Johns Hopkins Press, Baltimore, 1966. 232 pp., illus. \$6.50) is in part a critique of the traditional views of word association and in greater part an argument for his own interest in the struc-

tural analysis of associations. Deese starts from the notion that the general meaning of a word is given by the potential distribution of responses to it. He then takes the associations to a word, obtained by the usual method of one response per subject, as a sample of this distribution and proposes that this sample defines a subset of the general meaning which he terms the *associative meaning* of the word in question. This definition permits easy computation of the degree of similarity of associative meaning existing between words: the degree of similarity of associative meaning existing between two words is measured simply by the extent to which their distributions of associations intersect. A matrix of these measures may then be factor analyzed to find clusters of words sharing certain features of meaning. Thus Deese finds, for example, an animate set, *bees, flies, bug*, as opposed to an inanimate set, *sky, yellow, spring*.

After consideration of the measurement of similarity among stimuli, Deese takes up the relation between the stimulus and the kind of associations it elicits. One aspect of this relation is whether or not the associations tend to belong to the same grammatical category as the stimulus. In the case of adverbial stimuli associations tend to belong to a different category whereas in the case of the nominal or adjectival stimulus associations tend to belong to the same category as the stimulus. The associations to adjectives, however, tend to include many more antonyms than do those to nouns, which tend, on the other hand, to form semantic groups. Deese conceives of these two processes of antonymy, or contrasting, and grouping as playing important roles in laws of association; words are associatively related when they may be *contrasted* uniquely or when they may be *grouped* on the basis of two or more shared characteristics.

The book ignores most of the pressing issues of present-day psycholinguistics but will still be of interest to those who are convinced of the significance of word-association research. Information retrievalists may also profit from reading this book, although the Giuliano and Jones linear association model that they may be familiar with is probably more sophisticated than the approaches described here.

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