

adequate substitute for a system of product and factor prices as a means of providing decision makers with needed economic information. Schultz recognizes the existence of cultural and political factors in low-income countries, but he sees them as influencing underlying economic determinants.

The book should be of interest to a wide range of scientific specialists, policy makers, program administrators, and others concerned with agricultural development in low-income countries. Certainly it will encourage much needed research. While most of the material is likely to be understood by the well-informed noneconomist, a few sections have a heavy sprinkling of technical economic jargon and may pose some problem for the person not trained in economics. Professional economists as well as others should find the book highly stimulating and rewarding.

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Artificial Communities

The Javanese of Surinam: Segment of a Plural Society. Annemarie de Waal Malefijt. Humanities Press, New York, 1963. x + 207 pp. Illus. \$5.50.

Among the one-quarter million inhabitants of Surinam (Dutch Guiana) are 43,000 Javanese, descendants of indentured laborers who were brought to the colony between 1891 and 1939. Like the Chinese and East Indians before them, they were introduced to work on plantations. During the course of the present century, the government has favored the development of small-scale farming on family holdings. Plantations, which accounted for 90 percent of agricultural production in 1900, have yielded to small-scale farming, which now accounts for an equal proportion of total agricultural output. One-third of the original Javanese migrants returned to their homeland, and the others have become small farmers in tropical America. The author studied two settlements of such farmers, one settled by a rice-farming population of about 1200, the other inhabited by some 800 people carrying on mixed farming and fishing.

The cultural adaptation portrayed

is strongly egalitarian in character. Households produce sufficient food to answer basic subsistence needs. The well-filled paddy box is the central symbol of security. Money buys desirable objects, but not status. Division of labor is based on ascribed categories of age and sex, but achieved positions are few and part-time only. Headmen are appointed by the District Commissioner, but the office carries with it no salary and no formal legal power. Kinship is bilateral, and kinship terms are extended easily to include many individuals outside the immediate category of bilateral kin. Relations between men and women seem remarkably balanced. Divorce is frequent and easy, and an individual may thus acquire several sets of affinals during his lifetime. Adoption of children is frequent, with biological and adoptive parents calling each other by sibling terms. Ceremonial centers upon *slametans*, offerings of food shared with spirits in order to maintain essential harmony between the world of spirits and men. The spirit world, like the world of men, lacks status distinctions among spirits.

This egalitarian pattern contrasts sharply with the greater complexity of societal organization in the Javanese homeland. The Javanese migrants lack the well-established political hierarchies found in Java, as well as its sophisticated religious components (*prijaji*). In Surinam the local religious leader, the *ka'um* (who is, in Java, merely the lowest on a scale of religious hierarchy), has come to be the highest and only religious authority. The distinction between true Islamic believers and adherents of the peasant variant of Javanese religion has similarly become attenuated in America. There has also been a loss of some kinship terms, of several of the respect languages characteristic of the homeland, and of some forms of etiquette governing the relations between parents and children.

At the same time the Javanese constitute a well-demarcated cultural segment within the social structure of the country as a whole, a segment that is at a comparative disadvantage in its access to trade, to education, and to political power. These are largely in the hands of Creoles, Chinese, or East Indians (Hindustans). The Javanese, cut off from channels that would connect them with an economic life other than rice-farming and fishing or with resources of power and information, have strongly turned in upon them-

selves. Acculturation is limited; the acquisition of "western" goods is equated with desertion of the Javanese way of life. Strong shame sanctions threaten the individual with social and spiritual isolation should he wish to break with traditional patterns.

Thus, in the situation depicted by the author, traditional Javanese institutions that function at the level of community and nation seem to have been sloughed off. The strongly cohesive *desa* community of the homeland has been replaced by the much weaker tie of allegiance which a settlement maintains with its headman, a tie that is dependent for its strength on the purely personal qualifications of this official. At the same time, institutions on a national level are clearly beyond the grasp of the subsistence-oriented Javanese small farmer. However, this weakening of hierarchical institutions seems to have been compensated for by a proliferation of family-level institutions and by a condensation of the Javanese cultural group into a well-defined and well-defended social segment.

The proliferation of family-centered forms appears not only within the bilateral kindred but in the wide extensions of fictive kin terminology prompted by any conditions of common fate or by any other emotionally charged experience. An example of this is the brother terminology that obtains among people who were shipmates in the original migration. [A very similar picture of the simultaneous disruption of hierarchies and the accentuation of fictive ties has been noted for another migrant population, the East Indians in Fiji—see Adrian Mayer's *Peasants in the Pacific* (1961).] At the same time, however, it is the cultural group as a whole, rather than the community, which becomes institutionalized as a protective shield raised in defense of the traditional way of life.

This book, well written and well presented, is a welcome addition to the growing literature on "artificial" communities contrasted with the indigenous culture growths more traditionally studied by anthropologists. This literature will become more important as men increasingly strive to remake their societies through conscious efforts. The plural societies produced by plantation owners should be recognized as one of the first products, however imperfect, of such conscious planning. Perhaps plural societies represent one form such

social construction can take. It is therefore something of a pity that the concept appears in the title of this work but is not otherwise discussed in its pages. But the high quality of this study stimulates hope that in a future publication Annemarie de Waal Malefijt will go beyond the integrative description of a segment of plural society and clarify the concept of plural society itself.

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Management and Science

The Encyclopedia of Management. Carl Heyel, Ed. Reinhold, New York; Chapman and Hall, London, 1964. xxvii + 1084 pp. Illus. \$25.

This encyclopedia is indeed organized on an A (for Accounting) to W (for Workmen's Compensation) basis, "Human Engineering" appears between "House Magazines" and "Human Relations in Industry." "Learning Theory" is found between "Labor Unions" and "Lease vs. Sale or Purchase of Equipment." "PERT" follows "Personnel Testing" and precedes "Plant Location." "Waiting Line Theory" separates "Wage Incentives" and "Warehousing." These samples illustrate the coverage, which includes a few hundred topics by some 200 contributors.

The longest item (32 pages) is an excellent summary introduction to modern "Statistics" in which Bayesian decision theory is sketched and Markov processes are identified after the more familiar probabilistic methods of analysis have been outlined. Shorter items, such as two pages each on "Organization Theory" and "Teaching Machines," often do little more than serve as long definitions and provide an excuse for giving a few references to the literature on the topic.

It is a commentary on the sad state of affairs in the management sciences that "organization theory" deserves so little space. It is a bit surprising that "teaching machines" merit any mention in an encyclopedia for managers, but this kind of unevenness in the coverage of topics properly reflects the fact that the reading audience of managers and writers on management do in fact have these interests. Perhaps "teaching machines" is a topic of greater im-

portance to management than space technology, nuclear physics, and genetic coding, but certainly electronic information-processing technology deserves more emphasis than it was given.

The topics covered are primarily those that were and are popular with managers and scholars who reflect seriously on the management process but who are essentially nonmathematical and therefore do not make significant use of the techniques and knowledge of science. Nevertheless, there are brief sections on operations research, and on such specialized topics from management science as: mathematical programming, game theory, queueing theory, management games, simulation, statistical decision theory, and inventory theory.

There are biographical sketches of 33 "pioneers in management," including several who are still active. It is characteristic of the coverage that there are no biographical sketches of any of the pioneers in management science and operations research, or of any in electronic information-processing technology; this is still another indication of the concentration on the past era of "scientific management" after Frederick W. Taylor, contrasted with the new era of "management science," after John von Neumann.

All in all, this volume should prove to be very useful. It serves simultaneously as an elementary guide to the old in "scientific management," which has proved useful in management practice, and to the new in "management science," which promises so much for the future. The reader cannot help but observe that the old and the new together still provide managers with only a miscellany of useful devices and procedures, rather than with anything that approximates a comprehensive or scientifically established basis for management.

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Notes

Prehistory and Protohistory in India and Pakistan. H. D. Sankalia. University of Bombay, Bombay, India, 1962. 315 pp. Illus. Plates. Rs. 39.50. This volume is based on the Pandit Bhagwanlal Indraji lectures which the author delivered under the auspices of the University of Bombay in December

1960. The aim has been "to offer a critical review of the work done . . . in this subcontinent during the last twenty years or so." Chapter titles are "Lower Palaeolithic culture"; "Middle Palaeolithic cultures of India"; "Meso-lithic cultures of India"; and "Neolithic and Chalcolithic cultures."

The Malay Archipelago: The Land of the Orang-Utan and the Bird of Paradise. A narrative of travel, with studies of man and nature. Alfred Russel Wallace. Dover, New York, 1964 (reprint). xviii + 515 pp. Illus. Paper, \$2. In 1869, 6 years after his return from the "land of the Orang-Utan and the Bird of Paradise," Wallace published this account of his travels and conclusions. The Dover book is an unabridged reprint of the 1922 edition, with 62 drawings and maps and three appendices.

A Guide to Science Reading. Compiled by Hilary J. Deason and William Blacklow. New American Library, New York, ed. 2, 1964. xiv + 239 pp. 60¢. A comprehensive, annotated guide to more than 900 paperbound books. In his review of the first edition [*Science* 140, 42 (1963)], Isaac Asimov wrote that "to anyone interested in science education . . . the book is as essential in this age of the Paperback as a knife and fork are at a steak dinner." Each book is classified, according to the level of the complexity of its treatment, from 1 (for students in the upper elementary grades) to 4 (for advanced college students).

Navaho Expedition: Journal of a Military Reconnaissance from Santa Fe, New Mexico, to the Navaho Country, Made in 1849 by Lieutenant James H. Simpson. Edited and annotated by Frank McNitt. University of Oklahoma Press, Norman, 1964. lxxix + 296 pp. Illus. \$5.95. In 1849 Simpson was commissioned by the Army Corps of Topographical Engineers to survey the country inhabited by the Navahos. Although the topographical survey was the primary purpose of the expedition, Simpson explored the ruins of ancient pueblos and recorded his observations of the land and its inhabitants. Simpson's journal, which was first published as a Senate Executive Document, is illustrated with sketches, water colors, and maps by Richard and Edward Kern. The volume is published as volume 43 in the American Exploration and Travel Series.