

great compilation have been engaged in studying various aspects of the effects of smoking tobacco and of nicotine. This volume, which is so well organized and indexed, and which has such a comprehensive bibliography, will long remain a well appreciated record of their endeavor.

CHAUNCEY D. LEAKE
Ohio State University

Agronomists' Treatise

Tropical and Subtropical Agriculture. vol. 1 and vol. 2. J. J. Ochse, M. J. Soule, Jr., M. J. Dijkman, and C. Wehlburg. Macmillan, New York, 1961. liv + 1446 pp. Illus. \$35.

These boxed, cloth-bound volumes, are printed in easily read type on good quality paper. The authors, from the University of Miami and the University of Florida, have prepared a treatise that will be useful to college students, farmers, technicians, and crop administrators.

The first 368 pages contain general information on climate, physiography, soils, cultural practices, diseases and pests, and the economic possibilities relative to crops. The rest of the book treats important crops such as bananas, citrus and other fruit crops, spices, beverages (coffee, cacao, tea), rubber and cinchona, oil crops, fiber crops, sugar cane, rice, maize, sorghum, and tobacco. There are 285 illustrations.

It is not an easy task to review the two volumes, and I obtained the cooperation of experienced agronomists and horticulturists at the Agricultural Experiment Station and at the College of Agriculture of the University of Puerto Rico as well as a few others. Their comments follow:

"The authors strive to cover a vast field in two volumes. The depth and extension of the discussion has therefore been sacrificed to the scope. This is in part remedied by the appended bibliography, although this implies additional search on the part of the reader.

"Commendable features are the glossary, and the author-subject-common plant indexes. Too much space has been sacrificed in listing the names of plants in various languages and dialects at the beginning of the discussion of each crop. Such information could have been assembled in small print in

an appendix, and much needed space could have been saved for more useful information."

"Sea Island and Egyptian cotton are not the same. Sea Island *Gossypium barbadense* (L) Var. Maritima Watt., is perhaps the most valuable of all the different species.

"Egyptian cottons, as a class, are not so fine as Sea Island, but are superior to that of the American uplands for goods that require a smooth finish. In general, the data are accurate, but there is not enough information. As to the best fiber crop, the book is all right in a general way, but it lacks information on important fibers like flax and linen. The information about soybeans and sesame is accurate, although brief."

"*Bixa orellana*, commonly known as achiote or annatto, is an important plant in the tropics. Its seeds are used for coloring in food, cosmetics, and other items. In Puerto Rico alone, \$200,000 of achiote seeds are imported annually from the Dominican Republic, Mexico, and other producers. No mention of this plant is found in the book.

"The statement concerning the quality of fruits obtained from six different forms of trees of *Carica papaya* does not seem to be appropriate.

"The statements describing flower biology, breeding and selection, and so forth of *Coffea arabica* and other species should have been kept separate in order to make the views easier to understand."

"Tobacco. Flue-curing is not used in cigar-wrapper tobacco, but in bright cigarette tobacco. The method described in the rest of the paragraph, extending to page 1307 refers to flue-cured (bright) tobacco. Cigar-wrapper tobacco is wilt-fired (charcoal or Lp-gas) during the first four or five days to remove excessive moisture and obtain light brown colors. Thereafter, the cure is completed by air-curing in more or less the same way used in dark air-curing.

"On page 1308, first line. Tobacco is usually fermented in a warehouse, not in a barn."

"The rest of the section on tobacco is very interesting; the topic is very well dealt with, in a short concise exposition."

"Rubber. This is a good chapter, fairly detailed but disappointing; it lacks modern information about physiology of rubber formation."

"Oil crops. Good, but the dwarf-tall hybrids developed in Ceylon are neg-

lected. Also, in view of the growing economic importance of coconut diseases, quite a bit more information on this could have been included."

"Sugar cane. A good chapter, but tensiometers and gypsum or nylon blocks are used in the commercial irrigated sugar fields in Hawaii for water control of the sugar cane plant."

JUAN A. BONNET
Agricultural Experiment Station,
University of Puerto Rico

Showmanship

Physics for the Inquiring Mind. The methods, nature, and philosophy of physical science. Eric M. Rogers. Princeton University Press, Princeton, N.J., 1960. 778 pp. Illus. \$8.50.

Eric Rogers's course in physics for nonscience students at Princeton University has been famous for many years; it is probably the best known and most deservedly popular course of its kind in the country. Now he has put it down in a very handsome book, for all to see and possibly attempt to emulate.

In general terms, the physics is sound, the plan of organization novel but well thought out, the presentation ingeniously varied, often toward the end that the student can acquire ideas with a real sense of participation in the development. There is much use of familiar analogies to sports and other activities. The illustrations reflect some of the author's great showmanship with demonstrations. There are literary allusions and occasionally historical references to "tie in" the physics. The style is breezy and informal, so that the reader is carried along through what would otherwise seem a frightening amount of print, although some may not feel comfortable with such conceits as "the neutrino . . . he," and the like.

The ingenuity which produces so many useful parallels and analogies is always in danger of attributing to the discoverer of a scientific idea the motivation desired for pedagogical purposes. For example, there is no evidence, so far as one can see from the original paper, that Maxwell introduced the displacement current for reasons of mathematical symmetry; indeed, his justification, when he got around to giving one, involved the familiar condenser paradox with the circuitual form of Am-

pere's law. But the present author falls into this trap no oftener than other textbook writers.

Undoubtedly there exists a large body of college students whom this book could reach by virtue of its expert showmanship, not by its essential scientific soundness. It remains to be seen whether a book which reflects so strongly the personal style of its creator can be used to full advantage by a wide range of other physics teachers.

MELBA PHILLIPS

*Department of Physics,
Washington University,
St. Louis, Missouri*

Verbalized Values

A Grammar of Human Values. Otto von Mering. University of Pittsburgh Press, Pittsburgh, Pa., 1961. xx + 288 pp. \$4.50.

Probably as a reaction to the charge that the comparative data of their discipline have fostered cultural relativism and thus have contributed to unsettling the foundations of modern Western morality, anthropologists have lately been addressing themselves to a search for universal values or, at least, for universal value categories. In this book Otto von Mering, as part of a larger study sponsored by Harvard's Laboratory of Social Relations, reports on a comparative field study of the value systems of two small communities in New Mexico, one composed of Mormons and the other of homesteaders from Texas and Oklahoma who settled in their present location during the dust-bowl days of the 1930's. Von Mering tried to elicit statements which could be analyzed for elements containing value judgments by bringing together small groups of these people and inducing them to talk about their neighbors, the Navaho Indians. The discussions were recorded and carefully studied. These data were supplemented by questionnaire responses, obtained from members of the discussion groups, which probed the amount and nature of each one's contact with the Navaho.

On the basis of this material von Mering devised four major headings, divided into 34 categories, under which can be placed statements he considers to have significance for value theory.

This is his "grammar of human values." By the differential clustering of value statements in the categories, he attempts to show that the two communities do present contrasting value profiles.

One interesting facet of this study is that it is an attempt to extend the small group technique to a new field of research. Also, on the positive side, one must admire von Mering's boldness of plan. He believes his "grammar" may be a framework which has universal application and may be one in terms of which different organizations of values can be tested. Hence, he invites comparative work.

The limitations of the study are also fairly obvious. It is plain that the meaningful involvement of von Mering's respondents with the Navaho is slight. The Navaho could all sink at once into a deep hole and this would make very little difference, emotionally or practically, to the members of these groups. Even those who are inclined to be charitable in their estimates of the Navaho are abysmally uninformed about them. Can sound value theory or value categories of a group stem from what is unimportant and tangential to that group? Moreover, this is all discussion and assertion. These folk tell us what they think *ought* to be done about Navaho education, sanitation, ceremonies, and the like. There is nothing to suggest that they have taken steps to implement their opinions or that they have the remotest intention of doing so in the future. Verbalization is one kind of activity, but surely other types of performance must be considered in assessing the value system of a group.

Many will feel, too, that the canvas von Mering employs is too narrow for what he seeks to portray. His comparison of the value systems of the two groups in question is based exclusively on their reactions to the Navaho. No doubt they reveal a good deal about themselves in their comments about the Indians, but we need some assurance that the groups' thought and action patterns concerning work, religion, family, and government would yield parallel results. One can sum matters up by saying that this book is timely, novel, and ingenious but not entirely convincing.

MORRIS E. OPLER

*Department of Sociology and
Anthropology, Cornell University*

Political Power Study

Small Groups and Political Behavior. A study of leadership. Sidney Verba. Princeton University Press, Princeton, N.J., 1961. xii + 273 pp. \$6.

Community Political Systems. vol. 1, International Yearbook of Political Behavior Research. Morris Janowitz, Ed. Free Press, Glencoe, Ill., 1961. 259 pp. \$7.50.

Political behavior studies seek to unify theory and research in political science, to demand carefully designed empirical methods, and to utilize all the tools and findings of the other social sciences. Sidney Verba's book explores the relevance for political science of certain theories developed by sociologists and social psychologists who have been studying the behavior of small face-to-face groups. Morris Janowitz edited a group of symposium papers concerned with empirical studies of different aspects of urban politics, largely in the United States.

Verba claims that from the experimental studies of small group, face-to-face behavior some usable theories may be obtained for political science. He does not present a new theory of politics but brings together certain bits which, he hopes, may later be fitted into a larger picture. Although the book deals with many so-called experimental studies, it cannot present in the space available an evaluation of the methods used. The reader who has not gone through the extensive literature himself has to accept the author's claim that the studies reported used sound methods.

Verba does an excellent job in showing that, in the political process, important decisions are made by small face-to-face groups. Courts, cabinet meetings, administrative tribunals, and legislative committees are discussed as examples of important decision-making bodies. The author finds it more difficult to relate experimental studies to on-going social processes. Since most of the experimental small groups were made up of American students, campers, or club women, the findings apply largely to American conditions. It would be highly desirable to test them in other cultures. Verba attempts to apply the methods of measuring and identifying leadership in small group studies to the study of political leadership, and he analyzes the relation be-