

than could be made with anything else. Peas, evening primroses, and rodents were favorite materials with early geneticists; there followed about three decades of supremacy of *Drosophila*, an interlude of *Neurospora* mold, and finally bacteria and viruses. However, there are straws in the wind which seem to point toward human genetics coming next to the forefront.

The first edition of Stern's textbook of human genetics (1949) has become a classic in its field. It has no rival in lucidity, precision, objectivity, and fairness in the presentation of even highly abstruse matters. All these qualities are fully preserved in this second edition, which was necessitated by the remarkably rapid growth and progress in the field. Despite this growth, the volume of the book is only moderately increased—from 604 to 733 pages (excluding the index). The plan of the book remains the same, but we now have 33 chapters. The chapters which have new titles deal with linkage and crossing over, variations in the expression of genes, and the genetic hazards of radiation; two new chapters deal with heredity and environment and selection in civilization. Except in some of the early chapters, much new material has also been added in the chapters retaining their old titles. Altogether, this is not a patch-up job, so often found in new editions of textbooks, but a new and modern text.

Having written some books, I know from sad experience that to write one entirely without errors is superhuman; enough, therefore, to say that the book under review contains no important errors that I noticed. As to the general character of the book, it can be described as scientifically conservative, judicious, tending to adhere to classical lines and to avoid controversial issues. These qualities will appeal to some readers more than to others, according to their predilections, perhaps depending on whether the reader belongs (in the classification of scientists suggested long ago by Ostwald) to the group of "classicalists" or to that of "romantics." It may be noted that, in the discussions of the genetic radiation hazards and of the genetic loads, rather limited attention is given to the fundamental problem of the differences between the mutational and the balanced (segregational) fractions, although it is stated that this matter belongs to the class of "uncertainties." The discussion of eugenics is admirably clear, concise, and as uncontroversial as any I have ever read.

It is almost an act of supererogation to say that this book can be highly recommended to those wishing to familiarize themselves with human genetics. It has no rivals. It will be widely read.

THEODOSIUS DOBZHANSKY
*Department of Zoology,
Columbia University*

Strategic Psychological Operations and American Foreign Policy. Robert T. Holt and Robert W. Van de Velde. University of Chicago Press, Chicago, Ill., 1960. x + 243 pp. \$5.50.

This book is an attempt to state the principles of psychological strategy and to support these principles by reference, on the one hand, to social science research and, on the other hand, to three case studies of major international propaganda operations.

The strategic principles stated in the first three chapters are sensible, sound, and elementary. Readers new to problems of psychological strategy will learn something from them. So will some professionals, for many of these principles are not incorporated in current American practice. For example, the authors treat with proper disdain the notion that the purposes of this country's propaganda are to "sell America" or to create a more favorable image of the United States. They sensibly point out that the psychological instrument of statecraft is one of the major instruments used for achieving all the purposes of foreign policy, but that it is used along with the diplomatic, military, and economic instruments. If, however, professionals in the field of psychological strategy can learn from the introductory chapters, the fact that they can do so testifies to the sad state of the practice of the art (a point which Holt and Van de Velde emphasize), for by more sophisticated standards their summary of social research on persuasion would have to be considered a primer.

Chapter 4 is a rather lengthy blueprint of a table of organization for psychological strategy operations. Since the authors concede that a good program can operate under many different organizations, it is not clear what is gained by blueprinting one generally feasible and sensible organization among many.

The final three chapters, each concerned with a historic case of psychological operations, are intended to il-

lustrate the principles outlined earlier, but the connections are sometimes unclear. The three cases are the American *Psywar* operations in Italy in 1943-45, American operations during the 1948 Italian elections, and Radio Free Europe during the thaw in the cold war. These histories may be useful, though they are not penetrating studies and they do tend to substitute assumption for evidence. This is not so much a criticism of the authors as of the general state of the documentation of public opinion. It is rare indeed, especially for historical cases, that one can find substantial evidence of what public opinion really was. Scholars are often forced, for lack of better evidence, to assume that the propaganda output corresponds to the public reactions. The systematic use of public opinion polls now permits a more faithful documenting of opinion phenomena. Thus, in the Holt-Van de Velde volume, some of the more interesting insights come where they use material from the DOXA polls in Italy.

ITHIEL DE SOLA POOL
*Center for International Studies,
Massachusetts Institute of Technology*

Outer Space Photography for the Amateur. Henry E. Paul. Amphoto, New York, 1960. 124 pp. Illus. \$2.50.

Henry E. Paul, the author of this volume, knows his subject well and generously shares this knowledge with his readers. Celestial photography has been a hobby of his for over 20 years, and he has known personally most of the outstanding American amateurs in this field. Photographs comprise about 40 percent of the volume's contents, and many of them were made by amateurs.

After devoting the first three of the book's 12 chapters to general background and equipment, the author settles down to discuss the photography of star trails, rockets and satellites, the moon, the sun, eclipses, nebulae and galaxies (and comets and aurorae), and meteors and planets. He tells what kind of equipment is best for each and what type of film to use; he indicates the order of magnitude of the necessary exposure, and he warns the reader against some of the common mistakes.

The errors I found in this book are few and mostly unimportant; for example, on page 64, the suggestion that the exposure for photographing the moon at the first or last quarter should

be four times as long as that used for photographing a full moon. Actually nine would be a better factor for the first quarter and slightly more for the last quarter. However, if an amateur underexposes his first moon photograph, he can make corrections on his second try.

Paul suggests that one start by photographing star trails; as an illustration he uses an excellent photograph made by Paul W. Davis, of circumpolar trails. He might have mentioned that, by comparing such a photograph with one taken 50 years earlier, one can learn quite a bit about the precession of the equinoxes.

The book deserves a better binding and an index. It is an excellent book to recommend to amateurs seeking answers to questions about celestial photography.

CHARLES H. SMILEY

*Ladd Observatory,
Brown University*

Cultures and Societies of Africa. Simon Ottenberg and Phoebe Ottenberg, Eds. Random House, New York, 1960. x + 614 pp. Illus. \$7.50.

Few editors have had the courage or the opportunity to present their intended readers, college and university teachers and students, with a selection such as this. The articles and excerpts reprinted here are largely by professional anthropologists, written mainly for fellow professionals. The volume is focused not on all the cultures and societies of Africa, but on those of Africa south of the Sahara; the primary stress is the traditional way of life in these areas. Anthropological "readers" are rarely organized within such strict limits. The editors and their publisher are to be congratulated for breaking new ground.

There are six sections: the 81-page general introduction by the editors; "People and environment" (five selections); "Social groupings" (seven selections); "Authority and government" (six selections); "Values, religion, and aesthetics" (eight selections); and "Culture contact and change" (six selections). There are, then, 32 articles and excerpts, by as many authors, included here. The majority deal with specific groups, and only four or five might be styled summary or survey articles. Most of the major areas of sub-Saharan Africa are represented, although unequally. For

example, western Africa claims a major share, ten groups, compared with four groups for the central African Republic and two for the Congo area. Ethiopia and the Cape are not touched upon. In general, the representation is more even in terms of types of groups; these range from the Pygmies to the Ashanti.

The editors evince a strong predilection for materials published originally in English, and only two of their selections are translations. For each item an introduction and a section of annotated references "For further reading" are provided. The volume concludes with a 33-page classified bibliography, biographical notes on the contributors and editors, and an index. There are 26 pages of plates. An attractive end-paper map gives the approximate location of 28 tribes mentioned in the selections. In some cases, the location is *very* approximate (for example, the Tswana and the Swazi), and in one case (the Luapula) it is an area, not a tribe, that is designated.

The editors, and their cooperative publisher, have set high standards and have largely succeeded in maintaining them. Prospective users of the book should be warned, however, that there are a few traps.

Although the selections treat only sub-Saharan Africa, the editors, in the introduction, devote substantial space to the northern regions, space which might well have been devoted to a fuller treatment of the area actually covered by the volume. There are aspects of the introduction's organization which may lead to difficulties in the classroom: for example, among 13 subheads, one is called "Climate and cultures" and another "Means of livelihood." The rationale of this organization is unclear, and the reader must work back and forth to see where there are, or are not, cross-correlations among climate, culture, and means of livelihood. Most students will not willingly do this, and the task will inevitably fall to the teacher. Again, the authors create unnecessary work for teachers by subsuming kinship under "Social groupings"; and by saying, "The three basic kin relationships are those of descent, filiation, and marriage," only to dismiss filiation with a few brief sentences (page 28 and following). Regrettably, these and other lapses render the introduction somewhat less useful than it could have been.

A quarter of the selections are by American anthropologists; not all of these anthropologists were trained in

this country, nor do they all write in the prevailing American tradition with its emphasis on culture. The remaining three-quarters are overwhelmingly by scholars who write in the British tradition of social anthropology. In fact, a majority of the more important British Africanists, with certain notable exceptions, are represented. This source of the selections means that, in most, there is a strong emphasis on problems, and even the more descriptive pieces often have a good deal of theory implicit in them. If a course happens to be organized on regional lines, or to be heavily factual in its orientation, the topical organization, in combination with the substantial theoretical content of the volume, may make this book a difficult one to use.

Many teachers and students will no doubt welcome the stimulating challenge of such a book. This challenge, met squarely, will prove richly rewarding.

ALFRED HARRIS

*Department of Anthropology,
Brandeis University*

High Energy Nuclear Physics. W. O. Lock. Methuen, London; Wiley, New York, 1960. xi + 190 pp. Illus. \$3.25.

The latest volume in the Methuen monograph series on physical subjects is this pocketbook by Lock. I believe that these short books are the correct approach to providing excellent coverage of a limited subject which is part of a rapidly changing field. In contrast to some recent lengthy books on nuclear physics, to which a number of authors contributed incoherently on topics (and on the number of pages) assigned by an editor, this book, written by one person, provides a well-written, coordinated account of high-energy, pion, and nucleon physics, which is technically good and which is easy to understand.

The book is based on lectures given to first-year postgraduate students in nuclear physics at Birmingham University. Lock assumes that the reader will have an elementary knowledge of quantum mechanics and that he can supplement this knowledge by reference to the books and articles listed at the end of each chapter.

The text (188 pages) is subdivided into eight chapters: "Introduction"; "Properties of the pions"; "Fundamental concepts"; "The scattering of pions by protons"; "The photoproduc-