This second volume of Cook's journals (four volumes are projected) is larger (by 221 pages) and heavier (by 12 ounces) than the first, published in 1955. The same excellence of composition and bookmaking that has marked the Hakluyt Society's publications complements "all the marvelous beauty of their bows."

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Mitosis to Senescence

The Human Species. A biology of man. Anthony Barnett. Penguin Books, Baltimore, Md., ed. 2, 1962. xii + 354 pp. Illus. $1.85.

Human biology is rarely taught in our colleges, and for that reason even educated people have little knowledge of it. Far too often such information as they finally acquire is gained from magazine articles, cereal boxes, and doctors' relatives. One welcomes, therefore, such popular books as *The Human Species*, pausing only to wonder whether the broad picture they present is worth the errors they so often contain.

This particular paperback is a revision, updated to about 1960 in many areas of biology. It has respectable coverage, broader than sperm to worm, beginning with mitosis, selection, and Mendelian inheritance and ending with human nutrition, the biology of senescence, and population control. In between are sandwiched evolution and race, racism and individual differences, some historical anthropology, and land conservation. There are 31 pages of halftones and 67 line drawings in all.

Barnett, who edited an earlier Darwin miscellany, is broadly humanistic and does not assign genetic causes for obvious cultural differences. However, he is given to the "it is thought that" way of citing opinions, without stating whose opinions. And his ethical stand occasionally results in such unprovable statements as "There have been substantial increases in the numbers of people suffering from the hideous and fatal disease of leukaemia, as a result of the testing of hydrogen bombs . . ." (page 41). While this book is reasonably up-to-date in the newer area of chromosomal genetics, there are obsolescences in subjects less in the scientific eye. Barnett's women still ovulate on the 14th day, and his estimates of land productivity are not correct for contemporary practices.

When it comes to fossil man, Glasgow lecturer Barnett develops instant trouble, largely because he has to rely on tertiary and inadequate sources. His Neanderthals still crouch, his Pithecanthropus is a pygmy, and he half-heartedly accepts Weidenreich's "giants," inadvertently transporting Von Koenigswald's drugstore teeth from Hong Kong to Java. In evaluating the fossils, he remains British through and through, loyally admiring Swanscombe but relegating the far more important South African fossil species and genera to a purely colonial position. And while he adopts a contemporary position on the evolutionary nature of many racial differences, he darts back into the last century with a taxonomy composed of "Caucasiforms," "Negritiforms," "Australiforms," and the like. Moreover, he remains Victorian, elaborating the old cephalic index now dead and buried these many years.

With rather few references and none of them specific, *The Human Species* cannot be recommended as a choice for supplementary college reading. This is a pity because it contains a wealth of information and many ideas of considerable interest. Yet it may be advocated for the armchair reader, if only to make him think. Health is purchasable, Barnett points out, and a full belly too. Man can control his numbers and must. Primitives are not "primitive" because of intellectual inferiority, as primitives increasingly prove.

To live as human beings in the future, indeed to live at all, more people need the information *The Human Species* contains.

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Social Sciences

Appraisal from the Field

Communication in Africa, a Search for Boundaries. Leonard W. Doob. Yale University Press, New Haven, Conn., 1961. 406 pp. Illus. $7.50.

The author seeks to "locate and classify" all the variables that have on one occasion or another played a critical role in communication in sub-Saharan ("black") Africa, with the aim of delineating the boundaries of the subject of communication and of providing a conceptual frame of reference that would facilitate the empirical determination of the critical factors in any concrete instance of communication. Africa is the chosen field of study because it is culturally heterogeneous—"perhaps more so than any other area of the world of comparable size and population"; it is so different from the West that it provides cross-cultural perspective. It is the author's view that "any theory in social science worthy of utterance must be tested cross-culturally."

Twelve variables are examined: (i) the communicator; (ii) his goal; (iii) basic media; (iv) extending media; (v) the site; (vi) restrictions; (vii) the communication itself; (viii) the mood; (ix) perception; (x) reactions of the audience; (xi) changes in the audience; and (xii) the feedback—that is, how the communicator perceives the effects of his communication. Each variable receives a separate chapter and is illustrated from ethnographic literature, missionary, government, and journalistic reports, and the author's own observations.

It will be noted that the variables do not all belong to the same universe of discourse: the communicator can, very often, be identified, but perception is an incorporeal *multivariant* situation and, in this sense, has the same status as the communication process itself.