ity, variety, and depth. These "readings" were culled, classified, and collated by Slotkin during several years of intensive study. They provide equally impressive testimony of his scholarship and of his deep concern with the historical foundations of anthropology in Western Europe. His untimely death prevented Slotkin from undertaking the history of social anthropology in which he planned to use these materials. In such a work, these excerpts and their themes could have been presented in their culture-historical and idealogical contexts, thereby revealing their dialectical relationships. In the present volume, the editor's terse comments and signposts often presuppose that the reader is well versed in the general history and context of Western social and philosophical thought during these centuries, and especially in its competing views of man, his origin, development, status, society, language, and culture.

Although this is an extremely handy and useful source book for students of anthropological history, and a most welcome addition to the growing literature in that field, it needs to be handled with care, for several reasons. First, the citations are, as Slotkin points out, removed from their intellectual and cultural context. Second, for reasons unknown, the Romans and Greeks are ignored. Slotkin restricts his selections to Christian writers, ignoring Herodotus, Plato, and Ibn Khaldun alike. Consequently the book documents the struggles of West Europeans to break free of the crippling mould that medieval Christian theology imposed on thought about the human condition, but, by omitting the Greeks and Roman, Slotkin cuts off the Renaissance and the Enlightenment from their inspiration and source. The history of anthropology is part of the history of Western Europe, and in compilations of extracts much is inevitably lost because of lack of context. To get the most out of these readings, it is necessary to make the imaginative effort required to replace them in their contexts. Finally, anthropology is one of the youngest "sciences," and its development has always been conditioned by the state and progress of other older, and more advanced, sciences. Though many excerpts reflect and indicate this, these relations require special attention in tracing the evolution of the study of man.

The first two sections of excerpts—17 percent of the volume—deal mainly with the protoanthropological thought current from the 12th to the 16th century. These passages are almost wholly theological in their mode and terms, in contrast with the naturalism and rationalism that gradually dominate the contributions of the 17th and 18th centuries, which form 83 percent of the whole. It is particularly in its presentation of anthropological thought during the 17th and 18th centuries that this volume is of greatest value.

M. G. SMITH
Department of Anthropology,
University of California, Los Angeles

Birth and Death of a Theory

Galaxies, Nuclei, and Quasars. Fred Hoyle. Harper and Row, New York, 1965. x + 160 pp. $3.95.

During July 1948, H. Bondi and T. Gold sent a manuscript entitled "The steady-state theory of the expanding universe" to the *Monthly Notices* of the Royal Astronomical Society. One month later, an independent formulation (which arose, however, from a discussion with Gold) was communicated to the same journal by Fred Hoyle. In the years that followed, Hoyle became the leading spokesman for what he termed the "New Cosmology," spreading the gospel of continuous creation through lectures, articles, and books (*The Nature of the Universe*, 1950; *Frontiers of Astronomy*, 1955; *Astronomy*, 1962). Considerable interest was therefore generated by press reports of an "Evening Discourse" delivered by Hoyle on 6 September 1965, in which he announced to the British Association for the Advancement of Science that the steady-state theory would "have to be discarded." As seen by most astronomers, the crushing blow to the theory was the number versus flux-density relation for extragalactic radio sources, determined by Martin Ryle who (like Bondi, Gold, and Hoyle) did his work at Cambridge University.

In *Galaxies, Nuclei, and Quasars*, Hoyle traces the developments in physics, astronomy, and cosmology that have so profoundly affected his view of the universe in recent years. The chapters "Galaxies" and "Radio sources," for example, call attention to the increasing body of evidence that identifies the giant elliptical systems as the sites of catastrophic celestial events. Hoyle now believes that these galaxies result from a process of expansion, while he retains the view that the flattened systems (spiral galaxies) are formed by condensation. The relevance to cosmology of high energy physics and nuclear physics is shown, respectively, in chapters called "X-rays, γ-rays, and cosmic rays" and "An outline of the history of matter." Of greatest interest, however, are the chapters entitled "The steady-state cosmology" and "A radical departure from the steady-state concept," in which the author develops his presently preferred model, a variation on the oscillating universe theory.

The book, which is based on lectures delivered at various universities, contains many stimulating ideas that will be of considerable philosophical interest to scientists. Its chief flaw is the failure to point out to the reader that the theories presented are generally not the prevailing ones. Further, the use of such terms as "very likely" (p. 146) and "inevitable" (p. 147) in speculative discussions is regrettable, especially on the part of the author who, as recently as 1962, rejected the oscillating universe model (*Astronomy*, pp. 299 and 300).

STEPHEN P. MARAN
Space Division,
Kitt Peak National Observatory

Human Ecological Adjustments

Man, Culture, and Animals. The role of animals in human ecological adjustments. A symposium. AAAS Publ. No. 78. Anthony Leeds and Andrew P. Vayda, Eds. AAAS, Washington, D.C., 1965. viii + 304 pp. Illus. Prepaid to members, $7; others, $8.

The papers in this volume, some from a 1961 symposium and some added later, were not intended to test predetermined hypotheses but were an attempt to discover what regularities, if any, could be determined in the pattern of behavior of peoples who keep or use animals in various capacities, or depend on them for survival. Of the descriptive essays, eight are concerned with societies that possess