a different form of mammalian organization prevailed—eutherians in Europe and Asia, marsupials in Australia, and both eutherians and marsupials in South America. This interesting hypothesis requires considerably fewer assumptions than the two other current theories of land bridge filters from Asia or from Antarctica.

There is a large section in the book on marsupial reproduction, in which the author sets out to answer a series of questions dealing with such matters as the achievement of synchrony of male and female gametogenesis and subsequent conception, uterine maintenance of the embryo, succoring of young in the pouch, and the achievement of homeostasis by the young. To many zoologists this will be the most rewarding section of the book. The author's major contributions to this field have given him the insight to write a succinct and clear review of the subject. The large amount of material covered cannot be effectively reviewed here, but two aspects of the treatment deserve mention. The first is the interesting comparisons made of the uterine development of marsupials and of monotremes and the second is the review of the physiology of marsupial lactation. It is disconcerting to learn that at one point in the reproduction of the red kangaroo the mother can be suckling from adjacent teats a newborn young and a young about to be weaned. To the consternation of endocrinologists the two milks are entirely different in lipid and protein content and composition.

Most of the remainder of the book considers the ecological adaptations of a number of different species of marsupials. For economic reasons most work has been done on the larger kangaroos, and the author describes their ruminant physiology and temperature-water relations. There is a very interesting chapter on some of the smaller pygmy possums and gliders and on the insectivorous/carnivorous dasyurids. Of special interest to North American readers is the comprehensive review of the biology of the opossum, *Didelphis*. The book closes with a discussion of the effect of Paleolithic and modern man on the status of marsupials in Australia today.

This reviewer noted no major typographic mistakes in the text, but the double inclusion of sheep in fig. 3.10 is unexplained. In a few parts the book suffers from a lack of synthesis of material, but generally the author writes well and clearly. A major feature is the excellent illustrations including clear and uncluttered graphs and drawings. The deficiencies in present knowledge of marsupials also become apparent during the reading of this book. Apparently little is known of the bandicoots, although some species are relatively common in Australia. There is little mention of the biology of such appreciated species as the wombat, koala, cuscus, Tasmanian devil, or the tree kangaroos. Least of all is known about the South American marsupials.

An absence of information is not, however, the fault of the author of this book. Tyndale-Biscoe has succeeded in producing an excellent text, which, although it must inevitably become dated, is at present outstanding as the only competent major comprehensive work on marsupial biology.

R. M. F. S. SADLEIR
Department of Biological Sciences, Simon Fraser University, Burnaby, British Columbia

Adaptations of Early Man

Ice-Age Hunters of the Ukraine. RICHARD G. KLEIN. University of Chicago Press, Chicago, 1973. xviii, 140 pp., illus. Cloth, $6.50; paper, $2.95. Prehistoric Archeology and Ecology.

As Karl W. Butzer and Leslie G. Freeman, the editors of the new University of Chicago Press series Prehistoric Archeology and Ecology, point out, the tremendous amount of information about early man that has accumulated in the past decade has not been accompanied by a corresponding increase in publication outlets. Few of the existing ones are oriented to the current interdisciplinary approach, and those that are carry only short articles. Although some of the most important work on early man is being done by North Americans, there are no media here for more substantial reports, which not infrequently must await publication abroad in a costly format and even in a foreign language. With this new series the editors aim to provide a medium for rapid and inexpensive diffusion of medium-length summaries of work of major interest to scholars and students in English-speaking countries. They are particularly interested in encouraging the fusion of Old World data and technique with New World method and theory.

Their first offering, *Ice-Age Hunters of the Ukraine*, is of far broader interest than its title might suggest, and well exemplifies their aims. Though written for the undergraduate or the layman (it presupposes no knowledge of the subject), it will serve as a useful reference for the scholar, providing as it does a critical synthesis of a large body of scattered Russian sources.

One of the more interesting chapters of man's development was the remarkable adaptation to a rigorous periglacial environment achieved in many areas during the late Pleistocene, which through the exploitation of a rich resource of large game animals permitted not just bare survival but surprising local population densities. Some of the best evidence for this comes from the Ukraine with its abundant and spectacular sites containing remains of dwellings and art objects. These are long-term or frequently revisited campsites—they may well be winter camps—and not the mere kill sites or temporary camps on which studies of the New World early hunters are forced to rely. The time span covered embraces the Mousterian (associated with Neanderthal man) and the ensuing Upper Paleolithic, representing men of modern type. This impressive body of evidence has been little known and appreciated in the west owing to the language barrier and a general unfamiliarity with Russian sources.

In presenting his excellent summary of this material the author emphasizes man-environment relationships and stresses the interdisciplinary approach. He hopes to demonstrate its importance to the student reader as well as to convey the necessity of acquiring interdisciplinary training. After a brief opening statement on the aims and limits of paleoanthropological research, the book proceeds to sketch the geology and geological dating of the Ukraine sites and then to portray the environment at different periods of human presence, in terms both of landscape and of the fauna with which man coexisted and off of which he lived. The longest chapter deals with the cultural remains, again by periods: the tools and what information may be deduced from them, the art objects and the dwelling remains—the latter being discussed in some detail. A final chapter endeavors to compare the life of Mousterian and Upper Paleolithic times and to grapple with the problem of the transition between the two (or the re-

placement of one by the other). Since the Ukraine materials provide no answer the author digresses to a consideration of other areas.

The book is well referenced, and the wealth of sources utilized is reflected in the bibliography, Russian titles being rendered in English. For those interested in consulting sources inclusion of the original title as well would have been a convenience. (In a book aimed at the beginning student it is rather surprising to find Abramova's definitive work on Paleolithic art cited only in the obscure Russian original when a full English translation is readily available in *Arctic Anthropology*, Vol. 4, No. 2.)

In general, the book is clear, concise, and well illustrated. It supplements the author's previous *Man and Culture in the Late Pleistocene* (Chandler, 1969), which gave a detailed account of the important Kostenki group of sites just east of the Ukraine. The present volume covers both a larger number of sites and a greater time span, albeit in considerably less detail. It provides a welcome antidote to outmoded textbooks which give the student the impression that the ancestors of modern man down to 10,000 years ago lived only in a restricted part of France and which perpetuate the hoary stereotype of the "cave man."

CHESTER S. CHARD
Department of Anthropology, University of Wisconsin, Madison

A Psychodiagnostic Instrument

Objective Personality Assessment. Changing Perspectives. JAMES N. BUTCHER, Ed. Academic Press, New York, 1972. x, 212 pp. $6.95. Personality and Psychopathology, 12.

Of all devices for "objective personality assessment," by far the most widely used and most widely researched is the Minnesota Multiphasic Personality Inventory (MMPI). This volume contains the addresses given at a symposium on the MMPI by five experts—Starke Hathaway, Jane Loevinger, Warren Norman, W. Grant Dahlstrom, and David Campbell—to which have been added an overview of personality assessment by the editor and a statesmanlike concluding discussion by Paul Meehl. Initially intended to honor Hathaway for his work in developing the MMPI, the proceedings read more like a Friar's Club roast sans the usual humor, for after sober appraisals the symposium participants concluded that the MMPI must be diagnosed as conceptually and procedurally deficient and in need of fundamental overhaul. In Norman's words (p. 64),

> [The MMPI's] original clinical criteria are anachronistic; its basic clinical scales are inefficient, redundant, and largely irrelevant for their present purposes; its administrative format and the repertoire of responses elicited are, respectively, inflexible and impoverished; and its methods for combining scale scores and for profile interpretations are unconscionably cumbersome and obtuse.

The likelihood of anyone's undertaking to perform a major operation upon the MMPI is, however, poor, and the prognosis for its continued anachronistic survival is good. To its devotees—a circumscribed but sizable group of psychologists and psychiatrists—any serious change in it that would require developing new standards and new skills would probably be unacceptable. For psychodynamicists and behavioral therapists, no amount of mere technical revision could ever make it acceptable. From the viewpoint of the dynamicists the MMPI is conceptually inappropriate because it does not deal with covert psychodynamic motivations. For the behaviorists it is conceptually inaccurate because it sets out to measure something mythical, namely, personality, and deals only with a restricted class of behaviors, namely, self-report on sets of test statements that may have little relevance to the individuals being tested.

As with other such venerable instruments, the essential problem with the MMPI is that while it has remained relatively constant the fields of personality psychology and psychotherapy have not. The questions clinicians attempt to answer are no longer adequately addressed by the MMPI. It must quickly be added that no other available instrument does an appreciably better job. It is unlikely that any single instrument could keep all the promises attributed to the MMPI: to be a detector of gross pathology, a mechanism for making differential diagnosis, an inventory of personality for all purposes, and a measure of current mood and affective states. There is evidence that the MMPI may indeed expose gross pathology, but there is serious question regarding its utility in measuring the other variables.

The MMPI was devised originally as an aid to diagnosis. These days it is popular to decry the making of diagnoses as pejorative in intent and as of little relevance to the actual psychotherapeutic interventions employed. Further, it is widely believed that the reliability of diagnoses is poor and that the very effort to diagnose may hinder the establishment of the desired therapeutic environment. It is refreshing to find the importance of diagnosis defended here by Meehl, who argues that, since psychiatric disorders do "exist in nature" and are not simply arbitrary concepts, their recognition is potentially useful. Genetic evidence suggests that schizophrenia, manic-depressive psychosis, and unipolar psychotic depressions are not capricious inventions of the clinician. That some clinicians are not adept at diagnosis, or lack the skills and flexibility to adapt treatment to the diagnostic implications of patients' needs, reflects more on the clinicians than on the potential utility of diagnosis.

The question remains, however, whether the MMPI contributes significantly to adequate diagnosis. It became apparent early that MMPI scale elevations alone were insufficient for that purpose. The configural relationships between MMPI scales were found to more useful, and considerable work was done to delineate and validate the profile configurations and codes, which then became in effect a substitute for the classical diagnostic categories. While recurring MMPI patterns and profiles may indeed have validity, the determinants behind the new classifications are not yet understood.

Just as views regarding differential diagnosis have changed, so have views of the conception of personality. The dominant role of psychoanalytic theory in the field of personality assessment has steadily diminished. The psychoanalytic assumption that personality is based on underlying dispositions that have generality across situations is challenged by both social learning theorists and neobehaviorists, and all but the most ardent personality theorists now concede that this notion must be modified to take into account the influence of the particular environments in which the individual functions. One of the conceptual problems that inheres in the MMPI is that it appears to confuse two domains: (i) personality structure—the enduring attributes—and (ii) current emotional states, which are subject to change. To the degree that the scales measure stable characteristics they are insensitive to shifts in affect; if they ade-