relationship between these hunters and gatherers and the Bantu- and Sudanic-speaking Negro village cultivators with whom they share the region.

In previous publications Turnbull has challenged the view long sustained by followers of the anthropological school of Wilhelm Schmidt in Vienna (Father Schebesta, Father Schumacher, and Father Gusinde are representative of Schmidt's followers) that the pygmies are now totally dependent on the villagers for food and metal, and even for their very culture. Spurred on by a desire to refute this standardized error, Turnbull decided that he would immerse himself in the daily life of a single band and attempt to acquire by empathy and experience what linguists call the "inside view" of its members. From this structural perspective a very different view of the Mbuti–villager relationship emerged.

Dyadic relationships, whether between individuals, roles, or groups, may have varied qualities—they may be symmetrical or asymmetrical, complementary or antithetical, and they may involve symbiosis or avoidance. What Turnbull found in the Ituri was a single ideological field whose polarities were the village and the forest. This field was a unity of tensed opposites. Against Negro political centralization, Mbuti society offered "complete decentralization and diffusion of authority." Against "a sedentary, patrilineal, patrilocal village," it opposed "the nomadic, nonlineal, territorial band." Moreover, "the vertical village kinship system" was confronted by "a horizontal age-level system." Detailed documentation, in the form of genealogies, plans showing changes of band composition over time, and sketches of the layout of camps in the opposed contexts of free forest and village environs, convincingly supports Turnbull's argument.

Most convincing of all is the way in which he shows how relative position in cultural space determines the values held by its occupants. "Village values are directly opposed by Forest values. And within itself Mbuti society uses these same principles, in a state of almost perpetual flux, to maintain a cohesion fully as powerful as that found among the villagers." When the Mbuti in their nomadic cycle choose to locate themselves within the village sector, they fall so strongly under its influence that the very spatial arrangements of their camps replicate those of the cultivators' villages. But they have for retreat their own autonomous focus, the forest, which they love and which the Negroes fear, and where no one calls them servant. In the village sector, forest values are transvalued; in the forest the opposite is true. Thus Schebesta and his congeners have grasped a mere half truth, because they have seen the village-forest continuum only from the angle of observation of what Kroeber would have called a "half culture," that of the cultivators. But the pygmies consider themselves independent raiders of the village economy, raiders who play off, to their own advantage, one group of cultivators against another in competition for the forest produce they offer. Both viewpoints are "true," but both are also "false." Objective truth embraces their opposition. To this analysis of dualism Turnbull has brought a twofold spirit—a blend of *l'esprit de finesse* and *l'esprit de géometrie* that befits a practitioner of the discipline of anthropology, which straddles, or ought to straddle, the "snowline" between the two cultures.

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On "Compleat" Archeology

An Introduction to Prehistoric Archeology. Frank Hole and Robert F. Heizer. Holt, Rinehart, and Winston, New York, 1965. x + 306 pp. Illus. $7.

This volume is an introduction to the variety of techniques and the many scientific fields that are now used in the interpretation of prehistoric archeology. It does not systematically describe the content of that endeavor and is, for that reason, mistitled.

The authors' definitions of their subject are seen in the following statements: "But no matter how it is defined, archeology deals with man in the past; its concern is with culture seen in the perspective of time. Prehistory, as a special example of archeology, deals with noncivilized peoples whose closest living counterparts are studied by ethnologists. A liaison with anthropology rather than history has thus been natural for prehistorians.

"However, prehistorians are concerned with more than culture. Their special needs require close cooperation among a wide range of scientists who study the past. Geologists, paleontologists, palynologists, chemists, physicists, botanists, linguists, and astronomers have all contributed toward understanding man's prehistory."

This volume, an admirable guide to the complexity of archeological work, is divided into four parts: Introducing the Study of Prehistory; Acquiring the Facts of Prehistory; Dating the Events of Prehistory; and Describing and Interpreting Prehistory. Three of these parts have four chapters, and the other has six. The 41-page bibliography has 900 titles and would have been longer by at least one title if "Davis (1959)," on page 137, had been listed.

Most of the world's prehistorians think of their subject matter as an extension of history. In the United States most of the archeologists specializing in prehistory were trained in American universities in departments of anthropology where the emphasis at the present time is on social anthropology and on nonmaterial culture. Students cannot now find in any American university adequate training that includes an understanding of the whole variety of disciplines available for interpreting the past, or a training in the tools of modern archeological research and in the knowledge of prehistoric research in the major areas of the world. Some institutions are moving slowly in this direction. Hole and Heizer's volume is a brief presentation of the ways in which the data about prehistoric culture can be gathered and interpreted. The volume can serve as a textbook and as a guide for anyone interested in a "scientific" approach to prehistory. "Prehistory can thus be contrasted with treasure hunting, art history, philology, history and even protohistory, in its inspiration and method" (p. 31).

In a number of places the authors refer to the excavation of sites during the early days as "looting," and in many cases that is what took place. The "looting" of prehistoric sites has not been stopped anywhere, even in countries where there are national laws intended to protect sites and prevent unqualified people from excavating. Our American museums, art and antique dealers, interior decorators, and private collectors constitute an unfortunately avid market for foreign artistic and exotic prehistoric specimens. These specimens are obtained by smuggling, bribing, and other forms of illegal and unethical operations, while the price escalates to an exorbitant

figure, and the original diggers in the country of origin get a mere pittance. One major result is the destruction of sites, and another is that specimens so obtained have been removed from their context and their real meaning in cultural terms is lost.

An Introduction to Prehistoric Archeology has a broad coverage of archeological literature in the New World and in the Old World because of the cooperation of R. F. Heizer, primarily a western American specialist, and F. Hole, who is beginning a career in Near Eastern prehistory. Most of the books and papers listed in the bibliography are in English, since the volume is designed for an American audience.

In treating the varieties of techniques, methods, and disciplines available for interpreting the past, the volume is primarily descriptive. There are critical and cautioning statements about the application of many of these—for example, "Although there is a variety of methods for dating archeological materials by means of geology, none of the methods is simple. In all cases it is better to have several independent methods for dating particular events. Used alone, any method that depends on far-reaching correlations of geologic stratigraphy is likely to be undependable because of weak links in the chain of observations. Archeologists should use, but be aware of the many imprecisions of, geochronologic dating" (p. 166).

The examples of acceptable and of poor methods of prehistoric research could have been multiplied many times from literature in English, and from that in many other languages. The authors have been wise, however, in this introduction to limit their references to relatively brief comments, allowing the reader to pursue by way of the bibliography any of the many research leads that are mentioned. Of the several volumes that discuss archeology as a field of endeavor, this book is probably the best available.

In discussing the "Rate of Accumulation" method of dating, Heizer states that M. R. Harrington, in 1933, obtained the correct age of the Gypsum Cave culture in Nevada at 10,500 years ago, even though his estimate was based on incorrect evidence. He cites the radiocarbon age of sloth dung from the cave (C-221, 8505 ± 340 B.C.) as certifying to the age of Gypsum Cave culture. In other contexts, Heizer, as well as other archeologists, has taken the position that although the early Chicago black carbon run *may* date the organic material in the sloth dung, a better estimate of the Gypsum Cave culture would be to obtain a radiocarbon run on some of the wooden dart shafts from the Cave.

A large number of the books about archeology that come to the attention of the American public are dramatic fiction about the romance of archeology, or nice little books about the ease with which one can do archeology. This publication is testimony to the many faceted phases of prehistoric archeology which no single person can master, but which should be known to all competent practitioners. Even a brief investigation of the book will allow one to understand that there are no "compleat" archeologists.

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Ethnography

The High Valley: An Autobiographical Account of Two Years Spent in the Central Highlands of New Guinea. Kenneth E. Read. Scribner, New York, 1965. xviii + 266 pp. Illus. $6.95.

There is no commonly accepted way of writing a descriptive account of an exotic or primitive people. About all that contemporary ethnographies have in common is that they are crammed with data related to a special problem and are written in a style that is as objective and impersonal as possible. Many of the personal insights and reactions that an author experiences during his period of living with the people he describes are deliberately obscured by this detached presentation. *High Valley* is a notable exception to this tradition. As its subtitle, *An Autobiographical Account of Two Years Spent in the Central Highlands of New Guinea*, suggests, it is a narrative of a residence among a primitive people in which self-observation figures as importantly as analytic observations of a tribal people. The people are a group that has been transformed within the span of a single generation from a remnant of the stone age world into a suburbia of an Australian frontier town. The author is an Australian-born social anthropologist whose gift for writing sensitively beautiful prose is equaled, perhaps, only by his professional skill in probing the core of common human emotions that lies beneath the veneers of contrasting cultures which separate these people from himself.

The account is organized around the lives of a few individuals and their intimate responses to the social life around them. In this respect the book is abundantly anthropological. But the author himself was also a significant, if alien, part of this life for the months he describes, and in this context he exposes his own feelings with as much candor as he examines his friends. In this respect the book has no prototype in anthropological writings. Anthropologists who have lived with primitive peoples have felt the initial emptiness of being isolated among total strangers, but have come to enjoy warm and close personal friendships with persons of a completely different cultural heritage, only to sever these friendships abruptly and perhaps forever, cannot read the author's self-revelations without being profoundly, even painfully, stirred. The lasting impact of the book, however, comes from the development of a few mundane events and tense social crises in which the cast of principal characters is enmeshed into a drama of stark realism that is at once tense and poetically exquisite. *The High Valley* eminently achieves what its author intended it to be—an experiment in ethnography that gains a special lucidity by being fine literature.

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Space Science

Space Physics With Artificial Satellites. Ya. L. Al'pert, A. V. Gurevich, and L. P. Pitaevskii. Translated from the Russian (Moscow, 1964) by H. H. Nickle. Consultants Bureau, New York, 1965. x + 240 pp. Illus. $25.

This book is an interesting collection of results that repeat and extend work presented by the authors in a series of journal articles. Most of the book is devoted to a collision-free approach for determining the distribution of charged and neutral particles in the vicinity and in the wake of a body moving through a rarefied plasma. If