INTRODUCTION TO ARCHAEOLOGY

James J. Hester

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James J. Hester
University of Colorado

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Preface

Introduction to Archaeology is a text for the beginning college course in archaeology or world prehistory. It provides a balanced survey of world prehistory with generous treatment of both Old World and New World archaeology. While the approach is primarily descriptive, emphasizing what has been found—by whom and in what manner—the major aim of the volume is to reconstruct prehistoric lifeways as fully and convincingly as possible given the limitations of the evidence available to archaeologists.

Because this book evolved from the teaching of a freshman course at the University of Colorado, the needs and interests of students have largely shaped the author's view of what it should contain and how the message should be gotten across. Students are primarily interested in the way people lived in other times and other places—not in detailed descriptions of bones and artifacts nor in the scholarly controversies of professional archaeologists. Also, students of today have grown up with television and with often more visual than verbal modes of communication and learning. The author has therefore attempted a free-flowing narrative style of exposition with much supplemen-

tary detail provided in over 200 illustrations that are packed with information about site locations, chronology, and cultural relationships.

The book emphasizes no professional fads and proposes no new integrative schemes since these, though important to the professional archaeologist, tend not to be of interest to the freshman student who comes to an archaeology course with no required prerequisites. Also, students thought it less confusing to use such terminology as Lower Paleolithic, Mesolithic, Neolithic, and so on for chapter headings, and again, in the students' interest, these have been retained.

Part I, The Nature of Archaeology, presents a working definition of archaeology including the nature of archaeological data, the methods and techniques of archaeology, and the conceptual and analytic tools that allow archaeologists to create plausible descriptions of prehistoric cultures. Part II, Cultural Data Revealed by Archaeology, describes the development of prehistoric man on this planet with a balanced treatment of prehistoric cultures across the world.

Each chapter is designed to include material for a week's concentration in an eighteen-week course. Shorter courses can cover the material more rapidly. The book's major objective is to introduce freshman students to a body of information that may, if the student chooses, serve as a basis for more detailed exposure to methodological and theoretical issues in advanced courses.

I am indebted to those who have read this book in manuscript form and who have given their critical comments. My thanks are hereby expressed to James Grady, William Haviland, Frank Hole, David Thomas, and Linda Williams. I often incorporated their suggestions into the final version of the text, and my gratitude to these colleagues is deep and sincere.

J. J. H.

Contents

THE NATURE OF ARCHAEOLOGY

PART

Introduction: Some Definitions and Observations about Archaeology

The development of archaeology as a discipline is recent, most of its current form, interests, and methods having originated within the past 100 years. On the other hand, man's interest in man's past is common to all societies. Evidence of such interest in the past dates back to the last days of Babylon, 555–538 B.C. (Hole and Heizer 1969:5). The earliest excavations to find ancient artifacts that we know of were conducted by Nabonidus, the last king of Babylon. How then do we differentiate the modern science from its historical antecedents, and if we do so, to what purpose?

Perhaps our question can be answered by defining who an archaeologist is or what the archaeologist does that is unique. The modern archaeologist would draw a distinction between the simple collector of antiquities and the archaeologist. He would also define some students of ancient objects as philologists, epigraphers, or art historians but not archaeologists. What then are

the criteria by which we define archaeology? Practically every archaeologist has tried his hand at definitions so I will not quote here an exhaustive series of them. One usable definition is that of Grahame Clark in his *Archaeology and Society* (1969:17).

> Archaeology may be simply defined as the systematic study of antiquities as a means of reconstructing the past. For his contributions to be fruitful the archaeologist has to possess a real feeling for history, even though he may not have to face what is perhaps the keenest challenge of historical scholarship, the subtle interplay of human personality and circumstance. Yet he is likely to be involved even more deeply in the flow of time. The prehistoric archaeologist in particular is confronted by historical changes of altogether greater dimensions than those with which the historian of literate civilizations is concerned, and has to face demands on his historical imagination of a commensurate order, further, at a purely technical level he is likely to be met with much greater difficulties of decipherment, difficulties which can as a rule only be surmounted by calling on scientists and scholars practiced in highly specialized branches of knowledge.

In my own definition, I consider archaeology to be the study of man's past cultural behavior within the specific historical and ecological frameworks in which it occurred. The methodology includes the finding of evidences of this past cultural activity and then establishing the relationship of these findings to the temporal and spatial locale in which they occurred. Also of importance is the fact that these findings are not of themselves cultural behavior but are the *result* of behavioral patterns; thus the behavioral patterns themselves must be inferred. For example, the presence of a potsherd on a site provides a major opportunity for such inferences. The sherd may be painted, its interior shows scraping marks, and the clay it was made from has a distinctive temper (the crushed rock, sand, or other material placed within the clay to inhibit cracking). From the painted decoration we learn something of the design style. We may even be able to infer that the design is symbolic, as it may have religious, calendrical, or mnemonic meaning. The interior scraping will be typical of either handmade or wheel-made pottery. The temper may be identifiable to a specific place where it was obtained. The design style may have chronological significance. The form of the sherd may suggest the shape of the vessel that it is from, and thus we may infer the former uses of the vessel.

If we can learn so much from a single potsherd, then what possibilities await our study of the other remnants of man's past? Here lies the core of interest that makes archaeology so appealing to young and old. Beneath the next shovelful of dirt may lie something hitherto unknown to history, an object the like of which no one living today has ever seen. We have thus bound up in one field the glamor of a treasure hunt, a sense of creativity equal to that of the artist, and the vision into the unknown of the scientist. It is the excitement of the treasure hunt which so appeals to the common man. Everywhere I go, when people learn that I am an archaeologist, they say, "How fascinating, I'm sure your work must be exciting!" The truth of the matter is that frequently archaeology is not all that exciting. It has its share of drudgery because digging is hard

work, usually carried out in a hot dusty cave, in the rain, or in a cloud of gnats. Normally you are too busy labeling sample bags, drawing profiles, or taking photographs to notice everything that comes out of the trenches. Therefore, you lose or at least temporarily forget your sense of that excitement which is so typical of the nonprofessional. However, there are times when it suddenly comes back to you and you realize that you are the treasure hunter after all, only somewhat disguised by scientific motives and methodology. I remember the time I was excavating an 11,000-year-old (that is, 11,000 years Before Present) mammoth killsite in New Mexico. In the trench wall of the Clovis level a workman had exposed what in profile looked like a human skull. Immediately I planned what steps I would take. I would first obtain a highway patrolman to guard the specimen in place and then would notify the press of this momentous find—the earliest human remains found to date in the New World. Fortunately I decided to dig just a little bit more around the skull to be sure what it was and it turned out to be a large turtle shell! Another example concerns our work in the Egyptian desert south of Aswan. We were driving across an open sandy plain some 5 or 6 miles west of the Nile. Suddenly we noticed two cut stone columns, about a foot in diameter and 5 feet in height, lying on the sand. They were obviously of some antiquity but we could not understand why they were at that particular place. We photographed them and then drove on. A day later in the same area we found another such set of columns. This time we realized their presence was not accidental. We drove in a straight line toward the first set we had located and began to find additional sets at intervals of about one mile. Obviously they were some kind of road markers. We eventually traced the former road for about 30 miles, finding 22 sets of columns en route. We found that some of the markers had Roman numerals on them and that the interval between sets was about 4800 feet, the distance of the Roman mile. We had discovered the first Roman roads in southern Egypt; such roads had been long known in Tripolitania but not in Egypt. The point I wish to make here is that *we had made an exciting discovery,* but did not realize it until later.

We have established that the archaeologist studies remains of past cultures and from these remains attempts to infer the nature of prior behavioral patterns. The subject thus includes: a methodology for the recovery of objects and other kinds of information, a body of data already known with which new finds may be compared, a set of concepts to organize the data in meaningful terms, and a variety of ancillary techniques of laboratory analysis such as radiocarbon dating, archaeomagnetic studies, and so forth. Specific details of each of these parts of archaeology will be treated in later chapters.

The entire study of archaeology is made possible by accidents of preservation. Durable items such as stone tools, pottery, or stone architecture are usually preserved, even if broken or disarranged. Items of perishable materials also may be preserved in certain kinds of environments of deposition. Dry caves and sites below the water table are both excellent environments for the preservation of fibers, wood, cloth, leather, and other perishable materials.

Often the items we find are preserved through some unique circumstance such as the volcanic eruption at Pompeii or the accidental loss of a ship at sea. In addition, most of our finds are items that were broken in antiquity and discarded by their users. Our task is thus made more difficult. We must reconstruct the nature of past cultures from those remnants which have been preserved no matter how fragmentary or incomplete they are. However, I do not mean to suggest that archaeological remains are rare, for they occur almost everywhere, including portions of continental shelves now below sea level and in deserts now completely uninhabited. Archaeological remains per se are common; there are probably some archaeological remains within a mile of the homes of most of us. What is characteristic of archaeological sites is that wherever they occur, and no matter what their size, they contain only a portion of the material culture of the people that occupied the site. A major portion of the original materials have been destroyed by burning, erosion, organic decay, or chemical alteration. Therefore, the archaeologist's task is twofold: he must reconstruct the original nature of the objects he finds and in addition, infer their role in a prehistoric society. A helpful device employed by archaeologists is the recording of the position of each item found in a site. The relationship of items to each other may give clues as to their former uses and associations. By such means we may learn that items of vastly different form were used together in the past. An example would be the parts of a composite tool such as a harpoon. The harpoon head might be slotted for the insertion of a chipped stone point. You could infer from such a harpoon head that it had possessed a point, but finding one example with a point in place would constitute archaeological "proof" that the two items were associated in their use. A more abstract example could be a cluster of small items utilized in a religious ceremony. By their form there might be no way to guess that they were associated. Finding them together in one group establishes evidence that they were used together in the past. An outstanding example is the series of human figurines made of jade found at the Olmec site at La Venta on the east coast of Mexico (Fig. 1–1). The figurines had been placed vertically in a semicircle. Facing the semicircular group was a single figurine. From the association the excavators inferred that the group had been purposefully buried in that position to represent a specific past ceremony.

Although the field techniques for the recovery of archaeological materials are fairly standardized, the types of intellectual inquiry possible through examination of archaeologically obtained specimens are infinitely varied. Obvious divisions include those governed by the major time-space divisions. Some special interests depend upon study of techniques used; for example, weaving or pottery manufacture. Historical concerns afford another approach, such as the development of specific architectural features in cities or the development of social systems associated with specific economies.

These problems or interest areas have culminated in a series of specialities within archaeology. As a result the average archaeologist today does not attempt to master the entire body of knowledge relative to past human cultural