# PART II

# CHAPTER 5: PREHISTORY

As ought to be apparent at this juncture, the considerations undertaken as Part I of this volume do not constitute a fully developed, coherent theoretical system. Not only is such available elsewhere ·in various forms, but a treatment of this nature would far exceed the requirements for introducing some coherence into the formal operations and units of prehistory. Our goal is a coherent theoretical system for the formal aspects of prehistory, a much more limited goal than a general system. Thus the general considerations have been restricted to the explication, in terms adapted to current prehistory, of key notions-key in the sense that they are or ought to be issues within prehistory.

The initial problem to be faced in constructing a theoretical system for prehistory in formal aspects, and the one attended in this chapter, is that of defining the field for consideration. There are, of course, many possible ways of accomplishing this, and the choice of means as well as the end result have inlportant consequences for all further operations and require deliberation. Indeed, one source of confusion in the literature of prehistory has been attributed to the vague notion of what prehistory is and what it is or ought to be doing. This vagueness undoubtedly reflects the unstructured manner in which prehistory has developed primarily from Old World antiquarianism-sometimes in conjunction with the natural sciences; sometimes, as in this country, in close conjunction with sociocultural anthropology; and sometimes, at least effectively, in isolation. As long ago as 1953, it was possible for an eminent American prehistorian, A. C. Spaulding, to summarize prehistory as being that which prehistorians like to do-and nothing or little more. In many if not most quarters today this characterization is still accurate, the only important difference being that some prehistorians like to do things which their colleagues of twenty years ago had not thought of doing. There is, of course, nothing wrong with prehistorians' enjoying what they do; this is healthy, a requirement of a viable discipline. However, serious difficulties arise when this kind of characterization is the only accurate means of defining prehistory.

Prehistory has been defined many times and in various ways, this fact itself contributing in no small measure to the vagueness surrounding the meaning. Universal acceptance has not been accorded any definition, at least in part because all the definitions are more or less substantive, tied to a given area or problem. Boundaries around the field are drawn in terms of time and space (e.g.,, using the literal meaning of the label prehistory), or definition is in terms of specific goals such as “cultural reconstruction.” Even if one or another definition of these sorts should gain currency, the vagueness attending the field of prehistory would have been merely shuffled under the academic rug. Insofar as the definitions are substantive, either definitions in terms of subject matter limited in time and space or definitions in terms of results, they do not specify how the field operates. One can do anything with a given subject matter, yet not all treatments of the preliterate past would be considered prehistory even by those who employ a history-prehistory distinction in the definition of the field. Likewise, not all “reconstructions” of the past would be admitted as prehistory, especially those frankly based on speculation, by those workers “defining” prehistory as reconstruction.

As was pointed out on several occasions in earlier chapters, neither the subject matter nor even the results serve to adequately separate the various academic disciplines. Rather it is theory, the manner in which a particular discipline views phenomena, that distinguishes the various disciplines and sciences. A particular view of the world will always be more relevant to some kinds of things than others, a feature which lies at the root of the subject matter approach to definition. Likewise, a particular view conditions the kinds of results possible. Especially with today's trend toward multidisciplinary study, the relevance of a particular discipline to a particular subject matter is continually expanding. There is, even in the space of a few years, ample demonstration of the independence of discipline and subject matter. Likewise, unanticipated results are not infrequently obtained, sometimes completely reorienting disciplines in terms of the “thing to do.” These arguments do not mean that subject matter is unimportant for the definition of a discipline, but rather that the form of the subject matter, the way in which it is conceived, and not what it is, must be used, and, further, that subject matter alone or in combination with results is insufficient. If prehistory is to be an academic discipline and a science it must be a kind of study, not solely the study of a kind of thing.

One way in which prehistory could be defined consistently with the above discussion is to first develop a formal theory of prehistory and then define the field as that in which this theory is operative. While consistent and certainly accurate, this circular approach does not convey much information and would only contribute to the vagueness surrounding the meaning of prehistory instead of providing a basis for departure. The definition to be presented here, along with the explication of the terms used in it, is hopefully informative while at the same time consistent with the requirements of such a definition.

Given that prehistory has grown like Topsy, any definition, save that prehistory is what people who call themselves prehistorians do, is bound to exclude some things done under that label and perhaps include others not usually conceived of as prehistory. The definition to be presented has the advantage of including much of what is done under the label, and, further, the substantive definitions can be viewed as special cases of adaptation to a specific area, specific data, or a specific problem which holds the interest of a given investigator. Substantive definitions are not “wrong,” but they are limited to the problem or data they are designed to serve. A general definition provides not only a means of discussing prehistory in theoretical terms but at the same time it provides a means of deriving the substantive definitions and enables one to link these definitions to one another rather than treating them as competitive, contradictory, and inconsistent.

In spite of an attempt to define prehistory in such a manner as to include much of what is done under this label, some kinds of activity and some specific studies are, of course, excluded. These exclusions result primarily from a failure of the activity or study to meet the requirements of science rather than on other grounds. Their exclusion here does not mean that they are not worthwhile, profitable, interesting, or entertaining. It simply means that they are different in important dimensions from the other activities considered and cannot be judged by the same yardstick. It is not asserted, for example, that “amateur archaeology” is not worthwhile or that theologically-based speculation on man's past is not interesting. They cannot, however, be evaluated by the same means as used here.

With these points considered, prehistory is defined herein as the science of artifacts and relations between artifacts conducted in terms of the concept culture. This definition stipulates: (1) the kind of study-science; (2) the main concept with which explanation is undertaken-culture; and (3) the manner in which phenomena must be conceived-artifact. Insofar as any given work conceives its data as artifacts and uses scientific means to achieve explanations framed in cultural terms, it is prehistory and within the realm of our examination. The remaining portions of this chapter will first explicate each of the three key notions involved in the definition and then examine the implications of this definition of prehistory for the relationships to other sciences and non-sciences closely linked to prehistory.

## Science

In view of earlier discussion there is little need to further belabor this notion. Insofar as a given discipline has a theoretical structure which is employed to systematically organize phenomena for the purposes of explanation of these phenomena in a manner capable of testing, it may be considered a science. Employing this criterion excludes: (a) intuitive, non-rigorous approaches by virtue of a lack of overt theory and testability; (b) approaches which focus upon ideas rather than upon phenomena (e.g.,, philosophy); and (3) “descriptive” approaches whlch do not have explanation in the sense of prediction and/or control as an end product or a possible end product. A casual survey of literature bearing the label prehistory might suggest that it generally fails to meet these criteria, particularly in a lack of theoretical structure and testable conclusions. It is the contention here that this impression is more apparent than real, that at least as far as formal theory, systematics, is concerned, most of what has already been done in prehistory meets this criterion, but implicitly rather than explicitly. Further, while most of its conclusions are untested, they are testable.

## Artifact

Unfortunately, there is no generally accepted definition of the subject matter of prehistory, again because of the substantive preoccupation of the discipline. The many definitions in the literature reflect the requirements of particular problems, kinds of problems, and areas, and thus are not suited for theoretical use or, for that matter, practical application beyond the particular problem or area for which they are developed. This lack of unity has been customarily dealt with by ignoring it apparently no thought accorded to the non-comparability and contradiction that such fundamental disagreement introduces into the product of different investigators' work.

The concept artifact must be treated as a kind of theoretical template which segregates those phenomena of interest and amenable to scientific study by means of the concept culture and thus imposes a particular view upon the phenomena so segregated. The term artifact will herein be understood to mean anything which exhibits any physical attributes that can be assumed to be the results of human activity. First it should be remembered that “anything” could be rewritten as any “thing” or “event” since these are considered interchangeable; however, most past work in the field involves a “thing” conception and terms, and the thing kind of terminology is retained. One notable exception to this traditional view is chronological studies which must conceive data as events for obvious reasons. You cannot date an object before you, since it is still in existence, but, rather, must date some event or events (e.g.,, the event of manufacture, breakage, deposition). The second aspect of the definition which might require explication is the use of “attribute.” Attribute must be understood both as “thingness” and “evenness.” Not only is attribute intended to refer to qualities in the ordinary sense of quality, but also to position or location in the three-dimensional world. Human activity is manifest not only in changes of form but also changes or reorganization of locations, and, indeed, is usually a matter of both. One need think only of the importation of raw materials to have numerous examples of artifacts by virtue of location alone. The final aspect of the definition requiring some additional consideration is the “can be assumed to be” phrase. Unless one sees something being modified in form or moved, one must always assume the agent of human activity. Since prehistory is most often concerned with the past rather than the present, this becomes an important aspect of artifact and is the reason for the insertion of “assumed” in the definition. It is assumed that a given object or event is a product of human activity if its location or any other of its attributes cannot be accounted for by known natural processes. Thus the identification of artifacts is a problem of comparison with the known products of natural processes. It is important to recognize that individual attributes of objects are not in and of themselves distinctive of human activity until that point in history in which man begins to chemically alter the natural environment. Rather it is pattern-on an object, over a series of objects, or through space-that is distinctive. Prior to the advent of constructed materials the only means for shaping stone, for example, were pecking, grinding, and chipping, all of which occur naturally. Much prehistoric literature to the contrary, the removal of a flake is not the basis for assuming that an object is an artifact; however, the pattern of flakes removed from an object or the patterned occurrence of the objects through space may provide such a basis. For example, a chip on a finely-worked Danish Neolithic dagger is not distinctive of human modification. Each flake individually considered could well be the product of natural processes; however, the patterned occurrence of several hundred flakes resulting in the dagger form is distinctive especially in view of the large number of such objects known to occur and the context in which they are found including other objects most easily explained as the products of human activity. Only in those cases in which too little information is available to make appropriate comparisons is there any difficulty in deciding whether or not a given object can be assumed to be the product of human activity.

In this context it might be pointed out that science inevitably sacrifices completeness for accuracy. In viewing the identification of artifacts as a comparative problem, it is important only that everything identified as an artifact be indeed an artifact. Undoubtedly many things will be excluded that should be included, but this is not of pragmatic consequence. One of the normal kinds of progress within a science, and certainly here within prehistory, is the continual expansion of its sufficiency.

It is well to digress at this point to consider the utility, the necessity of theoretical definitions such as that presented for artifact. The several definitions of artifact in the archaeological literature can be viewed as special cases, restrictions for one or another reasons of this theoretical definition, and can be logically derived from it. If two definitions can be derived from the same general proposition, then the relationship between the two can be stated. Special definitions are often adaptations to the contingencies of executing a piece of research. Some definitions specify the scale of the object to be considered an artifact as portable discrete objects. This kind of definition is useful for the recovery and recording of data in the field, for obviously the size and coherence of an object have important bearing on techniques to be used. In this case, other larger or less coherent objects are given other designations such as “features” or “structures.” Non-discrete units based upon proximity and association such as “squatting places” and other identifiable loci of specific activities are gaining currency as artifacts. Because of their lack of discreteness, a function of scale, these units must be analytically constructed and thus are terminologically differentiated from the more usual discrete objects. Such “features” and units are artifacts in the same sense as those items given the label “artifact,” and they will be treated the same in any system of explanation. The differentiation is simply a recognition of the effect of scale and coherence on recovering and recording data.

Another kind of operating restriction is the division of artifacts into “incidental objects” or “non-cultural debris” or “food remains” and “artifacts.” In this case the restriction serves to segregate artifacts into categories requiring different kinds of academic specialists for identification-bones to the zoologist, plants to the botanist, and tools to the prehistorian. Again, all the categories have the same logical properties. The differentiation reflects only the structuring of academic disciplines, not some difference in kind in the data.

Special definitions are likewise employed for particular kinds of problems. For example, an investigator interested in stylistic change might advantageously restrict artifact to intentionally manufactured items. This kind of definition is not at all uncommon in archaeological writing, for style has been an important area of inquiry. An investigator interested in technology may restrict artifact to manufactured items, the by-products of manufacture, and the raw materials. In similar fashion one finds that artifact is frequently restricted to modified forms in studies dealing with early man where the presence of man and his activities is problematic.

All of these special definitions and many more are best treated as part of method, and not matters of theory. All can be derived from the general theoretical definition and related to one another explicitly. If, in the construction of a program of research, the investigator starts with a theoretical definition and adapts it overtly to the problem at hand, the frequently encountered problem of utilizing concepts inappropriately defined for the particular purpose to which they are put is eliminated. Further, a precise statement of the comparability of different studies is possible, and the perspective gained from employing this procedure in developing tactical concepts also aids in recovery procedures. It is unfortunately true that in some parts of the United States many kinds of tools have not been collected in excavation and surface reconnaissance because the investigators were implicitly using a restricted definition of artifact which had been developed in stylistic studies; this has quite effectively rendered the data useless for any other kinds of studies. Most of the argument about what is to be called artifact and what is not is an argument about words, for argument is usually focused on two or more special tactical definitions designed for different purposes. The single most important benefit obtaining with frankly theoretical definitions is that theory-the concepts themselves apart from a particular problem-can be discussed. Indeed, there cannot be theory without such definitions, and with them arguments at cross-purpose can be avoided. Further, laws are impossible achievements until the terms in which they are phrased are theoretical.

Returning to the concept artifact itself, there is one final point that cannot be emphasized too strongly. Defined as it has been here, artifact is the only subject matter of prehistory. Prehistorians do not study “culture” or past “societies” or “man's past.” Culture and society are anthropological concepts, and man's past, a metaphor. The only tangible phenomenon which can serve as data, with which prehistorians actually work and which is capable of explanation, is that encompassed by artifact. Confusing the means of explanation (culture, society, and so on) with the phenomena that are to be explained (artifacts) only results in further confusion, inconsistency, and untestable conclusions. This, of course, does not mean that one cannot study concepts, or any other words, for that matter; it only means that such study is not prehistory, but rather philosophy or linguistics, depending upon the approach.

## Culture

Culture is the most overworked word in the anthropological jargon. It would sometimes seem that every initiate to the anthropological disciplines must invent a definition for it to gain admittance to the profession. In 1952, Clyde Kluckhohn and A. L. Kroeber recorded some published definitions and concluded their treatment with one of their own, summarizing the salient features of previous definitions. Their definition constitutes a generalization, for not all of the features they include occur in any definition. The lack of a generally accepted meaning for the term which prompted the Kluckhohn and Kroeber endeavor appears in retrospect to have been aggravated if not generated by the insistence upon using substantively-bound, special-purpose definitions. The Kluckhohn and Kroeber definition did not rectify the problem. Indeed, this definition probably has less currency than many of the definitions it summarizes. As a generalization it still is restricted to the problems that were covered by the summarized definitions, and is too unwieldy for practical use. The disagreement, inconsistent usage, and outright contradictory content of many of the various definitions has been further complicated by a penchant for including as part of the definition various inferential elements that pertain to why the concept may be useful.

Herein the concept culture is to be understood as meaning shared ideas-and nothing more. The various special-case definitions may be derived from this by :

1. restricting the coverage to some special set or sets of shared ideas, in the fashion that restrictions can be imposed on the theoretical definition of artifact;
2. inferring or speculating how the ideas come to be shared (e.g.,, those stipulating learning);
3. inferring why the ideas are shared (e.g.,, those which view it as an adaptive system, etc.). These tactical definitions have their place in methods (e.g.,, a special definition for the problems and views of economic anthropology) and in techniques (e.g.,, a definition adapted to the particular data being studied). However, they cannot provide an adequate basis for theoretical considerations.

Quite apart from this notion of culture as an explanatory concept, there is the use of culture in the partitive sense in both sociocultural and archaeological literature. In speaking of “a culture” sociocultural anthropologists are denoting a set of people who to a greater or lesser degree share a number of ideas which are not shared by people outside that set. In an archaeological context, “a culture” is even more vague, denoting either a given set of assemblages of artifacts or a set of abstract units such as phases or components, which hold in common a relatively large number of features or “traits.” This usage of the term culture, in spite of the label, bears little relation to culture as an explanatory concept and is nowhere employed herein.

There are some important implications, however, of even the simplistic definition of culture used. First, culture is a concept, an idea. It has no objective existence itself and is not subject to study or explanation in any scientific fashion. It is a means of explanation. Further, its referent, shared ideas, does not have any objective existence. Ideas cannot be observed, but are always inferred from behavior, linguistic or otherwise, or products of behavior. A simplistic parallel can perhaps be usefully drawn between culture as an explanatory concept and the concept of gravity in the physical sciences. Gravity is a concept used in the explanation of the motion of bodies. There is no gravity in the phenomenological world; no one has ever seen it, and no amount of generalization will ever lead to gravity. Gravity is a posited concept which permits the prediction of the motion of bodies in fully calculable terms. What is observed is the motion of bodies; what is explained is the motion of bodies, and it is done in terms of the concept gravity. As in the case of culture, the referent for gravity is not observable; that is, forces cannot be seen or measured apart from the motion of bodies. It is in this manner that the concept culture can be and implicitly is employed by prehistory. Arguments as to whether artifacts and/or behavior are “culture” are just as nonsensical as arguments about whether the moon or its motion is gravity.

The character of the concept is imparted both by the stipulation of ideas as a referent and that the ideas must be shared. There is little doubt that explanation of artifacts and behavior can be usefully attempted in terms of the ideas held by the people involved. Perhaps the point of confusion in this respect revolves around which ideas of the people are considered. It is obvious that the “ideas” that are solicited from living people under study are not the means of explanation, but are part of what is to be explained. The ideas which serve as the referent for culture are imputed to the people to provide the mechanism for explanation, much in the manner as the force called gravity is imputed to nature for the explanation of motion of bodies. It is unimportant and indeed unknowable if either the forces or the ideas actually obtain in nature. What is of importance is whether or not such concepts permit the development of explanations, for explanations as predictions and means of control are testable. Nothing could be gained from a demonstration that the ideas called culture exist beyond the mind of the anthropologist or prehistorian.

While there has been some criticism of the “sharing” stipulation (see bibliography), this stipulation derives from and is a requirement of a science. “Sharing” implies, or rather. is a rewording of, repetition or recurrence through time and/or space of some form. Without repetition explanation is impossible because nothing recurs to be explained. Without repetition both systematics and science are impossible. To conceive of data as unique or “idiosyncratic” is to abandon any attempt at explanation (not infrequently when these terms are used, they are tendered as explanations and employed as a warrant to consider no further the data so labeled). From the outset phenomena are assumed to be unique, and the problem is to categorize them so that they are no longer unique and thus are capable of explanation. Science cannot predict when a given molecule of water will leave the surface of a pan of water and at what temperature, but it can predict, and quite accurately, when the pan of water will boil and how to bring about that condition. In short, the stipulation that culture, as a scientifically useful concept requires a component of sharing, permits the possibility of ahistorical laws for human activity. The concept culture, then, provides the means by which prehistorians explain the products of human activity. Quite obviously, this does not exhaust the possibilities of explaining those products; it does so only for them as artifacts. Physicists, geologists, biologists, theologians, and farmers can also explain the same objects, each with different results. One might insist in the first three cases that the results are trivial because they do not account for the human aspects or because they yield more interesting results for other phenomena, and in the latter two cases one might object that the results are not scientific and do not explain in the sense used here. But certainly none of these are wrong.

In summary, the definition of prehistory tendered earlier in the chapter can be more fully explicated. Prehistory is a kind of study, a science, sharing with other sciences the aim of explanation of phenomena utilizing a theoretical structure. Prehistory is distinguished from the other special sciences in that it employs the concept of culture as the basis for explanation of phenomena conceived of as artifacts.

The relationship obtaining between prehistory and non-sciences is but a special case of those obtaining between science in general and non-sciences which have been already considered in Chapter 1. Thus a treatment here of the relationships between prehistory and humanistic studies in general would be redundant; however, some detailed consideration of the relationship of prehistory as defined here and history and sociocultural anthropology is warranted by the close connection attributed these three fields in some archaeological writing. History, as was asserted earlier, can be distinguished from science, and thus from prehistory, on two fundamental grounds: (1) history does not produce or attempt explanation in the sense of prediction and control; and (2) the organization of history's data is assumed to be chronological. Thus the only “theory” history need employ is a common cultural background of writer and reader. History does not closely articulate with prehistory except in the sound of the name.

That history produces chronicles is not distinctive, for science likewise produces chronicles. However, the chronicles of science must be rendered in terms of classes derived from theory, whereas the historical chronicle consists of chronologically-linked, unique events. The scientific chronicle, much a part of prehistory, is easily confused with historical chronicle, especially in prehistory where the theory employed in constructing a scientific chronicle has been left implicit. To further complicate matters, historical rather than scientific chronicle often appears under the title of prehistory, usually called “culture history.” Indeed, most of the things called “culture history” are examples of the non-explanatory “descriptive” approach specifically excluded in defining prehistory as a science. Because the subject matter is usually preliterate man, “culture history” is usually an inferential historical chronicle, both the chronology and the events being inferred. In the view taken here, this kind of culture history is properly the practice of history on preliterate data, a kind of ancient history. History and prehistory are not complementary studies in terms of their subject matter. Each is applicable to the results of human activity regardless of the presence or absence of written records, though this feature profoundly affects the techniques of data collection.

Likewise, prehistory is applicable to contemporary results of human activity. The results of this application are less interesting to most people than those produced by history or other humanistic and scientific studies. For this reason, perhaps coupled with a feeling that one is not an “archaeologist” unless one deals with very ancient data, prehistory has seen comparatively little application to contemporary or modern data.

Importantly, history and prehistory have little in common, being quite different kinds of study with discrepant aims and potentials and overlapping fields of application. The general feeling that they are similar stems first from the fact that both make use of the chronicle, though each uses the chronicle differently, and, indeed, the chronicles themselves are different; and, secondly, because most prehistorians are also historians, that is, most people who practice prehistory also at one time or another construct “culture histories.” Given their radically different nature, a separation of the two is absolutely necessary if progress is to be made in either.

In the United States, but not universally, prehistory is academically considered part of sociocultural anthropology. While the close connection and in many respects profitable association between the two is not to be denied, it is difficult to conceive of prehistory as a science and also a part of or kind of sociocultural anthropology. Most kinds of sociocultural anthropology have little about their nature to suggest the field is a science, though good cases can be made for particular branches (such as ethnoscience) and particular studies being so. Currently, the main part of sociocultural anthropology is more like a flat history of mainly non-western peoples. This does not mean that sociocultural anthropology is incapable of being the science of man, but simply that most of it is not that and is not developing in that direction. There are, however, important connections between prehistory and sociocultural anthropology, far more so than obtain between prehistory and history. The primary point of articulation is in the concept culture, a concept developed by sociocultural anthropology. Sharing such a fundamental concept has naturally resulted in a great many correlative commonalities. In many respects the terminology used to manipulate data is the same. Further, sociocultural anthropology's broad interests in all kinds of human activity have been adopted into prehistory, along with the perspective that comes from familiarity with non-western lifeways. Thus many of the distinctive and essential elements and directions of prehistory are held in common with sociocultural anthropology; however, these are articulated into two different kinds of study. In the case of prehistory the concepts are part of an over-all theoretical system aimed at explanation of human activity, whereas the kind of articulation these same concepts receive in sociocultural anthropology is less systematic, more various, and, at least from the outside, less indicative of a purpose. While one can be appreciative of the important contribution made by sociocultural anthropology to prehistory, there is nonetheless a very stringent limit to the interdependence of the two given their different structures, potentials, and aims.

With the “cultural reconstruction” approach, generally acknowledged to have been given its modern impetus by Walter W. Taylor's A Study of Archaeology, there is an attempt to do sociocultural anthropology in the past. Not an insignificant amount of modem endeavor represents a technically more sophisticated and less ambitious version of this general approach. To a limited extent all prehistorians engage in some kind of reconstruction, or, rather, construction; however, as an approach, “cultural reconstruction” has all of the non-explanatory, descriptive limitations of old-time cultural anthropology, complicated by far inferior data. The interests, not the methods, of sociocultural anthropology and its ancient analog “cultural reconstruction” makes a valuable contribution to prehistory. Again the point is not to criticize “cultural reconstruction” as such, but simply to note its exclusion from the realm of science and to differentiate it from prehistory.

In discussing the relationships of prehistory to history and sociocultural anthropology, alternative approaches to the study of artifacts have been indicated. History and sociocultural anthropology are not, of course, the only alternative studies of man's activities. There are many well-developed fields, mainly within what has been called humanistic studies, which attend a more restricted segment of man's activity. Many kinds of study and inquiry have something to offer about the remains of man's past. Prehistory is but one such study, the science specifically directed toward these remains.

The problem to be pursued in the remaining chapters is simply a delineation of how one gets from science in general to a science of artifacts-essentially a substitution of prehistory as defined here for science in the general scheme presented in Part I. The definition of prehistory provides all the necessary elements for making the logical step from science to a science of artifacts. Given the earlier scheme, this is phrased largely in terms of a shift from the arrangement of things, to the cultural arrangement of things. No attempt is made to develop a new means of making this step, but rather the aim is to make explicit the implicit manifestation of this step in the literature of prehistory.