A Scientific Concept of Culture

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A century has passed since Tylor first traced for us the anthropological concept of culture. The subsequent history of the concept has been an unfortunate one, due to inadequate, unclear, nebulous, even mystical formulations. An attempt is made in this article to adjust the concept so that it will conform to a matter-of-fact reality. In so doing, the relationships between culture and society, culture and humanness, and culture and cultural systems, are discussed. A list of terms with strict definitions is provided as a culmination to the argument, and as an alternative to the formulations of the past.

AT THIS LATE DATE, it may seem presumptuous for anyone to write yet another article on the concept of culture. A longstanding dissatisfaction with current views on the subject, however, has given the present author the temerity to set forth his own somewhat novel way of looking at the matter. The basic ideas in the present article were worked out some fifteen years ago, were then tested in the field and in the classroom, and at last seem ready for consideration by a wider audience.

A characteristic of anthropology's history is that, for every theoretical question, alternative answers are presented one after the other until all logical possibilities are exhausted. Only then is it possible to select one or another, or some amalgam, from a complete set of such possibilities. Even if the present formulation fails to win the field against its rivals, it will have served the purpose of adding to the range of choices.

The charge that another article on culture would be superfluous is easily dissipated if the article in question has something new, or different, to offer. More difficult to combat is the feeling that all theoretical concern with the nature of culture is futile because "the last thing to be discovered in any science is what the science is really about" (Eggan 1954:760). This is at best an observation, and a questionable one at that. It should hardly be taken as policy for a discipline. Since work in a science is never done, this view would postpone any resolution of basic issues. It would require, in this case, the transformation of the concept of culture into a holy mystery, sacrosanct, never to be profaned by any vulgar consideration of its meaning. When any question is raised about it, one of the earlier, less than adequate discussions of the concept can be trotted out to satisfy the naive inquirer. The purpose of this paper, however, is to commit such an act of profanation, to penetrate through to the inner sanctum and topple from its pedestal of high mystery the basic concept of anthropology.

One argument presented by those who would prefer that the nature of culture not be explored, is that "culture" is the analog of "life," for which there has never been a satisfactory definition. This may be true, but "a culture" or "a cultural system" is the analog of "an organism" or "a living entity." Biologists would surely reject as preposterous an argument that they should not attempt to determine what organisms are, nor to explore the nature of organisms. Despite its title, this article is concerned more with determining the boundaries and composition of cultural systems than with a
definition of culture as such. Culture is our starting point; the cultural system is our destination.

We can begin by noting what everyone will accept, that a great deal has been written about culture. We can proceed by observing that much of what has been written about culture is contradictory or inconsistent among different authors. We have considerable latitude, as a consequence, in selecting a path to follow toward some understanding of the nature of culture.

The path which the present author has chosen to follow, and would recommend to others, is the path opened up by the insistence of anthropologists that culture (whatever it is) has a tremendous influence on human beings. Kroeber was one of the great exponents and promulgators of this view, writing, for example, as follows: "Culture... is a factor that produces enormous effects... a tremendous force affecting all human beings, socially and individually... In the main... it is our culture that directs and outlines the kind of life we can lead... The degree to which every individual is molded by his culture is enormous... All that remains of him that is not induced by his culture consists of... his innate general human capacities, and... his individual peculiarities" (1948:8-9, 256, 288-289; see also 1944:8, 1952:26-27, 139; Benedict 1959a:2-3, 55-56, 251-252; Kroeber and Kluckhohn 1952:185; Linton 1936:468, 471; Malinowski 1931:623, 645, 1955:220).

What could such a powerful thing, entity or existent be, within the range of our experience? The position taken here is that the only satisfactory answer to this question is in terms of maximum holism. Only the total system, properly defined, in which human beings find themselves could possibly have the power attributed to culture by Kroeber and others. Yet a curious development in the social sciences has been a strong tendency to identify as culture only a part of that totality. Which part has varied from one author to the next, on a random, arbitrary basis, without even an attempt by any of these writers to demonstrate why his choice was the best. In the Germanic tradition, "culture is our whole body of technical equipment" (Small 1905:59). For Lester Ward, "a culture is a social structure" (1907:235). To Wissler, "a culture is a definite association complex of ideas" (1916b:197). "Culture," according to Kroeber and Kluckhohn, "is part, though only part, of the personality" (1952:114). This is a truly extraordinary situation. We are reminded of the parable of the blind men and the elephant, since from a holistic point of view we would have to sum up these various partial definitions to arrive at a proper, adequate, complete definition of culture.

It is quite obvious from the literature that, of all these partial views of culture, the most popular—increasingly so—is the restriction of culture to mentalistic phenomena, to ideas or the like in the minds of men. This, in combination with the established concept of the powerful and uni-directional influence of culture on whatever it relates to, has produced the crassest form of idealism as the reigning philosophy in anthropology. A simple demonstration of the inadequacy of anthropology's current philosophy can be made with reference to artifacts, or material culture. In idealistic terms, material culture is a misnomer, and artifacts are simply the products of ideas, or of something more vague but still mentalistic. "In a strict sense, according to our definition of culture as a set of patterns and themes for the guidance of human behavior, material culture is of course not a part of culture at all but only a result or product of it" (Beals and Hoijer 1965:298; see also, for example, Anon. 1971:417; Bagby 1953:538; Bain 1942:90; Bidney 1944:32, 36, 1947:379; Ford 1937:226; Goodenough 1971:18-19; Hoebel 1956:176; Linton 1955:36-37; Murdock 1932:205; Piddington 1957:521-522). This is all we are told, and such authors as these presumably are satisfied with the formulation thus presented. As Kroeber and Kluckhohn noted, however, such authors are operating with an "unnecessarily restricted"
concept of culture: "Ideas alone, in the strict sense, seem a narrow concept for embracing the whole of culture" (1952:67).

More than this, are there no reciprocal effects of artifacts on ideas? Indeed, are not artifacts capable of generating ideas ab initio? How many of our ideas or notions are the result of the artifacts of production and consumption with which we are surrounded? Are not "patterns and themes," at least in certain cases or to a certain extent, the "result or product" of material culture? As expressed by the archetypal materialist—and realist—of our era, in his here appropriately entitled Poverty of Philosophy: "In acquiring new productive forces [i.e., artifacts of production] men change their mode of production; and in changing their mode of production...they change all their social relations...The same men who establish their social relations in conformity with their material productivity, produce also principles, ideas and categories, in conformity with their social relations" (Marx 1956:105). Certainly motor habits are the product of familiarity with artifacts. "The hands, arms, legs and eyes are adjusted by the use of implements to the proper technical skill necessary in a culture" (Malinowski 1931:622; my italics). There is no doubt that material culture has an effect on mental culture—and the same can be said for the relationship between behavioral culture ("human behavior") and mental culture. It will not do, however, to say that it is material culture alone that is culture, or behavioral culture alone that is culture, any more than it has been intelligible to take mental culture alone as culture. Marx was definitely moving in the direction of seeing a total system, the various parts of which affect each other. That is the path we also must follow, to make sense out of the existing anthropological literature and to be able to formulate coherent thoughts and meaningful problems for investigation.

In recent years, we have witnessed the rise of a "New Physical Anthropology," even of a "New Archaeology." But ethnology the core of cultural anthropology, and the source of most anthropological theory—has been in the doldrums. The reason, perhaps, is because we have taken a series of wrong turns in the history of ethnological theory, ending in a cul de sac from which no movement is possible except by retracing our steps. Here an attempt will be made to do just that, as we move back through the literature and then forward on the basis of Bierstadt’s early, crude formulation of a culture as a total system (1938), of the general tendency in Malinowski’s work to conceptualize such total cultural systems (see Leach 1961:6), and of the hints and intimations in the writings of many anthropologists that, unconsciously, they were indeed thinking in like terms.

It will be the thesis of this paper that there are certain total systems which deserve to be called cultural systems. There are, to be sure, those who recognize the existence of such total systems who nevertheless prefer to limit "culture" to only a part of that totality. They either do not name these total systems or, on the assumption that society and culture are mutually exclusive within such systems, refer to them as "sociocultural" systems. The term sociocultural, widely used in the anthropological literature, is a bastard term, a two-headed calf. It suggests that the total systems which we are considering have a dual reality, a schizophrenic existence, being both social and cultural. Let us recognize that the members of human societies are caught up in total cultural systems, as components thereof, just as molecules may be caught up in organic systems (organisms) as components thereof. If it is absurdly redundant, as it surely is, to speak of an organism as a molecule-organic system, it is equally absurd and redundant to speak of a culture as a socio-cultural system. If "socio" refers to social organization, there should be even less resistance to recognizing that it signifies a part of culture and should be discarded as totally superfluous and confusing. For those with a mentalistic concept of culture, and the usual view of society, the term sociocultural continues to exclude material culture, consequently does not refer
to the entire system, and so fails to accomplish its purpose. Thus, for Linton, there is a "social-cultural" reality, but material culture remains part of the "physical environment" (1938a:436, 432).

We are all by now too sophisticated to believe that our problem is simply to define a term. What we are confronted with is the reality with which our discipline is concerned, and the need to develop a suitable vocabulary to discuss that reality, a vocabulary that fits. If we postulate that there are natural boundaries in the real world, natural planes of cleavage, a suitable vocabulary is one whose terms refer to distinguishable entities in reality thus divided. We can presume that first attempts will be crude, early definitions of terms rough and imprecise. Refinement will involve either expanding the meaning of a roughly defined or conceived term to the boundaries of the real entity which encompasses it or reducing that meaning to the boundaries of a real entity it contains. Definitions and discussions of culture thus far have left it somewhere between culture-as-ideas and culture-as-total-system, which means we can either contract or expand its meaning to those respective boundaries. If we choose to contract, we must forever renounce the understanding that culture is extremely powerful, is a sufficient explanation for human behavior, is a system (or, more precisely, takes the form of systems) in its own right, and is all that a cultural anthropologist need study (aside from the natural environment) to handle the traditional questions and issues of his field. We are further left without a name for our entire field of interest. If we choose to expand, these difficulties disappear, and we are led to the argument that follows.

THE PROBLEM

There is a long-standing problem or predicament in anthropology that has lingered on to the present day. Despite a great deal of attention and many treatises on the subject both short and long, anthropology's key concept remains somehow unsatisfying in the way it is generally comprehended and discussed within the discipline. A number of years ago, Kroeber wrote proudly as follows: "The most significant accomplishment of anthropology in the first half of the twentieth century has been the extension and clarification of the concept of culture" (1952:139). Yet, in the same volume in which that passage appeared, Kroeber was forced to acknowledge, "We seem not yet to have attained a concise, unambiguous, inclusive, and exclusive definition of culture" (1952:23, see also vii; Kroeber and Kluckhohn 1952:4).

It might seem odd that Kroeber felt a definitional inadequacy. Tylor's classic definition of culture as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (1871:1), is certainly concise and clear. Tylor's definition of the word culture, the first explicit definition of the term in its anthropological sense, has never been rendered entirely obsolete. It has, indeed, been the touchstone for all subsequent considerations of the concept in anthropology. Furthermore, it established with one stroke what Tylor himself called the science of culture, the interest that came to be known as cultural anthropology.

Yet a feeling of dissatisfaction with Tylor's formulation, a sense that it is deficient in one or more ways, is evidenced not only by the passages noted in Kroeber's writings, but also in the continuing efforts by anthropologists to define the term anew. In their masterful study of the subject, Kroeber and Kluckhohn (1952) compiled 167 and more definitions of the word culture by different authors, no two of which were alike. As one earlier observer noted, "Tylor's definition of culture is . . . generally accepted 'in principle,' but in practice varying widely from interpreter to interpreter. To put it rather bluntly, the scientists studying culture are not agreed among themselves, except in a vague sort of way, as to the nature of the data they are studying" (Gary 1929:174; see also Binney 1944:30, 32). A
hundred years have passed since Tylor’s definition was first published and a science of culture established. The time is surely propitious for an awakened realization that, after all these years, there still remains an inadequate understanding and a lack of consensus about anthropology’s most important concept.

“We anthropologists,” wrote Stewart, are “the discoverers of culture” (1964:442; see also Ellwood 1927b:12-13). Beals and Hoijer (1965:19) spoke for anthropologists generally when they identified “the development of the concept of culture” as one of the two “major contributions of anthropology to the social sciences,” the other being “the emphasis upon each culture as an integrated whole,” about which we shall have more to say in an appropriate place. The anthropologist’s concept of culture had a powerful impact upon sociologists earlier in this century, producing “a rapidly increasing school of ‘cultural sociologists,’ who realize that the proper study of sociology is culture” (Murdock 1932:210). “The cultural perspective,” remarked Dollard, “is one of the few real achievements of social science” (1939:53n.). Ellwood wrote of “the revolutionary importance of ‘the culture concept’ for the understanding of human social phenomena” (1927b:15). According to Bidney, “The basic concept of contemporary social science is undoubtedly that of culture” (1947:375). Within anthropology, the concept continues to be highly and widely regarded; in Kluckhohn’s words, “culture remains the master concept of American anthropology” (1951:86). A recent textbook to which thirty-four anthropologists contributed informs students that culture is “the single most important concept in anthropological theory” (Anon. 1971:37). Yet such vagueness has always attached to the term—Boas himself wrote of “the vague term ‘culture’” (1938a:155; see also Murdock 1932:200; Lundberg 1939:179; Gordon Brown 1951:173)—that some anthropologists have discarded the word (compare Kroeber and Kluckhohn 1952:5). Thus, Gordon Brown was led to assert: “I propose to throw... overboard in the interests of clarity... the term culture... I do not necessarily expect the concurrence of fellow anthropologists in thus slighting one of our most sacred terms but have personally found it expedient to think without it” (1951:173; quoted in Hallowell 1953:600n.). Even earlier, Radcliffe-Brown made abundantly clear his distaste for the term in such assertions as “I should like to invoke a taboo on the word culture” (1957:53, see also 103). As a hard-headed realist, Radcliffe-Brown could not be blamed for his position, given the sorry condition of thinking about culture in his day. At present the word is used in simplistic expositions of why different peoples behave differently, etc., but it seems to have lost generative power.

A highly significant trend in recent years has been the replacement of the terms cultural anthropology and cultural anthropologist by the terms social anthropology and social anthropologist. The shifting of focus thus indicated away from the concept of culture could prove to be the most damaging event in the history of anthropological theory. This shift might be explained in part by the destruction of the strong Boasian tradition of cultural anthropology in this country under the fierce and unjustified attacks of its detractors. The effect of these attacks has been to facilitate the triumph of Radcliffe-Brown’s advocacy of a “social anthropology” or “comparative sociology” (1952:2, 1958:55, 128, 141) that would relegate the concept of culture to a subordinate if not minor theoretical role. The seriousness of this trend was recently emphasized by Harris (1970:59).

The point of view regarding the concept of culture held by those who identify themselves as social anthropologists, and who find it congenial to think of their discipline as social anthropology, is fairly established (see Murdock 1951:467, 471-472; Firth 1951:477). Perhaps more starkly revealing than the tenor of Radcliffe-Brown’s own writing is the following passage by another of the British social anthropologists, with
reference (surprisingly) to economics, material culture, and mythology: "These came to be subsumed under the title 'culture,' a word which has often been used in the post-war years almost in a pejorative sense to describe a sort of rag-bag of odds and ends in which to thrust all facts and ideas in which the social anthropologist was not at the moment interested" (Richards 1957:29). Here we see what may be taken as the invasion of anthropology by the sociological orientation, that orientation summarized nicely by Kroeber in the following terms: "Sociologists... view culture either as a marginal extension of social activity or as somehow a subdivision or derivation from it" (1952:161-162, see also 166; Kroeber and Kluckhohn 1952:93, 149; Kroeber and Parsons 1958:582; and, as an example, Dollard 1939:50, 57). As Kroeber and Parsons noted, it would appear that social anthropology "inclines to prefer the sociological assumption" (1958:582; see also Kroeber 1953:366). The further spread of the label "social anthropology," with its associated pattern of thinking, might indeed result in the complete transformation of cultural anthropology into the comparative sociology of Radcliffe-Brown's program.

The following points will be contended in this paper: (1) A comparative sociology would not be adequate to handle the full range of problems traditionally treated by the cultural anthropologist. (2) The concept of culture can be made very clear and precise, and demonstrably conforming to a definite empirical reality. (3) A set of terms incorporating the word "culture" can be given such exact definition as to dispel vagueness in a thoroughgoing fashion, these including the terms "culture," "a cultural phenomenon," "a cultural trait," "a cultural feature," and "a cultural system." With these and a number of auxiliary terms, it should prove possible to generate some very compelling theory and the promise of much more to come.

ANTHROPOLOGY AND CULTURE

The term anthropology, in its strict etymological sense, means the study of man. This, however, is generally recognized to be an inadequate definition if only because the word man conjures up the picture of man the biological being, the organism, alone. As a consequence, some anthropologists have looked with favor on a definition of anthropology as the study of man and his works, a phrase that was used as the title of an outstanding textbook by Herskovits (1948; see also Kroeber 1923:1; Linton 1938b:241; Gillin 1939:45-46). This definition—"the study of man and his works"—is a decided improvement, since it makes explicit what anthropologists do study. It is deficient in that it suggests a dual subject matter, as if a single discipline were dedicated to two mutually exclusive fields of study.

A satisfactory definition of the term by which we designate the anthropological science, one which specifies the full range of its interests while at the same time stressing its unitary and unified character, can be derived from proper definitions of the terms "phenomenon" and "human phenomenon." We may define a "phenomenon" as any particular observable thing, action or property in the physical universe. We may define a "human phenomenon" as any phenomenon (thus defined) owing its existence to the mere existence of man. Human phenomena, then, would include all biological and all nonbiological phenomena generated by the existence of man (the genus Homo) with his peculiar characteristics. Anthropology can now be defined as the study of the sum total of all human phenomena, everywhere across the face of this planet and beyond, and through all time since the first emergence of Homo some two million years ago or so.

Only at this juncture, as a second step, does it become appropriate to recognize the inherent duality of anthropology. The total field of human phenomena with which anthropology is concerned does prove to be divisible naturally into two subfields, those that have been the traditional investigatory areas of physical anthropology and cultural anthropology respectively. The subfield that is the specific concern of physical anthropology may be delimited as the sum total of all
human genetic phenomena. Here we may define a “human genetic phenomenon” as any phenomenon that is the direct expression of genetic inheritance in man. Physical anthropology is, for all intents and purposes, human biology—the specialized biological concern with a single genus, our own. The other subfield consists of what remains—the sum total of all human nongenetic phenomena. A “human nongenetic phenomenon” may be defined as any phenomenon that is not the direct expression of genetic inheritance in man. Anthropology has the distinction of being the discipline which first recognized the existence of this second subfield and the vastness of its range. This is culture, the province of study for cultural anthropology. “Culture,” then, may be defined as our generic term for all human nongenetic, or metabolical, phenomena. It should be noted that this definition corresponds precisely to the general understanding of the term in anthropology, though different articulations may vary in their phraseology and inclusiveness. Since “nongenetic” suggests, unnecessarily, a negative or residual category, one may prefer the use of “metabolical.” This latter term indicates in a positive way that culture is not itself biological but is something that biology (in the form of the genus Homo) has generated. In thus defining culture we have not moved, except in precision of expression, from Kroeber’s concept of the “superorganic,” of the “purely civilizational and non-organic” (1952:34, see also 28, 38; Folsom 1928:15, 33; Kroeber and Parsons 1958:582; Parsons 1957:58).

SOCIETY AND CULTURE

We may agree with Kroeber and Parsons’ estimation of a longstanding situation: “There seems to have been a good deal of confusion among anthropologists and sociologists about the concepts of culture and society (or, social system)” (1958:582). When the terms society and culture are used loosely, as they frequently are, no significant difference between them is maintained.

“Sometimes the terms ‘culture’ and ‘society’ seem to have been used almost as synonyms,” observed Kluckhohn and Kelly (1945:79), and Linton noted that “the terms culture and society are often used interchangeably” (1955:29; see also Binet 1947:383; Ina Brown 1963:6; Gastil 1961:1281, 1284; Kroeber and Parsons 1958:582). This situation, which these authors proceeded to deplore, can be amply documented. We have Bierstedt’s “The social group is the culture” (1938:211) and Ward’s “A culture is a social structure, a social organism” (1907:235). We have Kroeber’s “a science of cultural mechanics, or social psychology, or sociology” (1952:55). We have Radcliffe-Brown’s “any culture, any social system” (1952:185) and the ‘culture,’ as it is called (what I call the social system)” (1957:51). We have Redfield’s “persisting social groups or societies (culture),” “this entirety, seen as social structure, a system of social relations, or more commonly as culture,” and “a culture or system of social institutions” (1953:730, 732, 735), as well as “that central entity of our consideration, culture-society” (1964:46). Other examples might be given (e.g., J. Bernard 1929:21-22; Lundberg 1939:228; Montagu 1963:134; Wittfogel 1955:43). Nadel phrased the matter in these terms: “In recent anthropological literature...the terms ‘society’ and ‘culture’ are accepted as referring...more precisely, to different ways of looking at the same thing” (1951:80; in effect, this view is expressed in Kroeber and Parsons 1958:582; Wallis 1959:895; see also Firth 1951:483). A closer inspection of the reality with which we are confronted, however, indicates a need for both these terms and a need for a careful distinction between their meanings. In this way we may derive a satisfactory solution for what Radcliffe-Brown called “the most important problem that faces social science at the present time, that of the relation of ‘society’ and ‘culture’” (1937:174; see also Fortes and Evans-Pritchard 1940:3).

Let us define a “society” as a group of organisms of the same species forming a
breeding population. This appears to be the central idea of the concept as used by biologists: they recognize that many species are divided into breeding populations each of which is a society of organisms of that species. For the human species, however, because of its distinctive cultural dimension, an alternative second criterion must be added. A "human society" may be defined as a group of human organisms forming a breeding population or a maximum political entity, whichever is larger in the particular instance (Weiss 1969:42). For any non-human species, then, \( S_N = P \) (a population may be taken as a society of that species). For the human species alone, \( S_H = nP \) (where \( n \) is an integer, such that \( n \geq 1; n \) stands for the number of populations existing under the same political authority in a given case).

The issue relevant to our present discussion is whether we are justified in limiting our concept of (human) society to a group of human beings satisfying certain conditions. The position is taken here that the restricted definition provided above is the only legitimate and usable one for a proper handling of the human situation. Further, it conforms to the definition of (human) society accepted by sociologists and many anthropologists. As Simmel phrased it, "society merely is the name for a number of individuals, connected by interaction" (1950:10; my italics). As expressed by Tozzer, "society is usually defined as an aggregation of human beings with a common basis of subsistence, banded together" (1925:35; my italics). Similarly, Linton defined "a society" as "any group of people who have lived and worked together," as "a tangible group of individuals organized into a functioning whole by mutual adaptations" (1936:91, 1940:870; my italics; see also 1936:253, 1938a:427, 1945:5, 1955:29). "A 'society,'" according to Kluckhohn, "refers to a group of people who interact more with each other than they do with other individuals" (1949:24; my italics; see also Bagby 1953:541; Kluckhohn and Kelly 1945:79). Aberle et al. wrote of society as "a group of human beings sharing a self-sufficient system of action" (1950:101; my italics; see also Herskovits 1948:29; Naroll 1964:283; Radcliffe-Brown 1952:9, 1957:43; Redfield 1956:345; Steward 1950:98). This argument holds whether or not we extend the concept of (human) society to include its own organization (see Bagby 1953:542).

With the concept of society alone, since its proper significance is a restricted one, we are operating at a distinct conceptual disadvantage. This is evident at once when we ask the question, "Are the artifacts produced by the members of a given (human) society a part of that society or outside of it, as part of the environment?" Early writers did not know which way to turn for an answer to this question. Spencer simply begged the question: "That accumulation of super-organic products which we commonly distinguish as artificial . . . gradually form[s] what we may consider either as a non-vital part of the society itself, or else as a secondary environment" (1893:12, 14, see also 446). Durkheim shifted from one side to the other, asserting here "society is composed only of individuals" (1938:xlvii), and there "it is not true that society is made up only of individuals; it also includes material things" (1952:313, see also 1938:113). Later writers came consistently to exclude artifacts from (human) society and to describe them as constituting an "artificial" or "man-made" environment. Malinowski's expression of this view is, as always, eloquent: "Man in order to live continually alters his surroundings. On all points of contact with the outer world he creates an artificial, secondary environment. He makes houses or constructs shelters; he prepares his food more or less elaborately, procuring it by means of weapons and implements; he makes roads and uses means of transport" (1931:621, see also 1939:940, 1944:36). Artifacts, according to Ford, "are to be classed in the same category as . . . minerals, flora, and fauna, which compose the environment in which people live" (1937:226; see also Benedict 1956:183;
Goodenough 1971:19; Kroeber 1948:387; Linton 1938a:432; Montagu 1962:919, 1963:135). The view that artifacts are external to societies is alone consistent with the definition of society as a group of organisms of the same species, etc., exclusively. Yet there is something disturbing about considering artifacts as a part of the environment. They are not a part of the natural environment, certainly, since they could not have been produced by nonhuman nature. They are not external to whatever it is that human beings create for themselves. They are, by our definition, cultural, constituting what anthropologists call material culture. Consequently, while external to societies, they are perforce internal to culture and so fall in a middle ground between society and environment, properly designated. This middle ground is a conceptual no man's land into which the concepts of society and of environment can be expected to expand alternatingly and improperly, unless some additional terminology is introduced that will effectively restrict society and environment to their proper provinces yet leave no part of observable reality unaccounted for.

What additional terminology is needed becomes apparent when we consider the manner in which the concept of a system is relevant to our discussion at this point. The term system has been much used and much abused in recent years, but for our purposes we need to take it in its long-established sense where we would speak of an atom, a molecule, or an organism as a system. A good definition is provided by Radcliffe-Brown: "a set of entities in such relation to one another as to make a naturally cohering unity" (1957:20). An acquaintance with reality should suffice to convince us that a human society, despite the common use of the phrase "social system," is never a complete system in itself. It always forms part of a larger, pragmatically complete system. This larger system is "pragmatically complete" in that it is self-contained, having within it all that is needed for its operation as a system exploiting its environment. The composition of and proper nomenclature for this distinctive type of system may be indicated briefly.

Every human society creates, uses, and lives in intimate association with a body of nonhuman things of human manufacture, the artifacts or material culture pertaining to that society. The relationship between a human society and its artifacts is as intimate as that existing among the members of the society itself, and also as significant and reciprocal. There is no human society without an associated material culture. The two are in mutual dependence: such artifacts can only be made by human agency, and human beings individually and collective come to depend on artifacts for their survival and manner of living. The members of a given human society plus the artifacts they produce form a set of components that in every case proves to be (1) organized, and (2) individually modified to fit properly within the organization of what we can recognize as a complete or total system. This total system may be called with no inconsistency "a culture" or "a cultural system"—terms which may be used interchangeably.

A cultural system, then, consists of (1) a set of material components that includes (a) a set of human components (the members of the human society) and (b) a set of nonhuman components (the artifacts comprising the material culture); (2) an organizational network of interrelationships and interactions binding together (or linking) the material components of the system, both human and nonhuman; (3) a set of modifications imposed by the operation of the system upon the material components, adapting them to function properly—to look and act as they should—within the system, this set of modifications being divisible into (a) a set of physical modifications (changes in form or chemistry) imposed mainly on the nonhuman components of the system, and (b) a set of neural modifications (language, ideas, attitudes, skills) imposed mainly on the human components (Weiss 1969:43; compare Folsom 1928:22-24; Wissler 1938:74). That part of the overall organization of a cultural system which links
only the human components may be called the “social organization” of the culture; that part of the overall cultural organization that links the nonhuman components to each other and to the human components may be called the “technical organization.” The set of neural modifications present in a cultural system at a given time may be called that culture’s “corporate heritage.” A “corporate heritage,” then, may be defined as the sum total of all linguistic, ideological, attitudinal and “skill” phenomena existing in a particular culture at a particular time (Weiss 1969:16, 46). That part of the corporate heritage which comes to lodge in any particular human component’s neural apparatus may be designated as that individual’s “mental content” or “psychic structuring.”

As Wissler once remarked, “The what we think is largely determined by our culture” (1916b:196-197). We find further justification for these understandings in the writings of Goldenweiser: “The content of any particular mind . . . comes from culture . . . The cultural content [of the mind] is a heritage of the past” (1933:59, 10n.). Every human being is born into some human society, and so into some cultural system, and while maturing biologically is subjected to a barrage of neural modifications that are imposed, inculcated and internalized through that process of training, of education to the entire culture, which we call enculturation (of which “socialization” is only a part). In this way a culture repeatedly extends its corporate heritage to each new member of the society. No individual will have all of his culture’s corporate heritage contained in his mental content, but each individual will have some part thereof. With regard to this last point, Mead has similarly recognized that “no one person . . . ever embodies all the intricate detail of his culture” (1955:5; see also Linton 1936:84, 271, 1938a:426, 433-434; Herskovits 1948:22).

Bidney has argued that the word heritage, where it has been used in the anthropological literature, implies a “static, impersonal conception” and “fails to take into account the fact of novelty and change in cultural life” (1947:380, 385; see also Kroeber and Kluckhohn 1952:49). The corporate heritage of a culture should indeed be viewed as a dynamic, changing reality, the word heritage being used to suggest the passing down of its elements from mind to mind, and its continuity from the past through the present into the future, whatever changes it may undergo as additions are made and losses are sustained over time. An individual, operating with the fraction of his culture’s corporate heritage allotted to him, can produce novelties—extending what exists along some possible avenue of change or development—in this way changing not only his own mental content but also the corporate heritage of which it is a part.

The traditional alternative to equating society and culture has been to treat them as mutually exclusive. “For the sake of clarity, the two concepts, social and cultural, must be rigidly distinguished and their meanings sharply defined” (Stern 1929:266; see also, for example, Landis 1935:52; Linton 1940:870; Steward 1950:99). Frequently this understanding is expressed in terms of a society (or of human beings) “having” or “carrying” culture (or a culture). Stern himself wrote of “the associations of individuals that carry culture,” of “individuals conveying culture” (1929:270). “Society carries culture,” argued Kroeber (1952:68, see also 38, 51, 104, 1915:283, 1928:326, 1948:254, 265, 274). Many others have provided similar articulations of this idea (see, for example, Dollard 1939:52; Gastil 1961:1287; Goldenweiser 1933:63, 1940:164; Hoebel 1956:170; Kluckhohn 1951:87; Linton 1936:84, 283; Murdock 1932:205-206, 1940:365, 1945:136, 1949:83, 1953:478; Naroll 1964:283-284, 291; Steward 1950:97; Willey 1929:206n.). Beals and Hoijer’s standard textbook reiterates the understanding that “each human society has its own culture” (1965:604, see also 265, 291, 705). As summarized by Ina Brown, “a society is not a culture; it has a culture” (1963:6).

The view presented here is that both these alternatives are unsatisfactory: society
and culture are not to be taken either as equivalent or as mutually exclusive. Instead, the relationship between them which makes best sense is of a third kind. Society (here referring specifically to human society) and culture are indeed distinct, but they are distinct in that one is more extensive and includes the other. By our definitions, each cultural system contains within it one (and only one) human society; the sum total of all cultural phenomena includes within it all human social phenomena. Kroeber once wrote that "no anthropologist would concede for a moment that social, economic, or political structure and functioning were something outside the totality of what he considers culture," yet he spoke of "one of the more obscure or confused questions: how social structure can be equally 'social' and 'cultural,' while no one would make such a claim for religion or art" (1952:154, 152). The difficulty Kroeber saw is resolved at once with the simple solution offered here: the cultural contains all that is humanly social plus all other human nongenetic phenomena. This solution has one further advantage: in many contexts, "society" and "culture" can indeed be used interchangeably, as when we speak of a human being as a member of a society or of a culture. We need only retain the awareness that such interchangeability is the consequence, not of the terms being equivalent, but rather of the one being a part of the other. In other contexts, the two terms would not be interchangeable since, for example, an artifact would be a part of a culture but not of a society. As Radcliffe-Brown once noted, artifacts "are part of a traditional system (i.e., what we call a culture system . . . )" (1957:53).

That at least the organization of society is a part of culture has been maintained by many throughout the social sciences (see, for example, Bagby 1953:542; Bartlett 1923:177; Beals and Hoijer 1965:287-288; J. H. M. Beattie 1955:2; Boas 1930:100, 1938a:155, 159, 1962:132; Case 1924: xxxiv; Folsom 1928:22; Goldenweiser 1914:434; Lowie 1953:531; Kroeber 1952:154, 1953:366; Kroeber and Kluckhohn 1952:176; Malinowski 1931:621, 1939:938, 1943:651, 1955:162; Wissler 1916a:661, 1938:74-75). "Anthropologists," according to Kroeber and Parsons, "are . . . given to being holistic and therefore often begin with total systems of culture and then proceed to subsume social structure as merely a part of culture" (1958:582, see also 583). These authors, in a move that could only please the sociologically oriented by downgrading or trivializing the culture concept, proposed that "culture" be defined "more narrowly" as excluding social organization (1958:583; see also Parsons 1957:56). Gastil has suggested that this move, which "seems currently accepted by many anthropologists," also "seems neither very objective nor productive" (1961:1281, 1284). Nor was the proposal a novel one: Malinowski noted critically years earlier, "Social organization is often regarded by sociologists as remaining outside culture" (1931:622).

With the understandings thus far set forth, it becomes quite clear what the limits of the concept of society are and how the concept of culture permits us to go beyond those limits to deal with all the problems traditional to anthropology. These problems include what Gumperz clearly recognized to be "subjects which decidedly do not belong to sociology, such as the development of implements, the spread of domesticated animals, the influence of the use of metals, and the like" (quoted in Lippert 1931:x-xi). These very subjects, falling outside the study of society per se, have a significance and interest in themselves equal to that of any strictly sociological concern; they have a significance and relevance of the highest order for questions of social change and development; and they are major areas of interest in cultural anthropology (but not in sociology) from its beginnings a century ago. Clearly, a focus on society rather than on the more ample concept of culture is restrictive and inhibiting even in the consideration of strictly sociological questions, which so frequently require us to explore what
Kroeber called "aspects of culture, such as religion, economy, technology, environmental relations, that extend far beyond the structure and functioning of society sensu streito" (1952:108). The interdependence of the humanly social and the rest of culture within a single unified cultural entity was recognized by Goldenweiser many years ago: "Through the functional association of social units with other aspects of culture, the social system and the rest of the culture of a group are constituted an organic whole, and neither can be understood in dissociation from the other" (1914:436; my italics; see also Gary 1929:181-182; Macleod 1923:200n.; Malinowski 1931:621). The concept of culture definitely provides us with more ample intellectual room than the concept of society alone, in dealing with human matters. The position of social anthropologists regarding these issues is on record: "Except for a limited range of problems bearing on economics and ecological adjustment, no field-worker should today waste his time recording the tiresome inventories of artefacts and details of technology which come under the heading of 'material culture' " (Piddington 1957:557).

An unusual characteristic of this presentation is that culture emerges as the master term and concept that subsumes not only all human social phenomena but also human beings themselves as members of the human societies incorporated into their respective cultural systems. To call a human being a component of a cultural system—and so an element of culture, a cultural phenomenon—should prove shocking to those for whom human beings only "have" or "carry" culture. Yet by implication this idea has long been accepted in anthropology. What other interpretation can be given to the following statements gleaned from the writings of so many eminent anthropologists, what interpretation other than that human beings are to be taken as parts of the cultures to which they pertain? "We must understand the individual as living in his culture," wrote Boas (1959:xvi), who also used the phrase "the culture in which he lives" in the same sense as "the society in which he lives" (1962:14-15). Goldenweiser wrote of "man, being a part of culture" (1933:63) and "a group within a culture" (1937:493). Kroeber wrote of "individuals being parts of a culture" (1952:18, see also 42, 1948:294). Mead has spoken of "a tribe" as constituting the "members of a human culture" (in Tax et al. 1953:355), and of "the behavior of members of one culture as compared with another" (1955:5). Wissler was more dramatic: "Everyone is born, lives and dies in a culture" (1938:vi, xi). This listing by no means exhausts the record of statements to this effect (see also, for example, Blumenthal 1940:583; Braidwood 1967:30; Herkoviets 1933:68; Laguna 1949:389; Malinowski 1943:650, 1944:89; Métraux 1953:350, 358; Winston 1933:4, 6-7, 164, 205, 231). One voice raised against this usage, was that of a sociologist: "Some writers extend the term 'culture' to designate the living group of persons as well as the abstracted habits of the group; this is inexpedient since it leads to confusion. For the actual group, conceived as an association of persons, 'society' should always be used" (Dollard 1939:56; see also Goodenough 1971:38n.). Kroeber and Parsons, holding similar sentiments, proposed that all such statements be translated out of existence: "To speak of a 'member of a culture' should be understood as an ellipsis meaning a 'member of the society of culture X' " (1958:583; see also Parsons 1957:58n.). But the statements themselves give no indication that their authors had such an ellipsis in mind. Here we have a curious situation: whereas anthropologists have not consciously defined culture to include human beings and in most cases would be indignant at the suggestion, there is a chronic tendency to slip into just such a manner of indicating the relationship between the two. The explanation we may offer for this curiosity is that anthropologists over and over again, as a result of their contact with cultural realities, have come to recognize unconsciously the true relationship existing between cultural systems, properly conceived, and the human
beings within them. There has simply been a certain resistance undoubtedly stemming from the strong tendency to view society and culture as mutually exclusive, a tendency that even Tylor's definition appears to manifest. A close reading of Tylor's phraseology, however, suggests that a loose interpretation would permit us to equate his conception with the one proposed here. When anthropologists have come to accept consciously the view that human beings are parts of cultural systems, we will have risen to the level of sophistication of the Bororo, reported by Lévi-Strauss: "If the Bororo's thought—like that of the anthropologist—is dominated by the fundamental opposition between Nature and culture, it follows that they go beyond even Durkheim and Comte and consider that human life should itself be regarded as a department of culture" (1961:219). Sad to relate, Lévi-Strauss has chosen for himself the "mutually exclusive" point of view, as where he writes of "a sociological, rather than a cultural, standpoint" (1969:188; see also Charbonnier 1969:40).

There is every indication that it will be productive to consider each and every human being as a cultural phenomenon as well as a cultural product—born into a given cultural system and shaped by that system. Although they retain their status as biological entities, all human beings are caught up in cultural systems and so take on the added status of cultural components. Everything biological in man, including whatever genetically-established drives and propensities he may have, can be expected to undergo a subtle change—a "sea-change"—through enculturation to become, in an important sense, cultural. As Judd noted, "inherited traits are modified and in some cases wholly transformed by the demands of society" (1926:1). We may recognize eating as a definitely biological matter in man as in all other organisms but, in the case of man, when, where, what, how often, etc., are all regulated or set by the cultural system. Coughing is without question a biological characteristic of man, but there will be cultural standards regarding the manner in which coughing may be expressed (whether it should be covered or stifled under certain circumstances, for example—or allowed fullest expression, as at a concert). There is the predominantly cultural cough of the sort that Bernard Shaw called the "modest cough of the minor poet." Similarly, laughter is a biological trait of mankind, but whether, for example, it will be the "ha, ha, ha" of English-speakers or the "ja, ja, ja" of Spanish-speakers will depend on which language is spoken in the culture (compare Winston 1933:192-194; Malinowski 1939:943, 1944:68, 88, 94; Kluckhohn 1951:87-88).

Stature, girth, physiognomy, indeed all of an individual's phenotype, are affected and altered by what the culture in which he exists has to offer in the way of experience, diet, and so forth. And this is quite apart from the massive genetic transformation which mankind is believed to have undergone as a result of existing within cultural systems (Anon. 1971:181-187; Brace 1964:118-119, 124-126; Montagu 1952:73-74). If we take culture to be, in Kroeber's words, "all those things about man that are more than just biological or organic, and are also more than merely psychological" (1948:8; my italics), then surely the individual as such, while retaining his status as a biological phenomenon, emerges as a cultural phenomenon as well, since he cannot be said to be just biological or merely psychological. The genetic and nongenetic in man are not mutually exclusive categories: a particular human phenomenon can be both, i.e., partly the direct expression of genetic inheritance and partly not. We are moved to recognize the truth of the statement by Lord Monboddo, that "man form[s] a little world of his own, of which he is the sovereign, and which may be called the world of Art, in contradistinction to the great world of Nature . . . . The greatest work of art . . . is man himself, as we see him" (Burnet 1967, 2:2).

With these illustrations, we can see in new perspective the relationship between physi-
cal anthropology and cultural anthropology. For man, the genetic is subsumed under the nongenetic. Physical anthropology thus appears as a part of cultural anthropology, that part which treats of the biological characteristics of the human components of cultural systems. On the model of biochemistry (the study of molecular structure and behavior within organic systems), physical anthropology might be given the alternative designation “culturobiology.”

HUMANNESS AND CULTURE

Let us pause at this point in the argument to consider how well the elements of Tylor’s definition enter into the present formulation. Tylor described culture as a “complex whole,” that is, as a system—a total, unified, integrated, holistic system of a sort which can be called “a culture” or “a cultural system.” He then proceeded to list examples of what he was referring to—“knowledge, belief, art, morals, law, custom”—all of which have one characteristic in common: they are nongenetic. The list is explicitly left open ended to include all other kinds of nongenetic phenomena (“capabilities and habits” in the widest sense). The restriction which Tylor does place on the concept of culture is that it be limited to mankind in its application, that it be reserved for what is “acquired by man.” By anthropology’s most authoritative definition, then, culture is something exclusively human and found in association with no other species. Tylor thus intended culture to be taken as the sum total of all human nongenetic phenomena, which can be recognized as the generic definition of “culture” set forth in this paper. Finally, Tylor recognized that culture is generated by “man as a member of society,” conforming to our understanding that a human society necessarily forms the nucleus of every cultural system. Without human beings there could be no culture and no cultural systems, by definition, and without the social nature of human beings ensuring that they will always be found in societal groups, cultural systems could not be maintained for lack of continuity from one generation to the next.

“It is hardly conceivable that a non-social animal could develop culture” (Gower 1937:358; see also Malinowski 1939:956).

Tylor restricted culture to mankind. Ever since, there has been a pervasive understanding in anthropology (and elsewhere) that whatever culture is, it is limited to the human species. “Culture is the distinctly human trait,” wrote Wissler (1916b:195), and Ellwood insisted that “While all human groups possess culture, no animal group possesses culture” (1927a:4, see also 8, 71, 1927b:12). Equally strong statements have been forthcoming from scholars the stature of Kroeber—“Culture is the special and exclusive product of men, and is their distinctive quality in the cosmos” (1948:8, see also 10, 253, 849, 1915:286, 1928:340-341, 1952:10, 31, 157); Dobzhansky—“No animal, not even the anthropoid apes, can acquire the rudiments of human culture” (1955:4-5); and Hoebel—“Human beings are unique among all the creatures of the animal kingdom in their capacity to create and sustain culture” (1956:168; see also Bain 1929:85; Case 1924:xxix; Count 1958:1049; Dittmer 1960:44; Freud 1930:49-50; Herskovits 1948:37-38; Hollins 1962:16; Köhler 1925:277; Kroeber and Kluckhohn 1952:145; Linton 1936:78; Malinowski 1931:633-334; Stern 1929:266; Stewart 1964:431; Warden 1936:3).

Yet, what grounds are there, other than arbitrary definition, for distinguishing (with the use of the term culture) human nongenetic phenomena from nongenetic phenomena in other species? The distinction cannot be made on the basis of behavior that is learned as opposed to behavior that is not. Defining culture as “nongenetic phenomena,” as “learned behavior,” as “acquired characteristics” does not restrict culture to mankind since a considerable amount of learned behavior is now known to exist among many nonhuman species. Such a definition would have sufficed when there was no information to challenge the belief that animal behavior is entirely instinctive and human behavior entirely learned, as
when Pliny wrote: "While other animals have an instinctive knowledge of their natural powers... man is the only one that knows nothing, that can learn nothing without being taught; he can neither speak nor walk nor eat and, in short, he can do nothing at the prompting of nature but weep" (1957:2). Certainly this position cannot be maintained today. Yet many anthropologists and sociologists, in their formal definitions or expositions, have simply equated culture with acquired or learned behavior (see, for example, Aberle et al. 1950:102; Anon. 1971:325; Bain 1942:94; Beals and Hoijer 1965:249; Benedict 1959b:13; Bidney 1944:34; Dollard 1939:54; Ellwood 1927a:4, 6, 1927b:17, 35; Gastil 1961:1282; Goodenough 1971:18-19; Herskovits 1948:25, 165, 625; Hoebel 1956:168, 1966:5; Kluckhohn 1949:26, 1951:87; Kroeber 1948:253-254; Kroeber and Kluckhohn 1952:58-59; Linton 1945:46, 1955:3; Mead 1953:22; Murdock 1932:201, 1940:364-365, 1956:247; Parsons 1957:58; Spiro 1951:32, 37; Steward 1950:98, 1955:44; Stewart 1964:431; Tozzer 1925:56; Voegelin 1951:370; Warden 1936:32-33; Wissler 1916b:195).

As Voegelin pointed out, "if ever the... statement were made (that all learned behavior is culture), it would necessarily imply that infrahuman animals have culture" (1951:370; his italics). Boas was thus led to ponder the possibility that culture exists among nonhuman species (1930:79, 1938a:163; see also Bain 1942:88, 94; Kroeber and Parsons 1958:583; Radcliffe-Brown 1957:91; Tylor 1875:107). This view has indeed resulted in a widespread application of the term culture to the nonhuman world, particularly by psychologists and the recently-emerged ethologists. The tradition was set by Hart and Panzer (1925), who answered the question "Have Subhuman Animals Culture?" in the affirmative. It was maintained by Markey, who argued that "culture exists at least in an elementary form in all groups" (1929:150; see also Harlow 1959:40 and, by implication, Dollard 1939:57). The general thinking of ethologists is well illustrated by Goodall's discussion of the twigs which chimpanzees modify to dig for termites: "It seems almost certain that this method of eating termites is a social tradition, passed from ape to ape by watching and imitation. As such, it must be regarded as a crude and primitive culture" (1963:308; my italics; see also Yerkes 1943:51-52, 189, 193). These writers are not anthropologists and so lack the anthropologist's sense, arising from familiarity with the ethnographic literature, that culture is something peculiarly human. They have misapplied an anthropological concept. Whatever Bidney's status, he followed the same logical route—"All animals which are capable of learning and teaching one another are capable of acquiring culture. Hence not culture in general, but human culture... is peculiar to man" (1947:376; his italics)—and ended up talking about "monkey culture" (1947:381). The interpretations given to their findings by primatologists and other ethologists have affected others within the anthropological community as well: "There is growing evidence that apes and even some lower primates have some degree of culture" (Bryan 1963:297, see also 298, 305); "It is worth noting... that cultural transmission of behaviour is well attested in many animals other than apes" (Andrew 1963:301; see also Kelemen 1963:304). Tylor's guidelines absolutely preclude any such extension of the concept's meaning: within the Tylolean framework, culture and man are coterminous.

In the misapplication of the word culture by nonanthropologists, we witness a curious example of the transformation of a word's meaning outside the discipline where it originated, to the point where it is unrecognizable. The steps in this transformation might be traced as follows: Tylor was attempting to define "culture" as "all human nongenetic phenomena." This came to be comprehended as "all human learned behavior" even though human learned behavior is only part of culture thus defined and is part of culture not because it is learned but because it is human (compare
The “human” dropped out, leaving “learned behavior” which, it was soon recognized, is found among many animals besides man. We have arrived at the point where “culture” is defined as “animal learned behavior.” There is no reason to presume, however, that the transmutation will end here. The conclusion of the “logical” process can be predicted. The “learned” will drop out, leaving “animal behavior,” the most characteristic form of which, for (non-human) animals, is instinctive. “Culture” will come to mean “instinctive behavior,” the very antithesis of its original anthropological significance. This final step has already been taken by the camp followers of science: Ardrey speaks of “cultural instinct” and “that truism of zoology, the capacity of a species to include in its genetic make-up cultural attitudes” (1961:12, 201 et passim). Only one measure can save the traditional anthropological concept of culture from decomposing in this way: “culture” must not be defined as “learned behavior,” human or otherwise.

There is indeed something distinctive about mankind that colors everything human. The exclusive possession of this characteristic by mankind provides adequate justification for setting apart the category of human nongenetic phenomena, giving that category the distinguishing name “culture.” The characteristic in question should come as no great surprise, having been recognized as early as Aristotle, who argued that “man is the only animal whom she [Nature] has endowed with the gift of speech” (1941:1129). The recognition that the possession of language distinguishes man from other animals was expressed subsequently by many writers, including Hobbes (1939:136, 140-141), Diderot (1943:47), Burnet (1967, 1:1-2), James Beattie (1968:1), Condorcet (1959:165), Morgan (1868:279), Boas (1911:96, 1938a:164), McCormack (1918:9, 56-57), Köhler (1925:277), Tozzer (1925:36-37), Laguna (1927:53n.), Park (1927:737), Kroeber (1928:330, 341, 1948:840), Stern (1929:267), Malinowski (1931:633-634), Murdock (1932:211-213), Herskovits (1933:67), Linton (1936:80, 82), Voegelin (1951:369-370), and, in recent years, Lévi-Strauss (1961:389), Hockett and Ascher (1964:139). This understanding was perhaps most engagingly summarized by the anonymous “Old Contributor to Maga” (1875:3):

An ape with a pliable thumb and big brain,
When the gift of the gab he had managed to gain,
As a Lord of Creation established his reign,
Which nobody can deny.

What are the relevant characteristics of language? Language is a code (Saussure 1959:14). Like the genetic code which transmits genetic information from one generation to the next in a society, the linguistic code is the primary mechanism by which mankind transmits nongenetic information from one generation to the next. Language serves to transmit and to maintain the corporate heritage without which a cultural system would collapse. The propensity for language—the ability to create, learn and use language—is biologically given in the human genus as its most distinguishing characteristic. But any particular language is nongenetic (not genetically inherited), hence cultural. Language is thus part of culture, yet is unique in that it ensures the existence and maintenance of all of culture. As Warden noted, “It seems altogether unlikely that a culture could emerge and maintain itself without the support of a well-developed capacity for vocal language” (1936:22). This understanding was expressed even more forcibly by other writers, such as Ellwood—“Verbal language, we have every reason to believe, is the first element of culture, and becomes the main vehicle of the cultural process” (1927a:12-13, see also 4-6, 72-73, 1918:784, 792, 1927b:12, 34-35); Kroeber—“If...the relational forces in culture phenomena are the intrinsic ones, then the indispensability of speech to the very existence of culture becomes understandable” (1928:341, see also 1948:9); Bloch and Trager—“Language, then, is not only an
element of culture itself; it is the basis for all cultural activities" (1942:5); and Bidney—“Anthropologists and sociologists are in general agreement that human culture is acquired or created by man as a member of society and that it is communicated largely by language” (1944:30; see also Boas 1938a:164; Folsom 1928:102; Goldenweiser 1937:41; Hoebel 1956:170; Howells 1962:16; Judd 1926:214; Laguna 1927:12, 65n.; Lewes 1879:80; Linton 1936:82; Malinowski 1931:633; Murdock 1932:214, 1940:365; Stern 1929:267; Tax et al. 1953:262, 296; Thomas 1936:177; Trager 1964:163; Voegelin 1964:304).

Language is a form of animal communication, a form restricted to a single animal genus, *Homo*. Empirically there can be no question but that language is a powerful means of communicating nongenetic information, as powerful and reliable as the genetic mechanism is for transmitting genetic information and far more powerful than the cries and gestures used for communication elsewhere in the organic realm. Language proves sufficiently powerful to carry the burden of any culture’s corporate heritage down through the generations. Its absence in the nonhuman world would appear to account for the sporadic nature of whatever learned behavior there may be. Such nonhuman learned behavior (nongenetic phenomena) rarely survives a single transmission for lack of a suitably powerful means of transmitting and so maintaining that information (see Ellwood 1927a:4-5; Murdock 1932:212). This situation was transformed by the introduction of language, the advent of which some two million years ago (presumably) ushered in both man (the genus *Homo*) and culture. If it be argued that it is not proper to use any but some physical criterion or criteria to distinguish a genus, we may suggest that the advent of language must have marked some change in the structure of the brain to produce the linguistic faculty (compare Darwin 1936:462; Ellwood 1918:784; Herrick 1926:19-21, 350; Folsom 1928:3, 14, 107; Bryan 1963:300). If it be argued that there is inadequate evidence for the existence of language two million years ago, that the early tool traditions do not provide valid grounds for inferring the presence of language (see, for example, Clark 1964:155; Wescott 1964:165), we must insist that man and culture date only from whenever language did appear (compare Ellwood 1918:792, 1927a:70-73; Judd 1926:160; Kroeber 1948:225). In this last regard, the present author favors the position taken by Linton: “Language is so necessary to the existence of human life as we know it that it seems probable that it developed at the same time, if not before, such first steps in the human direction as the use of tools and fire” (1936:81).

In any event, language is so much more flexible and self-generative than all forms of nonhuman animal communication that it stands apart from them. Mankind has come to rely on language as much as on the genetic mechanism for the maintenance of its existence. It is possible that certain information transmitted by the genetic code in other species has come to be transmitted by the linguistic code in human societies, so that if divested of language human beings might prove to be incapable of surviving even biologically. It is definite that the bodies of information being transmitted by the genetic and linguistic codes respectively are complementary. Thus, for example, each individual human being is genetically coded to learn a language—any language—as a genus specific form of communication, and during the appropriate period of childhood will absorb a language like an eager sponge; but the language itself, of course, is part of the cultural information that the linguistic code transmits. The genetic mechanism seems to have relinquished to the linguistic mechanism, entirely or to a degree, other functions ordinarily inherited genetically in nonhuman species. Is a human being genetically geared to search for food when he is hungry, or to recognize what is edible? Does genetics alone provide him with urges specific enough to ensure propagation? The small amount of learned behavior among nonhuman species
seems to have taken some of the burden off the genetic mechanism in these respects; how much more so for man with the vast amount of information he receives by means of the linguistic mechanism!

All forms of animal communication, both human and nonhuman, employ signals (frequently called signs in the older literature) to transmit meanings. These signals take on vocal, gestural or some other form and may or may not be combined into message-bearing constructs. In languages these signals are called words. What distinguishes language from all nonhuman forms of communication was recognized long before anthropology arose to ponder the question further: in linguistic communication the meaningful units are “artificial,” with “arbitrary,” “conventional,” “voluntary” meanings. Thus, Rabelais wrote: “All Speeches have had their primary origin from the Arbitrary Institutions, Accords and Agreements of Nations in their respective Condescendments to what should be noted and betokened by them. An Articulate Voice (according to the Dialecticians) hath naturally no signification at all; for that the sence and meaning thereof did totally depend upon the good will and pleasure of the first Deviser and Imposer of it” (1948:395; see also, for example, Augustinus 1952:13; James Beattie 1968:11, 14, 53; Browne 1969:2-3, 10, 129; Burnet 1967, 2:205; Diderot 1943:60; Hobbes 1939:136; Locke 1965:231; Plato 1937:173-174; note Kroeber 1923:107, 1948:223; Linton 1936:83). The recognition of what Lévi-Strauss has called “the Saussurean principle of the arbitrary character of linguistic signs” (1963:209; his italics; see Saussure 1959:10, 67, 69, 74, 113) led to designating linguistic signals by the distinguishing term “symbols.”

Thus, Bacon could write of words not only as “the token and signs of notions” but also as the “symbols of notions” (1939:16, 30), and Diderot could write of “the symbols of speech” (1943:116). Over the last hundred years, the symbolic nature of language, that language is a major category of symbols, has long been recognized among the authentic contributors to anthropological theory as well as among writers in other disciplines. Judd noted, “It needs no long discussion to show that speech is a kind of symbolism” (1926:164). The tradition was established in anthropology after Tylor stated that “the power of using words as signs to express thoughts with which their sound does not directly connect them, in fact as arbitrary symbols, is the highest grade of the special human faculty in language” (1875:118, 1910:116; see also Lewes 1874:154, 1879:80). Powell could write that “All human language is symbolic” (1900:34); and Boas could write of “words that serve as symbols” (1930:100, see also 1938b:612). “Language,” explained Sapir, “is a purely human and non-instinctive method of communicating ideas, emotions, and desires by means of a system of voluntarily produced symbols” (1921:7, see also 3, 10-17, 21); according to Herskovits, “language . . . must be regarded as the identification of certain arbitrary sound-symbols with certain experiences in the life of those who employ these symbols” (1933:74). Expressions of this understanding in the literature of the social sciences are legion (see, for example, Cooley 1909:76; Ellwood 1918:784, 1927a:13, 69, 167; McCormack 1918:12, 56; L. Bernard 1925:329; Herrick 1926:19, 21, 327; Laguna 1927:6, 11-12; Folsom 1928:3, 14, 102; Bose 1953:11; McDougall 1929:35; Malinowski 1931:633, 1939:940, 955, 1944:24, 150, 1960:141; Breasted 1933:394; Linton 1936:80; Radcliffe-Brown 1957:100; Thurnwald 1937:199; Lundberg 1939:178-179, 221, 278; Murdock 1940:366n.; by thirty, even forty, years ago, the understanding was pervasive).

The relationship between signals in general and symbols in particular can be stated simply: symbols are a special subcategory of signals, they are those signals with arbitrarily associated meanings, they are what we may call “arbisignals.” This relationship was effectively established by Cassirer when he wrote of “the artificial symbols, the ‘arbitrary’ signs which consciousness creates in language, art, and myth” (1953a:105; see
also Burnet 1967, 2:203). Furthermore, symbols or "arbisignals" are restricted in their occurrence, being found only in association with human beings within cultural systems (compare Herrick 1926:350-351; Gary 1929:189).  

It now becomes possible to generalize: language is one form, but the main form, of symbolic communication. As Malinowski phrased it, "Language is the most important type of . . . symbolic signs" (1931:633, see also 1939:955). Other forms, such as writing, the telegraphic code, maps, blueprints, religious and political symbols (compare Folsom 1928:23; Sapir 1934:493; Saussure 1959:16), are also restricted to man and found nowhere else in nature. Language, as the most important form of symbolism, is found in all cultures, while other forms, derivative and optional, have relatively restricted distributions among the cultures of the world. Symbolic communication as a category, since it includes language for which this is unquestionably true, is critical for the existence and maintenance of cultural systems (Case 1927:907-908, 911-912, 915, 920; Ellwood 1927a:4n.; Park 1927:737; see also Malinowski 1939:955; Blumenthal 1940:573, 575; Bryan 1963:300). We conclude with man defined as the symbol-using animal (Kluckhohn 1942:56, 58, 78; Jensen 1963:326), as animal symbolicum (Cassirer 1953b:44). Cultural systems are those systems pervaded with symbolism, they are distinguished as those systems containing symbolizing components, organisms with the capacity to create, learn and use symbols who have actualized that capacity. Radin once remarked "it is universally admitted that symbolism permeates every aspect of primitive man's culture" (1954:29), a statement which can be generalized to all cultural systems both tribal and statal. Sapir expressed it well: "All culture is in fact heavily charged with symbolism" (1934:494; see also Thurnwald 1937:199-200).

All human nongenetic phenomena are not necessarily symbolic. Rather, symbolism—particularly in its most widely effective form, language—is required to maintain such nongenetic phenomena for human populations, allowing such phenomena to develop the varied and striking forms that they do. Consequently, wherever there is a species possessing the symbolizing faculty and utilizing it, the nongenetic phenomena associated with that species are for that reason distinguishable and may be called by a distinct name. Culture is the term we can employ with entire confidence, since there has always been the tendency to use it in this way. Moreover, wherever a species possesses the symbolizing faculty and utilizes it, the members of that species are caught up in total supra-individual systems that also may be given a distinctive name. "A culture" and, alternatively, "a cultural system" are the terms advocated here for this purpose in keeping with the naming procedures followed in other sciences: we name the system after its distinguishing character or content. In other words, it is the arbitrary nature of human communication that makes non-arbitrary our conceptual restriction of culture to mankind. Elsewhere in the universe there may exist other life forms, however bizarre by our standards, possessing and utilizing a symbolic faculty, to whom the term culture would necessarily apply. But for this planet of ours, to the best of anyone's knowledge, only one life form has evolved with that faculty and made use of it: man. As Folsom noted, "the human brain is the only known mechanism in all nature through which symbols can be produced" (1928:190). "The human brain," asserted Herrick, "can fabricate symbols and abstractions; it can use language, numbers and equations, design machines, bridges, telescopes, and use them. The chimpanzee does not know the meaning of \( y^2 = 2 px, \) and he never can find out" (1926:290; his italics).

This argument holds as long as no symbolic communication is discovered "in nature," i.e., outside of those total integrative systems in which human beings are found. By and large, nonhuman animal communication is genetically determined (i.e., nonarbitrary)—the preponderance of animal cries
and posturing, the dancing of bees, etc.—or else noncommunicative mimicry—the “parroting” of parrots, porpoises, etc. What Wescott refers to when he asserts that “both fish and insects, not to mention birds and mammals, produce and respond to symbols” (1964:164) is unclear. Work with chimpanzees, however, is producing laboratory specimens capable of communicating symbolically in a simple but clear manner, even combining symbols to form message bearing constructs as in language (Hahn 1971:80, 86-89). The symbolic faculty as such no longer appears to be a human monopoly. As Bryan recognized, “If the process of symbolization of abstract thoughts does occur in a rudimentary form among other animals, we must conclude that... the capacity for the construction of culture is... only a difference in degree” (1963:301). One crucial consideration, however, should not be overlooked: chimpanzees communicating symbolically are only to be found in already existing cultural systems with their human society nuclei. We have succeeded merely in extending a modicum of symbolic behavior from the human components of a cultural system to some of its nonhuman components. Chimpanzees in the wild have given no indication that they exercise the weak symbolic faculty which we can no longer deny that they possess. Special qualifications will have to be made regarding our conceptual restriction of culture to man only if these laboratory chimpanzees start communicating symbolically with each other and then make their escape to the wild. Until then, the phrase “human culture” for this planet must be taken as redundant. Experimentation and investigation continue in the area of animal communication, but as long as we can isolate some discernible difference between human and nonhuman communication, however minuscule or subtle, we can justify the conceptual limitation of culture to man so necessary to make sense of the indubitably unique nature of human accomplishment. Whenever we pick up a book, view a work of art, recite a poem, or inspect a temple, we should be aware that nothing comparable exists “in nature,” that we are confronted with a difference not in quantity but in kind. “There is an immeasurable difference between the rudest man and the highest lower animal,” wrote Tylor on one occasion, providing as justification for this assertion the observation that “to use words in themselves unmeaning, as symbols... is scarcely to be traced in any lower animal” (1875:120, 109, 1910:116, 110, see also 1904:123; Lewes 1874:144, 1880:484-485; Judd 1926:73, 323-324; Folsom 1928:2, 103, 125).

TERMINOLOGY AND CULTURE

“Culture is still but incompletely known,” wrote Gillin (1939:52) with insight. The loose, vague, nebulous understanding and use of the word culture has resulted in many confused discussions and futile arguments. The mental confusion has been reflected back on the reality, making mystical something as matter of fact as culture, giving it the character of a blurred miasma floating over people’s heads somehow directing their activities. A similar impression was made upon Bagby: “Culture is often thought of as a set of Platonic ideas... floating in the air over the heads of the culture-bearers” (1953:543; see also Spiro 1951:31, 37). Bagby was surely referring to Kroeber’s curious identification of “civilization” with “ideas in the Platonic sense” (1952:38; his italics). It was Kluckhohn who noted the similarity between Kroeber’s “total-culture pattern” and the mysterious Zeitgeist of Teutonic thought (1951:93). Mead has indicated how the prevailing understanding of culture borders on that of a “group atmosphere” (1953:22). Eggan has suggested a kinship between culture and the elusive “ether” of an earlier era in physics (1954:760). It is surprising to discover how many anthropologists have fallen prey to befuddled or mysterious notions about culture. An example of this tendency that has been a source of special bemusement to the present author is the following: “It is as if the basic pattern of the
culture must be reflected in the internal structure of each individual person; as if the individual were in some sense a microcosm and the culture to which he belongs a macrocosm. Each individual, like a Leibnizian monad, "reflects" the culture of his world from his own point of view and with varying degrees of clearness and confusion" (Laguna 1949:387; Kroeber and Kluckhohn called this "a balanced view" [1952:187]). A reader may be excused if he comes away from such verbiage with the distinct impression that "it's all done with mirrors."

In the light of what we have considered thus far, it is possible to set forth a consistent set of terms incorporating the word culture with definitions that clarify rather than obfuscate the reality and issues involved. Included in the list that follows are terms that do not contain the word culture. They are necessary, however, for defining the terms that do. The entire list is presented as a basic vocabulary for the realistic handling of cultural matters.

In terms of the definitions given, certain common manners of expression will have to be abandoned as meaningless or confused. Thus, if we accept the argument presented in this paper, it becomes meaningless to speak of two or more societies "having" or "sharing" the same culture. Such expression follows from the view that society and culture are mutually exclusive, a view which we have rejected. "Although we can say that each society has a culture," wrote Ina Brown, "it does not follow ... that several different societies may not share, at least to a large extent, a common culture" (1963:6), and Lowie wrote that "the same culture ... become the property of distinct races" (1929:34; see also Aberle et al. 1950:102; Anon. 1971:40; Kroeber 1948:254, 281; Murdock 1949:83). We may substitute for such articulations the understanding that two or more cultures (or cultural systems) may be very similar, may share many traits in common. Similarly, the statement that "China is a single state, but there are millions of persons of 'Chinese culture' who live outside that state" (Leach 1964:299) would require rephrasing in such terms as the following: "Outside the Chinese statal cultural system there are a number of China derived subcultures incorporated into other cultural systems." The migration of human components from one culture to another in any numbers produces the kind of phenomenon we call "the ethnic group," the "hyphenated Americans" in this country and similar subsocieties in other cultures.

Let us start, in true Aristotelian fashion, at the beginning:

1. Anthropology: the study of the sum total of all human phenomena.
2. Phenomenon: any particular observable thing, occurrence or property.
3. Human phenomenon: any phenomenon that owes its existence to the mere existence of man (the genus Homo).
4. Cultural anthropology: the study of the sum total of all human nongenetic phenomena.
5. Human nongenetic phenomenon: a human phenomenon that is not a direct expression of genetic inheritance.
7. Cultural phenomenon: any human nongenetic phenomenon. Cultural phenomena are directly observable, and form the empirical basis for our science. As Kroeber put it: "Genuine science['s] ... subject matter ... must be in nature and must consist of phenomena. My having learned how to write or being a Christian are phenomena; ... and so are axes and clothes and chairs; and they are all parts of culture" (1948:295-296).
8. Culture trait, or cultural trait: any category, class or kind of human nongenetic phenomena. This term has long been established in anthropology with the meaning indicated. It would be inexcusable for anyone in the discipline to confuse culture trait with cultural phenomenon, to write of a single or particular clan, hoe or horse as a "culture trait." The distinction is easily drawn: a pot is a cultural phenomenon;
pottery is a culture trait. Each culture trait has its own particular history of origin, diffusion and distribution among the cultures of the world.

(9) Cultural feature: a culture trait present in a given culture or cultural system at a given time. Such a trait may be spoken of as a feature of that culture. The use of the word "feature" as a technical term in anthropology was promoted by Steward, who wrote of "features" and "their integration in cultural structures" (1948:883; see also 1950:5, 48, 100; Goldenweiser 1913:277 et passim). Defined as it is here, the term serves to reconcile the opposing views of the "culture trait theorists"—Wissler, Kroeber, and the early Benedict—with their concept of the atomistic culture trait, and the functionalists—both Malinowski and Radcliffe-Brown—for whom there were only functionally interrelated parts of cultural (or social) systems (see Malinowski 1931:624-625, 1944:31-34, 149; Radcliffe-Brown 1952:186, 1958:72; Piddington 1957:521). The terms "trait," "feature," and "element" have been used interchangeably in the past (see Lowie 1918:531-535). It is here suggested that "trait" and "feature" be distinguished in the manner indicated and, further, that the phrase "cultural element" be used as a general term to refer indiscriminately to cultural phenomena and cultural traits or features whenever such a term is called for.

(10) A system: any observable existent consisting of discernible parts (or components) modified and organized in discernible ways to form an entity larger than themselves.

(11) A material system: a system whose components are material things.

(12) A culture, or cultural system: a material system consisting of a set of material components (human and nonhuman), a set of modifications (neural and physical), and a set of organizational relationships (social and technical). The sum total of these three sets of cultural phenomena is the total number of cultural phenomena in the cultural system at a given time. When these phenomena are classified, we derive the total number of culture traits present as features of that culture at that time. The human components must comprise a single human society, and the nonhuman components must be artifacts which they make and use (minus exports, plus imports). The biological analog of "a culture" or "a cultural system" is "an organism" or "an organic system," and not "species" as Murdock (1953:478) would have it.

(13) A society: for all nonhuman species, a group of organisms of the same species constituting a breeding population.

(14) A human society: a group of human organisms constituting a breeding population or a maximum political entity, whichever is greater in the given instance. In those cases where these two criteria coincide, where a single breeding population is controlled by a single political authority, the population is a human society. In those cases where, as is typical among foragers, a breeding population consists of several politically autonomous but intermarrying bands, it is the breeding population that constitutes the human society by this definition. In those cases where several breeding populations are under a single political authority, as in a caste situation or at least initially after conquest or confederation of several previously separate societies, it is the group of populations thus forming a maximum political entity that comprises the human society. The rationale for this approach is that a band, though politically autonomous, is not self-sustaining, since it does and must intermarry with other bands within the larger breeding population, which alone maintains itself down through the generations; conversely a caste, for example, is not self-governing and so has no independent existence apart from the sum total of all under the single political authority that does exist. In any event, the breeding populations and societies into which any species, human or nonhuman, is divided, are in a constant state of flux. The number of breeding populations or societies in a species changes over time as a result of fission, fusion and termination;
size and boundaries also change constantly. A society, like a breeding population, is a "temporary isolate" of a species; it comes into existence through either fission or fusion and passes out of existence through either of these means or by termination (in the extreme, or "Tasmanian," case).

(15) A subculture: a fraction or portion of a society distinguished on any grounds whatsoever—age, class, occupation, race, region, religion, sex, or any other—whether or not the subculture is recognized by the members of the society itself. Once a basis is selected, for whatever investigatory reason, the entire society is to be divided into a number of subcultures such that no one in the society is excluded. Although the concept is usually applied only to human societies, there might be reason for distinguishing subcultures in nonhuman societies, depending on the purpose of the inquiry.

(16) A subculture: a fraction or portion of a culture, or cultural system, consisting of a subculture and all other elements of the culture especially associated with that subculture. Subcultures in any particular culture are not entirely distinguishable one from another, since whatever sets them apart merges gradually into whatever commonality binds them together. Subcultures are usually more prominent in the larger, more complex statal cultures than in tribal cultures. As Steward has noted, "The culture of a modern nation is not simply a behavioral norm . . . Different groups of individuals are substantially dissimilar in many respects. They have subcultures" (1955:46; see also Kroeber 1948:274). An error to be avoided is viewing or describing subcultures as distinct cultures. This error is related to that of describing several societies as "having the same culture," both undoubtedly stemming from a misguided view of many anthropologists that a culture must be something internally homogeneous, without regard to societal boundaries. Yet, while it is true that tribal cultures (with which anthropologists traditionally are best acquainted) tend to be internally homogeneous, statal cultures tend to be internally heterogeneous, a situation that should cause no difficulty whatever. The error we are considering finds expression in such statements as "there may be more than one culture in a single society, and a single culture can exist in more than one society" (Anon. 1971:40). Malinowski committed the error we are considering when he wrote of "two or several cultures living under the same authority" (1960:261); Kardiner did the same when he asserted that "cultures are transmitted within a society from generation to generation" (1945:109). Clifton recently argued for this error in the following terms: "In the past few years the emergent nation of Indonesia has laid claim to and successfully obtained possession of the western half of the large island of New Guinea . . . Has the Indonesian culture . . . suddenly expanded to include the cultures of New Guinea? The answer is perhaps too obviously a firm no" (1968:20). On the contrary, in terms of our presentation, the answer to Clifton's question must be an indubitable "yes": the Indonesian cultural system today includes Western New Guinea, the former tribal cultures of which are now subcultures of the statal culture that has laid claim to their territory, at least to the extent that Indonesia does exercise political authority over them.

(17) Cultural component: any material thing, animate or inanimate, incorporated into a cultural system.

(18) Human component: a member of a given human society and consequently a component (material component) of the cultural system which has that society as its nucleus.

(19) Nonhuman component: an artifact in a given cultural system.

(20) Artifact: any material thing produced or modified by animal agency. This is to recognize that many nonhuman species produce artifacts: nests, hives, dams, etc.

(21) Cultural artifact: any material thing produced or modified by human agency.

(22) Inanimate artifact: in a cultural system, any inert material object fashioned (produced or modified) by human agency.

(23) Animate artifact: in a cultural sys-
tem, any living thing produced or modified by human agency—including all domesticated and tamed organisms, both plant and animal. Although we do not ordinarily think of domesticated plants and animals as artifacts, we must recognize them to be such. They conform precisely to our definition of a cultural artifact: they have been produced and modified by human agency. All species of domesticated plants and animals have undergone genetic change in the process of becoming domesticated, so that they no longer are the same as their wild progenitors. Some domesticated species have lost the capacity to propagate themselves, so can only survive in cultural systems with human assistance (see Darwin 1936:17; Sauer 1952:25). Optional physical modifications may be imposed on individual domesticated organisms, these varying from culture to culture (and in the same culture over time). Domesticated plants may be not only “produced” in the sense of being planted and tended but also “modified” through pruning, grafting, etc. Domesticated animals may suffer such modificatory indignities as being cropped, branded, gelded, etc. Some domesticated animals may be neurally modified, i.e., conditioned to behave in certain ways, either through training by a human agent or simply as an adjustment to the cultural system in which they find themselves. Animals caught in the wild and then tamed undergo the neural modification of becoming tame, and so they become cultural artifacts, entering the cultural system as animate nonhuman components. Tamed animals range from the pet parrot brought from South America to the Indian elephant incapable of being bred in captivity but captured and tamed to perform an important economic function in East Indian logging operations (Darwin 1936:548). Inanimate artifacts are found in all cultural systems; animate artifacts are found only in those cultures where domesticated or tamed organisms are in fact present.

(24) Material culture: the sum total of the artifacts in a given cultural system at a given time. These artifacts are invariably classifiable into artifact types or nonhuman component features of the culture. A complete inventory would include the artifact types and the number of each type present.

(25) Cultural modification: any modification imposed by the operation of a cultural system upon suitable “raw material” to transform that material into a properly modified component of that culture, looking and behaving as such a component should. Cultural modifications are impressed upon all components, both human and nonhuman, the “raw material” in the former case being the piling baby or, more accurately, the zygote (compare Beals and Hoijer 1965:252; Warden 1936:6). Any particular cultural component, then, consists of two fractions: one fraction is the raw material, drawn from outside the cultural system or generated within it, from which the component is fashioned; the other fraction is the sum of the cultural modifications imposed upon that raw material.

(26) Physical modification: a cultural modification involving a change in form or chemistry of the component in question. A ceramic pot is a good example of both kinds of physical modification. To make a pot it is first necessary to obtain suitable clay which serves as the raw material from which the pot will be fashioned. After suitable preparation, the clay must be given the shape of a pot, this being a physical modification of form; and then fired, this being a physical modification of chemistry. Only then is it a pot component in a culture, looking and behaving as a pot should. Without the presence in the culture of the particular cultural modifications involved here, there could be no pot, only clay. In the words of Confucius, “If an urn lacks the characteristics of an urn, how can we call it an urn?” (1955:48). Most physical modifications are imposed on the nonhuman components of cultural systems. Nevertheless, in every cultural system the human components are also invariably found to be physically modified so that they will look, and even behave, as human components of that culture should. Physical modifications of human com-
ponents vary from culture to culture and in
the same culture over time. Among the
common or well known modifications of
this kind are artificial deformation of the
skull; filing or extraction of the teeth;
cutting, shaving, or plucking of the hair;
puncturing of the nose, lips, cheeks, or ears;
trimming of the nails; binding of the feet;
tattooing or scarification of the skin; genital
mutilations including, in certain cir-
cumstances, castration. There are also
temporary physical modifications of human
components: tooth blackening, face paint-
ing, etc. The result of all this is a human
being who looks the way a human being
should in his culture. It is the physically
modified human being, not the hypothetical
“man in a state of nature,” who comes to
look normal in the eyes of the human
components of any given culture; the physi-
cal modifications of the human components,
indeed, facilitate for those components the
conceptual distinction between human
beings and the rest of the animal world.
Lévi-Strauss has written as follows about
the Mbaya of the Mato Grosso: “The nobles
bore, quite literally, the ‘mark of their rank’
in the form of pictorial designs—painted or
tattooed—on their bodies. These were the
equivalent of an escutcheon. They plucked
out all their facial hair—eyebrows and lashes
included—and recoiled in disgust from the
bushy-browed European: ‘the ostriches’
brother’ was their name for him” (1961:161; see also Darwin 1936:882, 887; P’u 1969:440n.). Within the Western tradition,
in the smooth-shaven days of Rome,
Lucian in one of his satires had an academ-
ian’s beard cut off by order of a god, whose
comment was “Yes, that’s much better.
Why, you look quite like a human being
now, instead of a goat” (1961:69; compare
Leviticus 19:27-28, 21:5 and Deuteronomy
14:1 with I Corinthians 11:14).

(27) Neural modification: a cultural
modification involving an imprint on the
neural apparatus of the component in ques-
tion. The process is one which we call
“learning” or the like. For the most part,
natural modifications are imposed on the
human components of a cultural system.
These are the neural modifications com-
prising all the linguistic, ideational, atti-
dudinal, and “skill” phenomena forming the
corporate heritage of the culture and the
mental contents of the various human com-
ponents in that culture’s society. Just as
physical modifications are not limited to the
nonhuman components of a culture, how-
ever, so neural modifications are not limited
to the human components. Domesticated
and tamed animals, since they also possess
neural apparatus, come to be neurally
modified—trained or conditioned by some
human agent to perform some task, or
simply habituated over time to existing
within the particular culture. Anthropolo-
gists have tended to overlook the neural
modifications of domesticated animals. No
study has ever been made of how the
domesticated animals within a culture are
trained, what they are trained to do, and
how well they perform. It might be hoped
that studies of this sort will be attempted in
the future to fill this gap in our under-
standing.

(28) Corporate heritage: the sum total of
all the linguistic, ideational, attitudinal, and
“skill” phenomena in a culture at a given
time (compare Folsom 1928:102). Like all
other cultural phenomena, these are classifi-
able into kinds of phenomena, i.e., traits or
features of the culture. A corporate heritage
is related to the human society with which it
is associated in a given culture very much as
a gene pool is related to a breeding popula-
tion (Weiss 1969:16; compare Spiro
1951:38). The corporate heritage is “spread
through” the society, divided into the
“mental contents” of all the individual
members of that society, and is the sum of
all those “mental contents.” Each trait in
the corporate heritage has its own frequency
(and pattern) of distribution among the
members of the society, a frequency that
changes over time. No single individual has
incorporated within his mental content all
the traits of his culture’s corporate heritage.
In all these respects we can see analogies
between corporate heritage and gene pool as
theoretical concepts, with mental content analogous to genotype. The idea that there is a cultural equivalent to the biological concept of the gene pool was recently developed independently by Dunn (1970:1042), which suggests that there is some merit to the idea. Dunn coined the term “cultural pool” and applied it to culture traits in general. This, however, may be equivalent to including all phenotypic traits of a population in its gene pool. The concept of the corporate heritage proposed here is restricted to “mentalistic” culture traits.

The corporate heritage and its biological analog, the gene pool, differ in a number of important respects. The rigid mechanical nature of genetic inheritance requires that genetic information flow only from parent to offspring. The nongenetic information in the corporate heritage, however, can flow in any direction. As Kroeber noted, “People who have not the slightest blood kinship to the first designers of aeroplanes can fly and are flying today. Many a father has used, enjoyed, and profited by the invention of his son” (1952:25). As a further consequence of the looser nature of nongenetic transmission within cultural systems, there is no equivalent for the corporate heritage of the Hardy-Weinberg Law developed in genetics, unless we use as our unit not the individual but the married couple. Any value that such an approach might have in, for example, tracing the corporate heritage down through family lines, remains to be explored.6

Regarding the distributional frequencies of the traits in a society’s associated corporate heritage, we find a useful application of Linton’s well-known typology of universals, alternatives, specialties, and idiosyncrasies (1936:272-274). A Lintonian universal would be a trait found among the members of a given society with a frequency of 100%. At the other extreme would be a Lintonian idiosyncrasy, with a frequency of \( \frac{1}{n} \times 100\% \) \((n = \text{the number of individuals in the society})\). Between these two extremes we should find Lintonian alternatives and specialties, with frequencies in the range \( 100 > x\% > \frac{1}{n} \times 100 \), i.e., less than 100% but greater than \( \frac{1}{n} \times 100\% \). Alternatives are distributed randomly, while specialties are those traits found in particular association with identifiable subsocieties. Linton noted (1936:282) that the typological status of a given trait can be expected to change over time, as it first appears as an idiosyncrasy, then perhaps spreads to become an alternative or specialty and finally a universal, later possibly declining in frequency toward the ultimate fate of becoming an idiosyncrasy once again before disappearing from the culture. Linton himself refused to grant idiosyncrasies the status of cultural phenomena because by definition idiosyncrasies are not “shared” (1936:274). Since there is no difference in kind between, for example, an idea held by one man and the same idea held by two or more, we are justified in stipulating that any human nongenetic phenomenon, \textit{shared or not}, is a cultural phenomenon. The “group fallacy” that culture to be culture must be shared has only one thing to say for itself: it is widely shared (see, for example, Beals and Hoijer 1965:265; Bose 1953:7-8; Gary 1929:176n., 182; Kluckhohn 1949:26, 1951:87; Kluckhohn and Kelly 1945:98; Kroeber 1952:118; Linton 1936:274, 1945:46; Malinowski 1944:45; Mead 1953:22; Murdock 1932:204, 1940:365, 1956:248, 257-258; Parsons 1957:58). The notion deserves a speedy interment. Blumenthal made a sensible pronouncement on this matter: “Communication of an idea makes no change in the idea... Hence there would appear to be no sound reason for saying that culture includes communicated cultural ideas but does not include uncommunicated cultural ideas” (1940:575, see also 578-580). Binney argued similarly that “a particular cultural trait may be either individual or social; that is, characteristic of a society as a whole or peculiar to one or more individuals within that society. As Boas and Allport have held, cultural behavior may be socially acquired by man as a member of society without being social or common to all members of his group” (1944:35). The concept of the corporate heritage with the
“mentalistic” culture traits it contains (language, ideas, attitudes, skills) can be seen as a clarification of Durkheim’s “collective consciousness” with its constituent “collective representations” (1938:103n., 106), a clarification that should prevent any lapse into that other fallacy, the “group mind” fallacy that Durkheim did try to avoid (compare Ellwood 1927b:16).

In simple terms, we may say that a human being physically is a temporary, partial expression of his society’s gene pool, and mentally is a temporary, partial expression of the corporate heritage with which his society is associated. He is a partial expression of his society’s gene pool because no individual ever embodies in his genotype all the allelic variation present in any gene pool. Similarly, as a matter of empirical fact, he will invariably be found to be only a partial expression of his society’s corporate heritage since no individual’s mental content ever incorporates all the elements of a corporate heritage, however meager that heritage may be. An individual human being is, furthermore, only a temporary expression of his society’s gene pool and corporate heritage since all human beings die. In a society of any size, the life or death of a single individual will not in itself significantly affect prevailing frequencies. Whether the gene pool or corporate heritage is stable or changing, the changeover of generations ensures that the individual, while perhaps unique through recombination, contains for the most part what was there before he came into existence, and what will survive his demise. It is certainly true that the concept of the autonomous individual is a fiction. With respect to the larger system that produced and incorporates him, an individual is, to use Aristotle’s phrase, “like a part in relation to the whole” (1941:1130).

The restriction of the term “corporate heritage” to mentalistic traits of culture when, after all, it is the entire culture that moves down through time, is a concession to the point made by Kroeber: “Gunpowder, textile arts, machinery, laws, telephones are not themselves transmitted . . . from generation to generation, at least not permanently. It is the perception, the knowledge and understanding of them . . . that are passed along” (1952:38). The conclusion which Kroeber drew from this understanding, that “All civilization in a sense exists only in the mind” (1952:38), is essentially fallacious. If there were a need for new terminology, then again using biology as a model, we might call the special study of the corporate heritage “culturetics.” It would be part of the general study of culture and cultural systems which we are calling “cultural anthropology.” For this general study, Read Bain was the first social scientist in this country to propose the alternative term “culturology” (1929:108-111): any other claim to this distinction (Gould and Kolb 1964:174) is fraudulent. Unfortunately, the subsequent history of this latter term has left it tainted with objectionable associations, rendering it absolutely unusable at the present time.

(29) Mental content, or psychic structuring: that part of the corporate heritage of a culture that has been extended to an individual through the process of enculturation (i.e., of growing up and experiencing life as part of a given cultural system), plus any innovations in the area of language, ideas, attitudes and skills which that individual might make as an extension of the preexistent corporate heritage and as an addition to it, since an addition to a single mental content is an addition to the corporate heritage of which it is a part.

(30) Socialization: the process by which an individual becomes psychically structured to function in the social organization of his culture; a part of the enculturation process (compare Aberle et al. 1950:109; Dollard 1939:60).

(31) Enculturation: the process by which an individual becomes psychically structured to function in his culture as a whole, becoming familiar and adept with the artifacts and technical organization as well as with the human components and social organization of his culture; education in the broadest sense, the extension of some part
of a corporate heritage to an individual to form his mental content (see Herskovits 1948:38-40, 640; a less satisfactory distinction is made in Mead 1963:185). We may wish to extend the meaning of this term to include the physical as well as the neural modification that transforms an individual into a properly modified human component of his cultural system.

(32) Cultural organization: the overall network of interrelationships and interactions within a cultural system.

(33) Social organization: of a culture, that part of the total cultural organization that interrelates the human components to each other. It is, in Malinowski's terms, "the invisible network of social bonds, of which the organization of the group is made up" (1939:940; see also Radcliffe-Brown 1952:190).

(34) Technical organization: of a culture, that part of the total cultural organization that interrelates the nonhuman components to each other and to the human components.

(35) Culture area, or cultural area: an area or region encompassing a group of cultures, usually contiguous, which share a set of traits that distinguish them from the cultures in other such areas; also, the group of cultures within such an area. On occasion, within a culture area, we encounter smaller groupings of very similar cultures; these smaller groupings may appropriately be called "culture clusters" (Murdock 1953:478). An important understanding to be established in this connection is that a culture area or a culture cluster is not a culture—it is not a single cultural system but a group of such systems. It is therefore incorrect to say, in the manner that Mandelbaum misquoted Lowie, that "western Europe as a whole presents a continuum—one culture and with admittedly innumerable local variations" (Mandelbaum 1956:217-218; see also Kroeber 1948:254, 281, 587). It is a confusion to argue, as Folsom did, in the following manner: "When an entire region... displays a distinct combination of culture traits and complexes, we speak of a culture type, or simply, a culture... The area in which a given culture type dominates is known as the culture area" (1928:29; his italics). It is quite clear that these authors failed to establish a basis for determining what, as Naroll expressed it, "constitutes a whole 'culture' rather than a mere 'subculture' on one hand or a culture area or culture cluster on the other" (1964:283).

If it thus appears absurd to speak of a culture area or culture cluster as a culture, the height of absurdity is reached when it is claimed that there exists in the world only a single world-wide cultural system. A world culture or a world cultural system is as meaningless a concept as that of a world organism. Cultures do interact, and they do interchange artifacts and even human components, but they remain distinguishable as discrete entities, if the procedure for identifying them suggested here is followed. They do not merge into a single cultural system. The notion of a single world culture had its origin in a passage written by Lowie, that "a culture is invariably an artificial unit segregated for purposes of expediency... There is only one natural unit for the ethnologist—the culture of all humanity at all periods and in all places" (1937:235-236; for a criticism, see Murdock 1940:365). Kroeber echoed Lowie's thought in the following terms: "In their origin and their history even the greatest and richest cultures are only parts of the great nexus of human culture as a whole" (1948:280). For there to be a single world culture there would have to be a single world society of mankind. Some have been willing to make that claim: "Because of the integration between communities, human society is as extensive as the species" (Emerson 1939:195-196): "In some sense all the people of the world taken together constitute a single society" (Redfield 1956:345). There is much to be said for Linton's view concerning "the question as to what constitutes a society, a point upon which there is still no general agreement. If we go to one extreme and use the term to include all individuals who are in
direct or indirect contact or whose activities affect each other in any way, the whole modern world must be considered a single society... The concept thus becomes meaningless" (1936:219). We are well advised to reject any notion of a single world society or world cultural system past or present (though a possibility remains for the future). There is culture the world over, and culture in each region, but not a culture.

(36) Culture type, or cultural type: a category, class, or kind of cultural system. It would be entirely legitimate to identify the groups of cultures in culture areas as "culture types," as Folsom suggested (1928:29). It would be equally legitimate to apply the term "culture type" to the categories produced by crosscutting major types of environment with levels of political integration, as proposed by Steward (1955:92; see also Steward and Faron 1959:12-13). A "culture type" is necessarily a part of a typology of cultural systems, and any given typology is constructed to aid in solving or clarifying a particular set of scientific problems. We can expect to develop different typologies for different problems and purposes, some more important than others. A master typology does not yet number among anthropology's accomplishments, and considerable truth remains in Radcliffe-Brown's judgment that "we have hardly taken the first steps toward a scientific classification" of cultures (1957:33). It is important to establish in this connection that a culture type is not a culture—it is not a particular cultural system but a category of such systems. Over time, a particular culture can change its type, i.e., its classification in any given typology, through the normal processes of change (compare Radcliffe-Brown 1952:181, 1957:83). In changing its type, a culture remains identifiable as the same culture—it does not become another culture. With regard to culture change, a distinction can be made between entity change and compositional change. An entity change is the change of an entire culture resulting from fission, fusion, termination, or migration (locale change). A culture ceases to exist as a result of the first three of these processes; one or more other cultures come into existence as a result of the first two of these selfsame processes. Compositional change is, by contrast, a change in the features present in any given culture, as a result of simple gain, simple loss, replacement, or transformation of one or more features. Compositional change can result in a change of type, but the culture remains the same cultural entity, whatever internal changes it may have undergone. When we are talking only about compositional change, or a change of type, it is an error to say that "culture A of one time period becomes culture B of a later period" (Anon. 1971:205). It is still culture A, but is now perhaps of type II whereas formerly it had been of type I in terms of some typological scheme.

It is possible to proceed further with the analysis of cultural components, modifications and organization, and with the consideration of cultural stability and change, but enough has been accomplished in this initial essay.

CONCLUSION

The purpose of this paper has been to demonstrate how it is possible to make the culture concept clear and distinct in such a way as to dispense with the criticisms that have been leveled at it, and also to avoid the trivialization of the concept that comes from considering society and culture mutually exclusive. Acceptance of the argument presented here will determine whether or not that purpose has been accomplished. Terms—some new, many familiar—have been given precise definitions intended to exclude any ambiguity and to supersede previous formulations.

Acceptance of the definitions provided herein should rest on three considerations. First, the terms as defined should prove to be precisely applicable to the reality which we are studying, such that distinguishable entities are named and their relations to each other specified. Second, the set of defini-
tions should prove to be internally consistent such that the terms do not come into semantic conflict with each other and one can pass from one to another of the concepts in a logical and orderly manner. These two conditions, in my belief, are met by this presentation. Third, the terms as defined should prove productive, in a way that other terminology and other definitions do not, in the building of sound theory and in the disclosure of hitherto unrecognized areas of theoretical import. We have had enough of definition for its own sake. Kroeber and Kluckhohn admitted as much in the following passage: “As yet we have no full theory of culture. We have a fairly well-delimited concept [but] . . . concepts have a way of coming to a dead end unless they are bound together in a testable theory. In anthropology at present we have plenty of definitions but too little theory” (1952:181). Two theoretical questions of some interest might be taken as a first test of whether this third condition is met, and will be explored in subsequent articles: the place of cultural systems among the material systems of the physical universe, and the nature of cultural systems viewed as parasitic systems relying on environmental resources for their continued existence.

NOTES

1 Simple observation, if only of domesticated animals, would provide abundant evidence that nonhuman animals learn. Such observations were not lost upon at least one Greek who lived centuries before Pliny. In the words of Aristotle: “Animals lead for the most part a life of nature, although in lesser particulars some are influenced by habit as well. Man has rational principle, in addition, and man alone” (1941:1296). Aristotle thus believed that what distinguishes man is not learning (“habit”) but a “rational principle.” Later writers, however, came to acknowledge the rationality of nonhuman as well as human animals (see, for example, Porphyry 1965:109ff.; Darwin 1936:453, 460; Engels 1954:295).

2 Darwin was ambivalent on this issue. He identified any and all animal communication as “language,” yet he did distinguish the human variant as different in degree if not in kind: “The habitual use of articulate language is . . . peculiar to man . . . The lower animals differ from man solely in his almost infinitely larger power of associating together the most diversified sounds and ideas . . . Some apes . . . could make other apes understand by cries some of their perceptions and simpler wants, [but] the notion of expressing definite ideas by definite sounds had never crossed their minds” (1936:461-462, 494). Darwin did ascribe to language a primary role in raising man to planetary dominance: “Through his [man’s] powers of intellect, articulate language has been evolved; and on this his wonderful advancement has mainly depended” (1936:431, see also 541, 912). A few writers have been willing to apply the term “language,” at least loosely, to animal communication, while restricting “speech” to man (James Beattie 1961:2-4; Bakunin 1953:93-94, 144, 157, 226, 228; Yerkes 1943:189-190, 193). Recently, an attempt was made once again to identify language as “any system of communication between animals” (Bryan 1963:298), a position later abandoned with good grace: “Clearly man is the only living species with true language” (Bryan 1964:154).

3 Saussure himself questioned the suitability of calling language symbolic: “The word symbol has been used to designate the linguistic sign . . . One characteristic of the symbol [however] is that it is never wholly arbitrary . . . there is the rudiment of a natural bond between the signifier and the signified. The symbol of justice, a pair of scales, could not be replaced by just any other symbol, such as a chariot . . . The symbol has a rational relationship with the thing signified . . . but language is a system of arbitrary signs” (1959:68, 73). Saussure’s point is not well taken, and has not hindered the application of the term symbol to language. There are those symbols, in Saussure’s sense, which have “no natural connection with the signified” (1959:69), such as flags and what Saussure himself called “conventional written symbols” (1959:15). Conversely, we have in language the occasional occurrence of onomatopoeia. The practical solution to the problem raised by Saussure is to recognize that the distinguishing characteristic of symbols is that they need not have a “natural connection” with what they signify.

4 In an earlier attempt to make sense out of existing terminology, Morris suggested that symbols be taken as a subcategory of signs; he deviated from the argument pre-
sented here, however, by using "signal" to designate the residual subcategory of non-symbolic signs (1946:354-355). The view taken in this article is that "sign" is too passive a term for its required task, that it is perfectly good usage, and accurate, to speak of human beings as signaling each other by means of language and other symbolic forms, and that there is no pressing need to name the residual subcategory ("non-symbolic signals" should suffice).

There is a deeper divergence between the concepts of the gene pool and the corporate heritage, a difference suggesting that the two, while analogous in the ways indicated, are not strict analogs of each other. An organism and a cultural system are strict analogs of each other in the biological and cultural realms respectively. The relationship "cultural system: corporate heritage :: organism: gene pool" does not hold, since a corporate heritage is entirely internal to a cultural system whereas a gene pool is largely external to any individual organism. With the breakdown of the analogy at this point, it is probably better not to use such a term as "cultural pool," implying as it does a strict analogy that does not exist. It is true that Dunn spoke of the "cultural pool" of an area rather than of a cultural system (1970:1042), but in a later paper Goodenough (1971:41-45) delimited a "culture pool" as the learned mental phenomena associated with a particular human society.

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