Theory of
CULTURE CHANGE

the methodology of multilinear evolution

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1

Multilinear Evolution: Evolution and Process[1]

THE MEANING OF EVOLUTION

Cultural evolution, although long an unfashionable concept, has commanded renewed interest in the last two decades. This interest does not indicate any serious reconsideration of the particular historical reconstructions of the nineteenth-century evolutionists, for these were quite thoroughly discredited on empirical grounds. It arises from the potential methodological importance of cultural evolution for contemporary research, from the implications of its scientific objectives, its taxonomic procedures, and its conceptualization of historical change and cultural causality. An appraisal of cultural evolution, therefore, must be concerned with definitions and meanings. But I do not wish to engage in semantics. I shall attempt to show that if certain distinctions in the concept of evolution are made, it is evident that certain methodological propositions find fairly wide acceptance today.

In order to clear the ground, it is necessary first to consider the meaning of cultural evolution in relation to biological evolution, for there is a wide tendency to consider the former as an extension of,

[1] This chapter is adapted from "Evolution and Process," in *Anthropology Today: An Encyclopedic Inventory*, ed. A. L. Kroeber (University of Chicago Press, 1953), pp. 313-26, by courtesy of The University of Chicago Press.

and therefore analogous to, the latter. There is, of course, a relationship between biological and cultural evolution in that a minimal development of the Hominidae was a precondition of culture. But cultural evolution is an extension of biological evolution only in a chronological sense (Huxley, 1952). The nature of the evolutionary schemes and of the developmental processes differs profoundly in biology and in culture. In biological evolution it is assumed that all forms are genetically related and that their development is essentially divergent. Parallels, such as the development of flying, swimming, and warm blood, are superficial and fairly uncommon. These latter, moreover, are generally considered to be instances of convergent evolution rather than true parallels. In cultural evolution, on the other hand, it is assumed that cultural patterns in different parts of the world are genetically unrelated and yet pass through parallel sequences. Divergent trends which do not follow the postulated universal sequence, such as those caused by distinctive local environments, are attributed only secondary importance. Such modern-day unilinear evolutionists as Leslie White and V. Gordon Childe evade the awkward facts of cultural divergence and local variation by purporting to deal with culture as a whole rather than with particular cultures. But Childe (1951: 160) quite explicitly distinguishes biological from cultural evolution by stressing the divergent nature of the former and the operation of diffusion and the frequency of convergence in the latter. It is interesting that such history as is implied in cultural relativism is rather similar to that of biological evolution: the variations and unique patterns of the different areas and subareas are clearly conceived to represent divergent development and presumably an ultimate genetic relationship. It is only the complementary concept of diffusion, a phenomenon unknown in biology, that prevents cultural relativism from having an exclusively genetic significance, like that of biological evolution.

Analogies between cultural and biological evolution are also alleged to be represented by two attributes of each: first, a tendency toward increasing complexity of forms and, second, the development of superior forms, that is, improvement or progress. It is, of course, quite possible to define complexity and progress so as to make them characteristics of evolution. But they are not attributes exclusively of evolution; they may also be considered characteristics of cultural change or development as conceived from any nonevolutionary point of view.

The assumption that cultural change normally involves increasing complexity is found in virtually all historical interpretations of cultural data. But complexity in biology and culture differ. As Kroeber (1948: 297) states: "The process of cultural development is an additive and therefore accumulative one, whereas the process of organic evolution is a substitutive one." It is on the question not of complexity but of divergence that the relativists and evolutionists differ. According to the former, cumulative change follows parallel trends, whereas, according to the latter, it is ordinarily divergent, though sometimes it is convergent and occasionally it is parallel.

Although complexity as such is not distinctive of the evolutionary concept, an allied concept might be considered to distinguish both biological and cultural evolution from nonevolutionary cultural-historical concepts. This is the concept of organizational types and levels. Whereas relativism seems to hold that a rather fixed and qualitatively unique pattern persists in each cultural tradition, despite cumulative changes which create quantitative complexity, it is implicit in the evolutionary view that development levels are marked by the appearance of qualitatively distinctive patterns or types of organization. Just as simple unicellular forms of life are succeeded by multicellular and internally specialized forms which have distinctive kinds of total organization, so social forms consisting of single families and lineages are succeeded by multifamilial communities, bands, or tribes, and these, in turn, by state patterns, each involving not only greater internal heterogeneity and specialization but wholly new kinds of over-all integration (Steward, 1950, 1951). Thus evolutionism is distinguished from relativism by the fact that the former attributes qualitative distinctiveness to successive stages, regardless of the particular tradition, whereas the latter attributes it to the particular tradition or culture area rather than to the development stage.

This brings us to the question of progress, which is the second characteristic attributed to both biological and cultural evolution. Progress must be measured by definable values. Most of the social sciences are still so ethnocentric, especially in their practical applications, that value judgments are almost inescapable. Even the "Statement on Human Rights" (1947) offered to the United Nations by the American Anthropological Association clearly reflects the American value placed upon individual rights and political democracy. This or any other criterion of value, however, certainly does not imply evolution. In fact, the concept of progress is largely separable from

evolution, and it may be approached in many ways. Kroeber, who is by no means an evolutionist, suggests three criteria for measuring progress: "the atrophy of magic based on psychopathology; the decline of infantile obsession with the outstanding physiological events of human life; and the persistent tendency of technology and science to grow accumulatively (Kroeber, 1948: 304). These values are not absolute in a philosophical sense; they are "the ways in which progress may legitimately be considered a property or an attribute of culture." By definition, then, it is possible although not necessary to regard progress as a characteristic of any form of cultural change, whether it is considered evolutionary or not.

We must conclude that cultural evolution is not distinguished from cultural relativism or historical particularism by any essential similarity of its developmental scheme with that of biological evolution, by the characteristic of increasing complexity, or by the attribute of progress. This is not to say, however, that evolution lacks distinctive features. The methodology of evolution contains two vitally important assumptions. First, it postulates that genuine parallels of form and function develop in historically independent sequences or cultural traditions. Second, it explains these parallels by the independent operation of identical causality in each case. The methodology is therefore avowedly scientific and generalizing rather than historical and particularizing. It is less concerned with unique and divergent (or convergent) patterns and features of culture — although it does not necessarily deny such divergence — than with parallels and similarities which recur cross-culturally. It endeavors to determine recurrent patterns and processes and to formulate the interrelationships between phenomena in terms of "laws." The nineteenth-century evolutionists are important to contemporary studies more because of their scientific objective and preoccupation with laws than because of their particular substantive historical reconstructions.

Cultural evolution, then, may be defined broadly as a quest for cultural regularities or laws; but there are three distinctive ways in which evolutionary data may be handled. First, *unilinear evolution,* the classical nineteenth-century formulation, dealt with particular cultures, placing them in stages of a universal sequence. Second, *universal evolution* — a rather arbitrary label to designate the modern revamping of unilinear evolution — is concerned with culture rather than with cultures. Third, *multilinear evolution,* a somewhat less ambitious approach than the other two, is like unilinear evolution in

dealing with developmental sequences, but it is distinctive in searching for parallels of limited occurrence instead of universals.

The critical differences between these three concepts of evolution have not been recognized, and there is still a general tendency to identify any effort to determine similar form and process in parallel developments with nineteenth-century unilinear evolution and thus categorically to reject it. The Marxist and Communist adoption of nineteenth-century evolutionism, especially of L. H. Morgan's scheme, as official dogma (Tolstoy, 1952), has certainly not favored the acceptability to scientists of the Western nations of anything labeled "evolution."

Unilinear Evolution

There is no need to discuss the validity of the nineteenth-century evolutionary schemes, for their vulnerability in the face of twentieth-century archaeological and ethnographic research has been amply demonstrated. Although no effort has been made to revise these schemes in the light of new empirical data concerning the history of individual cultures — which itself is a somewhat remarkable fact — it does not necessarily follow that L. H. Morgan (1910) and his contemporaries (Tylor, 1865, 1871, 1881, 1899) failed completely to recognize significant patterns and processes of change in particular cases. The inadequacy of unilinear evolution lies largely in the postulated priority of matriarchal patterns over the other kinship patterns and in the indiscriminate effort to force the data of all precivilized groups of mankind, which included most of the primitive world, into the categories of "savagery" and "barbarism." The category of "civilization," however, involved a less sweeping generalization for the simple reason that civilization was thought of largely in terms of the Near East, the northern Mediterranean, and northern Europe. Other areas which achieved civilization, particularly the New World, were far less known and have been accorded less attention.

In other words, whereas the historical reconstruction and the deductions derived therefrom were largely wrong as regards early stages of cultural development because they failed to recognize the many varieties of local trends, the analyses of civilization contain many valuable insights because they are based more specifically upon developments which occurred first in Egypt and Mesopotamia and later in Greece, Rome, and northern Europe. Although comparisons with other areas, particularly with the Americas but also with India and

China, left much to be desired so far as forms, functions, and developmental processes of civilization in general are concerned, the conclusions may nonetheless be valid under limited circumstances. Thus Henry Maine's insights concerning the processes involved in development from a kin-based society to a territorial, state society undoubtedly throw light on cultural development in many areas, though not necessarily on all. Such categories as "kin-based" and "state" are too broad; distinctions between particular, though recurrent, types within these categories are needed.

There are probably many developmental forms and processes discussed by the evolutionists which have validity, provided that they are considered qualities of particular cultural traditions rather than universal characteristics of culture. The extremely illuminating analyses that V. Gordon Childe (1934, 1946) and others have given us of cultural development in the eastern Mediterranean and Europe probably would find certain rather precise parallels in other world areas if a truly comparative study were made. Significantly, however, Childe's approach to evolution on a wider scale has entailed a retreat into broad generalizations.

Universal Evolution

Universal evolution, which is represented today principally by Leslie White and V. Gordon Childe, is the heritage of nineteenth-century unilinear evolution, especially as formulated by L. H. Morgan, in the scope of its generalizations but not in its treatment of particulars. Aware that empirical research of the twentieth century has invalidated the unilinear historical reconstructions of particular cultures, which constituted the essential feature of nineteenth-century schemes, White and Childe endeavor to keep the evolutionary concept of cultural stages alive by relating these stages to the culture of mankind as a whole. The distinctive cultural traditions and the local variations — the culture areas and subareas — which have developed as the result of special historical trends and of cultural ecological adaptations to special environments are excluded as irrelevant. White (1949:338-39) states: "We may say that culture as a whole serves the need of man as a species. But this does not and cannot help us at all when we try to account for the variations of specific culture. . . . The functioning of any particular culture will of course be conditioned by local environmental conditions. But in a consideration of culture as a whole, we may *average all environments together* to form a constant factor which may be excluded from our formulation of cultural development" (Steward, 1949; italics mine). Childe reconciles the general and particular in much the same way. He writes that "all societies have lived in different historical environments and have passed through different vicissitudes, their traditions have diverged, and so ethnography reveals a multiplicity of cultures, just as does archaeology" (Childe, 1951:32). Childe finds that consideration of the particular is a "serious handicap if our objective is to establish general stages in the evolution of cultures," and, therefore, in order to "discover general laws descriptive of the evolution of all societies, we abstract . . . the peculiarities due to differences of habitat" (Childe, 1951:35). Diffusion must also be discounted, because any society must be in a position to accept diffused technological and social features. At the same time, while local developments within each general stage are largely divergent, the concept of evolution is salvaged by assuming that diffusion brings technological and social features to all societies, thus convergently re-creating the required patterns (Childe, 1951:160 ff). This rather involved effort to enlist diffusion in order to offset divergent evolution is based empirically almost exclusively upon Old World data. How Old World and New World parallels would square with such reasoning Childe does not say.

It is interesting that White's theoretical discussions make no reference to his own extensive and detailed studies of the Pueblo Indians and that Childe's superb knowledge of developmental patterns and processes which are disclosed in the archaeology of the Near East and Europe becomes almost an embarrassment in his theoretical discussions. Childe's insights into the cultural development of these two areas are most illuminating, but he merely confuses the two areas when he endeavors to fit them into simplified developmental stages.

It is important to recognize that the evolutionism of White and Childe yields substantive results of a very different order from those of nineteenth-century evolution. The postulated cultural sequences are so general that they are neither very arguable nor very useful. No one disputes that hunting and gathering, which is Childe's diagnostic of "savagery," preceded plant and animal domestication which is his criterion of "barbarism," and that the latter was a precondition of large populations, cities, internal social differentiation and specialization, and the development of writing and mathematics, which are characteristics of "civilization."

If one examines universal evolution with a view to finding laws

or processes of development rather than examining it merely in terms of a sequential reconstruction of culture, it is also difficult to recognize anything strikingly new or controversial. The generalization that culture changes from the simple to the complex and White's (1943) "law" that technological development expressed in terms of man's control over energy underlies certain cultural achievements and social changes have long been accepted. Childe's transfer of the Darwinian formula to cultural evolution also will not evoke challenge. Variation is seen as invention, heredity as learning and diffusion, and adaptation and selection as cultural adaptation and choice (Childe, 1951: 175-79). It is certainly a worthy objective to seek universal laws of cultural change. It must be stressed, however, that all universal laws thus far postulated are concerned with the fact that culture changes — that any culture changes — and thus cannot explain particular features of particular cultures. In this respect, the "laws" of cultural and biological evolution are similar. Variation, heredity, and natural selection cannot explain a single life-form, for they do not deal with the characteristics of particular species and do not take into account the incalculable number of particular circumstances and factors that cause biological differentiation in each species. Similarly, White's law of energy levels, for example, can tell us nothing about the development of the characteristics of individual cultures. We may deduce from the data of both biological and cultural evolution that new organizational forms will appear in succession, but the specific nature of these forms can be understood only by tracing the history of each in great detail.

The problem and method of universal evolution thus differ from those of unilinear evolution. Right or wrong, the nineteenth-century evolutionists did attempt to explain concretely why a matriarchy should precede other social forms, why animism was the precursor of gods and spirits, why a kin-based society evolved into a territorial-based, state-controlled society, and why other specific features of culture appeared.

Multilinear Evolution

Multilinear evolution is essentially a methodology based on the assumption that significant regularities in cultural change occur, and it is concerned with the determination of cultural laws. Its method is empirical rather than deductive. It is inevitably concerned also with historical reconstruction, but it does not expect that historical data

can be classified in universal stages. It is interested in particular cultures, but instead of finding local variations and diversity troublesome facts which force the frame of reference from the particular to the general, it deals only with those limited parallels of form, function, and sequence which have empirical validity. What is lost in universality will be gained in concreteness and specificity. Multilinear evolution, therefore, has no a priori scheme or laws. It recognizes that the cultural traditions of different areas may be wholly or partly distinctive, and it simply poses the question of whether any genuine or meaningful similarities between certain cultures exist and whether these lend themselves to formulation. These similarities may involve salient features of whole cultures, or they may involve only special features, such as clans, men's societies, social classes of various kinds, priesthoods, military patterns, and the like.

It may be objected that a limited formulation which postulates that some special feature — let us say a clan — has developed in two or more cultures independently for the same reasons cannot be considered evolution. We thus return to definitions. If evolution can be considered an interest in determining recurrent forms, processes, and functions rather than world-embracing schemes and universal laws, the many efforts to make scientific generalizations, whether they deal with synchronic, functional relationships or with diachronic, sequential relationships and whether they embrace few or many cultures, are methodologically akin to evolution. The nineteenth-century evolutionists were deeply interested in making generalizations.

THE METHOD OF MULTILINEAR EVOLUTION

Parallelism and Causality

An implicit interest in parallelism and causality has always been present in cultural studies, and it seems to have increased during the last two decades. It would be quite surprising, in fact, if anyone held so tenaciously to the logical implications of the relativist position as to claim that understandings derived from the analysis of one culture did not provide some insights as to form, function, and process in others. The difficulty is in raising these insights from the level of hunches to that of explicit formulations. Postulated parallels and recurrent cause-and-effect relations are regarded with suspicion. They may be questioned on empirical grounds; and the inherent difficulty of deriving cultural laws may be attacked on philosophical grounds.

The methodology of cultural studies thus remains predominantly that of historical particularizing rather than of scientific generalizing.

A genuine interest in parallels, however, has been clearly expressed by many scholars who have made outstanding contributions within the framework of the so-called "Boas school." Thus Lowie, who was unsparing of L. H. Morgan's unilinear reconstruction (Lowie, 1925), not only recognizes independent invention and parallel development in many features, such as moieties, dual systems of numbers, messianic cults, and others (Lowie, 1940:376-77), but he is quite prepared to accept a kind of necessity in cultural development to the extent that certain cultural achievements presuppose others. "If a tribe practices metallurgy it is clearly not on the plane of savagery; only stock-breeders and farmers forge metals" (Lowie, 1940:45). But he denies that cultures can be graded on the basis of metallurgy because the Africans, for example, were metallurgists but lacked other features of more developed civilizations. Although Lowie cannot accept Morgan's unilinear evolution,[2] he is in accord with most of the profession in accepting such generalizations as universal evolution has to offer, and moreover, he is something of a multilinear evolutionist. Who, then, is more of an evolutionist, Lowie or White?

American anthropologists have traditionally assumed that there were Old World and New World parallels in the invention of farming, stockbreeding, ceramics, metallurgy, states, priests, temples, the zero and mathematics, writing, and other features. It would perhaps be going too far to say that this makes them multilinear evolutionists. When the question of parallel cultural causality arises, these similarities are held to be only superficial or to represent convergent evolution, or else it is said that the historical and functional relationships involved are as yet too imperfectly understood to permit formulation in terms of cross-cultural regularities. Nevertheless, many persons have recognized such a deep significance in these parallels that they believe diffusion must have occurred between the hemispheres, while others have attempted to formulate Old and New World sequences in terms of comparable developmental periods.

Kroeber (1948:241) did not hesitate to conclude from the numerous parallels in different parts of the world that "culture relations

[2] Lowie, in a reply to White, stressed the fact that Morgan, Tylor, and others were forcing the historical data of particular cultures into unilinear schemes rather than dealing with the evolution of an abstract or generalized world culture. See Robert H. Lowie, "Evolution in Cultural Anthropology: A Reply to Leslie White," *American Anthropologist*, XLVIII (1946), 223-33.

or patterns develop spontaneously or from within probably more frequently than as a result of direct taking-over. Also, the types of culture forms being limited in number, the same type is frequently evolved independently. Thus, monarchical and democratic societies, feudal or caste-divided ones, priest-ridden and relatively irreligious ones, expansive and mercantile or self-sufficient and agricultural nations, evolve over and over again." Elsewhere, I have called attention to statements by Lesser, Boas, Kidder, and others that cross-cultural understandings in terms of laws, regularities, or parallels — those who object to calling these "laws" may use some other term — are a major objective of anthropology (Steward, 1949, 1950). This list could be extended to include a substantial portion of the profession.

The determination and analysis of parallels as a methodological objective of multilinear evolution need not be carried out on a purely cultural level. Leslie White (1949:Chapter 14) has argued so cogently in favor of understanding cultural change in strictly culturological terms that the impression may stand that culturology and evolution are synonymous. It is beyond the scope of this paper to argue the matter. But I must insist that White's elimination of both the human and the environmental factors is an aspect of his concern with culture rather than with cultures. I have endeavored in various studies to demonstrate how cultural-ecological adaptations — the adaptive processes through which a historically derived culture is modified in a particular environment — are among the important creative processes in cultural change (Steward, 1938). There are certain problems in which man's rational and emotional potentials are not a zero factor in the equation. Thus Kluckhohn (1949:267) suggests: "If a tribe's customary outlet for aggression in war is blocked, one may predict an increase in intratribal hostility (perhaps in the form of witchcraft) or in pathological states of melancholy resultant upon anger being turned inward against the self." This psychological attribute of human beings which channels aggression in certain ways may be a significant factor in the formulation of certain cultural parallels. For example, among the Iroquois and their neighbors, war captives were adopted as members of the captor's family, then tortured and killed. Raymond Scheele (1947) has suggested that this pattern provides a means of diverting latent hostilities against kin to members of an alien group. A similar pattern is found among the Tupinamba of South America and among tribes in other parts of the world. Although

the psychological premises and the cultural manifestations may be open to question, the data suggest a useful cross-cultural formulation of certain modes of behavior.

The kinds of parallels or similarities with which multilinear evolution deals are distinguished by their limited occurrence and their specificity. For this reason, the outstanding methodological problem of multilinear evolution is an appropriate taxonomy of cultural phenomena.

Cultural Taxonomy

Any science must have precise means of identifying and classifying the recurrent phenomena with which it deals. It is symptomatic of the historical rather than the scientific orientation of cultural studies that there are few terms designating whole cultures or components of cultures which may be employed cross-culturally. "Plains culture," "East African cattle culture," "Chinese civilization," and the like designate culture areas which are conceived as unique patterns and complexes of elements. A great many sociological terms, such as "band," "tribe," "clan," "class," "state," "priest," and "shaman," are used to describe features which are found repeatedly in generically unrelated cultures, but they are much too general even to suggest parallels of form or process. The most precise terms designate very special technological features, such as "bow," "atlatl," or "ikat weaving." Such features, however, generally imply no large patterns, and the only inference ordinarily drawn from their distributions is that diffusion has taken place.

The present status of cultural taxonomy reveals a preoccupation with relativism, and practically all systems of classification are fundamentally derived from the culture-area concept. Basically, the culture area is characterized by a distinctive element content, which, on a tribal level at least, constitutes the shared behavior of all members of the society. Classification may give equal weight to all elements, as in Klimek's statistical handling of the culture-element lists which were compiled in the University of California survey of western tribes or as in the midwestern or McKern method of classifying archaeological complexes. The former yields culture areas and subareas; the latter gives categories of associated elements, which of themselves are placed neither in time nor in space. Following Wissler, culture area classifications have tended strongly to emphasize economic features, although not all postulate so close a relationship between culture and

environment as Wissler, and noneconomic traits receive emphasis which varies with the individual scholar and which may lead to a diversity of classificatory schemes for the same data. Thus South America has been grouped into five areas by Wissler (1922), eleven by Stout (1938), three by Cooper (1942) and by Bennett and Bird (1949), four by the *Handbook of South American Indians* (Steward, 1946-48), and twenty-four by Murdock (1951). Each gives primacy to features of interest to the individual. All these classifications are particular to the data of South America. None endeavors to recognize in any of the three to twenty-four areas structural or developmental features which are common to areas outside South America.

Classifications of cultures in terms of value system or ethos has essentially the same basis as that of culture areas. Such classifications all presuppose a common core of shared culture traits which cause all members of the society to have the same outlook and psychological characteristics. Benedict's concept of pattern, Gorer's and Mead's concept of national character, and Morris Opler's concept of themes derive from a taxonomic approach that is basically like that of Wissler, Kroeber, Murdock, Herskovits, and others.

If a taxonomic system is to be devised for the purpose of determining cross-cultural parallels and regularities rather than of stressing contrasts and differences, there is needed a concept which may be designated "culture type."[3] The difficulty of empirical determination of significant types has constituted the principal obstacle to a systematic search for regularities and parallels. By the present definition, a culture type differs from a culture area in several respects. First, it is characterized by selected features rather than by its total element content. Since no two cultures are quite alike in their element totality, it is necessary to select special constellations of causally interrelated features which are found among two or more, but not necessarily among all, cultures. Second, the selection of diagnostic features must be determined by the problem and frame of reference. Conceivably, any aspect of culture may be attributed primary taxonomic importance. Third, the selected features are presumed to have the same functional interrelationship with one another in each case.

Illustrative of cultural types are Wittfogel's "oriental absolute society" (Wittfogel, 1938, 1939), which exemplifies cause-and-effect

[3] Ralph Linton uses the term "culture type" but clearly has in mind the culture-area concept rather than types which are found in different cultural traditions. See Ralph Linton, *The Study of Man* (New York: Appleton-Century-Crofts, 1936), p. 392.

regularities between a special kind of sociopolitical structure and an irrigation economy; the present author's "patrilineal band," which is characterized by certain inevitable relationships between a hunting economy, descent, marriage, and land tenure (Steward, 1936); Redfield's folk society (Redfield, 1941, 1947), which has certain general features common to many, if not most, societies at a simple development or integrational level and which reacts to urban influences — at least to influences of the modern industrial type of urbanism — according to postulated regularities; and a feudal society (Princeton Conference, 1951), which once characterized both Japan and Europe, where it exhibited similarities in social and political structure and economy.

These few, illustrative types make economic and sociological features primary because scientific interest is widely centered in such features and because socioeconomic structure has therefore been more broadly examined and more readily formulated than other aspects of culture. Economic patterns are generally ascribed considerable importance because they are inextricably related to social and political patterns. Certain aspects of religion, however, are also included in Redfield's types. In an elaboration of Wittfogel's irrigation societies, the author has tentatively formulated developmental types which include not only social and political patterns but also technological, intellectual, military, and religious features that mark successive areas in the history of these societies (Steward, 1949, and Chapter 11).

A taxonomic scheme designed to facilitate the determination of parallels and regularities in terms of concrete characteristics and developmental processes will have to distinguish innumerable culture types, many of which have not as yet been recognized. A methodology like that of White and of Childe which ignores local particulars and deals only with world stages will not serve the purpose we have in mind. A stage of hunting and gathering, for example — or of savagery, to use the evolutionists' term — is far too broad a category. The functional relations and cultural-ecological adaptations which led to a patrilineal band, consisting of a localized lineage, were very different from those which produced a nomadic, bilateral band composed of many unrelated families (Steward, 1936). But these are only two of many types of hunting and gathering societies which developed as the result of particular cultural-historical and cultural-ecological circumstances. There are also types characterized by dispersed family groups, such as the Shoshoni and Eskimo, and by cohesive tribelets, such as

those of California. Moreover, it does not at all follow that all hunters and gatherers are classifiable into types which have cross-cultural significance. Many may be unique, except as some limited feature of their culture parallels a similar feature of another culture — for instance, the development of clans.

Since hunting and gathering tribes fall into an undetermined number of cultural types, any larger developmental scheme cannot with certainty take any type as representative of a universal early stage, except in characteristics that are so general as to signify nothing concretely about any particular culture. The absence among hunters and gatherers of dense and stable population, of large permanent towns, of social classes and other kinds of complex internal specialization, of priesthoods, group ceremonialism, money, investment, writing, mathematics, and other characteristics of "civilized" people is to be expected. The particular forms of marriage, family, social structure, economic co-operation, sociorcligious patterns, and other features found among these primitive societies differ in each type. Consequently, the objective is to ascertain the detailed processes by which hunters and gatherers were converted into farmers or herdsmen and these latter into more "civilized" people, and it is necessary to deal with particular types.

Among the farming cultures there is also a large variety of cultural types which have not been systematically classified with reference to problems of cross-cultural parallels or formulations of causality. Irrigation civilizations have received considerable attention (Chapter 11). But the term "tropical forest agriculture" still refers merely to those who farm in the tropical rain forests rather than to specific crops, methods of farming, markets, and related cultural features. Possibly the culture areas of the rain forest in the Old and New World, including both the Mediterranean and the northern hardwood forests, developed indigenous unique culture types. It is more likely that significant parallels between such areas would be disclosed if they were compared with reference to environment, technology, and era of development.

At present, interest in parallels centers in the development of Old and New World civilizations. The parallels are striking and undeniable. They include the independent development — independent, that is, according to most but not all anthropologists — of an impressive list of basic features: domesticated plants and animals, irrigation, large towns and cities, metallurgy, social classes, states and empires, priesthoods, writing, calendars, and mathematics. Although there is still

considerable tendency to stress the distinguishing features of each center or tradition and thus to view each as a culture area rather than as a culture type, interest in function and processes is gradually leading toward the use of comparable terminology. Instead of narrow technological terms like "Old Stone Age," "New Stone Age," and "Bronze Age," such potentially typological terms as "Formative," "Florescent" or "Classical," and "Empire" or "Fusion" are being used for the New World. For Old World development, Childe has introduced partially equivalent terms, such as "Urban Revolution."[4] I think it is safe to predict that as interest centers more and more upon the functional interrelationship of cultural features and upon the processes by which cultures are adapted to a variety of environments, a taxonomy suggesting significant parallels will appear.

The conceptual basis of multilinear evolutionary taxonomy is no less applicable to contemporary trends of cultural change than to pre-Columbian changes. Today, the many distinctive varieties of native culture areas of the world — and these include whole nations, subcontinents, and continents, such as China, India, Southeast Asia, Africa, and Latin America — are being strongly affected by industrialization which diffuses primarily from Europe and America and secondarily from subcenters created in all continents.

Whether the particular features of industrial developments — the mechanization of farm and factory production, the cost accounting methods, corporate and credit financing, and the national and international systems of distribution and marketing — are considered to be a single world development or a number of quasi-independent growths from a general industrial basis, there appear to be rather striking parallels in the consequences of the diffused features. These parallels are classifiable in terms of trends toward the production of cash commodities, purchase of manufactured articles, individualization of land tenure, appearance of a cash-based rationale in values and goals, reduction of the kinship group to the nuclear family, emergence of middle classes of business, service, and professional personnel, sharpening of interclass tensions, and rise of nationalistic ideologics. All these are features which also characterize the peoples of Euro-American

[4] These terms and their significance have been reviewed by Julian H. Steward and Wendell C. Bennett. See Julian H. Steward, "Cultural Causality and Law: A Trial Formulation of the Development of Early Civilization," *American Anthropologist*, LI (1949), 1-27; and Wendell C. Bennett (ed.), *A Reappraisal of Peruvian Archaeology*, Memoir, *Society for American Archaeology*, Vol. XIII, Part II (1948).

nations. But it would be too simple an explanation to say that these features were also merely diffused from Europe. Detailed study of native populations discloses processes which made the development of these features inevitable, even in the absence of sustained, face-to-face contacts between the native populations and Europeans which could introduce new practices and a new ethic. There is good reason to believe that the very fundamental changes now occurring in the most remote parts of the world are susceptible to formulation in terms of parallels or regularities, despite various local overtones which derive from the native cultural tradition. Although no very deliberate effort to formulate these regularities has yet been made, considerable contemporary research is directly concerned with modern trends, and the substantive results are probably sufficiently detailed to permit preliminary formulations.

Not all parallels need be based essentially upon a developmental sequence. Thus Redfield's postulated regularities in the changes of a folk society under urbanizing influence can hardly be called "evolution." However, it is our basic premise that the crucial methodological feature of evolution is the determination of recurrent causal relationships in independent cultural traditions. In each of the cultural types mentioned above, certain features are functionally related to others, and time depth or development is necessarily implied; for, regardless of which features are considered causes and which are considered effects, it is assumed that some must always be accompanied by others under stipulated conditions. Whether it requires ten, twenty, or several hundred years for the relationship to become established, development through time must always take place. Therefore, parallel developments which require only a few years and involve only a limited number of features are no less evolutionary from a scientific point of view than sequences involving whole cultures and covering millenia.

CONCLUSIONS

Cultural evolution may be regarded either as a special type of historical reconstruction or as a particular methodology or approach. The historical reconstructions of the nineteenth-century unilinear evolutionists are distinctive for the assumption that all cultures pass through parallel and genetically unrelated sequences. This assumption is in conflict with the twentieth-century cultural relativists or historical particularists, who regard cultural development as essentially diver-

gent, except as diffusion tends to level differences. This disagreement concerning fundamental historical fact is reflected in cultural taxonomy. The major categories of the unilinear evolutionists are primarily developmental stages applicable to all cultures; those of the relativists and particularists are culture areas or traditions. The difference in point of view also involves the very logic of science. The evolutionists were deductive, a priori, schematic, and largely philosophical. The relativists are phenomenological and esthetic.

Twentieth-century research has accumulated a mass of evidence which overwhelmingly supports the contention that particular cultures diverge significantly from one another and do not pass through unilinear stages. Since this basic fact of cultural history is no longer a matter of major controversy, those who have sought to keep the tradition of nineteenth-century evolution alive have been forced to shift their frame of reference from the particular to the general, from a universal scheme into which all individual cultures may be fitted to a system of broad generalizations about the nature of any culture. They concede that particular cultures have distinguishing features caused by divergent development in different areas as well as by the stage of development, but they now profess to be interested in the evolution of culture generically considered and not of cultures. Their reconstruction of world culture history is, as a matter of fact, made in such general terms as to be quite acceptable to everyone. No one doubts that hunting and gathering preceded farming and herding and that the last two were preconditions of "civilization," which is broadly characterized by dense and stable populations, metallurgy, intellectual achievements, social heterogeneity and internal specialization, and other features.

Because the weight of evidence now seems to support divergent cultural development, the proposition that there are significant parallels in cultural history is regarded with suspicion. Nonetheless, probably most anthropologists recognize some similarities in form, function, and developmental processes in certain cultures of different traditions. If interest in these parallels can be divested of the all-or-none dogma that, because cultural development is now known not to be wholly unilinear, each tradition must be wholly unique, a basis may be laid for historical reconstruction which takes into account cross-cultural similarities as well as differences. The formulation of the similarities in terms of recurring relationships will require a taxonomy of significant features. Taxonomy, which is discussed at length in Chapter 5, may be based upon few or many features and upon a varying number of different cultures. The developmental formulation may involve long or short historical sequences.

For those who are interested in cultural laws, regularities, or formulations, the greatest promise lies in analysis and comparison of limited similarities and parallels, that is, in multilinear evolution rather than in unilinear evolution or universal evolution. Unilinear evolution is discredited, except as it provides limited insights concerning the particular cultures analyzed in detail by the nineteenth-century students of culture. Universal evolution has yet to provide any very new formulations that will explain any and all cultures. The most fruitful course of investigation would seem to be the search for laws which formulate the interrelationships of particular phenomena which may recur cross-culturally but are not necessarily universal.