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ADAPTATION TO COMPLEXITY: THE RENAISSANCE OF ETHNICITY¹

David W. Hartman

My purpose in this article is to review some of the definitions of ethnicity, which are currently being used in the social sciences, and to indicate a general theoretical framework for the understanding of ethnicity in the contemporary United States. It is assumed that a renaissance of ethnicity is occurring in the United States today. This is, however, not demonstratable at the present time and will be the subject of later research.² Theoretically, I believe that ethnicity remains as one of the most available coping mechanisms available to alienated groups in our complex society. Thus ethnicity is viewed, in this paper, as a form of adaptation rather than as a social pathology.

I believe that many definitions which have been used to describe ethnicity may not be fully adequate for complex societal situations. They fail for a variety of reasons, but are primarily weak because they lack flexibility, are many times etic in origin, and generally stress the importance of the group rather than the importance of ethnicity.

Milton Gordon has defined an ethnic group as "any group which is defined or set off by race, religion, or national origin, or some combination of these categories" (1964:27). He uses the phrase
"sense of peoplehood" (1964:23-24) but seemingly prefers to accept that this "sense" can only be conferred by race, religion, or national origin.

On the other hand, Lester Singer (1962) and Raoul Narroll (1964) have lent more breadth to their definitions. Taken together the definition proposed by the above authors is composed of four interrelated criteria. 1) A shared pattern of beliefs, behavior patterns, cultural values, etc. 2) An awareness of the group's own distinctiveness which is partially reflected in a "we" feeling. 3) A group which makes up a field of communication and interaction. 4) The tendency to maintain generational continuity by marriage within the group.

Fredrik Barth, however, argues that "such a formulation prevents us from understanding the phenomenon of ethnic groups and their place in human society and culture (1969:11)." He believes that the importance of the ethnic group, to the social scientist, should be in the analysis of the process of recruitment, maintenance, and growth; not purely in the description of a static entity. Although Barth speaks of "cultural differentiae" (1969:38) his primary emphasis is upon the group rather than the ideology.

There are, however, two levels at which we can
analyze ethnic groups. One is at the group composition level and the other is at the ideological level. If we look at the group composition level, we are looking at a phenomenon which is continually in motion either retracting, expanding, or reestablishing itself. At the ideological level, however, it would seem that there is a great deal more in the way of continuity and stability. In other words, for the disenfranchised, the group may not in reality exist, but the ideology is there. It seems to be a shared ideology but not in the sense that we usually think of as shared group behavior. An example of voluntary associations in the Detroit metropolitan area may make this clear.3

In Detroit there are five Native American organizations vying for membership. One was established in 1940 while the others are products of 1971 and 1972. The four new organizations are in many ways providing the same services but are split along political and tribal lines. Although these are five very active organizations, the vast majority of Indians in the metropolitan area give no allegiance to any of these associations. Although informal groups do form, and are significant arenas of interaction, many Indians, if not most, seem to be content to say that "being Indian is a state of mind" and is not dependent on group affiliation. One informant has mentioned to
me that "there are two kinds of people in this world; those that are Indian and those that want to be Indian." Given the context of this discussion the only possible referent that he had in mind was the Indian ideology and not a group phenomenon.

Here I suggest that the ideology is as important and perhaps more important than the construct of the group. The question that becomes important is whether the maintenance of the group is the important variable or is it rather the establishment and/or maintenance of the individual's own self-concept. I believe that the self is most important and that self-concept will hinge on the individual's perception of himself in relation to the larger society. It may be true that ethnicity for its own sake may be disfunctional but when used for solving the individual's dissonance and/or other problems it may be a highly adaptive kind of coping mechanism.

Thus, let us view ethnicity as an adaptive strategy which 1) allows the disenfranchised to reestablish and/or maintain their self-concept; 2) may be a highly effective mechanism for establishing and maintaining economic and/or social status; and 3) may be used as the basis for gaining a greater share of the expected rewards of a society.

I am nominally concerned with the external
identification of the individual as an ethnic. My primary concern is how the individual uses his "perceived ethnicity" to manipulate his relationships with himself and his exogenous world. Thus, it is only when external identification becomes a significant factor in the social relations of the individual that ethnicity becomes a "real" phenomenon. Further, in terms of this paper, I can not be concerned with those who live in what might be called a "two-ethnic" world.

It also appears to me that in a highly complex society, such as our own, we may be experiencing a real change in what an ethnic group is and why it is important. I suggest that for many ethnicity is based upon achievement whereas traditionally it was grounded in ascription. Hypothetically, is an Italian really ethnically Italian if he doesn't eat lasagna, doesn't speak Italian, doesn't associate with other Italians, etc.? Of course he isn't! But can an individual of Irish descent be ethnically Native American if he eats corn soup, dances at Pow-wows, associates with Native Americans, and is accepted by them as being Indian? I suggest that he can be!

Why this new conception of achieved ethnicity is necessary may be a very important question. I think that it does become important because we have been tied too long to the ideas of Anglo-conformity, melting pots, and even cultural pluralism. Instead
of talking about where other social scientists draw boundaries let us approach the group and watch where they draw the boundaries. I do not suggest that this has not been done, but I do suggest that for many of us it has not been a reality. Who is included, and who is not included, might well not fit our preconceptions.

The idea of achievement and the use of ethnicity as an adaptive mechanism is consistent with many variables which are visible in our society. Let us look briefly at some of them. An axiom of American society has long been the persistent demand for self-determination and, in a deeper sense, the need for self-identity. It is this same demand for self-determination and self-identity which has been instituted in the 1960's as the major goal of some minority interests in the United States. Participants in these struggles have increasingly searched for their historical roots with their eyes constantly on the future; a future designed and defined by a sense of worth, self-determination and self-identity.

With the loss of extended family networks, stress upon the nuclear family, generation gaps, urbanization, bureaucratization, and rapid change, there is a need to reestablish networks which allows one to move back in touch with his fellowman. This is probably as vital for the middle class businessman as it is for the Chicano
Different pressures may be exerted on each, but with the same result: a sense of some form of deprivation which may not simply be resolved by oneself.

Richard Flacks has indicated that because of the erosion of the family unit (particularly in the middle class) there is a great deal of confusion which has been labeled by social scientists as pathological. However, Flacks asserts that "when parents raise their children in a manner that causes them to have significant problems of adjustment, if anything, this is a healthy circumstance" (1971:23). He continues by arguing "that the basic source of socially patterned maladjustment is a culture that no longer enables a person to find coherent meaning in life" (1971:23). It is also true that those societies where institutions are not provided to aid the individual in adapting and developing his self-concept will, in the same way, produce maladjusted individuals. It is for precisely this reason that I suggest that ethnicity, which many perceive as a maladjustment, may be a readily available mechanism with which one can cope and adjust to stress. If each individual found it necessary to face the development and maintenance of a self-concept by himself, each would experience an increased level of
confusion and anxiety. However, if continuity can be provided from some source, in terms of ideology, this confusion and anxiety can be minimized.

Man's search for self-determination and a sense of identity may, I conclude, objectively be found in an ethnic experience. It is within this ideological belongingness that he can assert himself as "somebody." Daniel Adelson (1971) has suggested that in times of vast social change and crisis cultural pluralism is both a boat and an anchor. In other words, ethnicity may become that vehicle which carries one over "Jordan" and becomes an anchor to hold one there when one gets over.

Few will deny the numerous and sometimes insurmountable problems which come as the result of rapid social and technological change. However, it is one thing to know that they exist and another to understand the process of how individuals adjust to increasing stress complexity. It is suggested here that the perceived quality of accomplishment, worthwhileness, and self-determination which may result from an ethnic group experience is one of the ways by which man is able to cope with displacement. To explain, however, how man adapts one must go further.

Assuming that the adoption of ethnic identity is both a response and a means of adaptation to increasing
complexity, a cross-disciplinary approach may be most useful in explaining the process. In particular, the theories of relative deprivation so aptly used by David Aberle (1966) and Lewis Coser (1967), the theory of cognitive dissonance by social psychologist Leon Festinger (1958), the idea of the ceremonial fund as suggested by Eric Wolf (1966), and what I have chosen to call the "band wagon" effect, which is essentially a sociological phenomenon, all appear to be of value as explanatory devices.

Aberle has defined relative deprivation as "a negative discrepancy between legitimate actuality and expectation, or between legitimate expectation and anticipated actuality, or both" (1966:323). This notion of relative deprivation has been fruitfully employed to explain social movements by Aberle (1966), Coser (1967), and others. However, the concept of relative deprivation may be more useful when combined with Festinger's notion of cognitive dissonance. Festinger postulates that when an individual is induced to engage in behavior that is inconsistent with his beliefs or attitudes, he will experience the discomfort of cognitive dissonance. He continues by saying that "the reality which impinges on a person will exert pressures in the direction of bringing the appropriate cognitive elements into correspondence with reality" (1958:11).
This is not to say that relative deprivation and cognitive dissonance are the same phenomena. They may or may not be. Relative deprivation is simply a form of cognitive dissonance. It involves the relative worth of an individual or group in relation to a point in their reference field. Cognitive dissonance, on the other hand, may not involve a sense of worth. Instead the discrepancy may be between how one is behaving or believing and what one believes is expected or commanded of him to do or believe.

It is the effects and the absolution of the deprivation or dissonance, however, with which we are primarily concerned. It is here that Festinger offers consistent guidance. He hypothesizes that:

1. The existence of dissonance, being psychologically uncomfortable, will motivate the person to try to reduce the dissonance and achieve consonance.

2. When dissonance is present, in addition to trying to reduce it, the person will actively avoid situations and information which will likely increase the dissonance (1958:3).

According to Festinger there are essentially three ways of reducing this dissonance. 1) The change of a behavioral cognitive element; 2) The change of an environmental cognitive element; and 3) The addition of new cognitive elements. By then changing his environment, his behavior, or by adding new cognitive elements the individual is able to either bring about
the expected or alter his perception of the exogenous factors, until he is in consonance and, of course, no longer relatively deprived or in a state of cognitive dissonance.

During periods in which societies experience rapid growth in their social and technological fields the disinherited may find a perceived discrepancy between what they believe they are getting and what in actuality they expect to receive. This discrepancy between the observed and the expected must then be dealt with and explained in terms of factors exogenous to the individual.

In light of Festinger's theory, let us look at one example which may help to explain the adoption of ethnicity as an adaptive device.

It was related to me by two Native American informants that when they first moved to an urban area they were told by relatives that they should find Italian friends. The rational was that Italians had made it, we haven't, and if we can be mistaken for an Italian so much the better. In effect we have an example here of the reduction of dissonance by denying ethnicity, or in Festinger's terms by changing a behavioral cognitive element. However, in the case of both of these informants the dissonance was not reduced. They had moved into an inner-city
neighborhood occupied primarily by Southern whites and blacks, they were separated from Italians by many miles and ecological barriers, and they were identified, by whites, as Indians upon their arrival.

However, in both cases, ethnicity continued to be denied in an effort to become socially mobile and to gain a share of the "riches" which the new urban environment had promised them. Today, however, both are members of Native American organizations which are actively ethnically oriented.

I suggest that in the above situation it is evident that the dissonance engendered by attempting to melt into the wider society, and being refused admittance; the promises that the urban environment had induced in the individual which were not fulfilled; the perception of discrimination; and perception of relative wealth in the surrounding environment was, in this case, solved in three ways. First, by avoidance of perhaps identity threatening situations; second, by a change in behavior; and third, by the addition of new cognitive elements. What actually did happen was 1) a withdrawal from social interaction which appeared to be threatening 2) a return to the pow-wow circuit, relearning of native language, and relearning of Indian craftmaking; and 3) quasi-mythmaking in the form of a belief in the independent origin of the
American Indian, stylish rhetoric, and a profound disrespect for whites and the system they represent.

One way of changing the behavioral element and confronting the environment is to re-establish or reify social relationships and/or ideology. Ethnicity may of course provide this mechanism. This is quite analogous to Wolf's concept of the ceremonial fund which serves quite the same purpose. Wolf states that "they (peasants) must also join with their fellow men in keeping order, in ensuring the rudimentary acceptance of certain rules of conduct so as to render life predictable and livable...social relations are never completely utilitarian and instrumental. Each is always surrounded with symbolic constructions which serve to explain, justify, and to regulate it (1966:7)."

Given the stress with which the individual must cope, ethnicity as an ideology or as a group phenomenon may serve the purpose of establishing relationships which have the dual function of offering individual stability and providing the basis for solidification and even economic and political power.

The asymmetrical structural relationship which exists for peasants is also present in American society for most of the lower and middle classes. This intensifies and magnifies the functional basis for the maintenance of this "ceremonial fund." By drawing on the fund of similar background, religion,
etc. the individual is socially and psychologically reinforced in such a manner as to allow for his functional adaptation, even though the afore-mentioned asymmetrical relationships exist. As Wolf points out, the amount of effort and the size of the ceremonial fund will depend on tradition and the perceived needs and abilities of the individual. In the same way, ethnicity may vary in its intensity and form.

It would certainly be rational, as well as productive for the individual who is in an uncertain social, political, or economic position to establish the kinds of social networks which would provide for him in times of emergency. This position, however, may drastically change as the individual sees himself as achieving his goals of social and/or economic mobility. The severing of ethnic ties at this stage has been well documented by Nagler (1970), as well as others, in his study of Indians in Toronto, Canada.

This brings me to the last point which I wish to consider. That is the effect of mass ethnic movements on other ethnics. Since the 1960s race relations has largely revolved around the relationships between blacks and whites. This attention has been important for two primary reasons. To many whites, and members of various other ethnic groups, the entire machinery of the several governments within the United States
revolved around "blackness." As a result many began to say "let me have some of this action." Thus the idea of ethnic became real, and in fact profitable, not only in terms of self-concept but also as a means of achieving social and economic mobility. Further, one need not look far to see other alienated groups seizing and slightly modifying the symbols that were, and continue to be, successful for Black Americans. This is what I have chosen to call the "band wagon" effect.

We have been speaking primarily of those peoples who are considered to be disadvantaged in the United States. However, it is apparent that in much of the middle class there may also be a redefinition of what an individual is in relation to his eco-system. Recently, while speaking to several upper-middle class Armenians and Italians it was pointed out to me that they perceive of a return to tradition among many of their people. As this return was being evidenced among both the religious and the non-religious and among those with weak family ties as well as strong family ties, I began to question. Their reasoning, for what they perceive as a renaissance of ethnicity among their own people, is the need for stability, the need for commonality against the impersonal work situation, and a conscious desire not to be left behind by others.
whom they see as being more ethnic than they.

This "band wagon" effect may have several important consequences. First, it provides the mechanism for the alienated to achieve a form of self-determination and a viable self-concept. Second, it provides the basis for a wider movement which may begin to integrate the several ethnic groups into the political and economic mainstream, while maintaining their culturally pluralistic traditions.

Sahlins and Service write that adaptation is "the securing and conserving control over the environment, (and) is the orienting process of the specific evolution of both life and culture" (1960:45). Essentially, this is what I have suggested ethnicity is doing in our contemporary society. I have further suggested that the result of alienation, etc. is relative deprivation and/or cognitive dissonance which must be resolved by reducing the dissonance and the deprivation. It is suggested that Wolf's concept of the ceremonial fund might very well be analogous in function to ethnicity as a mechanism which can be used to accomplish this goal. Finally, it has been suggested that the success that one group has had, because of a resurgence of ethnicity on their own part, has signalled a "band wagon" effect on other peoples who heretofore had not considered themselves to be ethnic
or had not used it as a positive mechanism with which to cope with their environment. As to why ethnicity, as the chosen mechanism, I can only suggest that it is 1) a readily available adaptation device; 2) it is independent of relative economic and political success; 3) symbols and models which have been relatively successful are available; and 4) ethnicity is a familiar model with which people can identify.
NOTES

1. This article is a revised version of a paper delivered at the symposium "Perspectives on the Effects of Complexity II: Urbanization," Central States Anthropological Society, Cleveland, Ohio: April 26-29, 1972.

2. It is a continuing source of internal intellectual debate for this author as to whether there is in actuality an emic ethnic renaissance or if instead it is only the latent discovery of the social scientist. Whichever is the case it will take additional research to clarify the point.

3. This paper is partially based upon preliminary fieldwork in an inner-city multi-ethnic community. Fieldwork will continue for an additional 30 months. Partial funding for this research has been obtained from The Ford Foundation and I thank them for their generous support.

4. I thank Ted Duncan (Wayne State University) for the initial idea which stimulated thought concerning the ceremonial fund.
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A GRAPHIC MODEL OF THE ASPECTS OF CULTURE
FOR APPLIED ANTHROPOLOGY

Maureen R. Jenkins

INTRODUCTION

THE REVOLUTIONARY TIMES

We find ourselves in the midst of a time of profound transformation of culture in every part of the world. The pain of confronting youth culture, women's liberation, and modern art in Western civilization is familiar to the Third World as it encounters Western rationality, compound interest, and transistors. This phenomenon extends even to those cultures which we might like to have remain in idyllic innocence as "primitive." This shift is basically a paradigm shift, brought about over the last fifty years as changes in technology, settlement, communications, and transportation have transformed the universe which we experience. The accomplishment of a man walking on the moon is, quantitatively speaking, simply another technological advance. For people across the world to see their environment from afar as a small, cloudy planet suspended in nothingness, however, is a qualitative shift in consciousness. The moon walk is simply a rather dramatic example of the new sense of ourselves as human beings which pervades the latter part of the twentieth century.
In *The Meaning of the Twentieth Century--The Great Transition*, Kenneth Boulding (1964:28–9) describes the selfconsciousness of the creation of social structures in our time as that of "post-civilization." Others, such as the archaeologist Teilhard de Chardin (1962), have called it a "post-human" era, and the time in which man has "come of age" (Bonhoeffer 1949). I would describe this situation as a paradigm shift of radically extreme dimensions. Every aspect of our lives is so discontinuous from that of even two generations before us that change is almost imperceptible, because it is so complete. In this context, all of the sciences, but particularly the social sciences, are also in transition.

THE SOCIAL TASK

It is anthropology, I would suggest, that is best equipped to deal in a well-informed way with the base for the massive cultural re-creation task which faces our day. As Malinowski points out in *The Dynamics of Culture Change*, "The field of culture change is one in which it is impossible to keep apart the theoretical and practical issues involved" (1945:6). There needs to be a way in which to pull together the diversity and richness of our understanding of cultural dynamics in such a way that that wisdom can be brought to bear upon local problems. Malinowski notes that
...in colonial policies we have perhaps the nearest approach to an experiment, at times almost a controlled experiment, to be found in social science... (1945:7).

The same could well be said of urban ghetto policy, restructuring in the schools, Peace Corps and other foreign aid projects, even of community renewal in the American suburbs. In all of these instances, it is clear that the ever-increasing rapidity of culture change demands the creation of unprecedented theoretical, strategic, and tactical models. A simple way of systematizing anthropological models of culture is needed to allow those grass-roots people now creating the direction of culture change to do so in an informed way. Of course, colonial and domestic policy will proceed without such a model, but the cost in human life and particularly in cultural gifts to civilization becomes increasingly prohibitive.

An anthropological model for practical usage by laymen as well as by intellectuals must hold every bit of the rigor demanded by any anthropological model. It must be thoroughly elegant, rational, and internally consistent. For the layman, who may have but passing acquaintance with anthropological method, or with reading for that matter, rationality is the key. His comprehension of a model is not on the basis of his acquaintance with past theory, but on the way the model itself organizes reality. Again, in practical operations, the model must be readily internalized. As Boulding
points out in The Image (1965), visual rationality is crucial to comprehending and internalizing complexity.

THE STUDY DESIGN

In the following study I shall present a model of the cultural processes which offers a way of holding together anthropological cultural theory into a single graphic abstract. The cultural process model is designed as an analytical filter which illuminates the dynamics of culture at any level of complexity. Although this is a working model at present, it has undergone extensive grounding and revision over the past two years by the staff of the Ecumenical Institute, which is a research and training body, affiliated with the Chicago Church Federation. In addition to work by the 1200 staff members of the Ecumenical Institute, the model was used as a basis for a four-week intensive work session in July, 1971, involving approximately 1,000 people from across the world. I have participated in planning and carrying out the workshops from which this model was created in my role as a staff member of the Ecumenical Institute. The study has two parts: first, I shall lay out the context of the cultural process model, and then I will present the model itself.

CONTEXT OF THE MODEL

THE HISTORICAL DEVELOPMENT

In Man and His Works, Melville Herskovits notes,
"One of the earliest postulates of anthropological science was that the ends achieved by all human cultures are basically the same..." (1952:233). This assumption supported the theory of the "psychic unity of mankind" which held that the resemblances between the institutions of different cultures are to be accounted for by the different capacities of human beings. No attempt at drawing cultural comparisons could have proceeded without this assumption of cultural equivalence. Herskovits (1952) points out that this theory was directly behind the work of Spencer, Tylor, and Morgan.

Out of this stance, social theorists of the nineteenth century put heavy emphasis upon the need for a nomothetic model of cultural equivalences or universals. As Auguste Comte put it in his massive *System of Positive Polity*, "To form...a satisfactory synthesis of all human conceptions is the most urgent of our social wants..." (1875:2). On a basis of sketchy ethnographic evidence and total ignorance of the mechanism of inheritance, the evolutionists of this period advocated the creation of universal cultural laws. The trend toward faith in inevitable progress of mankind was rather marked. As Tylor observed in *The Origins of Culture*:

On the one hand, the uniformity which so largely pervades civilization may be ascribed, in great measure, to the uniform action of uniform causes: while on the other hand its various grades may be regarded as stages of the development of evolution,
each the outcome of previous history and about to do its proper part in shaping the history of the future...(1871:x1).

It was through this work that was begun the task of delineating the universal aspects of culture. Tylor, for instance, in his Anthropology, foreshadowed later systems when he delineated culture as consisting of the following aspects:

...language; the "arts of life"--the food quest, implements, dwellings, clothing, fire-making, cooking, and what would today be called economics (barter, money, commerce); the "arts of pleasure"--poetry, drama, dance, the graphic and plastic arts; "science"--counting, weighing, and other methods of reasoning about the physical world, and magic; the spirit-world or religion in its various forms; history and mythology; and "society" or social institutions...(1881:73).

Clark Wissler's system, while more usefully arranged, was similar in content (1923:74). Murdock's catalogue approach, in "The Common Denominator of Cultures" in The Science of Man in the World Crisis, (Linton, ed. 1945:123-42) is vastly more inclusive than other schemes. He includes a total of forty-six categories, but offers little rational relationship among them.

The key distinction between the work of nineteenth-century anthropologists and those of the twentieth century is in the elaboration of the role that the aspects of culture play in relationship to each other. The primary figure in the shift from nineteenth to twentieth century thinking is Franz Boas. Whatever else may be said of Boas, it is clear that he trained an entire
generation of American anthropologists in the understanding that the "solid work" had not been done in anthropology, and that theory and method should be held off until serious empirical data-gathering was done (Harris 1967:259). It was through this push toward a more "scientific approach" that the description of cultural aspects began to take reliable form as a useful tool in talking about culture.

I would point to Emile Durkheim's work, The Rules of Sociological Method, as the clearest articulation of the application of scientific reasoning to cultural variables in such a way as to give functional strength to the delineation of cultural universals. Durkheim points out that a social fact is a thing altogether distinct from its individual manifestations; it is an abstraction of behavior (1938:7-8). His definition of a social fact is as follows:

A social fact is every way of acting, fixed or not, capable of exercising on the individual an external constraint; or again, every way of acting which is general throughout a given society, while at the same time existing in its own right independent of its individual manifestations...(1938:13).

A model of culture, then, is not concerned with the particular practices of a particular group of people except insofar as they operate as the common consciousness of what it means to participate in the given culture. It is this commonness or statedness or self-consciousness which distinguishes a social fact from any routine activity of
a culture, rather than the mere repetition of an activity throughout a culture.

Bronislaw Malinowski pulled together the insights of the functionalists and structuralists as to the dynamic interactions of social facts into a design of the imperatives and responses out of which any culture operates. This model assumes that social imperatives call into being social responses, or aspects of culture. The responses take institutional form, but are never altogether synonymous with any given institution. His model in tabular form, is as follows:

<table>
<thead>
<tr>
<th>Imperatives</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The cultural apparatus of implements and consumer's goods must be produced, used, maintained, and replaced by new production.</td>
<td>1. Economics</td>
</tr>
<tr>
<td>2. Human behavior, as regards its technical, customary, legal or moral prescription must be codified, regulated in action and sanction.</td>
<td>2. Social Control</td>
</tr>
<tr>
<td>3. The human material by which every institution is maintained must be renewed, formed, drilled, and provided with full knowledge of tribal tradition.</td>
<td>3. Education</td>
</tr>
<tr>
<td>4. Authority within each institution must be defined, equipped with powers, and endowed with means of forceful expression of its orders.</td>
<td>4. Political Organization</td>
</tr>
</tbody>
</table>

In another section of the same book, Malinowski describes the imperatives and responses of the religious
and aesthetic elements of culture (1944:92-119). The cultural process model is based on these presuppositions as the most viable way to hold together the demand for rational models of the aspects of culture and the dynamic framework of culture as an integrated system which is assumed in our time.

THE CULTURAL PROCESS MODEL

THE PRACTICAL PRESUPPOSITIONS

The cultural process model here being introduced is a series of interlocking triangles which deal abstractly with the process of creating commonness of social facts which goes on in any culture at any time. Figure 1 is the basic cultural process model, representing level 0, the cultural process as a whole, and level 1, the processes of economic commonality, political commonality, and social commonality. This basic model can be expressed thusly; the cultural process of humanness is a dynamic, which is made up of economic commonality, political commonality, and social commonality. The model is thus out to hold inclusiveness, in that each level down further delineates the contents of the level above it.

The model describes social processes. By this is meant the arenas of activity in which a culture is always about the task of creating commonality. This is the same thing as a social fact. Processes are not reducible to their institutional manifestations. For instance, the
Figure 1

Rational Pole

Level 1

The Social Commonality

The Cultural Process

The Economic Commonality

Level 0

The Political Commonality

Level 1

Foundational Pole

Communal Pole
Figure 2

COMMUNAL SYMBOLS

SOCIAL COMMONALITY

COMMUNAL WISDOM

COMMON STYLES

COMMON DISTRIBUTION

THE CULTURAL PROCESS

ECONOMIC COMMONALITY

COMMON RESOURCES

2

1

CORPORATE WELFARE

2

POLITICAL COMMONALITY

2

CORPORATE ORDER

1

CORPORATE JUSTICE
process of education will go on whether there is an educational structure or not. And yet, to deal with the process of education, one must include educational structures.

In addition to the processes, the model is also understood in terms of the dynamic relationships among the processes. No process takes place in a vacuum; rather, it takes place in interaction with all of the other processes. The process of economic commonality, for instance, operates in continual interaction with political and social commonality, and they with it. At every moment each process is creating, judging, and sustaining all of the others, and being created, judged, and sustained by the others.

THE MODEL RATIONALE

The cultural process triangles operate out of a single abstract rationale. The foundational, or lower left, pole of any triangle pertains to the drive for self-preservation. In the context of the whole cultural process, this is the process of economic commonality. Within the economic process, this is common resources; within the political process it is order, and so on. (See figure 2) The foundational pole of any triangle is that without which the other two processes do not go on. Without life sustenance through the economic, for instance, one's polity and sociality has no relevance.
Within economic commonality, there is no possibility of production or distribution but that there are resources with which to begin.

On the lower right-hand pole of any triangle is the communal pole, which pertains to the relationships of power and decision-making in the midst of any social group. Eighteenth century political theorists stressed the need for any social group to counteract people's fundamental tendency to destroy each other by creating some sort of a social contract. The maintaining of this common social contract in any dimension of culture is the communal aspect.

The final dynamic of the cultural process in any triangle is the top pole, the rational dynamic. This is the dynamic which dramatizes the uniquely human in the triangle; it is the spirit which makes participation in the social process of one's culture understood to be worthwhile. Without this process there would be no commonness, because there would be no mechanism for maintaining human consciousness in being.

It is in the dynamics of the foundational, communal, and rational aspects of any triangle that the cultural process model deals with culture as a series of human relationships, rather than a static holding of mere cultural data.

THE ECONOMIC COMMONALITY

The cultural dynamic of humanness is a process, one
THE CULTURAL COMMUNITY

ECONOMIC COMMONALITY
- Technological Resources
- Common Resources
- Natural Resources
- Production Systems
- Common Production
- Production Instruments
- Production Forces
- Human Resources

SOCIAL COMMONALITY
- Final Meanings
- Social Structures
- Social Art
- Social Wisdom
- Accumulated Knowledge
- Communal Styles
- Useful Skills
- Procreative Scheme
- Cyclical Roles

POLITICAL COMMONALITY
- Significant Engagement
- Corporate Welfare
- Secure Existence
- Political Freedoms
- Legal Base
- Corporate Order
- Domestic Tranquility
- Legislative Consensus
- Executive Authority
- Judicial Procedure

Common Religion
- Common Symbols
- Corporate Language

Figure 3
aspect of which is creating economic commonality. This foundational pole was chiefly the articulation of the nineteenth century, although the activity itself has always been present. Adam Smith, Karl Marx, and Thomas R. Malthus are key articulators of the modern theoretics in this arena. Durkheim, in *The Division of Labor in Society* (1947:203), points to the foundational nature of the economic process when he notes that even if political activity were absent, economic life would continue:

Social solidarity would then be nothing else than the spontaneous accord of individual interests ... The typical social relation would be economic ... resulting from the entirely free initiative of the parties...

Marx stated clearly that the fundamental human relationship was an economic one. In the rise to power of the bourgeoisie, he saw that an economic system which separated the laborer from his labor by making it a commodity, completely altered the social dynamics of the entire culture (1888:15).

Economic commonality is organizing material means in order to sustain human life. Through such a means a culture taps resources of wealth, systematizes creation of goods and services, and regulates mechanisms for dispensing these usable commodities. These three dynamics are named common resources, common production, and common distribution. Without this process of
creating economic commonality, a culture can neither support itself nor guarantee its future existence.

THE POLITICAL COMMONALITY

The cultural dynamic of humanness is a process, one aspect of which is creating political commonality. Despite his clumsy style, Auguste Comte was a signal articulator in this area. As he rather painfully put it in his Positive Philosophy:

...the relation between the political and the social condition is simply this:--that there must always be a spontaneous harmony between the whole and the parts of the social system...(1896:II,218).

This communal pole of the cultural processes is the point at which any social group structures its internal and external relationships. It has to do with social ordering, or the process of corporate order; with decision-making and arbitration, or the process of corporate justice; and with guaranteeing the minimal rights or expectations of people within and without the group, held here in the process of corporate welfare. This process was broken open in its modern statement in the eighteenth century in the work of such writers as Hobbes, Locke, Jean-Jacques Rousseau, and Thomas Jefferson. The agonizing struggle of the French and American revolutions shows through in the clarity and vociferousness of their work. Perhaps the most helpful images these writers produced were in the area of the social contract--the sort of consensus which a social group creates to preserve itself
as individuals and the whole, and to wield greater power corporately than they could as the same-sized collection of individuals. Rousseau puts the image very clearly in his *A Treatise on the Social Contract*:

Now as men cannot create new powers, but only compound and direct those which really exist, they have no other means of preservation, than that of forming, by their union, an accumulation of forces, sufficient to oppose the obstacles to their security, and of putting these in action by a first mover, capable of making them act in concert with each other... (1776:17).

Political commonality is the process of individual and corporate human relationships within the community that enables it to function as a social unit. This requires that the process of political commonality structures the cultural forms, implements the will of the people, and serves the community's well-being. Without the function of political commonality, the culture's bonds, which relate person to person and group to group, in all dimensions of life, would collapse, allowing cultural chaos.

THE SOCIAL COMMONALITY

The cultural dynamic of humanness is a process, one aspect of which is creating social commonality. The social commonality is the rational, or organizing pole of the cultural process. Durkheim's category, the "conscience collective," seems to hold the significance of this pole. Paul Bohannan, in an article entitled "Conscience Collective and Culture," (Wolff 1960:78-9),
points out that the French term *conscience* translates into English as both "conscience" and "consciousness." For Durkheim, then, internalized sanctions of the culture are amalgamated with awareness of the social milieu. Bohannan goes further to note that Durkheim uses *conscience* also to point to the shared awareness or consciousness of life of a culture—not only what a culture holds as its images of humanness, but also how it rehearses, quickens, and transmits those images. The social process is this activity of commonly signifying what humanness is through internalized sanctions, the common sense of the social milieu, the images of humanness itself, and the acting out of those images. It is clear in any discussion of this dimension of life today that we find ourselves in the midst of a void in language to describe empirically the activities in culture to which we are pointing. It seems that this is the area in which it is most difficult to distinguish social science from psychology, theology, or just plain hogwash. It is clearer than ever before, however, that the social processes of culture are peculiarly powerful. Hitler, modern advertising, and social movements of all sorts over the past ten years point to the incredible power and objective weight as cultural fact which these activities have. It is perhaps most crucial of all that anthropology organize its profound wisdom in objective description of the universality of the social processes.
Social commonality is the means of giving an external rationale to internal consciousness. Each culture continually interprets the collective knowledge, organizes the collective mores, and symbolizes the common life struggle of its members. These processes, of communal wisdom, communal styles, and communal symbols, shape social commonality. Without social commonality, human society acquires no significance in sustaining and ordering itself, and the entire cultural process is denied the vision necessary for its continued creative response.

CONCLUSION

Even the most naive human being today is aware that there is something unprecedented about our times, even if it comes to him only as color television and a phenomenal degree of defiance on the part of his children and wife. This uniqueness of our time seems to be focussed in the total transformation of our basic paradigms of living, and this is as true in Samoa as it is in Chicago. The foregoing model, while it is yet highly abstract and unfinished, seems to point in the needed direction in that it provides a simple and rational way for common man to objectify the terrifyingly rapid change he finds himself in the midst of, and it holds any particular human activity in relationship to all of the culture's activity. Unless such tools are made available
to the common man across the globe, accompanied by training in mass problem-solving methods for cultural problems, there is serious question whether local man will have the fortitude to continue to struggle with the social and individual crises which our age has brought about, let alone use that new situation as an opportunity to forge out new paradigms of what it is to be post-modern man.
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NUTRITIONAL ECOLOGY: A NEW PERSPECTIVE

Sue Taylor
Nancy Shelor
Margaret Abdelnour

Populations have differential but potentially specifiable nutritional requirements. In various ecosystems, essential substances such as salt, water and certain vitamins and minerals are differentially represented, and populations exhibit variable efficiency in extracting these substances from the environment. Those groups that exist with only limited outside contact have managed to maintain a fairly balanced diet by taking advantage of a variety of natural food resources, including insects, rodents, and the internal organs of game which are rich in vitamin B₁₂. Man's apparent success in extracting essential nutrients from a particular ecosystem lies not only in the differential patterns of exploitation, but also in his adaptive capacity and represents a long-term process of experimentation, the immediate effects of which are not necessarily cognized. However, nutritional deficiencies may occur in response to physiological disturbances resulting from inadequate digestion, absorption or utilization of nutrients consumed; or, these deficiencies may indicate either environmental inadequacies or exploitative inefficiencies. In order to offset these deficiencies, socio-cultural
instrumentalities, such as trade relations, food taboos, certain ritual observances and culinary practices, may come into play as populations devise specific strategies which are employed as ecological problem-solving devices.

Traditionally, ethnographers viewed subsistence activities, trade, food taboos and rituals to be described as separate entities and in some instances placed in predetermined categories of social behavior. Nutritional ecology is an attempt to give an ecological as well as a nutritional interpretation to cultural data. Nutritional requirements of populations as well as the actual intake vary with environmental and cultural conditions. Both annual and seasonal fluctuations in the abundance and variety of food resources often lead to trade relations as described in the reinterpretation of the Northwest Coast Potlatch (Suttles 1968; Pidcocke 1965). Such ritual practices as the pig feast in Melanesia show correlations between the increased need for protein intake as a result of negative nitrogen balance and stress (Vayda n.d.). A nutritional approach ideally extends the interpretation one step further, with a qualitative as well as a quantitative analysis of the essential nutrients provided. Once the actual food consumption is determined, a caloric value is
established with an analysis of the protein, carbohydrate and fat content. Vitamin and mineral composition is also established. Caloric cost evaluation—that is, specification of energy expenditure versus caloric yield—is equally important in a nutritional approach to subsistence activities.

Optimum utilization of protein is necessary for growth and development and is dependent on the presence of the eight essential amino acids in proper ratio. Maintenance equilibrium can be achieved on approximately 20-30 grams of protein per day, with greater amounts needed for pregnant and lactating women (Harrison, et al. 1964). With some variation owing to climatic conditions, quality protein requirements are determined on the basis of 1 gram per kilogram of body weight (Garn and Block 1970). In warmer climates, caloric needs are lower (at least partly because caloric expenditure for body temperature maintenance is lessened), but protein requirements may be higher by as much as 5-10 grams per day (Mitchell and Edman 1951:94). Salt and water needs are also higher in warm climates, although fully adapted or acclimated peoples seem to have special physiological mechanisms to conserve these nutrients; in addition, increased sweat and fecal losses call for increased intake of iron, and possibly
of calcium. In cold climates a higher ingestion of fat is needed for insulation and fuel storage. By way of illustration, fat intake among the Eskimo is 162 grams (1,458 calories) per person per day, as opposed to 63 grams (567 calories) daily in the population of tropical Barbados (Harrison 1964). There is also some evidence that fat requirements are high in arid areas as well (Newman 1962).

Physiological reactions to vitamin and mineral deficiencies have been described in the literature in detail; however, little attention has been given to the effects of nutritional deficiencies on cultural behavior. An example of a nutritional deficiency involving cultural adaptation is the Eskimo's response to Piblokto (Eskimo madness). This condition is the result of a breakdown of calcium homeostasis caused by low dietary intake of calcium coupled with inadequate sunlight for vitamin D synthesis. (Vitamin D, along with phosphorus, is necessary for calcium absorption.) Wallace and Ackerman (1960) suggested that Piblokto was the result of hypocalcemia brought about by the inability to adapt physiologically to low calcium intake. Piblokto occurs during the winter and early spring, when the Eskimo are living in large groups and when there is little sunlight. It begins with a period of social withdrawal and culminates in
"running amok," spasms, collapse and finally total recovery. Running amok is probably preceded by anxiety and hyperventilation, which result in a partial depletion of calcium ions in the system. Shamanistic practices in times of stress resemble Piblokto behavior; in other words, the culture not only accommodates but also capitalizes on this response. We interpret this as an example of the manner in which cultural instrumentalities come into play in the absence of or in advance of biological adaptation to the exigencies of the habitat (see Katz and Foulkes 1970).

The nutritional content of foods is often enhanced by the specific culinary techniques employed. The Mesoamerican practice of soaking maize in lime increases the calcium content twenty times. In parts of Africa, baobab leaves are dried in the shade rather than in the sun, resulting in greater vitamin retention. In parts of Southeast and Insular Asia, the nutritive value of soybeans is increased by germination and fermentation. Culinary practices in the Near East provide another example; here, in the absence of techniques for its preservation in the raw state, milk is allowed to curdle and then is dried and mixed with wheat (Harrison, et al. 1964).

Dietary habits are conditioned by the availability of food resources, certain sociocultural instrumentalities (e.g., food taboos), and extrasocietal
influences. Food taboos generally take one of the following forms: 1) a general prohibition on the slaughter or consumption of specific animals; 2) the restriction of certain foods to particular segments of the population; and 3) temporary, situational restrictions (e.g., before or during war, during menstruation or after parturition). Taboos of the latter two types often have the effect of channelling food to those members of the population undergoing a temporary or chronic nutritional deficiency. Vayda and Lowman-Vayda (1970:1312) provide an example from the Maring of New Guinea. They state that inherited food taboos in the form of proscriptions on the men's consumption of hunted game have "...the beneficial effect of making more of the scarce animal protein available to categories of people who especially need it: women, who are likely to be either lactating or pregnant, and growing children."

Ritual practices frequently constitute devices to offset environmental inadequacies. For instance, the Karimojong of Uganda maintain a complex system of food production including animal husbandry, agriculture and gathering. Yet, the primary source of food is the blood and milk of cattle. During the dry season, milk supply and agricultural productivity are both low. At this time, rituals are performed that
include prayers for better times and the sacrificial slaughter (and consumption) of cattle, that is, ritual activity permits utilization of a resource normally held in reserve.

When societies are displaced or disrupted by external forces, the wisdom developed through centuries of trial and error may cease to be relevant. For example, the Zulu of South Africa were forced to change from their traditional diet to one that gives a higher caloric yield, but which also results in an unbalanced diet. White settlers moving into the area encouraged the cultivation of maize instead of millet. Maize gives a higher yield and requires less work (Dubos 1965:68-69). On the other hand, millet is higher in methionine and tryptophane than maize (Richard Bozian, personal communication). A second factor contributing to the unbalanced diet is the movement of settlers onto land formerly used for hunting and gathering. The game and berries so essential in the original diet are no longer available.

With the trend toward a market economy, traditional agriculture is being commercialized as subsistence crops are replaced by such cash crops as cotton, groundnuts, coffee, etc. The reaction to the introduction of generalized money appears to be similar cross-culturally. This money is used initially
to procure trinkets and prestige items introduced by Westerners. Only later is the money used to purchase items for consumption in an attempt to supplement the diet and perhaps offset the malnutrition which develops from an imbalance of nutrients.

Agricultural development has been approached primarily from an economic perspective, with an emphasis on yield in order to cope with the problems of undernutrition in the world today. The introduction of such high yield grains as IR-8 (miracle rice) may alleviate the problem of inadequate caloric intake. Unfortunately, subsistence based primarily on cereals may lead to malnutrition and increased susceptibility to disease. For instance, wheat flour is low in zinc, a deficiency of which leads to beri-beri and slow wound healing. In areas where cereals constitute the main diet, Shroeder (1970) indicates that phosphate fertilizers aggravate zinc deficiency and suggests the use of a zinc supplement. The process of refining cereals has a detrimental effect in that 80-90% of the mineral elements of the cereal are deleted (Hemphill 1967).

Phillips (1959:383) suggests that the one and only foundation to agricultural development is an ecological one--constituted by knowledge of the climate, vegetational and soil features of a specific
locality. Nutritional ecology, as we are using the term, combines this approach with a survey of all available subsistence resources in the ecosystem. In the remainder of this paper, we suggest some guidelines for the field study of nutritional ecology.

First, the anthropologist must have at his disposal a complete ecological study of the ecosystem; multidisciplinary team research is crucial.

Second, the anthropologist must determine the way in which the ecosystem is cognized and exploited. All analysis on this level must be conducted in terms of local cognitive categories ("folk taxonomies"). Steward's (1955) and Netting's (1965, 1968) discussions of "effective environments" are pertinent here.

Third, the actual nutritional requirements must be determined for the society being studied. Most available nutritional studies reflect only the requirements of members of Western societies. These standards cannot be applied cross-culturally, because nutritional needs vary in accordance with such factors as climate, altitude, and probably, genetic constitution. In addition, activity rates affect nutritional needs. In this regard, the division of labor (whether according to sex or along any other dimensions) must be taken into account (see Rappaport 1967), both in the study of particular societies and in
making cross-cultural comparisons.

Fourth, it is necessary to determine the exploitation of seasonally available subsistence resources as well as seasonal and annual variations in the distribution and abundance of food resources as affected by climatic fluctuations.

Fifth, the study must specify how the distribution of subsistence resources is undertaken in the society in terms of food restrictions, ceremonial cycles, and seasonal demographic patterns.

Sixth, the study of nutritional ecology as we have discussed it will require a change not only in the conceptual, but also in the organizational structure of field research and data analysis. The research problems of modern anthropology are beyond the capacities of the one-man scholar.
1. An earlier version of this paper was prepared for a class in Cultural Ecology taught by Prof. Kent D. Vickery. We thank Prof. Vickery and Profs. Barry Issac and Ivan Brady for their criticisms of subsequent drafts.

2. Essential nutrients are those elements necessary for life maintenance. Over fifty have been identified chemically including 14 trace elements, 8 amino acids, salt, water, etc.

3. Nutritional deficiencies constitute a lack or inadequate supply of essential nutrients.

4. Essential amino acids include isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophane and valine.

5. Techniques have not yet been developed for measuring cross-cultural differences in requirements of vitamins, minerals, amino acids, and certain other essential nutrients.
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MASTERS THESIS TITLES

A traditional feature of the Lambda Alpha Journal of Man has been the listing of Masters theses titles recently awarded by graduate departments in this country. We hope that it will prove helpful in furthering the exchange of ideas by students of anthropology.


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