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# toward a convergence of cognitive and symbolic anthropology

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There is a new fermentation in social anthropology that crosses the boundaries of what have usually been seen as distinct subfields. In particular, one can envision a convergence of cognitive and symbolic anthropology. We are concerned both with the signs of convergence that one can already see and with the directions along which this convergence might continue. The lack of developed theory in the two subfields makes both more responsive to changing conditions which include innovations in disciplines that neighbor anthropology, as well as in cognitive and symbolic anthropology themselves. This paper examines the conditions that have brought about the emergence of the two subfields as distinct groupings of anthropologists, describes the recent changes that are bringing the two closer together, and suggests future directions that may lead to a convergence and even, possibly, to a single theoretical base which is more developed and interesting than the separate formulations of earlier writings. While no such theory is advanced here, we point to the directions from which such a theory might come.

## separate fields of inquiry

Cognitive anthropology grows out of an enduring anthropological commitment to the analysis of native thought processes and, more particularly, to formal analyses of systems of belief and world view. Subsequently, this approach has come to rely heavily on the analysis of native terminologies and entered into a highly focused phase in the 1960s with studies of taxonomic structures and semantic features within such domains as those of kin-

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*This review describes the conditions that have established the subfields of cognitive anthropology and symbolic anthropology as major clusterings of anthropologists. It discusses the influences in anthropology as well as in related areas of cognitive science, linguistics, and literary criticism that can bring the two subfields closer together. It also looks at future directions of study and suggests some of the characteristics that might be included in a single, unifying theory. [cognitive anthropology, symbolic anthropology, history of anthropology, method, theory, review of field, social anthropology]*

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ship, plants, diseases, and color terminology. Symbolic anthropology, on the other hand, has in its recent study of metaphoric codings of the world emphasized the integration of domains—condensation, extension, conglomeration, and cross-referencing are various concepts employed. It has relied on analysis of symbolic forms in behavioral context, rather than upon elicitation of domains, and has sought to explain or interpret the totality of relevant associations of these forms. This analysis has mainly involved complex cultural structures such as myth, ritual, art, play, and game.

Although initially distinct in subject matter and approach, neither cognitive nor symbolic anthropology has had the *strong theoretical foundation necessary to produce a coherent research paradigm*. Such a paradigm requires not only a set of research exemplars, which do exist in the two subfields, but also a strong theoretical framework that can be formalized (or expressed in at least semiformal terms) and that can thereby generate models and hypotheses for testing. It is this lack of a strong theoretical foundation that, as it is realized, leads to changes in orientation to suggest a *future convergence* of the two. The change in orientation has been stimulated also by developments outside traditional anthropology and by entry into the subfields of people with an increased diversity of backgrounds, from literary to mathematical.

What has maintained cognitive and symbolic anthropology as distinct approaches in the past has been more a matter of *general predilection, interest, and assumptions* than of explicit theoretical differences. At the same time, the beginnings of a comprehensive theoretical approach can be discerned that embraces both areas as part of a more abstract level of analysis. We characterize this convergent higher level as *microanthropology*, in contradistinction to what we see as *macroanthropology*, the more sociological, political, economic, and evolutionary branches of *social anthropology*.<sup>1</sup>

The predilectional base for cognitive anthropology has consisted of: (1) the general interest in an intellectualized world view or interpretive logic, and (2) a concern for formal analytical procedures and category validity. In the early development of cognitive anthropology, this interest and concern led to an emphasis on *ethnoscience*—on the analysis of native beliefs and terminologies associated with aspects of the world which, in modern society, would fall under the purview of a scientific discipline. This predilectional basis taps the general interest that many anthropologists have had in native constructions *qua* constructions.

Modern work in ethnoscience began with Goodenough (1956a), Lounsbury (1956), Conklin (1955, 1962), Frake (1961), Lenneberg and Roberts (1956), French (1956), Metzger and Williams (1963a, 1963b), and Wallace and Atkins (1960). The first two, now less frequently cited, were the chief exemplars of the new subfield which rapidly expanded to a general interest in the cognitive aspect of culture.

In attempting to characterize this interest, some researchers outside cognitive anthropology saw the field as covering what earlier was called “world view,” a people’s “picture of the way things in sheer actuality are, their concept of nature, of self, of society” (Geertz 1973:127). But since world view has had many different meanings from the time of Dilthey and before, Bateson’s (1936) term *eidos* is less ambiguously applied to the range of subjects generally included in cognitive anthropology. This range extends from general questions of primitive mentality and science (Horton and Finnegan 1973), to native views of the natural and material world and their response to it (Conklin 1961), and to terms for particular social domains of native interest, including legal terminology (Black and Metzger 1965). Reviews of the subfield include M. B. Black (1973), Colby (1963, 1966), Sturtevant (1964), and Werner (1972).

In symbolic anthropology the predilectional base *begins, perhaps, as far back as Fustel de Coulanges (1956[1864]) and Robertson Smith (1956[1889]). Frazer’s (1900[1890]) concern*

with compulsive yet consequential nonutilitarian activity is essentially symbolic in orientation. And his inquiry into the variety of associations bound up in magical acts has returned, as we see below, to be of very contemporary interest to symbolic anthropologists. But the initial impetus of the symbolic approach lies in psychoanalysis, on the one hand, and in the sociology of knowledge, on the other. The primal documents are Freud's (1965[1899]) *The Interpretation of Dreams*, with its emphasis on personally generated symbolism, and Durkheim's (1961[1905]) *The Elementary Forms of the Religious Life*, with its emphasis on collective representations and systems of classification and correspondence. The relationship between collective realities and personal and corporeal realities, between public and private symbols, has continued to be of central interest to symbolic anthropology (Leach 1976b). We will examine both these classic influences and the most recent, post-World War II influences below, but mention should be made here of two other important influences: the neo-Kantian emphasis on the constitutive nature of symbolism as found in the work of Cassirer (1955[1923]) and Langer (1952), and the G. H. Mead emphasis on the incessant construction and reconstruction of social reality and individual identity by the objectification of social experiences found in the work of the symbolic interactionists (Blumer 1968). One could add other primal figures; but, manifestly, contemporary symbolic anthropology is richly "overdetermined." And it is not surprising that out of these multiple strands contemporary symbol theory has braided diverse tendencies and schools.

Our focus here is upon microanthropology, but we should mention the fact that symbolic arguments have extended to macroanthropology. Geertz (1973) has long argued that the entire cultural system is best understood through the analysis of symbols and their constitutive power in structuring and motivating that system, a point of view that is expressed in Schneider's (1968) "symbolic system school," in which an understanding of the structure of symbolic associations in many domains is taken as crucial to the understanding of the normative in behavior. Douglas's (1966, 1971, 1975) work is similarly systematic, indeed cosmological in import, seeking to relate symbolic structures to social structures as a form of total analysis. Currently, some cultural materialists, whom one might expect to have granted uninterpretable primacy to pragmatic and productive activity in the real world, have come around to the symbolic argument for human constitutive powers—the power invested in symbols to define situations. Rappaport's (1979) increased emphasis on the place of the sacred in evolution and his attention to the "cognized world" represents a shift of this kind away from a much more ecologically oriented approach (Schneider 1968). And Sahlin's (1976) has challenged contemporary hardheadedness about production, both capitalist and Marxist, by showing the degree to which production is the realization of symbolic schemes and not simply the exploitation of resources readily available. Also, today's structural Marxists are devoting increasing attention to the superstructure—essentially the symbolic structure—and its powers in determining, not simply reflecting, the infrastructure (Friedman 1974). The symbolic approach, in short, has made major claims in macroanthropology, the anthropology of large-scale cultural and social systems. Whatever may be the relevance of symbolic understanding at the macro level, it remains the case that microsymbiotic processes are still not well understood. And it is just here that convergence between cognitive and symbolic approaches can be revelatory.

If the predilectional base of the cognitive approach is directed at discovering and understanding explicit native descriptions and categorizations of the world, and at finding clear and precise solutions, one can see how the focus would be on matters of reference—that is, on how lexemes correspond to categories of reality and on how to get accurate renderings of these categorizations as the natives have made them. The approach is thus a narrowing one, where some semantic domain of interest is isolated for a detailed and systematic analysis of those aspects which are amenable to relatively direct validity checks of one

kind or another. These studies usually are directed at the lexical set (or set of native statements) that map the domain, rather than at the domain itself as observed by the ethnographer (Berlin and Kay 1969; Conklin 1955; Frake 1961; Goodenough 1956a; Lounsbury 1956).

If the predilectional base of the symbolic approach is toward symbols with their rich associational possibilities, one would expect there to be an emphasis on discovering how context (or contexts) is (or are) brought into association in symbolic activity. The interest is less in analyzing native intellectual constructions through distributional studies or in eliciting techniques than in interpreting the associations of salient symbols or metaphors as they occur in contexts of performance (Turner 1974; Herzfeld 1979). This requires the interrelating of semantic domains and therefore leads to a wider, more varied kind of ethnographic attention, the kind characteristic of long-term participant observation (Leach 1958; Fernandez 1966; Schneider 1968). Even so, there is still a tendency to focus on those areas in which symbolism has its richest expression, in myth and ritual (Leach 1977; Sapir and Crocker 1977). Among reviews of the field are Munn (1973), Turner (1975), Umiker-Sebeok (1977), Singer (1978), and Schwimmer (1978). For structuralism and its relationship to linguistics, see Kronenfeld and Decker (1979).

Cognitive anthropology is especially responsive to two related methodological questions of central import to modern anthropology: What is the status of anthropology as a science? How valid can ethnographic data be? While the first question is at times discussed in structuralist and symbolic writings (Fernandez 1977), it is rarely attended to as in cognitive anthropology, which often tries for prediction (Colby 1973) or model-testing procedures (Romney, Shepard, and Nerlove 1972). In the symbolic camp, the preoccupation with validity is often dismissed as "vulgar positivism" (Scholte 1966) or is itself seen as a symbolic statement (Rabinow 1977; Dumont 1978). Symbolic interest in the synthesis of performance and the complex resonances of context—with such qualitative matters as have been called the "ethos" of a culture, "the tone, character and quality of life of a people," "the moral and aesthetic style and mood" (Geertz 1973:127)—breeds impatience with explicit hypothesis-oriented definition and the necessary simplifications of the testing situation and of predictive statement. The inclination is toward qualitative analysis and virtuoso interpretations based on thick description with all the personal idiosyncrasies of method that such an approach presumes (Geertz 1973).

### **the roots of cognitive anthropology**

Prior to the development of cognitive anthropology, concern about the status of anthropology was foremost in Radcliffe-Brown's (1957) writings about a natural science of society. One can see it also in Nadel's (1957) attempt to formalize role relations and Murdock's (1949) statistical correlations between kinship and other cultural characteristics in the quest for universal laws of cultural behavior. Perhaps part of this concern for "hard" anthropological theory arose out of the indefiniteness and lack of precision which the most significant previous theoretical formulations, such as those of Malinowski and of Ruth Benedict, had shown.

But it was concern about the second question, the vagueness and lack of precision with which basic ethnographic data were recorded, that proved to have the greatest consequences for cognitive anthropology. The problem was raised by comparative ethnological work. Frazer had made large cross-cultural comparisons, but his findings were vitiated by a variety of factors, including his use of biased and secondhand accounts, isolated facts out of ethnographic context, and the absence of well-thought-out sample design or analytic

methodology. The data problem provided an impetus to the work of Malinowski and Radcliffe-Brown with the resultant major changes in the social anthropology of that time. Both men recognized the need to base cultural comparisons on integrated ethnographic accounts constructed by trained observers from their firsthand reports.

This ethnographic response at first seemed adequate, especially as social anthropologists initially limited their studies to relatively unambiguous cultural traits and institutions. Technology, language, kinship, and political organization could all be seen as having clearly ascertainable units of study. The systematic description of these units and the search for regularities that might explain them were the primary tasks of cultural anthropology. The chief way to accomplish these tasks was the writing of ethnographic descriptions, or natural histories, of societies.

But eventually these traits and institutions were seen as insufficient for explaining cultural processes. Additional data were needed, data which pertained to psychology, values, and general world view. However, such additions had their cost. They usually involved "fuzzier" kinds of material. Emotions, thoughts, and values seemed not to be the same cut-and-dried things that artifacts or units of social organization were.

Eventually, it became clear that trained ethnographers alone were not enough to guarantee reliable data; this realization came when the number of anthropologists increased sufficiently to allow restudies of people already described. First, the problem was seen in the relatively "fuzzy" areas of cultural psychology, values, and world view, where different anthropologists writing about the same people came up with significantly different statements (see, e.g., the Redfield-Lewis debate discussed in Pelto and Pelto 1978). But later the problem has been found equally in supposedly unambiguous areas of residence patterns (e.g., the Goodenough-Fischer debate in Goodenough 1956b, and Fischer 1958) and kinship terminology (Epling 1967).

This problem of the reliability of ethnographic data acquired particular force in the wake of the first major attempt within post-Frazerian anthropology at wide-scale, theoretically relevant ethnological comparison. Murdock had available the careful and systematic ethnographies of the trained students of Boas and of Malinowski and Radcliffe-Brown; he also was much more sophisticated about sampling procedures and analytic methodology than had been Frazer. But it turned out that the overall quality of his data was still quite poor. The ethnographies he relied on were very uneven in their accuracy of observation. Later, cross-cultural codings were shown by Naroll (1962) to be related to such observer effect variables as length of time in the field.

It was Murdock's ethnological work that triggered a new surge of concern with ethnographic description and ethnographic analysis, and it was his students who initiated this "new ethnography." They felt that good ethnological work could not be done without an equally good ethnographic base—and thus that Murdock had attempted to put the cart before the horse. They turned to descriptive linguistics for their model for a scientific ethnography in which procedures would be explicit, replicable, and ethnographically valid (Nida 1975; Pike 1967). A concern with native conceptions and concerns, when coupled with a linguistic role model, led naturally to an initial concern with ethnographic semantics. The immediate goal was a comprehensive ethnographic description entirely in terms of the native view of their cultural system; ethnological comparisons would be based on these descriptions and would be phrased in cross-culturally valid analytic categories induced from these descriptions. Comparisons would be of productive sets of (generative) rules (i.e., grammars), rather than of isolated surface traits. This new ethnography would, in the words of one cognitive anthropologist, relegate all previous ethnographies to the status of "preethnographies."

With the advent of the new ethnography, the old ethnographies were seen as soon to be

obsolete. The traditional chapter heading, or "Notes and Queries" approach, was thought to be entirely inadequate, representing a procrustean framework that prevented native organizations of cultural phenomena from emerging. Of the solutions adequate to explain the observable raw data, the "correct" one was that which most closely approximated the coding or solution that the native himself had arrived at. So it was that ethnosience began with an almost messianic fervor to solve the problem of ethnographic validity.

## the influence of linguistics

In their development of ethnosience, anthropologists turned for inspiration to linguistic theory, the one area of cultural investigation that had some claim to rigor and precision. When ethnosience emerged in the 1950s, linguistics was in a transition stage from Bloomfieldian and structural linguistics to transformational generative linguistics. Some of the key ideas of transformational linguistics became active: the idea of a finite set of rules going beyond a given string of words to account for the infinite set of potential behaviors, that is, generative capability; and the idea of competence (versus performance).

Part of the ambiguity within anthropology of the linguistic model has always been a confusion between the forms of analysis and theory and the content thereof. Chomsky's concern with syntactic relations had no more to say to anthropology, directly, than did Jakobson's concern with phonological distinctive features; neither content was relevant. Yet the form of Jakobson's theory served as a model for anthropological analysis, both in cognitive anthropology (componential analysis) and in the structural symbolic studies of the Lévi-Straussian kind; but the form of Chomsky's rewrite rule syntactic theory was less broadly influential. It influenced some of Lounsbury's work but not much else. The difference was that Jakobson and European structuralism (most extremely in Copenhagen, but also in Prague) claimed that the form of analysis and theory was parallel through all levels of language (including content, or semantics), while Chomsky asserted that each level had its own distinctive form. The effect was that Jakobson invited anthropologists to use his work as a model, while Chomsky denied that his could properly be so used. Indeed, Chomsky has acted to move linguistics away from anthropology and closer to philosophy/psychology (see Bohannan's 1978 reference to anthropology's "loss" of linguistics). He wants linguistics to be less descriptive, less comparative, and less concerned with exotic languages—all of which drastically lessens the relevance of anthropology and the interest to anthropology.<sup>2</sup>

To summarize the history of linguistic influence on cognitive anthropology and symbolic anthropology, we might say that during the time the basic approaches were germinating, structural linguistics had a very strong influence. Then, as momentum gathered in the two anthropological subfields, the linguistic "rug" was pulled out from under them by the eclipsing approach of transformational generative grammar. More recently, however, alternative approaches to transformational generative grammar have appeared. In fact, some now argue that Chomsky's work is no longer the dominant paradigm (Lakoff 1978). The new alternatives are in psycholinguistics, developmental linguistics, sociolinguistics, and the field as a whole, where concerns about the presuppositional elements of language understanding have come to the fore. All of these have direct anthropological relevance and relate to much older concerns with "elementary thoughts," "themes," etc. This new linguistic influence, along with systemic linguistics which subsumes the above alternative areas (including sociolinguistics) in a single theory (which will be discussed later), is one of the factors that we think suggests a convergence of cognitive and symbolic anthropology.

## a critique from today's vantage point

Initially, ethnoscientists explored relations of contrast and inclusion and described componential structures (primarily of kinship terminologies) and folk taxonomies. These initial kinds of structures were felt to be solidly based on regularities in the substantive world of the referents of the sets of terms and seemed, therefore, to lend themselves readily to ethnological comparison. However, from the beginning ethnoscientists denied that the particular relations and structures that they happened to be studying were in any general way special; the assertion was that any (at least any verbally expressed) conceptual relationships in a culture could be studied in the same manner. It was expected that one could as well study partonomies (i.e., relation of parts to the whole; analagous to taxonomy), relations of succession, sequences of production and use operations, relations between input properties and output product, and so forth—i.e., the kinds of relations that we present in Table 1. This sense that any sort of native conceptual relationship could be ethnoscientifically explored was systematically outlined by Frake (1964a) in his article on "Notes on Queries. . . ."

Table 1. Semantic relations in three categories of ranges.

I. Narrow		
Similarity		
Identity of reference	Equivalence	X and Y refer to the same object. (For purpose P) X is equivalent to Y, or X can substitute for Y.
Difference		
Antonymy		X is the opposite of Y.
Reciprocity		X is the reciprocal to Y.
Contrast		X contrasts with Y.
II. Middle Range		
Partial		
Class inclusion		X is a member of the class Y. X is a kind of Y.
Part/whole		X is a part of Y.
Analogy		X is to Y as Z is to W.
Contingency		
Cooccurrence		X and Y occur together in context Z.
Covariance		X varies with Y in context Z.
Entailment		X entails Y.
Time sequence		X precedes or follows Y.
Gradiance		X is considered along some grade from Y to Z.
Space arrangement		X is contiguous to, or is oriented spatially with respect to, Y.
III. Broad Semantic Relations		
Characteristic action		Action X is characteristic of Y.
Use of instrument		X is characteristically used for Y.
Location		X is the usual location of Y.
Source, provenience		X is the usual source of provenience of Y.
Goal, purpose		X is the usual goal or purpose of Y.
Value		X has the value Y for Z.
Enablement		X enables Y.
Participants		X is characteristically a participant in case Y with action Z.
Ownership		X is the owner of Y.
Potentiality		X has the potentiality of Y.
Evaluation		X is usually valued positively, negatively, mixed or neutrally.

The disillusionment came when people tried to implement such suggestions. Looking for folk taxonomies and componentially analyzing kinship terminologies were well-defined and circumscribed tasks; what one had to do was clear, as were the criteria for telling an interesting (i.e., useful, accurate, and informatively new) finding from an uninteresting one. Similarly, there existed relatively clear and straightforward mathematical (or quasi-mathematical) formalisms for representing these structures. But accepting Frake's suggestion, and trying to examine any kind of conceptual structure in this manner, seemed to dissolve the rules of the game. One appeared free to do anything, and one appeared to have no criteria for telling interesting results from trivial ones. The means for analysis of such data structures seemed also to dissolve: these new kinds of relations did not lend themselves to such obvious mathematical formalization and did not relate so obviously or directly to external bodies of theory. Where the biological and social facts of kinship had provided an interpretive backdrop for componential analyses of kinship terminologies, and where the Linnaean taxonomy of systematic biology had provided such a background for the study of folk taxonomies, no such developed bodies of theory about the substance of their referents existed for these newer relations. Many of these newer relations seemed more culturally specific in their particular content or form than had been the areas of initial ethnoscientific exploration. This was underlined by a study Casagrande and Hale (1967) did of how natives defined words among themselves or for the inquiring ethnographer. Casagrande and Hale collected many definitions of Papago words and classified the principles that were used in these definitions. Their list had such definitional types as attributive, contingency, and antonymy. In the attributive type, a word, *x*, is defined with respect to some attribute, *y*. A willow tree has narrow leaves, stones are hard, a desert rat goes around where there are cacti, and so on. A contingency definition is often used for verbs. For example, "to wash" is defined as: "If a person gets dirty, he washes himself"; "to swallow" is defined as: "Whenever we eat anything we swallow it" (Casagrande and Hale 1967:172-173).

The Casagrande and Hale list contained 13 types; D'Andrade (1974) added to that list. Werner (1978) has produced a slightly different list with several queuing relations for different types of sequences and with larger than (or smaller than) relations. In Table 1, we include other types of relations that objects and processes may enter into (though where definition ends and mere contextually frequent relations begin is not readily determined). These relations can be organized along a kind of semantic continuum from narrow through mid-range to broad.

The narrow group concerns the relationship of two items; the middle range concerns the relation of an item to a set or continuum, or involves causal and orientation-type relations; the third group represents a contextual history or usage experience. One can see that the kinds of relations at the narrow end of the continuum are more frequently the kinds of relations that are found in dictionaries and that are expressible in formal logic. But as one goes toward the broader end, toward a less logical and more experiential or functional semantic (see Halliday's [1977] distinction between logical and experiential in his ideational component of language and Scribner's [1977] distinction between theoretical and empirical explanations in informants' responses to the syllogism completion question), one goes into a greater depth of meaning and also toward something that might be more encyclopedic in scope when the content of a particular relation is expressed. It is a situation that is very difficult to formally describe or predict and in which a great diversity of general knowledge becomes available for response.

The meanings in Table 1 are not all those that could be cataloged; the list is only meant to be illustrative. For example, one could add other kinds of relations which frequently occur as bound forms in different languages around the world. Some of these might be tangibility, size, shape, value, animateness, and sex. Taken together, these differences ap-

peared to deprive these more generalized versions of ethnoscience of the clear relationship to a noncultural world of substantive phenomena and substantive relationships that initial ethnoscience work had seemed to possess. It was at this juncture (and in this connection) that the charge of triviality became relevant and serious. Ethnoscience's weakness, then, was that, in spite of its greatly enhanced descriptive technology and methodological sophistication, it remained squarely within the atheoretical descriptive framework of Boasian anthropology and Bloomfieldian linguistics.<sup>3</sup>

Insofar as theory is expected to relate form to content and function, the same can be said of Chomskian transformational linguistics. In his *Syntactic Structures*, Chomsky (1957) excluded semantics because (as he then thought) to do otherwise would mean bringing in an entire encyclopedia of knowledge, which to him was Bloomfieldian and unworkable.<sup>4</sup> Ethnographic description is, in effect, an attempt to write such an encyclopedia as Chomsky would have excluded. Any traditional ethnography with the usual wide scope of subject matter (from economics to religion) is indeed encyclopedic in range and variety, except that the boundaries are local cultural ones rather than global. It might, in one view, be something of a paradox for anthropologists to accept Chomsky's work as a model for ethnography, because a commitment to a Chomskian view of linguistics would have entailed a rejection of the encyclopedic theory (Colby 1966:13). In another view, anthropologists could accept Chomsky's work as an abstract model of the form which a theory of the content of other cultural structures might take (Durbin 1970). If sufficiently abstract, the fact that the role of semantics in transformational linguistics has never been really clear would not be problematic. The main difficulties involve not the abstract form of the theory, but the actual relationship of semantics to the theory of syntax and the relationship of semantics to our pragmatic knowledge of the world. Thus, the manner in which the limitations of the formal devices in ethnoscience, and of the analytic assumptions behind them, hindered the immediate and direct extension of early ethnoscientific research to the wider anthropological areas intended for it was paralleled by problems that arose in the anthropological application of Chomsky's early work in linguistics.

## **the roots of symbolic anthropology**

Symbolic anthropology has its roots in those classic studies of the 19th and early 20th centuries which sought to understand how and what social situations and life experiences were represented in ritual events, giving meaning to these experiences and providing orientation and commitment to social interaction. Durkheim's (1961) *The Elementary Forms of the Religious Life* is a culmination of this interest in "collective representations," but his study of totemic symbolism is foreshadowed in Fustel de Coulanges's (1956) interest in the way hearth and commensal rituals, both familial and communal, expressed and ordered human relationships at various evolving levels of *La Cité Antique*. Similarly, Robertson Smith's (1956) study of the way sacrifice brought into communion and thus reinforced the social bonds of a group of worshipers, and Mauss's (1954[1925]) study of the way social obligation was represented in *The Gift*, are essentially symbolic in orientation. They prefigure Durkheim, for they deal with the Durkheimian problem of how people—that is to say, individuals—experience their collective identities and responsibilities in the presence of representations whose moral power "obliges them to submit to rules of conduct and of thought which they have neither made nor desired and which are sometimes contrary to fundamental inclinations and instincts" (Durkheim 1961:237). From early on, then, the symbolic approach has been interested in the constraints on individual and collective behavior bound up in symbols. For, as Durkheim (1961:263) said, "without symbols social sentiments

could have only a very precarious existence"; and "social life in all its aspects and in every period of its history is made possible only by a vast symbolism" (1961:264).

Durkheim, besides focusing our attention on the prerequisite and efficacious quality of symbolism in social life, engaged two other problems which have been persistent for symbolic theory. The first problem is the dialectic, if not contradiction, between the realities of the internal individual experience and the external realities of the communal order. He showed us how symbolism was what Munn (1973:583) has called a "switch point" between the external and the internal and the way in which symbols as outward and visible forms implant themselves directly into individual experience while individual experience finds itself transcended, identified, with external collective representations. This switching or internalization-transcendence process between the material and the moral was characteristic of all sacred activity, Durkheim (1961:253–254) argued, and provided for an essential ambiguity in religion. This ambiguity or switching process has been recurrently addressed in symbol theory.

The second problem is that of reality construction, and more particularly the construction of religious universes. Durkheim argued that every religion, including totemism, suggests a cosmology, a totality; and though he himself was mainly interested in the generic ideas of class and in conceptual hierarchies implied in collective activity—matters that are, to be sure, of interest to the cognitive anthropologist—he spoke of such symbolic matters as the attraction of similar images, commingling of classes, feelings of resemblance and participation, and the effervescent contagiousness of religious beliefs. The sense of cosmic totality lay in these processes as well as in the impulse towards the generic. Durkheim thus raised questions of associative processes, of symbol formation and function which were separate from questions of class logic and concept formation. He raised the question of the constructed solidity of the religious system, "all of whose parts are united and vibrate sympathetically" (Durkheim 1961:175). At issue here is the logic, if it is a logic, by which symbols are joined—a preoccupation that has been central in the symbolic anthropology of the 1970s, and which inevitably converges toward cognitive preoccupations.

Notions of participation, contagion, and sympathetic association evoke Frazerian (1900) interests, on the one hand, and Levy-Bruhl's (1966[1922]) exposition of the prelogic of primitive mind, on the other. Levy-Bruhl argued that a mind given to confounding both external things with each other, as well as the external with the internal, could not be described as logical in any Aristotelian sense of the term. Levy-Bruhl, in documenting prelogicality, gives insight into the "participation" of the elements of experience in symbolic thought, but the understanding of that process offered by Freud's *Interpretation of Dreams* is more fundamental. Freud provides a method, that of "free association" (whatever its problems of verification) and a set of mechanisms (condensation, displacement, pictorialization, and secondary elaboration), by which dream thoughts are transformed into dream elements (images and symbols, primarily), and through which one can retrieve the dream thoughts themselves. Freud saw these dream elements as "organizational foci" or "nodal points" that were overdetermined in respect to dream thoughts (or in the opposite case, overrepresentative of a single thought). It is just this organizational or focal quality that has continued to be the object of analysis, though there has been debate as to whether it is images or symbols that are the true foci and thus the more elementary forms (Fernandez 1973; Turner 1973).

Freud's interest and intent is just the opposite of Durkheim's, but there is an interesting area of convergence in their writings. In contrast with *The Elementary Forms*, which is a study of the constraints upon mind effected by social activity and collective representations, Freud sought to understand what the mind within does on its own when released from the imperatives of the social order without. What the mind does through the mechanisms of

figurative thought, Freud discovered, is make use of its social experiences. From this, students of the social and cultural orders could learn that the focal events of social life (rituals, primarily) are replete with symbolic elements, each of which is overdetermined—a condensation of meanings—which, no differently than dream symbols, reaches out by multiple strands of association into many diverse domains, levels, and corners of cultural experience . . . in short, encyclopedic meaning.

For Freud, the determinate events in dream experience were of three kinds: recent events in social life, infantile experiences, and somatic states. The dream interpreter was obliged to trace out the dream symbols to those contexts. The Freudian sense of the meaning of symbols was thus much richer than the Durkheimian, which read in them the imperatives of social relations. It is Radcliffe-Brown's (1964[1922]) contribution to symbol theory in *The Andaman Islanders* to have picked up not only on the Durkheimian (1961:25) notion of social sentiment ("the effervescence in which the religious idea and moral authority is born"), but to attempt to reach out and locate the meaning of ritual symbols in recurrent, daily, extraritual situations of high "social value." Such situations are those laden with positive (euphoric) or negative (disphoric) feelings of attachment or separation. Objects that are recurrent in such situations—say, food or plants—are invested with the potentiality of becoming vehicles of "social value" and "moral obligation" in ritual situations. Radcliffe-Brown thus draws attention to those cultural contexts out of which ritual symbols draw their forceful meanings. He adds to our sense of the contextual meaning of symbols but still without approaching the complex sense of thick overdetermination contained in the Freudian idea of the symbol. What Radcliffe-Brown does anticipate, as Munn (1973) has made clear, is the fertile improvisational character, the "bricolage," in symbolic constructions such as ritual—its making use of "the remains and debris of events" (Lévi-Strauss 1962:22).

There is hardly a problem in modern symbolic anthropology that is not overt or implicit in the work of Durkheim and Freud. For example, the three-step method employed by Turner (1967b) for discovering themes in Ndembu ritual symbolism—identification of principal symbolic elements present in a ritual scenario, discovery of the amplified complex of properties associated with (condensed in) these elements, synthesis of the set of abstract themes implicit in these associated properties—is almost precisely that of Freud in *The Interpretation of Dreams* (Foulkes 1978:38).<sup>5</sup> And there is something essentially Freudian in Geertz's (1973) interpretation of the Balinese cockfight, that male dream of momentary dominance. We do not use "Freudian" in the customary sense of an established interpretation of specific symbols, but rather in the methodological sense. Indeed, Geertz has intentionally titled his collection of essays *The Interpretation of Cultures*, in resonance with Freud's title of his dream study and in recognition, perhaps, of a pervasiveness of method.

### **critique of symbolic anthropology from today's vantage point**

In symbolic anthropology the status of the central term *symbol* remains problematic. Is the symbol itself the elementary form most accessible to inquiry? Consider the symbolism of myth. Major symbolic elements usually are particularly multivalent or "pregnant" symbols. As such they have a strong survival potential (i.e., for passing from one generation of myhtellers to the next). They may mean many things to many people. The symbols that have a more limited range of possible interpretations and are meaningful to a smaller constituent of the audience tend to drop out. Now, assuming that the symbols of a myth (or ritual) are rich in meaning, the analytic problem lies in finding the particularly relevant meanings of particular symbols.

Let us imagine a myth that contains three major symbols, A, B, and C, each, for the sake of argument, with about seven different meanings. There are 343 possible triadic combinations of these meanings. If we just look for meaning pairs, it is possible to find 98 different combinations. The basic problem is one that *Time* magazine (apocrypha has it) pinpointed a few years back when it described a new party game. To start the game the players first put a heterogeneous set of words in a hat. Play consisted of a player drawing four words from the hat and using the four words to construct a syllogism such that the first word drawn was to the second as the third was to the fourth. That is, the task was to find a relationship  $R$  such that  $W_1RW_2 = W_3RW_4$ . The wry comment was that no one had yet been able to produce a set of four words for which such a relationship could not be found.

In our hypothetical myth example, each symbol has only seven meanings, and we are given only three (major) symbols to work with; even with these restrictions the number of combinations which are possible is quite large, and hence the probability of an analyst stumbling purely by chance upon some accidentally interpretable combination of meanings is quite high. "Interpretability" represents a weak enough constraint on a solution to leave a number of degrees of freedom in which chance or analytic creativity can operate. The validity problem grows even larger when one realizes: (a) that most "pregnant" symbols offer considerably more than seven potential meanings; and (b) that the contrast between "major" and "minor" symbols does not inhere in the data in any obvious way, which leaves the analyst considerable freedom in the selection of symbols around which to build the analysis.

This mistake made it possible for some schools of structuralism to draw symmetrical diagrams and develop interesting discussions based not on the total constellation of meanings, but on those selected meanings which best illustrated their theses. These dialectics contribute little, if anything, toward scientific anthropological goals because there is no assurance that the analyst is not simply inventing some structure that has at best only a minimal or conditional validity. It is as though the analyst were taking an inkblot test (Colby and Peacock 1973; Thomas, Kronenfeld, and Kronenfeld 1976).

A related issue addressed elsewhere (Colby 1978) is the problem of semantic accommodation. During the early days of the transformational generative grammar approach, there was much interest in constructing sentences that were either syntactically or semantically anomalous. One of the most celebrated sentences was "colorless green ideas sleep furiously," a syntactically correct sentence that seemed meaningless. With some thought, however, it is usually possible to find some context in which such a sentence would make perfectly good sense, as for example in the poem dedicated to Noam Chomsky by the poet John Hollander (1971:38):

Coiled Alizarine

Curiously deep, the slumber of crimson thoughts  
While breathless in stodgy viridian,  
Colorless green ideas sleep furiously.

This process of semantic accommodation is a major part of our experience when we read poetry, particularly modern poetry. When we are reading a poem, there is a certain amount of accommodation, some poems requiring more than others. We have to construct in our minds some context that will give the maximum meaning and pleasure to the reading.

### recent developments in symbolic anthropology

It is in connection with work on metaphor, metonymy, and drama that one can most clearly see the beginnings of the convergence with which we are concerned in this paper.

On the one hand, we see in symbolic anthropology an increasingly insightful characterization of the broader functions and content of metaphor, metonymy, and literary scenes. On the other hand, cognitive anthropologists (as well as linguists) are increasingly exploring the more narrow cognitive and semantic functioning of metaphoric relations and syntagmatic structures (as in decision theory work).

Because of the complexity and overdetermination of the symbol itself as the principal focus of inquiry, there has been an attempt in recent years to redirect symbolic interests toward the tropes—principally metaphor and metonymy, but also synecdoche and irony—and away from symbols, since the latter can be more easily related to the propositions that lie behind belief, and to the predicative processes. Attention, that is to say, has turned to the rhetorical dynamics and interactional intentions of social life (Fernandez 1974; Sapir and Crocker 1977). This turn in symbolic analysis towards a more explicitly linguistic model at the syntactic and semantic level, and towards the more intentional and instrumental objectives of actors, has its roots in the Saussurian (1966[1923]) tradition of syntagmatic-paradigmatic analysis, on the one hand, and in the dramatisitic approach of Kenneth Burke (1945, 1950, 1966), on the other.

Burke's dramatisitically oriented literary and social criticism, his view of the human situation as the interplay of scenes, acts, agents, agencies, and purposes, focuses attention on the power of the language-based imagination to shape social scenes, produce acts, exalt or debase agents, identify and entitle agencies, and envision and pursue purposes. It was this constitutive power of human language bound up in its figurative tools (the various tropes), its power over the "entitlement of things," as he calls it (Burke 1966:378), that was most influential in the subsequent rhetorical emphasis in American symbolic anthropology. Turner's (1957, 1974) later use of the dramatisitic mode comes out of a different tradition, the British classical one, and aims less at methodological amplitude of analysis than at identifying the dramatic sequence of symbolic action—breach, crisis, redressive action, and reintegration—a sequence suggestive of predictive interests.<sup>6</sup>

But Burke's work, seminal as it has been, is so exuberant and ultimately puzzling (M. Black 1946) that it has acted as a stimulus rather than as a model for analyses. The Saussurian oriented work of Jakobson (1956, 1960) on the dynamic relationships of similarity and contiguity associations in cultural productions has been the model, particularly as that work has been of singular influence on Lévi-Strauss (1962) in his main statement of his position. The analyses performed in *The Savage Mind* recurrently contrast the metaphorical and metonymical ordering of social and cultural relations and the transformations that take place between these two orders—the rhetorical equivalent of relations of similarity and contiguity. Lévi-Strauss (1962:106) is so greatly influenced by his "law" of mythical thought that he sees the transformation of a metaphor to be achieved in a metonym. This interpretation of transformation has often been overlooked in his work by those who concentrate on the structural study of oppositions.

The renewed focus upon associations by similarity (metaphor) and contiguity (metonymy)—an old interest in anthropology, after all, dating back to Frazer's distinction between imitative (similarity) and contagious (contiguity) magic—despite many difficulties, sharpens our analytic grasp and our ability to formalize associative processes at work in cultural productions beyond that achieved by Freudian-type tracing out (and resynthesis) of the associations contained in overdetermined symbols. Reference to language-based analogues has been made periodically in anthropology. Radcliffe-Brown (1964) compared symbols to morphemes, and Turner (1966) has spoken of the syntax of symbolism in African religion; but neither of these usages was applied systematically. Various students have attempted to systematize the syntagmatic-paradigmatic approach.

Fruitful use of the de Saussure-Jakobson distinction is made by Tambiah (1968) when

discussing “the magical power of words” in Trobriand garden spells and pregnancy rites. He shows how these spells “convey attributes” to their subjects: gardens, yam houses, and ultimately human participants. This is done by relating them metonymically or metaphorically to qualities inhering in other objects within the same domain or in other domains of Trobriand experience. This “conveyance of attributes” goes hand-in-hand, as Malinowski showed, with practical activity and was part and parcel of the effectiveness of that activity. Tambiah’s contribution was to show much more clearly than Malinowski did how these spells were efficacious in transferring and confirming attributes useful to practical activity. A similar contribution is made by R. Rosaldo (1968), who shows us how much of Zinacantan cargo ritual is a metaphoric statement of the hierarchies of daily social relationships and thus efficacious to their satisfactory conduct. M. Rosaldo (1972, 1973, 1975a, 1975b) continues the Malinowski-Tambiah line of attack (and interest in spells) by examining in detail the contribution of metaphor and simile in both ordering and reordering social categories and in giving profound affective content to these categories. Fox (1972) shows the impossibility of grasping the Rotinese kinship system without taking into account the metaphoric idiom in which it is expressed—an idiom that ties together in complex correspondences a virtual cosmos of man-plant relations.

Neither Tambiah nor his successors pick up on Lévi-Strauss’s interest (it is also in Jakobson) in the dynamics of transformation implied in metaphoric or metonymic assertions—between interests in parts and interests in the whole. Fernandez (1969, 1974) attempts a formal statement of this dynamic in presenting a pronoun-oriented theory of metaphoric predication with both the symbolic interactionist psychoanalysis of Lacan (1966) and the semiological (Piercian-Saussurian) tradition of sign distinctions in mind. Leach (1976b) makes a more extended formulation of a similar synthesis aiming at the structural logic by which symbols are connected. The logic he presents is fundamentally the Lévi-Straussian (1955) one of myth interpretation, where a syntagmatic sequence is **broken down into episodes which can be arranged paradigmatically. This method enables us to understand how metaphoric assertion generates syntactic progression and how such progressions can be converted into a paradigm of metaphors seeking to resolve—or restate in more acceptable fashion—the same set of thematic preoccupations. Whatever the difficulties of this kind of analysis, it is, in explicitness, a step beyond the interpretive association and resynthesis practiced by other symbolic anthropologists. What has happened in the 1970s in symbolically oriented anthropology—and the interest in metaphoric and metonymic assertions has been very influential here—has been a movement back and forth between an interest in relating symbolism to class logic and cognitive hierarchies and an interest in propositional logic: the sets of ideas about the relationship between domains of experience and about their qualities that underlie expressive statements, whether these are in the form of myths and rituals or in local exegesis and response to direct question. We see this shift in Tambiah’s interest in the “conveyance of attributes” and in M. Rosaldo’s studies of the impact of analogy and metaphor on systems of classification. We see it in Fernandez’s interest in the predicative process in which metaphor is enmeshed and by which actors recurrently provide identity for others and themselves by reaching within and across domains for “subject matter.”**

Some of the most sophisticated earlier work in metaphor is to be found in the writings of I. A. Richards and William Empson, particularly in the latter’s *Structure of Complex Words*. Empson (1951) anticipates, for example, later discussion of how metaphoric equations are both devices for the “conveyance of attributes” and for bringing about new strategies. **More recent reference to semantic features picks up insights in the literary criticism of I. A. Richards but with a greater degree of precision and thoroughness of analyses.**

## recent developments in cognitive anthropology

Cognitive anthropology was at first synonymous with ethnoscience. However, as the study of componential and taxonomic structures lost momentum, and as the problems which we have discussed above in connection with Frake's (1964a) "Notes on Queries . . ." rose to the fore, new people with wider and more theoretically generated interests came into cognitive anthropology, and older practitioners expanded their interests. Three kinds of responses have been developing to the problems which arose in initial attempts to generalize ethnoscience analysis beyond the few domains and few structures on which it had initially and narrowly focused; these responses represent moves to use the techniques of ethnoscience, and its semantic focus, in the service of more general analytic aims.

One response is based on the growing recognition within cognitive anthropology that purely descriptive (or inductive) accounts (or theories of description alone) are no more logically possible in anthropology than they were found to be in linguistics. Accounts that aim only at description, and that entail a (sometimes only implicit) claim that (explanatory) theories of why or how the materials being examined came to be, can come only *after* a rigorous description has been made. Indeed, such descriptive theories are even less likely to give the appearance of success in cultural anthropology than they did in linguistics because of the relative absence in anthropology of the kind of *implicit* theory (of assumptions about units and relations) that successfully guided descriptive linguistics in spite of its disavowal of such a theory. Thus, one of the trends in modern cognitive anthropology is to get away from the old ethnoscience notion that description was an end in itself, and instead to put the descriptive machinery of ethnoscience to the service of externally (to the universe being described) derived theoretical questions. To date, the major outside uses of this machinery have been in relation to economic questions (see, e.g., C. Gladwin 1977; H. Gladwin 1971, 1975; Plattner 1975; as well as related work from a different tradition reported in Barlett 1980), but the machinery would seem to lend itself even more naturally to symbolic questions.

A second response has been to aim for theoretical generalizations concerning the shape or operation of particular kinds of semantic (or cognitive) structures. Such theories are generally based on wide-scale cross-cultural comparisons of ethnoscientifically derived structures of some particular domain. They represent the interaction of general considerations concerning the nature of our classificatory abilities and of the social and communicative uses to which we put our classifications, with special considerations concerning the substantive nature of the domain being classified. In the first instance, such generalizations have been based on the kinds of classificatory structures with which ethnoscience began. Examples of this work include Berlin (1972, 1976) and Berlin, Breedlove, and Raven (1974) on ethnobotanical classifications; Berlin and Kay (1969) on color terminologies; Brown (1977) on life forms and color terms; and Hunn (1978) on ethnozoology. A partially contrasting view is represented by Randall (1976). More recently, there has begun to emerge some similar comparative work on other kinds of structures (e.g., Brown's 1976 paper on body partonomies). Work in cognitive anthropology on the nature of the classificatory enterprise itself includes Greenberg's (1966, 1978) work on marking relations; Nerlove and Romney (1967) and Kronenfeld (1974) on conjunctivity and marking with respect to sibling terminologies; Kronenfeld (1979) on recoding; Kempton (1978) on category grading; and Wexler and Romney (1972).

Metaphor is a particular cognitive structure in terms of which convergence can be seen. Basso (1976), for example, shows how metaphor, though anomalous and unaccounted for in most linguistic theories, particularly transformational theory, makes use of the rules of

language. The metaphors of the Western Apache, working on the basis of similarity in connotative features, extend across lexical hierarchies and fill gaps in the Apache lexicon. The work of Lounsbury (1964), Scheffler and Lounsbury (1971), and Kronenfeld (1973, 1978) on metaphorical extensions in kinship systems is also relevant in this argument. Metaphor is a form of conceptualization, then, for the creation of novel semantic categories. These studies, cognitive in their analysis of the relation between semantic entities and symbolic in their orientation towards creativity within contexts, represent an important joining of symbolic and cognitive interests.

Recently, metaphor as an organizer of thought, as a set of entailments that color a general approach to subjects, has been treated by Quinn (1979), Colby and Colby (1981), and Lakoff and Johnson (1980). At the same time, a promising tradition is building in psychology in the work of Ortony (1979) and Tversky (1977). This work brings in a quantitylike conceptualization and deals with degrees of metaphoricalness. Ortony argues that salience imbalance is the essence of metaphoricalness. This tightly conceived experimental work on metaphor, which is developing rapidly in linguistics and psychology, should have a beneficial influence on both symbolic and cognitive anthropology. One result of this influence is the use of the notion of organizing metaphors in a production or decision model for Ixil Mayan divination and a cultural grammar for Ixil folk narratives (Colby and Colby 1981).

A third kind of response, one that stays within the descriptive framework of early ethno-science, is represented by Frake's (1964b) article on Subanun religious behavior. Frake approaches the question of how to organize all the questions that one could ask, the information one could get, and the patterned data relations that one could find through the use of his "Notes on Queries . . ." approach by turning to higher-level descriptive aims. He picks a relatively high-level chunk of Subanun life (a "scene") to describe, and then uses in his article the particular taxonomic structures (of participants, purposes, paraphernalia), the particular sequential structures, means-end relations, part-whole relations, and so forth that are needed to adequately characterize the contents of this Subanun "scene," the purposes it serves, and the manner of its operation. At this wider descriptive level, Frake is addressing a variety of kinds of cognitive units and relations that extends far beyond the simple semantic relations of early ethno-science. And it is just this high-level treatment of cognitive units which converges with the dramatic chunking of ritual sequences and Burkean scenes in symbolic anthropology.

Frake's own generalization of the ethno-science descriptive task entails the kind of validity problem that normally accompanies any atheoretical descriptive exercise and that is endemic in symbolic anthropology. Frake's description implies that it captures (and describes) the essence of the domain in question—without providing us with any characterization of "essence" to allow us to decide how to evaluate his claim. The problem is that one does not know whether or not all the relevant relations have been described, and one does not know what kind of finding would be required to demonstrate the omission of significant relations or the inclusion of the wrong ones. For such problems a theory of activity description provides an alternative approach. It involves a demonstration of the sufficiency of the included information for some normal set of cultural inferences (behavioral, conversational, or whatever). Such an alternative approach is being employed in recent work in the area of artificial intelligence involving the understanding of natural discourse (e.g., Becker 1973; Schank and Abelson 1977) and in derivative anthropological work (Colby and Knaus 1974; Colby 1979; Hinz 1978; Hutchins 1978; Werner 1978). Symbolic representations, no less than botanical classifications, represent structures encompassed within the human mind. The ultimate shape of symbolic theories will be greatly affected by whatever can be learned about the nature, shape, and limitations of human cognitive structures.

The analogue of metonymy in cognitive anthropology has been a long-standing interest in cultural grammars (cf. Pike 1967; Metzger and Williams 1963a). More recently, work with eidochronic analysis of folklore (Colby 1973; Colby and Colby 1981) and anthropological decision theory has produced more realistic models with greater predictive power. The concern in this cognitive work has been more with delineating the basic syntagmatic structures than with the communicative uses to which they might be put; the feeling has been that good characterizations of the structures and their reasons for existence were a necessary precondition to any rigorous understanding of their subsequent cultural uses.

A number of interesting findings have begun to emerge from anthropological work on decision theory, action planning, and the like. Naomi Quinn (1976), for example, describes a cultural system for making one kind of frequently recurring decision. It simplifies the decision process by limiting the amount of relevant information used in the decision and by applying this information, one item at a time. In a more recent paper (Quinn 1978), she takes economic anthropology to task for not considering the cognitive aspect of decision making. She has also been sensitive to the presence of metaphoric formulations of situation. To assume that natives base decisions on unconscious probability estimates is not only unwarranted, she reminds us, but likely to lead to false conclusions, for the bases of decision making and the cognitive procedures and the symbolic associations involved are crucial in anthropology. To ignore the cognitive and symbolic components is to ignore the key mechanisms of action.

Another example is the work of Robert Randall (1977), who described fishing procedures in terms of formal structures that focus on goals and means of achieving them—an ethnologic expressed in decision trees and flow charts. Randall has offered a systematic elaboration of the contrast between a null (or “unmarked”) option, which does not require specific immediate reasons for its choice, and a special (or “marked”) option, which represents an override of the null option and which is only chosen for a specific and immediate reason. This use of the distinction between marked and unmarked categories represents an extension of ideas developed most fully in linguistics by Greenberg (1966). The idea of an “unmarked” category is analogous to the computer science notion of a “default option”—a set of specific parameter values which automatically operates in a program unless a user specifies otherwise; the cognitive economies produced by such a device are at least as great for people using the conceptual apparatus of their culture as they are for harried computer programmers. Other works of interest are by Geoghegan (1973), H. Gladwin (1972), C. Gladwin (1975, 1976), Gladwin and Murtaugh (1975), Lave (1972), Anderson (1979), Kronenfeld (1973, 1980), and Young (1980).<sup>8</sup>

As we have said, symbolic theory concerns ritual and performance as much as classification. The work on decision theory constitutes an extension of the methods of cognitive anthropology to the realm of action. As such, decision theory offers a new and potentially exciting perspective from which to approach some of the classic issues of symbolic action.

Even in the work we have just been discussing, the convergence has not yet taken place in the sense that we do not yet have an integrated theory. But the interests of people in the two fields—in metaphor, in metonymy and cultural grammars, in scenes and dramas—are close enough to one another and sufficiently complementary to give one some clear view of a rich and creative future of interaction. The new emphasis on choice, constraints, and strategies seems directed toward more relevant, less trivial, aspects of social life. It makes possible the synthesis of contemporary ecological concerns, cognitive categories, and material or observed situations. One has only to keep in mind Kenneth Burke’s understanding of a metaphor as a strategy for dealing with a situation to see the possible convergence with the interests of symbolic anthropology.

## from old stereotypes to new combinations

Symbolic anthropology and cognitive anthropology developed as serious, highly influential approaches in the 1960s. In different ways each was an attempt to remedy inadequacies found in earlier anthropology. Structuralism was an attempt to formalize relationships in symbolic expressions, particularly in myth, and to deal with the deeper kinds of meaning expressed by cultural forms. It lost impetus because the basic units of analysis, the basic decodings, seemed so often arbitrary and were never substantiated in any rigorous way. There was thus a shift in later symbolic work to an emphasis on context, and on a holistic treatment, of social phenomena. Symbolic anthropology became an attempt to maintain a basically humanistic approach that holds on to the poetry—that is to say, complexity—of cultural experience. But after this poetry has been analyzed, even in a humanistic tradition, there is a danger (from the scientific viewpoint) that it will be transformed into an entirely different poetry, a poetry of the analyst rather than of the culture and people being described. The enduring humanistic problems of translation and interpretation loom very large as problems of validity to the scientific eye.

If we were to characterize these two microanthropological approaches in their early development, we can think of six chief dimensions of interest (see Table 2). This admittedly overcharacterized set of oppositions becomes less appropriate when applied to current work in progress. In the past, these subfields were less often mixed and the characterization would seem to fit most early papers. An attempt in 1974 (Basso and Selby 1976) to bring cognitive anthropologists and symbolic anthropologists together was made in a conference at Santa Fe, but the time was not yet ready for the convergence we see ahead. Yet even then some individuals were comfortable with both or had done work that, either through methodology or subject matter, bridged the two. On the symbolic side, Lévi-Strauss used mathematical terminology freely if somewhat idiosyncratically. In the introduction to *Rules and Meanings*, Mary Douglas (1973) writes that the readings in it have been used in a course she sometimes gives under the name of cognitive anthropology and sometimes under the name of symbolism (as well as under other related names). This crossing-over of interests is becoming more frequent. On the symbolic side, David Sapir and contributors to a volume edited by him are concerned about validity (Sapir and Crocker 1977:5); on the

Table 2. Dimensions of interest in the early development of cognitive and symbolic anthropology.

Cognitive Anthropology	Symbolic Anthropology
1. Focus on chunk or unit as a formal unit.	1. Focus on surround or associated context as well as on content.
2. Chief goal: approximation to actual cognitive organizations in the mind.	2. Chief goal: interpretation of the significance and structure of the text (or ritual description), i.e., hermeneutics.
3. Focus on the link between lexemes and their referents, on semantic relations within domains.	3. Focus on inter-domain (metaphoric) linkages within the text, ritual or genre, or cultural system.
4. Interest in decisional sequences and their instrumental consequences.	4. Interest in ritual and performative sequences and their expressive and emotive consequences.
5. Mathematical and linguistic formalisms.	5. Literary and rhetorical idioms emphasizing condensation and polysemy of meaning.
6. Emphasis on narrow eidological structures.	6. Emphasis on broad eidological structures and on the expression of ethos within them.

cognitive side, Wallace (1966) has studied ritual, Buchler and Selby (1968) have studied myths, and Quinn (1979) has studied metaphor.

## future directions

In the process of our review of these two dominant perspectives in contemporary cultural anthropology, we have suggested alternatives to the commuting between two essentially distinct approaches—both convergences that are actually taking place and possible convergences. There are also several current developments that may lead to a lasting convergence, and we mention those here.

Essentially, the convergence we detect and envision lies in the fact that cognitive anthropology has been seeking to move away from the highly formal, methodologically logical, but so often trivial analyses of early ethnoscience, and towards analyses of behavior in contexts where the participant's encyclopedic (that is, cultural) knowledge is at play. Of course, in its concern with the meaningfulness of human action, symbolic anthropology has directed itself characteristically to this question of behavior in the full context of associated cultural knowledge. Thus, cognitive anthropology has been moving towards the level of analysis characteristic of symbolic anthropology. At the same time, there has been a worrisome idiosyncrasy in symbolic interpretation: the hermeneutic circle, to put it in symbolic terms, has been too tight. Consequently, there has been a desire for greater validity of method and a greater constancy and generality of theoretical perspective. These are precisely those strengths present in cognitive anthropology: the strength of emphasis upon verifiability of procedure and the strength of constant reference to the logical structures present in human thought and action. The logic of inquiry present in cognitive anthropology must, therefore, constitute a natural attraction to symbolic inquiry, however expanded and transformed the notion of that logic might be as seen in the shift in emphasis from classificatory to propositional logics in cognitive study. This shift, incidentally, represents a convergence towards symbolic concerns with the associations available to social subjects as they form propositions about themselves and about the world. This high-level convergence towards the analysis of meaningful content by valid methods revealing logical structures we have called *microanthropology*.

Above all, microanthropology represents a general movement from a static structural picture to an interest in process. It is a focus on cultural transmission and transformation and requires that we consider both cognition and external cultural patterns—the contexts of such interest to symbolic anthropology—and what goes on in the interaction between the two, rather than think about each in isolation from the other. The pattern-schema approach, for example, is one that satisfies some of these requirements. Developed in anthropology by Colby (1966; Colby and Colby 1981) and Rice (1980), it traces back to the work of the anthropologically oriented psychologist Bartlett (1932), who used American Indian folktales in memory experiments. Bartlett, in turn, was influenced by his teacher, Rivers (1914:383) whose Torres Straits work (1901–1935) was a forerunner of modern ethnoscience and whose study of pattern change and conventionalization in art was taken up by Bartlett and extended beyond artistic expression to a broader cognitive approach. Pattern-schema theory in anthropology has also been influenced by Roberts's (1964, 1965; Roberts and Sutton-Smith 1962; Roberts and Chick 1979) work with games and other folk models and by the similarly oriented work of O. K. Moore (1957; Moore and Anderson 1969).

But process focus includes a wide range of phenomena, from descriptions of concrete, observable social processes—as in recent studies of pilgrimages and processions (Turner and Geertz)—and their effects on large-scale cultural phenomena, all the way down to less

readily observable processes of cultural transmission as between a tailor and his apprentice (Lave 1977). In kinship terminology study it has meant dealing with behavioral context (Epling 1967; Kronenfeld 1973); and in illness category study an attempt has been made to relate key dimensions to action strategies (Young 1978, 1980).

Process focus is an expansion of interest in text analysis which has by no means been confined to symbolic anthropology. It involves linguistics (Longacre 1968; Grimes 1975; Halliday 1971), cognitive science, primarily psychology and artificial intelligence (Rumelhart 1975; Mandler and Johnson 1977; Kintsch 1977; Beaugrande and Colby 1979), and also folkloristic studies which are moving toward increasingly more formalistic work (Jason and Segal 1977).

As long as the analysis of full-length texts was selective and, as Lévi-Strauss once said, mythical, process focus failed to gain the attention of anthropologists who were more formalistically or empirically inclined.<sup>7</sup> With the recognition that grammars of folktales can be written that are testable with new samples from the population covered by the grammar (Colby 1973, 1975), and the revival of Bartlett's approach in a modern experimental anthropology (Rice 1980), there seems to be yet another point of convergent interest—interest in texts.

The above examples of "crossings-over" from aspects of one perspective to those of the other might be seen as a midway stage in the converging historical trajectories. These are still uncertain changes, and attempts at rapprochement have not been entirely successful. Consider, for example, Leach's (1964) highly interesting analyses of animal categories and terms of abuse, and of the colors of traffic signals (1976a:16–29). Each of Leach's analyses has a clear topic, has rich empirical content, is well thought out, and seems quite convincing; however, each has been definitively refuted (Halverson 1976; Gamst 1975). An important problem is posed by these analyses, their positive receptions, and their refutations. First, one needs to explain why Leach's analyses felt so right to so many people if they were as wrong as Halverson and Gamst, respectively, indicate. Both analyses deal with our own (in most cases) Anglo-American culture and refer to matters about which we have native intuitions as well as anthropological knowledge. Since the historical and specifically classificatory facts seem to be wrong, their "convincingness" must result from their fit with patterns that we as natives are inadvertently or subconsciously attempting to impose on somewhat inappropriate facts—a process much like that described by Ardener (1971:224–225) as underlying folk etymology. Leach, as a native, responds to these cognitive pattern pressures in constructing his analyses, and we, as natives, respond in reading them. What Leach lacks is a method for demonstrating that his analogy is in fact a genuine folk etymology—once it has been shown definitively that the proposed etymology is historically/derivationally incorrect. He lacks a good conceptual apparatus for distinguishing historically accurate reasons for some given culture account from cognitively real *posited* (structural) reasons or causes that may or may not be historically correct. This problem comes from having no real theory of cognitive structures or cognitive functioning, and no good ethnographic techniques for describing specifically cognitive structures or for analyzing and then describing the propositions that underly such structures.

For those problems, Halliday's (1967–68, 1973, 1977) systemic theory seems anthropologically interesting and linguistically sophisticated. The theory encompasses language acquisition and sociolinguistics, as well as the more core elements of the lexicogrammatical system. Most important, it is functionally based and utilizes such anthropological terms as Malinowski's context of situation and context of culture.

If one is concerned with determining the nature of higher-level "chunks" and processes, as we have suggested both symbolic and cognitive anthropology now are, it is important to look closely at how Halliday has subdivided the semantic system, which is the next level

down from the cultural level. He has three major components of the semantic system: ideational, interpersonal, textual. The first component concerns language as idea, as expressing experiences and the relations and processes that occur in the world. It involves processes, participants, circumstances, and situations. The ideas expressed in myth and ritual and the transitivity relations among beings and objects in these symbolic forms are carried in this first component.

The second component focuses on speakers and hearers, their images of each other, their attitudes, evaluations, roles, etc. This area has expanded rapidly in anthropology, particularly under Hymes's (1971) influence and his notion of the ethnography of speaking.

The third component, the textual, has to do with the speech event or text itself. It concerns highlighting, focus, and emphasis. In particular, the analysis of the theme-rheme structure can be undertaken at several levels from the clause to the entire text. This ties in directly with the new interest in more formal studies of narrative texts in anthropology from both the cognitive and the symbolic points of view. All three components of the semantic system relate to different aspects of ethnography where both symbolic and cognitive anthropology ultimately derive their strength.

The new interest in Bartlett and Halliday outside anthropology, combined with changes in the approaches of anthropologists, are bound to have a strong role in the convergence of cognitive and symbolic anthropology. There are too many new developments in the whirling ferment of neighboring fields to allow the old stereotypes to complacently continue in anthropology. We have already mentioned individual crossings-over in our dichotomous caricature of the predilectional bases. With a new focus on the process dynamic between cultural pattern and cognitive schema brought about by the Piagetian variant of cognitive science that has attracted some symbolic anthropologists, and the interests in symbolic texts that have motivated some of the cognitive anthropologists, together with the new work in metaphor and the influence from systemic linguistics, changes will surely be of major proportions in the near future.

Ethnographic techniques, in sum, are specifically what cognitive anthropology has concentrated on, and it is in this area that cognitive anthropology has the most to contribute. Theories of cognitive structures are less developed, but are currently the subject of much work in cognitive anthropology and in artificial intelligence. What cognitive anthropology, in turn, has lacked the most is any basis or mechanism for identifying culturally significant problems and structures, and relating them to the physical and mental world. The excitement produced by symbolic analyses constitutes just one indication of the success that symbolic and structural anthropology have had in identifying problems that go to the heart of how cultural experience orders life and nature. If we, as anthropologists, can now manage to apply the ethnographic methods and knowledge of mental functioning from cognitive anthropology to the cultural problems and structural relations identified by symbolic anthropology, we are in a position to achieve a higher level in our understanding of culture.

## notes

<sup>1</sup> In making this twofold division, we have not mentioned psychological anthropology, which would fall under microanthropology. Goldberg (1978) has recently made a study of the relations between psychological anthropology and cognitive anthropology (and some traditions of British anthropology), but comment on these interesting relationships would carry us too far afield for our present purpose.

<sup>2</sup> Since Chomsky's approach quickly took over the center of linguistic interest, and since it was at first limited to syntactic relations, the influence of linguistics on anthropology diminished sharply and usually came only from what were then (though no longer now) the fringes of linguistics, particularly

sociolinguistics and conversational analysis (i.e., Hymes 1974; Sacks 1972). Sociolinguistics at that time was of less interest to cognitive anthropologists than to symbolic anthropologists, who were more concerned about the contextual relationships and performance characteristics of language than the formal rules and questions of competence associated with transformational grammar.

<sup>3</sup> It is interesting that the most significant work to come out of this ethnoscience phase, Berlin and Kay (1969) on color terms, was cross-cultural and evolutionary, which was decidedly uncharacteristic of the majority of ethnoscience studies at that time. The other new direction, also uncharacteristic of early ethnoscience, was the use of statistical studies via multidimensional scaling and the testing of alternative models (Boyd 1972; Burton and Kirk 1977; Romney, Shepard, and Nerlove 1972).

<sup>4</sup> Bloomfieldian semantics, for that matter, was never developed beyond a primitive Skinnerian kind of explanation; and Skinner's own venture into linguistics was roundly trounced by Chomsky's (1959) review in *Language*. Again, the subject matter was restricted by what could be handled by the formal methods being used.

<sup>5</sup> Part of the interest and persuasiveness in Turner's analysis of symbolism has lain in his bringing together of Durkheimian and Freudian perspectives in his reading of the polarization of meaning in ritual symbols between an ideological pole,

a cluster of significata that refer to components of the moral and social orders of Ndembu society, to principles of social organization, to kinds of corporate grouping, and to the norms and values inherent in structural relationships. At the other, the sensory, pole the significata are usually natural and physiological phenomena and processes (Turner 1967a:28).

For Turner's own statement of the Freudian influence in his work, see Turner (1978).

<sup>6</sup> Burke (1970:25), in his *Rhetoric of Religion*, has also proposed a dramatic sequence in human interactions:

Here are the steps/In the Iron Law of History/That Welds Order and Sacrifice: Order leads to Guilt/(for who can keep commandments!)/Guilt needs Redemption/(for who would not be cleansed!)/Redemption needs Redeemer/(which is to say, a Victim!). Order/Through Guilt/To Victimage/(hence: Cult of the Kill). . . ."

<sup>7</sup> There have been some attempts to formalize Lévi-Strauss's approach (Buchler and Selby 1968), but these never gained much attention, probably because of the validity problem which was never addressed.

<sup>8</sup> Mathematics has figured importantly in cognitive anthropology (see Burton's 1973 review of this area). Of special interest for cognitive anthropology have been efforts by Romney, D'Andrade, and others (cf. Romney, Shepard, and Nerlove 1972) to utilize multidimensional scaling and hierarchical clustering techniques in anthropological research, and efforts by D'Andrade (1976) and Burton, Brudner, and White (1977) to generalize Greenberg's (1966) technique for extracting implicational relations from incidence data. See also Kay (1971) and Boyd (1969, 1972).

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