CULTURE IN MIND
Cognition, Culture, and the Problem of Meaning

Bradd Shore

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The Psychic Unity Muddle

In early life we have been taught that human life is everywhere the same. . . . This error we must replace by the truth that the laws of thought are everywhere the same.

—Herbert Spencer

How can you explain the workings of the human mind without a knowledge of the social setting which must have played so great a part in determining the sentiments and opinions of mankind?

—W. E. H. Rivers

[E]thnology is first of all psychology.

—Claude Levi-Strauss

This is a book about anthropology's oldest and most vexing question: the psychic unity of humankind. George Stocking has characterized this commitment to psychological universalism as "the major premise of the comparative method of ethnology" and the cornerstone of "The Enlightenment view of man" (Stocking, 1968:115). Grounded in eighteenth-century notions of rationality as a defining characteristic of the human species, the psychic unity doctrine has appealed to social Darwinists and cultural relativists alike.

Despite its status as the theoretical and moral bedrock of modern anthropology, the idea of psychic unity has always had an uncomfortable relationship with the idea of culture as a key element in human life. The philosophical commitments of Enlightenment anthropology have had an uneasy relationship with the empirical evidence of human diversity—evidence amassed by generations of travelers, missionaries, and professional ethnologists. Yet along with psychic unity, cultural anthropology has adopted cultural diversity as its defining issue. Anthropologists have typically defended cultural difference as a defining human characteristic while repeatedly affirming their faith in humankind's psychic unity, usually without noting the apparent tensions between these two views.

The contradictions inherent in such a project have proven theoretically troublesome. The problem is how to reconcile faith in a single human nature with the reported variations among communities—variations not only in physical characteristics but also in matters of custom, belief, and temperament. For the cultural anthro-
The Psychic Unity and the Human Brain

Any case for human psychic unity or diversity will inevitably rest on how the psyche is conceived. It is easy enough to defend a simplistic notion of psychic unity by emphasizing the common design features of the human nervous system. This approach effectively reduces the psyche to structures of the brain and stresses very general species-defining characteristics like tool use, language, or symbol use. Lists of such species characteristics can be found in any introductory anthropology textbook.

But attention to the biological and evolutionary basis of cognition does not really support any significant notion of psychic unity. Modern neurobiology does not paint an essentialist picture of the human nervous system. Our mental hardware turns out not to be as "hard" as we had presumed. Many neurobiologists view the human nervous system as the biological basis of an "adaptive intelligence" (Changeux, 1986; Laughlin et al., 1992; Piaget, 1971). The nervous system is highly programmable within the limits of what Changeux terms its "genetic envelope" (Changeux, 1983:468; see also Laughlin et al., 1992:53–54).

The flexibility of the human brain, its openness to the world around it, is suggested by the fact that much of its development and all of the myelination of the cortex take place outside the womb in the first five years of life. Attempting to move beyond the relatively simplistic oppositions between the competing characterizations of brain functioning as either totally plastic or hard-wired, Changeux proposes a developmental theory of brain functioning that stresses a "selective stabilization" of neural networks during an early "labile" phase of brain development (Changeux, 1983). Laughlin et al. provide the following summary of Changeux's theory:

Changeux begins from the position that there is too small an evolutionary increment in genetic material to account for the remarkable increase in complexity of human neural organization over that of, say, the chimpanzee. A solution to this apparent paradox is to be found in a process by which patterns of synaptic innervation are stabilized out of a field of potential synapses. Processes develop and synapses are tentatively established during an early "labile" phase of neural development. During the labile phase, the developmental processes have a high redundancy factor and are largely determined by the genetic labeling producing the generalized cell type of which any particular neuron is a member. A period of selection follows the laying down of the field of synapses, during which some synapses are reinforced through activity at both pre- and post-synaptic sites on the membranes of the cell and its target, and many other synapses are eliminated by irreversible regression and cell death due to inactivity. [Laughlin et al., 1992:41; emphasis in original]

This view of brain development distinguishes various levels of environmental responsiveness in different kinds of neural networks (Rosenzweig et al., 1962, 1972). Some networks are relatively hard-wired and constrained by a tight genetic envelope. Laughlin et al. refer to such hard-wired neural associations as "highly prepared associations" (Laughlin et al., 1992:63). Others are subject to selective stabilization early in life during the labile phase of brain development. And still other neural networks remain subject to reprogramming throughout an individual's life and account for the neural basis of lifelong learning.

It is thus clear that the active human psyche cannot be reduced to its common biological substrate, abstracted from the conditions of its development and the particular environment within which it is functioning at any given time. While certain neurological features may be characterized as intrinsic to the normal development of any human brain, others are more flexible and inscribe in the form of particular neural networks the particular environment in which the brain has been developed.

Viewing the mind in this way—as dependent on a variety of neurologically grounded models of different degrees of flexibility—we can see how it is possible for anthropologists to justify either the psychic diversity of the species or its essential psychic unity. We can also understand the sense in which the unity/diversity debate is based on a false dichotomy. In the face of the complex and equivocal character of the human brain, the immediate question becomes why, for so many years, anthropologists have chosen largely to ignore the implications of culture for understanding the important degree of psychic diversity characteristic of our species.

Given the cultural anthropologist's penchant for particularistic rather than universalistic accounts of human experience, this history of support for the psychic unity doctrine and its implicit essentialism may seem puzzling. In its rush to clear up any doubts about the species' psychic unity, anthropology inevitably drove a theoretical wedge between the ideas of culture and mind. The modern legacy of this move was the marginalization of anthropology from the deepest currents of the cognitive revolution.

How and why did culture and mind come to be separated in this way? This split is the legacy of Victorian anthropology and its commitment to understanding difference exclusively in terms of a notion of general evolution. The psychic unity doctrine became entangled in complex ways with the discredited ideas of racial character and "progressive" cultural evolution. Until the issue of cultural diversity could be unhooked from its evolutionary (and racial) moorings, modern anthropologists were not
free to contemplate the implications of cultural difference for an understanding of mind. In the rest of this chapter, we consider the troubled roots of the culture/mind divide in the complex intellectual currents of Victorian anthropology.

EARLY SPECULATIONS ON PSYCHIC UNITY

For Victorian anthropology, the idea of general evolution resolved the apparent contradiction between cultural variability and psychic unity. The belief that cultures progressed through a fixed sequence of historical phases led anthropologists to understand cultural difference as stages of evolution (Sahlins et al., 1960). So long as evolution was understood as general (i.e., unilinear) and progressive (i.e., directed), it was possible to reconcile an essentialist view of human nature with the cultural variability of the species.

The evolutionism of Tylor, Morgan, and Spencer preserved the Enlightenment faith in psychic unity, but only by ignoring the kind of opportunistic variability implicit in Darwin’s theory of natural selection and adaptive radiation. Whether in culture or biology, specific evolution (speciation) is always a problem for those proposing a unilinear conception of evolution. The idea of general cultural evolution made possible a comparative ethnology by providing anthropologists with a single evolutionary track and an associated taxonomy of historical types for classifying human variability.

Evolution was anthropology’s early solution to the psychic unity problem. In Spencer’s terms, the cultural diversity in human life could be acknowledged, while the “laws of thought” remained common human property, albeit unfolding over evolutionary time. The human mind was assumed to operate on laws that were independent of a particular culture, even though specific cognitive abilities were closely tied to the group’s level of social evolution. The mind, unified in its essence, was pluralized in its temporal existence. Mental evolution was treated as an “orthogenesis,” a directed linear development linked to the orderly unfolding of cultural stages. For evolutionists like Spencer, the human mind might be fixed and universal but, as Stocking suggests, “mentality” was contingent and plural:

For Spencer, the crucial factor in the formation of primitive mentality was the closeness of the primitive mind to its external environment. The sensory perceptions of the savage were notoriously acute, but as a result of the antagonism between “perceptive” and “reflective” activity, his mental processes rarely rose above the level of sensation and the “simple representative feelings directly associated with them.” Improvisative, credulous, incapable of abstraction, his behavior was primarily a matter of reflexive or imitative response to environmental stimuli; though fundamentally impulsive and indeed antisocial, he was paradoxically subject to the most extreme fixity of habit and rule of unthinking custom, since his “simpler nervous system, sooner losing its plasticity” was unable to take on a modified mode of action.” Inherent savage mentality produced a certain type of social life; but savage social life, by a circular Lamarckian process, also produced the hereditary savage mentality. (Stocking, 1960:117–118)

This implicit distinction between a fixed “mind” and a fluid, environmentally conditioned “mentality” became an article of faith among Victorian anthropologists. Yet, as I have suggested, this complex position on the psychic unity of humankind was disturbingly ambiguous at best and, at worst, self-contradictory. It was just these troublesome issues about the psychic unity doctrine that impelled the first generation of anthropological fieldworkers to set out from the academy for distant lands, natural laboratories where they might have a first-hand look for themselves.

AMERICA: BOAS AND THE MIND OF PRIMITIVE MAN

In 1883, Franz Boas, then a young student of physics, left Germany for Baffinland, in northern Canada. His primary intent was to study how Eskimos perceived the color of ice and seawater in their natural setting. This research was to be an extension of his dissertation research in the psychophysics of vision. But even before he left Germany, Boas’s intellectual agenda was complex and in transition.

During his year-long arctic sojourn, Boas endured considerable physical hardship and found himself painfully isolated intellectually. Yet as he overcame the strangeness of his new surroundings, Boas found himself quite charmed by what he saw as the essential humanity of his Eskimo hosts. “[A]fter a long and intimate intercourse with the Eskimo,” Boas wrote in 1887, “it was with feelings of sorrow and regret that I parted from my arctic friends.” He continues:

I had seen that they enjoyed life, and a hard life, as we do; that nature is also beautiful to them; that feelings of friendship also root in the Eskimo heart; that, although the character of their life is so rude as compared to civilized life, the Eskimo is a man as we are; that his feelings, his virtues, and his shortcomings are based in human nature, like ours. [Boas, 1887a:402]

To occupy himself during the long and frigid arctic nights, Boas had brought with him a copy of Kant’s Critique of Pure Reason. Boas’s developing interest in ethnology emerged under the unlikely joint influence of Eskimo hospitality and Kantian philosophy. Kant directed Boas’s attention to questions of the mind’s reliance on categories and the resulting complex relations between the objective world and mental representations (Stocking, 1960:143–144). As he became increasingly absorbed in the lives of his Eskimo hosts, Boas’s interest in the effects of seawater on the perception of light began to give way to a new set of questions: issues of human value and meaning.

During his laboratory experiments attempting to measure the absorption of light by different samples of water, Boas had begun to realize the importance, even in scientific measurement, of what he termed “situational factors,” by which he meant the psychological predispositions of the observer (Stocking, 1960:142 ff.) “I learned to recognize,” Boas wrote in 1938, “that there are domains of experience in which the concepts of quantity, of measures which can be added and subtracted like those with which I was accustomed to operate, are not applicable” (Boas, 1938, cited in Stocking, 1974:42). Turning from psychophysics, Boas took up as his life’s work the question of “the relation between the objective and the subjective worlds . . . the reaction of the human mind to the natural environment” (Boas, 1938, cited in Stocking, 1974:42).
Boas’s early field studies, really the cornerstones of modern anthropology, were
driven by issues of cross-cultural psychology and questions about the flexibility and
variability of human psychological processes. From the outset, however, the
cross-cultural study of psychological processes was beset by theoretical problems. Mostly
the problems stemmed from a tradition of treating group differences in terms of
evolutionary stages. While he initially shared the Victorian assumptions about cul-
tural evolution, Boas gradually changed his views, increasingly directing his theoriz-
ing against the notion of evolutionary hierarchies of cultural and psychological char-
acteristics.

Boas sought to replace evolutionary taxonomy with detailed descriptions of indi-
vidual cultures understood as integrated wholes. In interpreting cultural artifacts, for
instance, Boas invoked a contextualist relativism that made cross-context compar-
sions virtually meaningless:

We have to study each ethnological specimen individually in its history and in its
medium. . . . By regarding a simple implement outside of its surroundings, outside of
other inventions of the people to whom it belongs, and outside of other phenomena
affecting that people and its productions, we cannot understand its meaning. [Boas,
1887b, cited in Stocking, 1974:62]

“In ethnology,” Boas asserted, “all is individuality” (Stocking, 1974:66). By
“individual,” Boas meant individual culture.

In a 1909 address at Clark University, Boas underscored the centrality of the
psychic unity issue for anthropology. “The fundamental problem on which all anthro-
pological inquiry must be founded,” he said “relates to the mental equipment of the
various races of man” (Boas, 1910a:371). Boas had not broken completely with the
prevailing evolutionary assumptions of his day, and his subsequent comments suggest
the degree to which his conception of mind was grounded in biological essentialism:

Are all races of mankind mentally equally endowed or do material differences
exist? The final answer to this question has not been given, but anatomical observations
on the various races suggest that differences in the form of the nervous system are
presumably accompanied by differences in function, or, psychologically speaking, that
the mental traits which characterize different individuals are distributed in varying man-
er among different races; so that the composite picture of the mental characteristics
of one race would presumably not coincide with the composite picture of the mental
characteristics of another race. [Boas, 1910a:371]

Boas qualified this conception of racial variation in mentality with the assertion
that such difference does not necessarily imply that one group is more advanced than
another. “It would seem,” he went on, “that the weight of evidence is, on the whole,
in favor of an essential similarity in mental endowment in different races, with the
probability of variation in the type of mental characteristics” (p. 372).

This discrimination between a common mental “endowment” and racial variation
in mental “characteristics” echoes the distinction made by Boas’s old mentor
Adolph Bastian between Elementargedanke (primal/basic thought) and Volkergedanke
(local “folk” thought). But already Boas was moving away from this distinction to-
ward another. The term “endowment” suggests an inherited characteristic and anticip-
pates the distinction that Boas was later to make between race and culture. Boas was
trying to draw a line between mental characteristics based on race and those based
on membership in social groups. He attributed the latter characteristics not to racial
influences but to “the habitual reactions of the society to which the individual in
question belongs” (Boas, 1910a:372).

In his extraordinary essay “Psychological Problems in Anthropology,” one
senses Boas’s struggle to forge a set of crucial distinctions: between race and eth-
nicity, between mental “endowment” and mental “characteristics,” and between
racial differentiation and evolutionary advancement. Yet in 1910 Boas had not freed
himself of the notion of general evolution as a framework for understanding group
differences. Distinctions between racial groups and ethnic groups were still linked in
his mind with differences in evolutionary advancement.

The nature of “primitive thought” was still at the heart of Boas’s view of psy-
chological anthropology. Thus Boas claimed that the “primary object of anthro-
pological researches would be the determination of the fundamental categories under
which phenomena are classified by man in various stages of culture” (Boas,
1910a:377). Boas proposed the importance of investigations into the “domain of cer-
tain simple sense perceptions” such as color, noting that color terminologies in some
languages make finer discriminations than in others. He favored rigorous comparative
investigation of such differences in the classification of sensory phenomena.

Boas appears to be uncomfortably straddling a thoroughgoing cultural relativism
and an older evolutionism. Difference has not yet emerged simply as difference but
rather as developmental level. On the one hand, Boas’s view anticipates by half a
century the research project of ethnosciences. On the other hand, it clearly resonates
with Spencerian assumptions about the failure of the “primitive mind” to make fine
sensory discriminations. Though he comes close, Boas has not quite untangled the
psychic unity conundrum.

Boas’s most famous statement on the issue of psychic unity is his 1911 volume
The Mind of Primitive Man (Boas, 1911/1938). Though the book jacket of a 1963
printing highlights Boas’s affirmation of the psychic unity of mankind and his rejec-
tion of the racial mentality notion, the book is in fact considerably more equivocal
on these issues.3 The crux of Boas’s actual position on these matters is found in
Chapter 11. Here Boas clearly repudiates the notion of unilinear evolution from sim-
ple to complex cultural forms, at least in relation to what he terms “particular cultural
phenomena” (Boas, 1911/1938:180). On the other hand, Boas acknowledges that
“increasing intellectual achievements” have produced clear advantages for human
communities in security and food production. This change, in turn, leads to “new
approaches to truth, and a more systematic development of knowledge” (p. 184).
These changes also represent to Boas clear cultural advances.

In terms of cognitive characteristics, Boas still believes in evolutionary develop-
ments in sense perception. Classifications in different cultures are “founded on funda-
mentally distinct principles” (p. 190), principles echoing Spencer’s evolutionary se-
quence. Primitive thought is linked, in Boas’s view, with anthropomorphism, concreteness, difficulty in forming abstractions, and a tendency to reify abstract phe-
nomena into agents or objects (as in theories of illness). But though he seems to
confirm the classic evolutionaryist’s view of primitive mentality, Boas is, in fact, at-
tempting to make a crucial distinction—not between primitive and civilized mind but
rather between the “traditional ideas” that their respective cultures provide. There is,
Boas concludes, no reason to attribute differences in thinking to “any fundamental
peculiarity of the mind of primitive man" (p.199). In his words, "The difference in the mode of thought of primitive man and that of civilized man seems to consist largely in the difference of character of the traditional material with which the new perception associated itself" (p. 199, emphasis added).

Boas preserved the psychic unity of humankind while freeing himself of the racial assumptions of the evolutionist position. He achieved this freedom by distinguishing between cultural traditions and mental endowment as the basis for differences in mental life.

By focusing on the cultural sources of different mentalities among human groups, Boas moved closer to making sense of the psychic unity problem. But the Boasian solution to the problem of psychic unity had a serious cost, one that has continued to trouble modern anthropology. General evolution is overcome by clearly disengaging culture from mind. With the "fundamental" unity of the mind assured, ethnologists are free to document in detail the variety of cultural traditions. These traditions may legitimately be held to shape a people's "mode of thought," their "style of thinking," and their "beliefs." Yet in no sense may we conclude that there is any fundamental difference between "minds." The human mind, Boas concludes, is essentially free of cultural effects.

This intellectual sleight of hand is reinforced by an implicit metaphor of mind-as-container. Culture is conceived as one of the contents of mind rather than as a defining attribute of mind. Thus anthropology achieved an independence from psychology. The study of culture could be dissociated from the study of mind.

BRITAIN: RIVERS AND THE UNITY OF SOCIETY AND MIND

Fifteen years after Boas's first encounter with the Eskimos, a group of British scientists from Cambridge University traveled to the South Pacific to collect information on exotic life forms in Melanesia. The 1898 Torres Strait expedition was led by Cambridge marine biologist Alfred C. Haddon. Accompanying Haddon was a team of psychologists made up of William Rivers and two of his Cambridge students, Charles Meyers and William McDougall (Stocking, 1968:216).

Rivers left England for the South Pacific armed with the latest psychometric tests of the day. Like Boas before him, Rivers planned to study the effects of environmental differences on human sensory perception. Though experiments were conducted on a wide range of sensory reactions, the team was particularly interested in visual perception. Rivers administered the famous Müller-Lyer illusion to natives of Murray Island and discovered that they appeared to be somewhat less susceptible to the visual illusion than European populations. Rivers's findings were early evidence for what would eventually come to be called the "carpentered environment hypothesis." The exposure to the precise and regular angles of so-called carpentered environments was thought to affect human spatial perception. It was this effect which was tapped by the Müller-Lyer illusion.

On the general issue of human psychic unity, the team's experiments were inconclusive and inconsistent. McDougall reported that his Papuan subjects were twice as sensitive to tactile stimuli as Europeans but half as sensitive to pain. Myers, whose test results on reaction time were hardly conclusive, nonetheless concluded that any recorded differences in reaction time were the "expression of racial differences in temperament" (quoted in Stocking, 1968:216). McDougall would later become a believer in the racial determination of temperament and an advocate of a doctrine of racial inequality (p. 217).

As for Rivers, he returned from Melanesia somewhat confused about the psychic unity issue. Though his field research had inspired him a serious interest in ethnology, Rivers tended to keep his psychological and ethnological interests separate. Whenever he did attempt to bring these interests together, the result was ambiguous at best.

Though his early writings were on the borderline between psychology and ethnology, Rivers gradually became interested in the connections between psychology and social life and more particularly the influence of social and physical environment on perception and thought. Despite his psychoanalytic orientation, Rivers was drawn to a highly relativistic view of the human psyche. Sixteen years after his Melanesian research, Rivers wrote: "The two kinds of process, social and mental, are so closely connected that there must be relations between the two throughout. The two paths will have interconnections even while they are parallel to one another, and these interconnections will become still more numerous as the paths converge" (Rivers, 1916/1926a).

By psychology, Rivers apparently meant the understanding of human motivation. His own fieldwork in both Melanesia and India as well as his wide reading in ethnology convinced him of the strong influence of local tradition on what psychologists had assumed was basic human motivation. In the 1916 essay, the chief example he used was revenge. Rivers succinctly summed up his objections to the assumption of psychic unity of motivation: "In place of asking 'How can you explain the blood feud without revenge?' I would rather ask, 'How can you explain revenge without a knowledge of the blood feud?' " (p. 11).

Early on, Rivers developed a set of contradictory views on the psychic unity issue. In his 1906 ethnography The Todas, Rivers writes of the "extraordinary similarity of custom throughout the world" and affirms the importance of the independent invention of widely distributed cultural traits (quoted in Smith, 1926:217). Here Rivers reflects the influence of Adolph Bastian. Eventually Rivers's attempt to interpret his Melanesian materials led him to renounce Bastian's notion of psychic unity as implicit in the conception of Elementargesamkeit. In an essay "Convergence in Culture," Rivers argues for a pluralistic view of human psychology. "[In the study of human culture," he writes,

the nature of a practice is not to be explained by the working of motives which move ourselves, nor is it even to be explained fully by the immediate motives of those who now put the custom into practice. It is only by historical inquiry, by finding the social concomitants and antecedents of the custom, that we can hope to understand its nature. [Rivers, 1916/1926b:146]

By 1911, just five years after the publication of The Todas, Rivers had all but abandoned the assumptions of psychic unity in favor of a notion of socially shaped motivation. But there was still the issue of accounting for cultural similarities between widely separated populations. Rivers turned to diffusionism—the borrowing of traits
The Problem of Culture in Mind

between cultural groups—as a way of explaining cultural parallelism. Diffusionism did for Rivers what cultural particularism did for Boas. It allowed him to evade the troubling aspects of the psychic unity question by disconnecting cultural from evolutionary questions.

To what extent was Rivers actually able to overcome the contradictions about the psychic unity of mankind that beset the thinkers of his time? For Boas, the contextualism of his idiographic approach to cultural description was seen as an alternative to both evolutionism and to diffusionism. For Rivers, however, diffusionist explanations of cultural similarity were presumed to be consistent with the perspective of general evolution. The evolutionary conception of mind, with its notions of advanced versus primitive thinking, go unchallenged by Rivers. He turns to diffusionism because it seems to him empirically preferable to evolutionary accounts.

In both Boas’s and Rivers’s pioneering work, an early interest in the relationship between culture and mind was gradually replaced by a theoretical split between culture and mind. Once this break was made, the evolutionary issues were put to rest, but at a price. The relationship of culture to individual motivation and cognition became problematical. Rendered as “spirit,” culture lost its body. The culture-mind split was simply another version of the Cartesian mind-body dualism, but with an ironic twist. In affirming psychic unity in the face of cultural diversity, mind became roughly equated with brain and thus with body, a position with which many contemporary neuroscientists would concur. But culture (understood as mentality or mental characteristics) was conceived in a disembodied fashion as Geist (or spirit) and therefore not understandable in the same terms as organic evolution.

The Psychic Unity Muddle

the presumed parallelism between individual and phylogenetic development was characteristic of the social thought of the time. Yet it does seem odd to find such a claim in the work of writers who devoted so much effort to arguing for the dissociation of social facts from those of individual psychology.

Despite Durkheim’s apparent embrace of evolutionism, the romantic strain in French anthropology provided a fascinating countercurrent to the straightforward evolutionary thinking in his work. For French thinkers, primitivism was more than mental confusions and undifferentiated social forms. The primitive suggested for these writers a romance of meaning, a vision of a prelapsarian world as an uninterrupted chain of signification.

For Durkheim, the romance took the form of the idea of “collective representations” that defined the solidarity of the “archaic societies.” In his Division of Labor in Society, Durkheim contrasted the “organic solidarity” underlying complex societies with the “mechanical solidarity” of simpler societies. But in moving from simple to complex society, the very meaning of “solidarity” undergoes a telling shift. Mechanical solidarity is a function of religious belief and practice and constitutes a unity of minds—a shared system of common representations. Organic solidarity, however, unites minds rather than minds in a shared-in system of diverse economic specializations. In short, primitive society was distinguished by its proliferation of shared meanings, while so-called civilized society traded off such common meanings for economic interdependence.

Though he clearly distinguished primitive from civilized social forms, Durkheim shared with the English evolutionists a strong commitment to the psychic unity doctrine. In fact he and Mauss wrote Primitive Classification as a vigorous defense of the idea of psychic unity. And while evolution produced changes from simple to complex and undifferentiated to differentiated social forms, they claimed that the character of the human mind had remained essentially unchanged from the beginning. That character is to be found in the fundamental rationality of human classification.

“Primitive classification” is seen as an early form of the basic human mind:

Primitive classifications are not . . . singular or exceptional, having no analogy with those employed by more civilized peoples; on the contrary, they seem to be connected with no break in continuity, to the first scientific classifications. In fact, however different they may be in certain respects from the latter, they nevertheless have all their essential characteristics. [Durkheim and Mauss, 1963:81]

For Durkheim, psychic unity is not based directly on the common nature of mind but on the commonality of human social processes. Classificatory logic, the capacity to oppose and to order concepts hierarchically, is derived from the processes of group formation, group hierarchy, and social opposition. Mystical identifications and confusions in “primitive” thought were treated as a psychic residue of an earlier, undifferentiated social state. For Durkheim, this residue had the positive effect of promoting the unity of the clan. In stressing connection over differentiation—the solidarity of clan members—their identification with each other and with their totemic species are for Durkheim and Mauss relatively "primitive" human traits. Social identification is conceived of as a kind of evolutionary residue left over from “the state of the initial confusion from which the human mind has developed” (Durkheim and Mauss, 1963:81). By contrast, the logic of social distinctions, such as those

THE FRENCH CONNECTION: RATIONALITY AS ROMANCE

By the end of the nineteenth century, leading French social thinkers were wrestling with the same questions about human psychic unity that were troubling their English and American counterparts. The terms of the French debate were set out by Émile Durkheim and his followers and by the philosopher-ethnologist Lucien Lévy-Bruhl. These leading French figures shared with Boas and Rivers a focus on the relationship between cultural differences and mind. Yet from the outset French social thought had a distinctively Gallic flavor, a pervasive intellectual tension between cognitive romanticism and classical rationalism.

Durkheim and Lévy-Bruhl shared the Spencerian vision of social evolution that was the received wisdom of their day. General evolution presumed the gradual replacement of simpler and undifferentiated social forms with complex and differentiated ones. For Émile Durkheim and his nephew Marcel Mauss, the evolution of both social and mental forms involved a gradual increase in both complexity and “differentiation” out of what they termed a primitive “state of indistinction” (Durkheim and Mauss, 1963:5). The classic case of the Bororo Amazonian tribesman literally identifying himself and his clan with the totemic arara parakeet is marshaled by Durkheim and Mauss as an example of the sort of mental confusion that represents at once the earliest stages of human evolution and the earliest phases of the development of the individual mind. This passing reference in Primitive Classification to
defining traditional divisions of the tribe into increasingly smaller "nested" groups (moiety, phratry, and clan) suggests for Durkheim and Mauss the more highly evolved classifying and differentiating phase of social/psychic development (p. 81). The startling implication is that, for Durkheim, the "mechanical solidarity" of simpler societies—defined by shared representations, similarity of worldview, and a lack of economic differentiation—is linked to residues of mental confusion. It is here that Durkheim's evolutionism and the French romance with meaning come together. Though Durkheim dissociated his views from Lévy-Bruhl's radical opposition of scientific and prelogical thought, Durkheim's association of primitive society with undifferentiated mechanical solidarity bore a striking similarity to Lévy-Bruhl's brand of primitivism, with its stress on prelogical "participations" and identifications between heterogeneous species.

Durkheim's social determinism of thought has been subject to many critiques. Yet it is important to remember that Durkheim was arguing for an understanding of mind as dependent on cultural models. Like Rivers, Durkheim argued against the explanation of social phenomena in terms of psychological characteristics. Durkheim and Mauss proposed instead that properties of mind be derived from aspects of social experience. In a famous passage he states:

Far from it being the case, as Frazer seems to think, that the social relations of men are based on logical relations between things, in reality it is the former which have provided the prototype for the latter. According to him, men were divided into clans by a pre-existing classification of things; but on the contrary, they classified things because they were divided by clans. [Durkheim and Mauss, 1963:82]

Durkheim's conception of a "social mind" whose functioning is grounded in external models is surprisingly modern in its anticipation of cognitive anthropology. In fact, Durkheim and Mauss articulated an early version of what has become known as "prototype theory" in cognitive psychology, whereby basic-level categories may be derived from key cultural exemplars.

Yet while Durkheim proposed an enlightened view of the cultural basis of classification, he was also anxious to distinguish sociology (social facts) from psychology, which he viewed as the study of purely individual experience. In his preface to Suicide, Durkheim stressed that social facts were "realities external to the individual" (Durkheim, 1951:37–38). Durkheim left unresolved and problematical the relations between social forces and individual motivation. Like Boas, Durkheim constituted culture ("social representations") as a distinct domain for inquiry. But he accomplished this by splitting culture off from the psyche and simply asserting a relation of difference or opposition. The result was that the role of culture in mind as a source of personal as well as social motivation became something of a black box.

LÉVY-BRUHL'S "PARTICIPATION"

Durkheim presumed a link between the psychic unity implied by classification and the social basis of mental representations. Lévy-Bruhl took a different path. His project was to play out the romance with meaning to its "prelogical" conclusions. This entailed for Lévy-Bruhl a decisive break with the psychic unity doctrine. Lévy-Bruhl became increasingly fascinated with cultural difference and struggled, without complete success, to characterize cultural difference in a nonevolutionary way.

Lévy-Bruhl's most influential ideas about the psychic unity of humankind are contained in his 1910 book Les fonctions mentales dans les sociétés inférieures, which was misrendered in English as How Natives Think. Through the linked concepts of "prelogical mentality" and its "principle of participation," Lévy-Bruhl tied the romance of meaning to cultural evolution. Lévy-Bruhl chose the unfortunate term "prelogical" to describe the quality of mysticism that he attributed to primitive religious thought. By "prelogical," Lévy-Bruhl meant that many religious beliefs and practices violated Aristotle's principle of "noncontradiction." Conceptions proposing the coexistence of apparent mutually exclusive states (e.g., life in death, unity and multiplicity of being, the identity of distinct forms of life or distinct species) were logical and categorical anomalies. "Primitive thought" simply ignored the apparent logical anomalies in such conceptions.

Lévy-Bruhl insists that the failure to note contradictions is not due to the lack of any cognitive capacity for logic but rather a lack of interest in the logical consistency of a set of relations. The difference in mentality is traced to differences in "social milieu" (p. 43). For Lévy-Bruhl, prelogical and logical modes of thought are derived from a common brain but different collective representations, or what we would now call distinct cultural models. Logical and prelogical thought are matters of cultural value rather than cognitive capacity. "Undoubtedly," Lévy-Bruhl affirmed, "they have the same senses as ours . . . and their cerebral structure is like our own. But we have to bear in mind that which their collective representations instill into all their perceptions" (p. 43).

The social value that underlies the disregard of logical consistency is positively defined in terms of "the law of participation," which proposes correspondences or relationships where logical thought proposes differences and oppositions. The law of participation accounts for mystical thought and its identification of things which, in everyday life, appear to be separate:

For instance, "the Trumai (a tribe of Northern Brazil) say that they are aquatic animals. . . . The Bororo (a neighboring tribe) boast that they are red araras (parakeets)." This does not merely signify that after their death they become araras, nor that araras are metamorphosed Bororos, and must be treated as such. It is something entirely different. . . . It is not a name they give themselves, nor a relationship that they claim. What they desire to express by it is actual identity. That they can be both the human beings they are and the birds of scarlet plumage at the same time, Von den Steinem regards as inconceivable, but to the mentality that is governed by the law of participation there is no difficulty in the matter. [Lévy-Bruhl, 1910:43]

The other important characteristic of "participation" is the fact that concepts are sensuous, colored by feeling and by bodily activity, and are not apprehended as pure ideas: "In its purest form, primitive mentality implies a participation which was felt and lived, both by individuals with the social group, and by the social group with the surrounding ones" (p. 366). Lévy-Bruhl asserts that only with the emergence
of "individual consciousness" do such sensuous concepts take on an abstracted and ideological quality. Ultimately, participation gives way to abstract relations of symbolic identification, of similarity and of metaphor.

I have dwelt at length on Lévy-Bruhl's conception of primitive mentality because I think that his important insights into human thought have been lost to modern anthropology. This has been due in part to the long history of misunderstanding of what Lévy-Bruhl was getting at. Lévy-Bruhl's work has been sidelined from the canon of social theory because of the residual and patronizing evolutionism in his discussions of the "primitive."

At the end of his life, Lévy-Bruhl finally gave in to his increasingly vociferous critics who sought to defend the psychic unity doctrine against what they saw as Lévy-Bruhl's insupportable challenge. In his Notebooks, Lévy-Bruhl asserted that he had erred in characterizing so-called primitives in terms of a single prelogical mentality. Yet even in his early work, Lévy-Bruhl had never claimed that prelogical thought was the exclusive province of one sort of human being. What he had asserted was that the collective representations of some groups legitimized mystical thinking in a far greater number of contexts than other groups did.

Lévy-Bruhl came the closest of any early writer to recognizing the serious problems faced by a field that insisted on foregrounding cultural diversity while clinging to an unrefined notion of psychic unity. Alone among the major thinkers of his time, Lévy-Bruhl openly questioned the idea of psychic unity. In recognizing that "mentality" lay at the intersection of a common human sensorium and a variable se. of cultural representations (models), Lévy-Bruhl might well have laid the foundation for a cognitively grounded conception of culture and an intellectually vigorous vision of the psychic diversity of humanity. But his critics never permitted this to happen.

In reevaluating Lévy-Bruhl, there are also issues of the substance of his thinking about mind. What is a modern anthropologist to make of Lévy-Bruhl's notion of prelogical mentality? It is a safe bet that the vast majority of modern anthropologists would have little positive to say about Lévy-Bruhl, and most would probably admit to never having had extensive contact with his writings. Yet I have long found his discussions of participation and contradiction quite compelling, even if they are derived from romanticized readings of the ethnography. What Lévy-Bruhl has identified is not, of course, a mentality that could be exclusively associated with any single human group or type. Nor could it be seen as a "lower" form of human cognition than any other. But he has identified in somewhat vague terms a particular "mode of thought" that is found to one degree or another in all human communities and has strong empirical validation in relation to key life experiences (see Chapters 5 and 6 of the present volume). In Chapter 14, we revisit the notion of "participation" that Lévy-Bruhl was getting at and discover that it is closely connected to the process of analogical schematization that underlies meaning construction for all humans.

Stripped of its evolutionary framework, Lévy-Bruhl's questioning of human psychic unity no longer looks as threatening as it once did, since it conceives of the mind as an emergent phenomenon at the nexus of the nervous system and a variable field of social values. His emphasis on the sensuous and nonrational component of mind finds renewed significance in light of recent work on the embodiment of human understanding. Though the jargon has changed and few would recognize their kinship to Lévy-Bruhl, the concept of participation is, in fact, a live issue in modern anthropological research.

RECENT ANTHROPOLOGY AND THE PSYCHIC UNITY QUESTION

In the last quarter century, cultural anthropology has fragmented into numerous theoretical camps with widely divergent and sometimes mutually hostile research agendas (Shore, 1988b). Despite this fragmentation, the doctrine of psychic unity has gone largely unchallenged by the mainstream of anthropologists. The notion of general evolution of culture and the social Darwinism that supported it have been either eliminated in modern anthropological discourse or self-consciously purged of their racialism and ethnocentrism. Yet the legacy of Victorian anthropology looms large in the conscience of the field. Though Boas, by clearly distinguishing among the concepts of race, culture, and language, should have cleared the way for a reevaluation of the psychic unity doctrine, modern anthropologists tend to retain an unexamined version of the doctrine as a matter of faith.

LEVI-STRAUSS AND THE RATIONALITY OF THE SAVAGE MIND

Without question, Claude Levi-Strauss must be considered the most influential thinker in anthropology in the last half of the twentieth century. Though his work spans the full range of ethnological concerns (social organization, myth, ritual, language, and history), the problem of culture and mind is at the heart of his thinking, much as it had been for Durkeim, Mauss, and Lévy-Bruhl. Even Levi-Strauss's early work on social organization focused less on behavior than on the implications of norms and rules for an understanding of human nature. Gradually, the focus of his work shifted to a more direct confrontation with the problem of mind as revealed by myth and art. Levi-Strauss's writing betrays a deep ambivalence about the question of psychic unity, an ambivalence reflecting the characteristic French tension between rationality (and its attraction to universality) and romanticism (and its passion for diversity). The French tradition of philosophical anthropology, stemming from Rousseau, Durkeim, and Lévy-Bruhl, bequeathed to Levi-Strauss the romance of the "primitive" or "savages," terms which he never abandoned despite their disreputable associations.

Levi-Strauss's influential work The Savage Mind is a complex argument, part science, part poetry, for psychic unity defined in terms of a human desire for order through systematic classification. The so-called savage mind is, in Levi-Strauss's magisterial treatment, a subspecies of Linnaean rationality, a different machine compelled to impose categorical order on the world. In an interview for Canadian radio, Levi-Strauss discussed his lifelong struggle against irrationality: "Since I was a child,
The Problem of Culture in Mind

I have been bothered by, let’s call it the irrational, and have been trying to find an order behind what is given to us as disorder” (Levi-Strauss, 1979:11).

Yet Levi-Strauss’s work does not simply affirm the common rationality of all human thought; rather, it adopts an implicit evolutionism and splits the mind into two forms of rationality—one primitive, one modern. The modern scientific mind, like the mind of the engineer, operates through the rationality implicit in hypothesis testing and the manipulation of abstract concepts (Levi-Strauss, 1966:19). In contrast, “mythical thought” employs “the science of the concrete,” interrogating nature indirectly by means of concrete signs and symbols rather than directly through abstract concepts.

Myth may be a species of scientific thought, but it is one that operates according to a distinct epistemology which Levi-Strauss calls “bricolage.” Both the scientist and the bricoleur are empiricists. But the scientist’s propositions are presumed to be open to the disconfirmation of contrary experience (or experiments). The bricoleur, by contrast, betrays what Levi-Strauss has termed a “totalitarian ambition” (Levi-Strauss, 1979:17). Mythic thought exploits the expressive possibilities of the finest details of nature and of the play of human events in a poetic reaffirmation of an all-encompassing world view that is beyond disconfirmation.

Mythic thought may share with modern science a disinterested passion for explanation and order. But it is not completely disinterested, and the two species of thought are not quite the same. At the same time as Levi-Strauss affirms psychic unity, he points to the profound gulf that he believes separates these two frames of mind:

To say that a way of thinking is disinterested and that it is an intellectual way of thinking does not mean that it is equal to scientific thinking. Of course it remains different in a way, and inferior in another way. It remains different because its aim is to reach by the shortest possible means a general understanding of the universe—and not only a general but a total understanding. That is, it is a way of thinking which must imply that if you don’t understand everything, you don’t explain anything. This is entirely in contradistinction to what scientific thinking does, which is to proceed step by step, trying to give explanations for very limited phenomena, and then going on to other kinds of phenomena. [Levi-Strauss, 1979:17]

The Savage Mind and Totemism were both written in refutation of Lévy-Bruhl’s “false antinomy between logical and prelogical mentality” (Levi-Strauss, 1966:268, 1979:16). Levi-Strauss attempted to demonstrate alternate forms of rationality that defined, in one puzzling package, the common mental capacities of humankind and the split between primitive and modern science. His project was in part motivated by his joint commitment to the psychic unity doctrine and the importance of cultural differences in the definition of mind.

The ambivalence about difference at the heart of Levi-Strauss’s work is reflected in the following comments he made during a radio interview:

Today we use less and we use more of our mental capacity than we did in the past. And it is not exactly the same kind of mental capacity as it was either. For example we use considerably less of our sensory perceptions. . . . You cannot develop all the mental capacities belonging to mankind at once. You can use only a small sector and this sector is not the same according to the culture. [Levi-Strauss, 1979:19; emphasis added]

The Psychic Unity Muddle

Levi-Strauss uses a radical statement of the cultural variability of mind to support the psychic unity doctrine. For he concludes his comments with the extraordinary claim: “It is probably one of the many conclusions of anthropological research that, not withstanding the cultural differences between the several parts of mankind, the human mind is everywhere one and the same and that it has the same capacities. I think this is accepted everywhere” (Levi-Strauss, 1979:19).

As is customary in anthropology, the human mind is held to be unitary, whatever the local differences in its productions, so long as one can maintain that its capacities are everywhere the same. But as readers will quickly note from the apparent contradiction between the two passages (from the same page of Myth and Meaning), the definitions of both “mind” and “capacities” are left crucially ambiguous. Dan Sperber is one of the few anthropologists to have noted this fascinating tension in Levi-Strauss’s work: “Levi-Strauss’s originality . . . which has often gone unnoticed or been misunderstood, is to have developed this notion of psychic unity of humankind while, at the same time, putting forward new arguments to show that ethnography has a true, indeed unique psychological relevance” (Sperber, 1985:71).

Levi-Strauss is, quite literally, of two “minds.” In one frame of mind, both reductive and materialistic, Levi-Strauss seems to equate mind with its organic substrate in the brain or nervous system. Any presumption of difference would then have unfortunate racial implications, so he is forced to affirm the psychic unity doctrine. Yet in quite another frame of mind, Levi-Strauss goes so far as to claim that even mental capacities can be understood as distinct under different historical and cultural conditions. In this view, Levi-Strauss adopts an implicit conception of mind as an emergent property of the interaction of brain and organized experience. This is a radically different position from the materialistic conception of mind that underlies Levi-Strauss’s understanding of psychic unity. Far from justifying the psychic unity doctrine, this latter view of mind is actually consistent with a radically pluralistic vision of psychic diversity.

Levi-Strauss often dissociated his own views from those of Lévy-Bruhl. His main objections are to Lévy-Bruhl’s categorical distinction between mentalities and to the characterizations of mythic thought as emotional and participatory rather than logical or conceptual. While these are genuine enough differences, I think that the two writers are actually somewhat closer in conception than Levi-Strauss allows. Both affirm an important conception of psychic diversity, and for both, this diversity is clearly attributed to the influence of distinct social experiences on mind. Moreover, Levi-Strauss’s conception of a distinct species of mind called “savage” recalls Lévy-Bruhl’s primitivism, the romance with meaning:

The exceptional features of this mind which we call savage and which Comte described as spontaneous relates principally to the extensive nature of the ends it assigns itself. It claims at once to analyze and to synthesize, to go to the furthest limits in both directions, while at the same time remaining capable of mediating between the two poles. [Levi-Strauss, 1966:219]

The synthetic aspect of “savage thought” is the meaning-constructing impulse of mind, an impulse that Levi-Strauss attributes to the primitive bricoleur but which is more accurately identified with religious thought in general. What Levi-Strauss identifies as synthesis, Lévy-Bruhl characterized as participation. While there are distinc-
The Problem of Culture in Mind

itions between these concepts, I think they both reflect the same romance with meaning and the misleading overidentification of meaning—constructing cognitive processes with “primitive people.”

In both visions, the diversity of mind is understood as a response to variable social representations. A range of different modes of thought, though held in common by all humans as cognitive potentials, is in fact characterized as subject to differential social distribution. Though both Lévy-Bruhl and Levi-Strauss were quick to defend the doctrine of human psychic unity, they did so only in terms of a common organic substrate of mind. As they wrestled with exotic cultural texts, both writers were led to theoretical positions that viewed the mind as an emergent and contingent property of social experience. From the postulated psychic unity, both writers were led by the evidence to a potentially radical position of human psychic diversity.

CLIFFORD GEERTZ: BRINGING CULTURE TO MIND

While structuralism dominated the intellectual life of cultural anthropology through the early 1980s, Boasian cultural particularism was experiencing a sophisticated revival in the United States starting in the late 1960s. The new cultural relativism became known variously as “interpretive” or “symbolic” anthropology. Its emergence as a dominant paradigm in cultural analysis is associated with the Department of Anthropology at the University of Chicago and most particularly with the work of David Schneider and Clifford Geertz, both products of Harvard’s Department of Social Relations and students of Talcott Parsons. Though Geertz and Schneider shared an early interest in culture and personality, both would later renounce psychological in culture theory as they sought to carve out a distinctive niche for cultural analysis.

Geertz’s early essays on culture theory are particularly interesting in the context of the psychic unity issue. In two brilliant early essays, “The Impact of the Concept of Culture on the Concept of Man” and “The Growth of Culture and the Evolution of Mind,” Geertz laid the foundations for a conception of mind as an emergent phenomenon on the crossroads of brain and extrinsic programs—that he termed cultural “templates.” That vision should have provided the underpinning for a cognitively grounded conception of culture and a culturally grounded conception of mind, but it did not. Why it did not is a telling commentary on the staying power of the psychic unity doctrine.

Geertz looked to the implications of hominid evolution to provide a biological basis for the importance of culture in human life. For Geertz the human capacity rests on the extensive symbolic mediation of behavior. He stresses the human need for symbolic models of and for reality. Cultural templates are at once public (i.e., socially accessible to a community) and conventional (i.e., historically and locally contingent). For Geertz, culture is a semiotic system, an ensemble of “structures of signification” (Geertz, 1973c:9) which function as an external control system for human action.

The “control mechanism” view of culture begins with the assumption that human thought is basically both social and public—that its natural habitat is the house yard, the marketplace, and the town square. Thinking consists not of “happenings in the head”

The Psychic Unity Muddle (though, happenings there and elsewhere are necessary for it to occur) but of a traffic in . . . significant symbols. [Geertz, 1973d:45]

This human reliance on what Geertz calls “symbolic sources of illumination” derives from our species’ behavioral and semantic plasticity and the relative incompleteness of the human neonate:

The behavior patterns of lower animals are, at least to a much greater extent, given to them with their physical structure; genetic sources of information order their actions within much narrower ranges of variation, the narrower and more thoroughly, the lower the animal. For man, what are innately given are extremely general response capacities, which although they make possible far greater plasticity, complexity, and, on the scattered occasions when everything works as it should, effectiveness of behavior, leave it much less precisely regulated. . . . Undirected by cultural patterns—organized systems of significant symbols—man’s behavior would be virtually ungovernable, a mere chaos of pointless acts and exploding emotions, his experience virtually shapeless. Culture, the accumulated totality of such patterns, is not just an ornament of human existence but—the principal basis for its specificity—an essential condition for it. [Geertz, 1973d:45–46]

The human dependence on culture affects not only how we understand contemporary human nature but also has significant implications for our conception of the selective forces in evolution which shaped that nature. Geertz’s arguments are directed against what he views as common fallacies about hominid evolution and human nature. One such fallacy he terms the “critical point” theory of evolution, which mistakenly postulates a biologically complete hominid suddenly inventing culture after having reached the critical point of evolution. Geertz’s point is that symbolically mediated adaptations exerted selective pressures on evolving hominid lines, and thus that culture was an intrinsic selective factor in the evolutionary process and not simply its end product.

The other view of human nature Geertz seeks to dispel is what he terms “the Enlightenment view of man.” This was the view that underlay the psychic unity doctrine in its Spencerian version. Human nature, having been laid down once and for all through evolution, is invariant and regular. As we have seen, this view was reconciled with the obvious diversity of physical and cultural types in two ways. First, variations were treated as relatively superficial phenomena in contrast to the deep inner human constancies. Second, variations were understood in relation to orthogenetic principles of development. In other words, difference was translated into evolutionary/developmental stages. Geertz’s profound but elementary insight is that in view of the plasticity and social dependence of the human sensorium, human variation must be viewed as a constituting feature of the human rather than a superficial addition to it. Culture moves from the peripheries of human life into its very center as a postnatal completion of human development. The study of human nature minus culture does not produce a more basic understanding of the human but an understanding of a protohuman, a creature that is all bioessence but lacking recognizable qualities of human existence. In Geertz’s estimation, time and space, history and culture are as central to the definition of the human as is the stuff of genetics.

Better than anyone before him, Geertz laid out the implications of cultural evo-
lution for a theory of mind. Geertz explicitly rejected the reduction of mind to its organic basis, arguing instead for a view of mind as a relationship between a nervous system and its extrinsic sources of activation. In reviewing developments in neurobiology, Geertz notes, however, the “apparent paradox” in brain evolution of increasing centralization, autonomy, and hierarchical complexity of the nervous system which together produce a brain increasingly dependent for its functioning on external sources of patterning and activation. The implications for culture theory are profound:

[The accepted view that mental functioning is essentially an intracerebral process, which can only be secondarily assisted or amplified by the various artificial devices which that process has enabled man to invent, appears to be quite wrong. On the contrary, a fully specified, adaptively sufficient definition of regnant neural processes in terms of intrinsic parameters being impossible, the human brain is thoroughly dependent upon cultural resources for its very operation; and those resources are, consequently, not adjuncts to, but constituents of, mental activity. [Geertz, 1973b:76; italics in original]

Having thus proposed a conception of mind with psychic diversity at its heart, Geertz takes the remarkable step of using this view of mind as a justification for the psychic unity doctrine. He does this by ignoring his own insights about the emergent character of mind. In an argument that has become all too familiar in anthropology, Geertz ignores the cognitive implications of his own insights by equating psychic unity with a bioessentialist view of the mind:

[A] denial of the simple independence of sociocultural and biological processes in pre-Homo sapiens man does not imply a rejection of psychic unity, because phyletic differentiation within the hominid line effectively ceased with the terminal Pleistocene spread of Homo sapiens over nearly the whole world and the extinction of whatever other Homo species may have been in existence at that time. [Geertz, 1973b:69]

The fact that this phyletic differentiation has equipped humans with an ecological brain seems not to trouble Geertz’s thinking about psychic unity. For Geertz, the denial of psychic unity would appear to imply an evolutionary hierarchy of mentalities. “The doctrine of psychic unity of mankind,” he proclaims, “which, so far as I am aware, is today not seriously questioned by any reputable anthropologist, is but the direct contradictory of the primitive mentality argument; it asserts that there are no essential differences in the fundamental nature of thought processes among the various living races of men” (Geertz, 1973b:69).

It is not clear what Geertz means here by “the fundamental nature of thought processes.” Yet one can hardly imagine a more fundamental sort of variability in mind than the kind of brain-culture interactionism that Geertz outlined in the very same article.

Like Boas before him, Geertz struggled with anthropology’s fundamental contradiction. With characteristic eloquence and erudition, he tries to write his way out of it. Yet the result is an obscure vision of culture in its relation to mind. Like Levi-Strauss, Geertz wavers uncomfortably between two incompatible models of mind. The one, essentially organic and fixed, justifies psychic unity; the other, emergent and contingent, justifies cultural diversity.

Geertz’s insistence on the external and public nature of cultural texts was in part motivated by a kind of deep antipathy to what he called “psychologizing.” For those, like Ward Goodenough, who took a cognitive view of culture as a system of knowl-

derg, Geertz reserves his most strident scorn. In an eloquent if completely misguided series of passages in his famous essay “Thick Description: Toward an Interpretive Theory of Culture,” Geertz compares the cognitive theory of culture to a confusion between a musical performance and the score. Culture, in Geertz’s view, must be limited to the “text” and not to the “reading.” No reason for this limitation is ever adduced by Geertz, other than a dismissive reference to culture-in-mind as one of “the privacy theories of meaning” (Geertz, 1973c:12). Yet if Geertz’s own conception of mind is right, and thought is public to its very core, then there is no way in which culture-in-mind could be construed as “a privacy theory of meaning.” For ideological reasons, Geertz has not followed out the implications of his own argument. The echo of Durkheim’s distinction between social and individual facts resounds in Geertz’s categorical split between culture and mind.

Having culturalized the mind, Geertz resisted a cognitively nuanced apprehension of culture. This resistance to a sociocognitive conception of culture as knowledge may well be due to the dominance, at the time of Geertz’s writing, of what has variously been called ethnosceince or componential analysis. Ethnoscience viewed the mind as a kind of sorting device for generating taxonomic order in various delimited domains like kinship, disease, color terms, and the like. The cognitivist’s quest for methodological rigor was successful in demonstrating a limited range of variability in cultural classifications. Most important, ethnoscience gradually helped clarify the nature of basic-level categorization, a development that revolutionized our understanding of thinking (see Chapter 13). Unfortunately, ethnoscience also tended to squeeze the life out of culture by limiting cultural knowledge to abstract classification schemata divorced from human action.

The arid formalism of ethnoscience was a far cry from the thick description of enacted texts that Geertz saw as the goal of cultural analysis. Geertz called for a kind of literary, “experience-near” rendering of culture, evoking the textures and tonalities of everyday life. Having identified cognition with a purely taxonomic view of the mind, it is little wonder that Geertz was so anxious to draw the line between culture and mind. Yet he himself had laid out a vision of mind in which there was scope for a wide variety of cultural models of a nontaxonomic sort: in kinesthetic image schemes, iconic models localized in house structures, “ludic” (play/performance) models like cockfights, calendrical systems, scripts, and systems of personal names.

Geertz’s work had opened a window onto a world of tropes not reducible to taxonomies—tropes that were as much a matter of mind as they were of social order. But the complex relations between culture’s two lives, as social text and as mental model, could never be worked out so long as culture and mind were presumed to have no articulate joint life. Culture had been brought to mind. What remained was to bring mind back to culture, viewed as a knowledge system.

CULTURAL PSYCHOLOGY: SHWEDER’S “ROMANTIC REBELLION”

In recent years a new sort of cognitive anthropology, a kind of cognitive romanticism, has begun to crystallize. Its roots may be traced to a number of intellectual wellsprings: to Lévy-Bruhl’s notion of a plurality of human mentalities; to the old
The Problem of Culture in Mind

configurationist school of culture and personality studies associated with Margaret Mead, Gregory Bateson, and Ruth Benedict; to the linguistic relativity of Sapir and Whorf; to Saussure's conception of the arbitrariness of linguistic signs; to Schneider's and Geertz's interpretive anthropology; to Victor Turner's brilliant eclecticism in symbolic studies; to Obeyesekere's powerful account of the complex relations between conventional and personal symbols; and to contemporary developments in "schema theory" from cognitive psychology and metaphor theory from linguistics and philosophy.

Cognitive romanticism is a cognitively nuanced version of the sort of cultural relativism that Geertz and Schneider had long been advocating as an alternative to psychological. One of its leading proponents is Richard Shweder. Shweder shares with Schneider and Geertz common institutional roots in Harvard's Department of Social Relations. But his explicitly psychological and hypothesis-testing orientation to the study of mind landed him at Chicago's Committee on Human Development rather than its Department of Anthropology.

From his home in human development, Shweder straddles the worlds of psychology and anthropology and has embarked on an ambitious project of synthesis. In a seminal essay on the fate of the concept of mind in anthropology, Shweder contrasts the Enlightenment view of psychic unity and its uniformitarian vision of human nature with what he terms "anthropology's romantic rebellion" (Shweder, 1984). This recurrent tension between anthropology's two faces pits the general study of "culture" against the more particularistic interpretation of "cultures."

In an afterword to this essay, Shweder attempts a formidable taxonomy of anthropological theories of the mind. Enlightenment approaches are distinguished into rational and irrational, while the romantic vision of mind is set aside as simply "non-rational." The other axis of his typology distinguishes the sort of "universalism" associated with structuralism or transformational grammar from a "developmentalist" stress that links evolutionists like Tylor and Horton with developmental psychologists like Piaget or Heinz Werner. Relativism differs from universalism and developmentalism in its emphasis on simple and noncomparable diversity. Yet it shares with developmentalism an interest in human variation.

Shweder's main purpose in this essay is to clarify the underlying premises of anthropology's perennial and seemingly irresolvable debate on the nature of culture and mind. However, in a 1990 essay introducing a paradigm-defining volume of essays by psychologists and anthropologists, Shweder takes a strong stand in favor of the romantic view of mind. His aim is to distinguish what he terms "cultural psychology" as an interpretive discipline from other ways of studying culture and mind:

Cultural psychology offers an alternative discipline of interpretation of the fundamentals of mind. The mind, according to cultural psychology, is content-driven, domain specific, and constructively stimulus bound; and it cannot be extricated from the historically variable and cross-culturally diverse intentional worlds in which it plays a constitutive part. [Shweder, 1989:13]

Cultural psychology cannot embrace general psychology's search for what Shweder calls a "central processing unit." Instead, its object is the "intentional worlds" within which human action takes place, a view which defines mind as an emergent and contingent relationship between brain and social context. The search for inherent properties is replaced by "descriptions of local response patterns contingent on context, resources, instructional sets, authority relations, framing devices and modes of construal" (p. 13). In other words, Shweder is outlining the possibility of a cognitively oriented ethnography of mind.

Shweder's "cultural psychology" comes close to a constructive transcendence of the dilemma that has haunted anthropology since its inception: the problem of how to reconcile a pluralistic conception of culture with a uniformitarian conception of mind. In the face of the powerful but unwarranted grip that the psychic unity dogma has had on modern anthropology, Shweder has been an exuberant advocate for the study of psychic diversity.

Nonetheless, Shweder's promising view of a truly cultural psychology does pose a few conceptual problems. Shweder's critique has the virtue of drawing a number of bold distinctions between competing approaches to the cross-cultural study of mind and clarifying their implications. In two important contexts, however, he misrepresents or overstates his case for culture in mind. The first problem has to do with his emphasis on the "arbitrariness" of cultural systems viewed from the romantic perspective. The second problem is his assumption that cultural psychology is somehow irreconcilable with a view of mind as a central processor.

In his defense of cognitive romanticism, Shweder characterizes the romantic view of mind in terms of nonrationality and arbitrariness (Shweder, 1984:47ff).

A good deal follows from the idea of the "arbitrary" or "non-rational." To be a romantic is to be anti-normative. It is to be suspicious of the concept of "progress." That's not to say the romantic is an anarchist—clearly there are rules to any game, and any "frame" has its own internal standards. . . . The romantic's anti-normative point is that there are no standards worthy of universal respect dictating what to think or how to act. [Shweder, 1984:47]

The whole thrust of romantic thinking is to defend the coexistence of fundamentally different "frames" of understanding. The concept of nonrationality, the idea of the "arbitrary" frees some portion of man's mind from the universal dictates of logic and science, permitting diversity while leaving man free to choose among irreconcilable presuppositions, schemes of classification, and ideas of worth. [p. 48]

Shweder subscribes to a very common false dichotomy in anthropology. If cultural practices or beliefs are not fully determined or universally shared, the fallacy goes, then they must be arbitrary and thus infinitely variable. But in assuming that arbitrariness is the only alternative to a reductive and deterministic understanding of cultural practices, Shweder has overlooked a third possibility, a view of cultural institutions that stresses their conventional character as human creations without confusing the conventional with the purely arbitrary. In this alternative view, cultural phenomena are better characterized as conventional arrangements that may or may not be arbitrary. A familiar example will make this distinction between the conventional and the arbitrary clear: the cough or sneeze. In their most common forms, neither is generally considered a cultural convention but rather a physiological reflex. But a particular style of "handling" coughing or sneezing, or of holding back a sneeze in certain contexts, or of using a specifically stylized cough-analogue as a polite
social warning—all are examples of “conventional” institutions based on and thereby constrained by biological processes but not reducible to them.

Conventions are human creations. Their forms and social distribution show a certain degree of free play and indeterminacy. This is one of the reasons human cultures are so diverse and ultimately not reducible to their encompassing material constraints. To call cultural facts matters of convention is to recognize their inherent indeterminacy. But it also recognizes the possibility that their range of variability may not be absolute, arbitrary, or unmotivated. Many cultural practices are constrained but not determined by other factors (Shore, 1988b). They vary within the limits of their constraints (like Changeux’s “genetic envelope”), but within those limits their status is indeterminate.  

The confusion of the arbitrary with the conventional in human affairs is admittedly a subtle mistake. But it is an error that has had serious implications for any theory of culture. For to characterize cultural life as arbitrary is tantamount to arguing that there is no significant relationship between cultural practices and anything else. The analysis of a collection of practices that were genuinely arbitrary would be, quite literally, cultural non-sense. This is denied not only by the logic of the case but also by the very practice of anthropology. For devoting one’s life to the study of endless arbitrary beliefs and practices could be neither edifying nor very engaging for an outsider.

Such a cultural solipsism invites a justified incredulity from many corners, not the least of which is from the people whose lives are thus characterized. The assertion of unmotivated arbitrariness in human affairs where what is meant is actually the indeterminacy of conventional arrangements invites all sorts of misguided attacks on the nihilism implicit in “cultural relativism.” I shall return throughout this book to the unfortunate implications of the confusion between arbitrariness and conventionality, for it has a profound bearing on a fundamental problem of culture—the problem of intentionality and meaning construction.

The second problem I have with Shwed’s view is his presumption that a commitment to the cognitive relativity of cultural psychology necessitates the rejection of the “central processor” view of mind. The view Shwed is attacking is a kind of high-tech version of the Enlightenment faith in universal rationality. It is the common view from experts in artificial intelligence that the essential human mind is a kind of computational machine.

Now I am unsure whether this is an appropriate metaphor for some aspects of the mind, though I think it is likely that computation of some sort is involved in many aspects of nervous system functioning (see Chapters 13 and 14). Yet in fact Shwed’s conception of culture and mind is fully compatible with modern connectionist models of mind (see Chapter 14). And while these models are quite different from those that Shwed seems to have in mind, they do suggest some viable conception of central processing. As we have seen in Geertz’s early attempt to define central nervous system processes in relation to culture, there is no inherent incompatibility between a central processor and an emergent conception of a culture-dependent mind. A more defensible position might be that taking culture seriously as a dimension of mind implies that a central processor can never be a sufficient definition of mind.

To exploit the computer metaphor, the reduction of mind to a central processor would be like reducing the functioning of a digital computer to its hardware, ignoring the emergent properties of both the general operating system and particular programs. While it would be fair to say that the character of any application is constrained by the characteristics of its operating system and that the operating system is constrained (but not determined) by hardware design, in both cases no sufficient account of the operation of a computer could be given based solely on an understanding of its hardware. But any adequate account of the functioning of a machine would have to take into account the constraints imposed by hardware architecture.

CONCLUSION: MOVING BEYOND THE MUDDLE

The repeated insistence that cultural variability in no way compromised the anthropological doctrine of human psychic unity grew out of the discomfort of anthropologists with the evolutionism implicit in cognitive accounts of cultural difference. It is easy to understand the well-intentioned motives of this resistance to any perceived reference to mental evolution and its usual racist entailments. Yet the unfortunate result of this desire to bury our past has been to drive a wedge between culture and mind, explaining each according to its own properties and principles and avoiding serious discussions of their connections.

In consequence, anthropology has inherited a conception of culture that is alienated from some of the deepest sources of human motivation. This alienation is the legacy of a conception of culture as exclusively arbitrary symbolic forms, where meaning is understood solely in terms of the internal relations of signs. It is hardly surprising that, having inherited these assumptions about culture and mind, anthropologists have come to think of culture in two radically opposed visions. One vision equates culture with external power, largely external to the realities and motivations of the self. The other sees culture as purely private experience, disconnected from shared realities. Culture becomes either the exclusive property of public, political life or it is thoroughly privatized as personal experience. What is lost is an appreciation of the life of cultural forms at the juncture of the public and private. This requires a cognitive view of culture and a cultural view of mind.

Meanwhile, cognitive psychologists and neurobiologists have begun to make some headway in understanding the nature of mental representations. The cognitive revolution has gathered steam from work in artificial intelligence as well as from linguistics, experimental psychology, and neurobiology. But the notable successes of the artificial intelligence approach to mind have exacted a cost on our understanding of mental representations. By stressing computational models of thought based on information sorting processes, meaning construction and cultural cognition have been seriously marginalized from the cognitive revolution.

The argument of this chapter has been that the marginal role played by anthropology in the cognitive revolution results in great part from a long-standing set of misconceptions about psychic unity. The muddle in the psychic unity argument emerges from the very structure of the debate. To propose that the mind is essentially uniform or that it is essentially variable phrases the relationship between culture and mind in terms of a false and irresolvable dichotomy. The question cannot be phrased as psychic unity versus diversity. If mind exists at the intersection of brain and extrin-
sic models, we need to model brain-culture interactions so that they reveal at one and the same time the general cognitive processes of information processing and meaning construction as well as the culturally diverse manifestations of those processes in action. Neither dimension is more basic or more important than the other.

Put in this way, addressing the psychic unity question seriously becomes a matter of characterizing the role of cultural models in the functioning of the human nervous system. This is a tall order. Cognitive scientists have only just begun to understand brain functioning. And we anthropologists have only recently begun to pay close attention to the cognitive properties of cultural models. Before considering the relations between culture and mind, it is important to begin to develop a robust conception of models, one that will illuminate the links between anthropological and psychological versions of what models are and how they work. But the literature in both psychology and anthropology is notoriously imprecise on the matter of models. In the following chapter 1 argue for the usefulness of the “models” approach to cognition. But approaching the problem of culture in mind through the concept of models requires a far more refined theory of cultural models than we have had up until now. Chapter 2 attempts to refine our understanding of models by clarifying a number of important distinctions—distinctions that should permit us to both differentiate and relate cognitive and cultural models.

Notes

1. In Boas’s most famous work on the psychic unity question, The Mind of Primitive Man, his Kantian view of reason is clear:
   Since the foundation of human thought lies in the rise into consciousness of the categories in which our experience is classified, the principal difference between the mental processes of primitives and ourselves lies in the fact that we have succeeded by reasoning to develop from the crude, automatically developed categories a better system of the whole field of knowledge, a step which primitives have not made. [Boas, 1911-1938:198]
   Boas’s emerging interest in the relativity of the mental categories on the basis of which even simple discriminations are made is evident in his 1888 essay “On Alternating Sounds,” in which he anticipates the discovery of the phoneme as the psychologically relevant basic unit of language (Stocking, 1974:72-77; Stocking, 1960:157ff., see also Boas 1911/1938, chap. 11)

2. The book jacket in the 1963 Free Press edition of The Mind of Primitive Man cites the following quote from the text:
   [T]here is no fundamental difference in the ways of thinking of primitive and civilized man. A close connection between race and personality has never been established. The concept of racial type as commonly used even in the scientific literature is misleading as a logical as well as a biological redefinition.
   3. For a recent discussion of this classic Bororo parakeet metaphor see Turner, 1991.
   4. This attempt to separate social facts as autonomous sources of motivation was most elaborately worked out in The Rules of the Sociological Method.
   5. Shweder calls Lévy-Bruhl anthropology’s “romantic founding figure” (Shweder, 1984:30).
   6. For an excellent discussion of the long history of misreadings of Lévy-Bruhl in anthropology, see Littleton, 1983.
Rethinking Culture as Models

I know noble accents
And lucid, inescapable rhythms;
But I know, too, that the blackbird is involved
In what I know.

—Wallace Stevens

You go to my head
And you linger like a haunting refrain.

—Gillespie and Coots

Over twenty years ago, just before undertaking my first fieldwork, I was hired by the Peace Corps Office in Western Samoa to work with their cross-cultural training of a new group of volunteers. My job was to speak to the newly arrived volunteers about Samoan culture. During the initial phase of training in the town of Apia, I lectured to these newcomers about Samoan history, food customs, the complex system of political titles, kinship obligations, and matters of local etiquette. I found myself frequently referring to Samoan "culture" in my accounts, and when one of the volunteers asked me what anthropologists meant by "culture," I was surprised to find myself at a loss for a simple answer. I struggled to articulate for the trainees some kind of all-purpose unit of culture that would clarify just what we were getting at. I do not remember what I said, but it presumably was neither very definitive nor especially convincing. Here, in a country that prided itself on being the last holdout of traditional Polynesian culture, culture seemed to be everywhere. But for that very reason it seemed to elude simple definition.

Several days later, my confidence in the culture concept was further shaken when the local Peace Corps director, a young and aggressive lawyer without much patience for anthropology, challenged me to locate Samoan "culture" for him. "I don't know what you anthropologists think you have to research so hard," he quipped. "It's just people figuring out how to deal with each other," he said. "I can't see any basic difference between what we have to do back home in the States when we walk into a store and want to buy something, and when we walk into a village shop here in Samoa to pick up a box of mosquito coils. Only here they speak Samoan instead of English." He suggested that we anthropologists made too much of the idea of culture. Most human behavior, he insisted, could be explained in terms of an intuitive practical logic—commonsense strategies of people simply trying to get on with one another.

He was wrong, of course. And although he took obvious delight in goading an inexperienced scholar, I think he knew he was wrong. Yet he had a point. Aside from the obvious exotic Samoan artifacts, like fine mats or kava bowls that museums use to represent Samoan culture, it was not easy for me to point my finger at something in everyday village life and say "there's culture." But this was not because of the absence of culture, rather the opposite. Culture seemed to be everywhere and in everything. It was not easily pried free from the flow of life, so that one could isolate a moment of experience and say that there, at last, was a unit of culture for inspection.

Within a month, the trainees were taken to a Samoan village to continue their language training in a more traditional setting than the town of Apia provided. Language lessons consisted of "dialogues" of typical interactions within a village that the students memorized and used with each other. One such dialogue was an "invitation-to-eat-and-polite-response" script that had the trainees pretending to walk through a village while people called out to them from their open houses to come in and join them for a meal. Trainees learned two versions of this invitation dialogue. One ("Please come in for a meal") suggested that there was indeed food ready and that they could accept the invitation. The other was phrased negatively ("Won't you come in for some food"). It called for a polite refusal.

One day, after the trainees had gone through their language drills, we sent them out for a walk through the village for some real-world experience with the language. Within twenty minutes, some of the trainees returned from their walk. I remember the look of bemused surprise from one trainee as she approached me. "I can't believe it!" she said. "These villagers must have read our language text. They knew the dialogue word for word. It was amazing!"

Here at last, I thought, was a concrete instance of culture at work, one that I could draw attention to and say, "There you have it. Samoan culture in a nutshell!" Years later, of course, after having read through Shank and Abelson's treatise on restaurant scripts, I came to realize that the writers of the Samoan language text had simply recorded a canonical form of a cultural script for the trainees to learn. This one was quite useful for beginners, since Samoan etiquette frequently takes the form of highly codified and predictable exchanges with only minor individual variations. They were more rigid in form than many of our own cultural scripts, so they made a strong impression on those volunteers that maybe there was something to this notion of culture after all. And, as with many cultural forms, most Samoans did not think of their invitations as any kind of performance of a "script." They were simply asking, out of their genuine compassion for visitors and their love of entertaining, an appropriate question. From the outsider's perspective, these scripts appeared to be kinds of objects—predictable social artifacts, like a dialogue from a textbook. But to the people who used them, the scripts felt more like spontaneous speech, part of a taken-for-granted world of normal human intentions and feelings.
APPRAISING CULTURE THROUGH MODELS

Obviously, this invitation script was not anything close to Samoan culture in a nutshell. Whatever cultures are, they do not fit inside nutsheells. But while it is relatively easy to say what culture is not, it is much more difficult to describe what culture is. Anthropologists have conceptualized culture and its constituent units in many ways: as a patchwork of traits, integrated configurations, constellations of symbols and meanings, symbolic templates, a web of meanings, taxonomic trees, measurable units of behavior, a collection of material artifacts, systems of knowledge, sets of values and beliefs, sets of characteristic strategies for accomplishing a desired goal, and, more recently, a field on which a cacophonous cluster of diverse voices or "discourses" plays itself out. But the relatively simple notion of script I came upon in those early years in Samoa points to a particularly powerful way of thinking about culture: as an extensive and heterogeneous collection of "models," models that exist both as public artifacts "in the world" and as cognitive constructs "in the mind" of members of a community.

This book adopts the view that a culture is best conceived as a very large and heterogeneous collection of models or what psychologists sometimes call schemas. Conceiving culture as a stock of models has much to recommend it for anthropology. To the extent that they are public artifacts, cultural models are out in the world, to be observed by outsiders as well as experienced by locals. In this sense, cultural models are empirical analogues of culture understood as knowledge. As we shall see, they are not analogues in any simple sense, since public models are not exactly the same thing as mental models. But approaching culture as a collection of models has the advantage of showing that making sense of culture as an aspect of mind requires that we both distinguish and relate these two notions of model.

As external and public forms, cultural models point to a great variety of human institutions that are the projections of conventional understandings of reality set in time and space, for all to experience as artifacts of a community's life. Houses, pottery, tools, paintings, songs, dances, types of clothing—all are examples of such public models. Because they are projected into material form, we often call them examples of "material culture." But cultural models can take less palpable forms, such as conventional styles of movement, speech, or social interaction. And they differ from one another in their degree of formalization. Some cultural models are highly formalized and given explicit labels, as part of a stock of self-conscious cultural forms. Samoans do this with kava ceremonies, fine mats, and certain styles of dancing, while Americans might point to the Thanksgiving dinner or to the Super Bowl as characteristic models in their own culture. As we shall see, other cultural models are less conscious and more tacitly known.

The other important advantage of conceiving of culture as a stock of conventional models is that the very notion of model provides a bridge between the empiricist concept of culture as "objects" and the cognitive concept of culture as forms of knowledge (or, more pretentiously, as mental representations). Anthropologists have borrowed this notion of model from both philosophy and psychology. Plato, and in a quite different way Kant, developed the notion of general forms (Kant called them "schemas") which were believed to underlie or guide human understanding of partic-

ular experiences. Early in this century, F. C. Bartlett suggested that cognitive schemas structure memory processes. The best known of the schema theorists is probably the Swiss psychologist Jean Piaget, who employed schema theory as the basis for a developmental view of human intelligence. Even in anthropology, the idea that knowledge comes to us prepackaged rather than piecemeal is an old one, dating back to the Ruth Benedict's notion of culture as variable patterns or configurations.

In recent years, a new cognitive version of this old view of culture as templates or patterns has emerged. Just as Benedict borrowed her vision of cultural organization from the gestalt psychology of her day, modern cognitive anthropologists have adapted the notion of "model" or "schema" from cognitive psychology as a way of representing the structured nature of cultural knowledge. Through the notion of cultural models, the culture concept has taken on new life as an aspect of mind. Each of the case studies in this book approaches the relationship between culture and experience through this idea of cultural models.

WHAT IS A CULTURAL MODEL?

The idea of cultural models is a useful alternative to dissolving the concept of culture altogether into vague notions of power or discourse. Yet the idea of a cultural model is also imprecise, serving as a catchall phrase for many different kinds of cultural knowledge. So long as the notion of cultural models remains undertheorized and vague in this way, its potential to provide a long overdue bridge between anthropology and cognitive science will be seriously hampered. The aim of this chapter is to develop a useful set of distinctions—to clarify what cultural models are and how they work. While several important general accounts of cultural models have appeared, no attempt has yet been made to characterize in a thoroughgoing fashion the functional and structural diversity of cultural models.

In an important survey of the field, Roy D'Andrade defines a cultural model as "a cognitive schema that is intersubjectively shared by a cultural group" (D'Andrade, 1990:809). This handy and concise definition is still somewhat too vague for our purposes. For example, it does not distinguish between "special-purpose models" of relatively limited application and "foundational schemas" that structure a large number of apparently diverse models. Thus, in Samoa, the invitation script is a special-purpose model. By contrast, the center-periphery model, described in Chapter 11, is really a foundational schema of far more global application that structures a whole cluster of special-purpose models.

Another limitation of D'Andrade's definition is that it suggests an unproblematic "intersubjective sharing" of cultural models within cultural communities. But the claim that models are shared is one that deserves careful consideration. How shared must a cultural model be in order to qualify as a true cultural model rather than a personal construct? What are the relationships between cultural models and personal or idiographic knowledge? These are some of the issues I take up in this book.

Perhaps most important, D'Andrade's general definition of cultural model does not distinguish between models as publicly available forms (what I call "instituted models") and models understood as mental constructs. Culture on the ground and
The Problem of Culture in Mind

culture in the mind must be carefully distinguished before they can be usefully related. Clearly, the notion of cultural models needs a lot of work. Even at the expense of rendering the idea of cultural model less intuitive and more complex, I want to propose a set of distinctions aimed at making the models approach culture servicable as a foundation for bridging cultural anthropology and cognitive science.

The human brain has often been characterized as an information processor, but its equally crucial role as a model generator is as important, though often overlooked. Human beings are opportunistic and creative model builders and model readers of great virtuosity. So it should come as no surprise that no one has tried to document the full range of possible or even existing cultural models. There is presumably no end to the variety of cultural models human communities could come up with. Furthermore, the attempt to classify cultural models into distinct genres is hampered by the fact that special-purpose models are often nested into more general and abstract schemas. It is sometimes difficult to know when we have two distinct models as opposed to different instances of the same genre. Thus, the general “restaurant script” in the United States is linked to the more specific “fast-food restaurant script.” Are these two different models or two versions of the same model? Clear categorization of even this one genre of script-model is therefore very difficult.

MENTAL MODELS: PERSONAL AND CONVENTIONAL

The human ability to create mental models as ways of dealing with reality has two distinct dimensions: personal and cultural. Important as culture is for humans, our experiences are never exhaustively accounted for by a cultural analysis. Even in terms of the mental models we use to explain, predict, or justify our experiences, culture is not the only resource we have for making sense of things. While one might argue that any individual’s life-world is inevitably orchestrated by culture, this assertion is somewhat misleading. Not all experience is culturally modeled to the same degree. And cultures differ in the extent to which certain classes of experience are modeled for individuals.

At the personal level, each of us is adept at constructing idiosyncratic models of experience on the fly, as a basic meaning-making strategy. Common examples of such idiosyncratic model making are the mnemonic strategies we use for remembering things such as personal names or lists of vocabulary terms in a foreign language by creating very idiosyncratic associations for the new words. I have also created several mental maps of my neighborhood and my city, each of which bears only a very schematic relation to its actual layout. Each map employs landmarks of special interest to me, such as the houses of neighbors I know or the highway exits relevant for my habitual journeys. My children, who do not drive, clearly have their own mental maps of this same terrain that are quite different from mine. And their maps will have to change once they start driving. My wife’s mental maps tend to be specific tracks defined by concrete landmarks. Mine tend to be more schematic, bird’s-eye representations of space, though for some purposes I switch to point-to-point maps. These various maps are all mental models that have been personally constructed or “schematized” by myself and my family as a normal part of our negoti-

tion of our physical and social world. For the most part, these personal mental models are idiosyncratic in that they are not shared in their details by others in my community.

In addition to these personal mental models, I have a set of concepts that I have internalized from conventional models, models that are part of the stock of shared cognitive resources of my own community. I hear “The Star Spangled Banner” being sung at a baseball game and I know I am to stand up and take off my hat. If I am watching the game on television, however, I neither stand nor remove my hat (if I am wearing one) unless the screen happens to be in the ballpark. In driving down the street, I tend to keep to the right and pass on the left unless I am driving in Britain. At home, I know I must stand if a visitor enters, while in Samoa I know that the visitor must quickly sit upon entering someone’s house.

These special-purpose programs are not of my own making but are conventional models I have internalized as part of my own stock of ready-made responses. They are conventional mental models. Their creation is more complex than that of personal models, since they have been externalized as shared institutions as well as internalized by individuals. Conventional gestural models, such as an American handshake or a Japanese bow, emerged gradually as social institutions. Their origins are part of the largely unrecorded history of cultural conventions. Cultural models are born, transformed through use, and eventually die out. Their continued existence is contingent, negotiated through endless social exchanges. Such shared models are a community’s conventional resources for meaning making. To gain motivational force in a community, these models must be reinscribed each generation in the minds of its members. In this way conventional models become a personal cognitive resource for individuals.

Both personal and conventional cognitive models are kinds of “mental models,” what cognitive scientists like to call mental representations. In many ways, the cognitive processes that underlie the creation and use of such conventional models are basically the same processes that are involved in the formation of any “mental models.” Mental models, such as my mental maps for driving to work or picking up the kids from school, are creative and adaptive simplifications of reality. Thus they do not contain many colors or sounds. And they delete the vast amount of visual detail that is actually available along these routes, retaining only abstracted, schematic information relevant to my purposes. Details are reduced in complexity and at times eliminated altogether, while salient features of an environment are selected and sometimes exaggerated or otherwise transformed by a process of formalization and simplification—a process I call “schematization.” In this sense, every mental model is part memory, part invention. But there is an important difference between personal models and cultural models. Cultural models are constructed as mental representations in the same way as any mental models with the important exception that the internalization of cultural models is based on more socially constrained experiences than is the case for idiosyncratic models. Cultural practices that constrain attention and guide what is perceived as salient are not left open to much personal choice but are closely guided by social norms.

Take the case of rites of passage, which mark important status transitions for individuals. To the extent that the experiences of puberty or marriage are purely personal experiences, individuals will come to understand them through more or less
personal memories. But when these life changes are marked by highly conventional ritual forms, as they are in so many societies, people's personal models of their life changes will tend to share a great many features, with overlapping salience structures. Such “shared” cultural models will not produce total cognitive homogeneity among individuals within a community but rather a tendency for personal models to overlap far more than they would if left to purely individual experience. This is the conventionalization of memory through ritual that Paul Connerton has emphasized (Connerton, 1989). Chapters 9 and 10 will explore this conventionalization of personal experience in the lives of young Murngin boys from Arnhem Land in Northern Australia, a case where the initiation rites appear to have a powerful effect in shaping how these young boys will understand and experience the general process of knowledge acquisition itself.

So conventional models are schematized by people, just as personal models are. But the processes by which they are schematized are socially constrained and reinforced by both positive and negative social feedback. Try not standing to acknowledge “The Star Spangled Banner” next time you attend a baseball game, or try crossing a busy intersection in a German city when the facing traffic light is red. You will quickly understand the power of negative social feedback.

Because it may approximate conventional models to many different degrees, the status of any “mental model” is inherently ambiguous. In some cases, an individual's mental models may be derived directly from a public (i.e., instituted) model, in which case it is a highly conventional mental model. But in other instances the mental model may diverge sharply or even be completely independent of any conventional representation, in which case it is a highly personal model. And there are all sorts of intermediate cases. One would expect, for instance, that the mental models that Catholic nuns of the same order would have of their relation to Christ would be far more conventionalized than would the models of this relationship for a Christian who attended no particular church and whose relation to Christ was markedly less mediated by conventional ritual. This is not to say that the nuns' models would all be identical but rather that their deeply personal and perhaps idiosyncratic motivations for their faith would rest on a similar experiential framework of great evocative power.5

Psychologists have documented the individual variability of mental models. Gentner and her associates have for years studied a kind of “naive physics,” the conceptual models of the physical world that individuals construct as explanatory frameworks for how things work (Gentner, 1983). The thrust of this research is to understand the difference between expert knowledge and nonexpert knowledge in technical domains.6

Other research documents how individual experience transforms more general conventional cognitive models into highly personal forms. In a delightfully playful account of his experiences eating out around the world, Roger Schank has described how people construct idiosyncratic versions of restaurant scripts based upon salient personal experiences.7 In this case a conventional model (a restaurant script) plus personal experience produce personal models. The utility of this slippery distinction is that it allows us to characterize the processes that govern the variability of mental models along a continuum, from the idiosyncratic to the conventional.

Not infrequently, individuals have conflicting personal and conventional models for a given domain of experience. In Thailand, for instance, it is expected that young men will be initiated early into sexual relations by visiting prostitutes, often with friends. The conventional model of such relations is that casual extramarital sex is a male prerogative and a natural and pleasurable part of life. In the case of a young man trying desperately to mask or deny his homosexual urges or afraid of contracting AIDS, however, there would be considerable discrepancy between the conventional attitudes he might struggle to adopt and his personal model of the encounter. Such discrepancies can produce considerable anxiety for individuals.

These situations, in which a conventional model conflicts with a personal model are not to be confused with cases in which an individual subscribes to conflicting cultural models. Chapter 12 examines a series of Samoan case studies of conflicting cultural models. Sometimes it is difficult to decide whether a widely shared alternative to a dominant cultural model represents another (counterhegemonic) cultural model or a convergence of personal models. For example, Unni Wikan’s account of one Balinese woman’s struggle to maintain a “bright face” in the midst of personal turmoil is described by Wikan as both personal experience (in opposition to a cultural model) and as an alternative (but less obvious) cultural model of personhood for the Balinese (Wikan, 1991; see also Abu-Lughod, 1986).

Since cultural models can have significant psychic costs for individuals, it is reasonable to suppose that dominant cultural models are often accompanied by widely shared but not highly cognized or publicly symbolized alternative models. It is hard to say whether such alternative models qualify as cultural or personal models. As Obeysakere has shown in his ethnographic portraits of Sri Lankan ecstatic worshipers, such countermodels may, under special circumstances, actually become the basis of the creation of novel cultural models (Obeysakere, 1981).

So far, I have stressed the importance of a distinction between personal mental models and those that are culturally mediated. The mainstream of research in cognitive psychology has studied personal mental models, while anthropologists have tended to assume that most mental models were cultural models. The assumptions of each discipline are quite different. Cognitive psychologists treat mental models largely as subjective representations constructed by individuals in a relatively direct relationship with a physical environment. By contrast, cultural anthropologists assume that cultural models are intersubjective representations, constructed by individuals in relation to a social environment. The distinction is subtle but important. Cognitive psychologists interested in mental models often base their research on the following general model:

\[ \text{Individual} \rightarrow (\text{mental model}) \rightarrow \text{physical environment} \]

in which the construction of mental models mediates an individual’s encounter with a particular physical world.

By contrast, research on cultural models uses a somewhat different general model:

\[ \text{Individual} \rightarrow [(\text{Cultural model}) \rightarrow \text{social environment}] \rightarrow \text{physical environment} \]

The introduction of a social environment changes the way in which anthropologists conceive of mental models. The social environment includes a stock of shared social
models that constrain and motivate the construction of cognitive models. By contrast, mental models research is based on a kind of methodological individualism. The individual's cognitive orientation and adaptation become the paramount question, to which mental models are the answer. By introducing a social environment into the equation, the anthropologist transforms the problem of models into one involving intersubjective communication and not just adaptation. There is some truth to each of these representations, since, as I have argued, some but not all mental models are culturally mediated.

Research focusing on conventional models presumes that individuals adapt to the world in large part through shared resources. Many of these resources come "preconstructed" for individuals in the form of what I call instituted models. For the anthropologist, the cognitive issues become questions of (1) how external, publicly available instituted models are reconstructed as cognitive models (the two-births issue; see Shore, 1990b, and Chapter 14) and (2) the relations between relatively conventional and relatively personal mental models for any individual (Obeyesekere, 1981, 1990; D'Andrade and Strauss, 1992).

INSTITUTED MODELS

Twenty years ago, Clifford Geertz reopened Durkheim's case against psychologism in culture theory. In an influential essay, "Thick Description: Towards an Interpretive Theory of Culture" (Geertz 1973c), Geertz attacked what he termed "a theoretical muddle in contemporary anthropology." The general criticism was aimed at what Geertz called "privacy theories of meaning" (p. 12) in cognitive anthropology. More specifically, Geertz objected to the view that "culture is composed of psychological structures by means of which individuals or groups of individuals guide their behavior" (p. 11). His specific target was Ward Goodenough's cognitive characterization of culture as "whatever it is one has to know or believe in order to operate in a manner acceptable to its members" (cited in Geertz, 1973c:11). Culture, Geertz argued, was properly located in the byways of public life rather than in anyone's mind. Culture was, in his words, "an acted document."

Geertz's argument against psychologism in culture theory invoked a now famous example of how to understand a musical score. His example was a Beethoven quartet:

[N]o one would, I think, identify it with its score, with the skills and knowledge needed to play it, with the understanding of it possessed by its performers or auditors, nor . . . with a particular performance of it or with some mysterious entity transcending material existence. . . . But that a Beethoven quartet is a temporarily developed tonal structure, a coherent sequence of modeled sound—in a word, music—and not anybody's knowledge or belief about anything, including how to play it, is a proposition to which most people are, upon reflection, likely to assent. [pp. 11-12]

Yet to claim to know a Beethoven quartet as disembodied form is, like Yeats's famous conundrum, to vainly attempt to "know the dancer from the dance." There is a sense in which the quartet is, as Geertz claims, not reducible to any of its local manifestations either in performance or in the minds of its performers. Yet, ironically, unknown and unperformed, a piece of music has no real existence either. For

Geertz to acknowledge that the quartet is "a temporally developed tonal structure" and a "sequence of modeled sound" is to invoke an absent agent, the necessary agent of the embodiment of the music as an event rather than as pure potentiality. As lived experience, a musical composition, like any social institution, takes its life through its performances and as forms of knowledge by its devotees. Moreover, a composition may be understood as a "document" (to use Geertz's own metaphor) only in a tradition that includes written conventions of notation. In a purely oral tradition, Geertz's document metaphor would not appear so apt and musical compositions would be more easily understood to have their only life in their enactments as knowledge and performance. Thus, by means of a misleading analogy, Geertz made the case for understanding culture and meaning as public artifacts rather than as forms of personal knowledge.

Geertz's influential formulation has since come under considerable criticism in anthropology. Yet for all the limitations in his constriction of the culture concept, Geertz's reaffirmation of the classic Durkheimian distinction between individual and social facts was a brilliantly effective rhetorical stroke. For like Durkheim, Geertz was not wrong in his insistence on viewing culture as a public rather than a private phenomenon. But he was surely guilty of what Donald Donham (personal communication) has aptly termed "strategic overstatement," a rather effective vice not unknown elsewhere in cultural anthropology. Geertz's argument proceeds from a false dichotomy between culture-in-the-world and culture-in-the-mind.

The upshot of Geertz's overstatement was to shift the attention of a generation of talented scholars to the character of cultural symbolism. In much the same way as Boas had earlier argued for the relative autonomy of culture from biology, Geertz claimed for cultural symbols a terrain all their own. Yet what both Geertz and Goodenough failed to emphasize was that the locus of culture was inherently ambiguous and could not be adequately characterized in exclusively psychological or social terms. By their very nature, cultural models have two quite different lives: as social artifacts and as cognitive representations. The enforced distinction between these two dimensions of cultural models allowed each to thrive in its own domain (anthropology and psychology), each relatively innocent of an understanding of the other. Serious attention to the crucial question of the relationship between culture's two lives awaited a more ecumenical intellectual environment.

What Geertz called "templates" I call instituted models. Instituted models are social institutions—conventional, patterned public forms such as greetings, calendars, cockfights, discourse genres, houses, public spaces, chants, conventional body postures, and even deliberately orchestrated aromas. In what sense can we consider such conventional shared arrangements to be "models"? After all, models imply not simply that something exists but that something exists for someone. Instituted models always lead a double life, as part of an external social world and as products of intentional behavior. They are models in two different senses. First, instituted models are human inventions, the product of the continual social production of publicly available forms. Instituted models are the externalization in the social world of particular models of experience. Second, to the extent to which these instituted models govern concept formation of newly socialized individuals, they are also models from which individuals construct more or less conventional mental models.

While the distinction between instituted models and conventional mental models is of great theoretical importance, it is not always easy to separate the two. The sorts
of models privileged by Geertz’s analysis (i.e., cockfights, calendars, time reckoning, personal names) all have the advantage that they are relatively easy to observe empirically, independent of their existence as cognitive representations. Geertz’s conception of culture as acted public documents rests on a careful selection of examples, those that intuitively seem firmly rooted as public artifacts of social life. For other models, the distinction between social and cognitive representations is more problematic. The difference lies in how “institutionalized” the models are.

Models become “institutionalized” when they are objectified as publicly available forms (Berger and Luckmann, 1966). The most obvious examples of highly institutionalized cultural models are performance genres like rituals, carnival, dance genres, or games. The status of such cultural performances as expressive cultural artifacts is underscored by performance frame markers—the physical stage, the raising and lowering of curtains, costumes, the dimming of the houselights, and so on—and highly formalized behavior, setting them off from the flow of normal life. Highly objectified verbal conventions like proverbs and myths are also easily detachable from the contexts of their ongoing creation and production in the flow of discourse. Wherever such forms are detachable in this way and become objectified for people as relatively stable cultural institutions “in the world,” it is relatively easy to distinguish them from their instantiations as conventional mental models “in the mind.”

Other kinds of cultural models, like scripts or taxonomies, are also modeled in social discourse. Like those just discussed, they are social models, public artifacts of culture. But often these more implicit models are embedded in the flow of discourse and are not marked as performance frames in the same way as rituals or games. Whereas people are usually aware of highly institutionalized models in their culture, they are rarely cognizant of the existence of implicit cultural models.

Terms like “ritual,” “performance,” or “script” have a literal quality when applied to institutionalized performance frames like religious ritual or theatrical drama. But they take on a more figurative sense when applied by scholars like Victor Turner, Erving Goffman, or Schank and Abelson to more implicit models like restaurant scripts, conflict-resolution strategies, or patterns of elevator behavior.

The reason for stressing the distinction between conventional mental models and instituted models is that there is not a simple one-to-one correspondence between a social model and its cognitive analogue. It is conceivable, for example, that under certain conditions, members of a community will fail to fully internalize a cultural model because their personal experiences are incompatible with the conventional model. For these people the cultural models have become “dead models.” These individuals may well have alternative mental models, models that may be highly idiosyncratic or socially manifested as marginal cultural representations or as cultural innovations.

The second kind of disparity between instituted and conventional mental models derives from the cognitive processes by which social models are given their second life as mental representations. I call these processes “meaning construction.” Meaning construction is quite different from what Strauss (1992) calls “the fax view” of internalization, where cultural models are seen as copied directly as mental analogues in the mind. The contingencies of meaning construction are complex and suggest that public cultural models undergo a variety of transformations as they are brought to mind. Meaning construction is discussed at length in Chapters 13 and 14.

**FOUNDATIONAL SCHEMAS**

There is some confusion in the literature on mental and cultural models about what constitutes a model. The terms “model” and “schema” are often used interchangeably to refer to organizations at different levels of abstraction. Thus, for instance, Quinn argues that the metaphors people use for talking about marriage in the United States can only be understood in relation to the “American cultural model” of marriage (Quinn, 1991). She seems to imply here that (as opposed to Lakoff and Johnson, 1980) the metaphors refer to cultural models and that a cultural model for marriage exists at a higher degree of abstraction and generality than the metaphors that organize people’s talk about marriage. The analysis does make clear what such a general cultural model of marriage looks like and how it is different from a metaphor model.

For both mental and instituted models, we need to distinguish between abstract global models and more concrete and particular instantiations of those models. I call the more general and abstract forms foundational schemas, reserving the term “model” for the particular and more concrete instantiations of those schemas.10

Foundational schemas organize or link up a “family” of related models. Obviously, the difference between a model and a foundational schema is relative rather than intrinsic or absolute. The distinction between a foundational schema and a model becomes useful mainly when a set of specific cultural models shares a common general schema. The distinction is really a matter of context. Take, for example, the general hub-and-spoke spatial plan we see in airports, school buildings, and shopping malls. As a general spatial organization, the hub-and-spoke layout could be considered a foundational schema in relation to any of its specific architectural genres, which I would call models. On the other hand, the hub-and-spoke building plan might be treated as a model based on an even more general radial schema that informs a variety of related arrangements, such as route scheduling for airlines or trains or the relationship between home office and regional managers or between central administration and teaching staff.

Lakoff (1987a) and Johnson (1987) both use the term “schema” to refer to abstract cognitive forms in their discussion of the “image schemas” that inform many particular metaphors. Image schemas, like the “center-periphery schema” so common in Samoa (Shore, 1982; and Chapter 11) or the “container” or “journey” schemas central to the Murngin worldview (Chapters 9 and 10), are inherently abstract and perceptually uncommitted forms. Such abstract schemas are commonly (though not inevitably) derived from concrete bodily experience (Johnson, 1987; Lakoff, 1987a; Lakoff and Johnson, 1980).11 Yet as foundational schemas, what they lose in specific sensory reference they gain in their ability to organize a wide diversity of particular models. As such, they underwrite the possibility of meaning construction in a variety of contexts.

Not all cultural models have an encompassing foundational schema. Many cultural models are special-purpose models with no family resemblance to other models. On the other hand, those models linked through foundational schemas have a special status in any community, contributing to the sense that its members live in a world populated by culturally typical practices and a common worldview. The extent to which communities will differ from one another in the degree to which cultural mod-
els are linked by foundational schemas has never to my knowledge been systematically
understood by anthropologists. Yet certain societies appear to exploit a relatively
small number of foundational schemas to structure many of their specific cultural
models. Perhaps the best-documented example of a culture whose institutions are an
extreme elaboration of a few foundational schemas are the Australian aboriginal
groups, for whom the Dreamtime journey schema seems to have special significance
(see Chapters 9 and 10).

The importance of such foundational schemas will be evident in all of the case
studies we look at in this book. In Samoa, for instance, the center-periphery schema
is instantiated in numerous cultural models, ranging from dance styles to the organi-
ization of village space. The common foundational schema that appears to connect
these diverse cultural models motivates, for Samoans, a high degree of coherence in
what appears to be a complex social system. The same is true of the “inside-outside”
container schema central to Murungin cosmology (Chapters 9 and 10; also Morphy,
1991, especially chapter 5). Chapters 5 and 6 describe a very general “modularity
schema” that is a powerful organizing principle of many American institutions.

Typically, people are more likely to be aware of the organization of specific
cultural models than they are of the existence of the common underlying schema. To
the extent that individuals are aware of schematic knowledge at all, it is usually tacit
knowledge. For example, in the next chapter we find that baseball fans are often
quite conscious of the special character of baseball space. They are aware of the
particular charm of the traditional baseball park compared with the modern domes.
Baseball writers were eloquent about the significance of the return to traditional base-
ball space in the building of Baltimore’s Camden Yards. The same kind of awareness
by fans characterizes their appreciation of the special character of baseball’s orches-
tration of time (the celebration of baseball’s glorification of inning time over clock
time). But rarely are these same “experts” aware that these specific models of time
and of space have a common underlying (asymmetrical) schema.

A MATTER OF PERSPECTIVE: ACTORS’ MODELS AND
OBSERVERS’ MODELS

In the 1960s and 1970s three of the most influential approaches to the study of culture
were structuralism (dominated by Levi-Strauss), the Chicago school of symbolic
anthropology (dominated by Geertz, Turner, and Schneider), and ethnoscientific (whose
many champions included Frake, Goodenough, Sturdevant, Lounesbey, and Con-
klin). In its own way, each of these schools of thought claimed to be dealing with the
relationship between culture and mind. Yet in each the concrete subject of culture
was hard to find. These versions of culture theory tended to give us disembodied
systems, structures, or programs—knowledge without any particular knower in mind
and structures of thought that lacked any flesh-and-blood thinkers. Real people
were replaced by hypothetical entities—“the savage mind,” the “typical” or “average”
members of a community. People appeared more as the passive sites of cultural
programming than as purposeful agents, strategists, and meaning makers. Despite
these serious shortcomings, these midcentury approaches to culture did have a signifi-
cant virtue. The culture concept was given very powerful theoretical articulation

in the form of structures, taxonomic programs, and systems of symbols and mean-
ings. Yet the culture concept gained in clarity at the expense of its concrete agents.
We came to know more about cultural systems in general than we did about people
in particular.

Over the past two decades, anthropologists have sought to redress the omission
of the concrete subject in culture theory by reconstituting the field of culture as a
complex arena with many voices, often discordant. In this poststructuralist version,
the agents of culture are no longer hypothetical or average natives but look like real
indians with specific histories, particular interests, and concrete strategies. Rather
than as members of homogeneous cultures, we now are more likely to conceive of
our natives as enmeshed in complex power relations. As a remedial strategy, this
reconstitution of the living subject of culture has been an important corrective to the
excesses of earlier theories of culture. Yet it is hard to miss the irony. As the concrete
person has been given new life in anthropology, the very concept of culture that has
been at the heart of the discipline has receded from view and is but lost to us.
Anthropologists no longer have what might be termed a “cultural imagination.” We
now know much more about particular people within the cultures we study than we
do about the cultures themselves.

While many have greeted these developments as wholly salutary, I think that
our newfound insight into the contingencies and loose ends of culture as lived come
at a serious cost: a lamentable loss of focus on the notion of culture itself. When the
very notion of culture becomes equated with bloodless structures and disembodied
programs, anthropologists trained in the new poststructuralism flee from the concept
that once defined their field, finding their legs in the more hospitable fields of history
and identity politics.

I suspect that the very idea of cultural models has, in the minds of many anthrop-
ologists, become synonymous with these presumably outlawed structuralist
approaches to culture theory. Particularly in the area of the cultural construction of
emotion, some anthropologists have managed rather successfully to reconcile the idea
cultural models with an agent-centered poststructuralist vision of culture. In particu-
lar, Catherine Lutz and Lila Abu-Lughod have used cultural models in this way. But
they have done so largely by defining cultural models as matters of speech rather
than in the more cognitive idioms of mental models (Abu-Lughod, 1986; Lutz, 1988;
Lutz and Abu-Lughod, 1990). Reconstituted as discourse, cultural models have quite
literally “surfaced” in a retreat from any kind of rigorously cognitive characterization
of culture. More than anything else, it is probably this retreat from any sort of depth
psychology into the surfaces of cultural life that has driven a wedge between cultural
anthropology and cognitive science.

This rejection of cognitive models as an approach to culture is unfortunate and
misguided. I am very sympathetic with the anthropologist’s shift of attention to hu-
man agency and contingency in cultural life. Yet properly conceived, this focus
should lead us further into the issues of the relations among culture, mind, and mod-
els rather than signal a retreat from the cognitivist paradigm.

What has been missing in cognitive anthropology is careful attention to the dis-
tinction between actors’ and observers’ models. In fact, the difference between
actors’ and observers’ models is hardly acknowledged in anthropology and so has
not been well studied by anthropologists. It is well recognized, however, by psychol-
ologists interested in visual processing, spatial representation, and cognitive maps.
the analysis of Samoan spatial models in Chapter 11, this distinction in how cultural models are positioned suggests not only alternative ethnographic strategies for anthropologists but also the significance of alternatively positioned native models. The Samoan case suggests that subtle but significant differences between actors’ and observers’ models may exist for many domains of experience.

In general, actors’ models employ symbolic forms that are dynamic and graded, permitting the representation of an individual’s changing relationships to any phenomenon. They are dynamic ecological models that govern the negotiation of a changing landscape. By contrast, observers’ models are adapted for the representation and social coordination of abstract general perspectives. Thus observers’ models tend to be organized more in terms of categories, permitting mutual rather than just personal orientation. Structuralism, with its attention to culture as categories, was enameled of observers’ models and failed to acknowledge that the flow of attention and action was also subject to modeling of a quite different kind. A kind of objectivist knowledge was unfortunately put forward as a sufficient account of the whole of culture. In Chapter 11, I argue that the proper remedy for this error is not to abandon the idea of cultural models but rather to use what we know about various kinds of mental maps of spatial relations to rethink the issue of perspective in approaching culture through the concept of models.

MODEL GENRES

Cultural models fall into a large number of general genre forms. These genres have been the most important way that cognitive anthropologists have distinguished different cultural models from one another. Because a single genre of cultural model may serve several different functions, it is useful to treat the structural variations in models separately from the question of function. Probably the most basic structural distinction in any typology of cultural models is that between linguistic and nonlinguistic models. Linguistic models have been studied far more thoroughly by anthropologists than have nonlinguistic models (D’Andrade, 1990:795).

Linguistic Models

Linguistically coded models exhibit a great diversity and complexity in human life. To exhaust the description of linguistic models would be to rehearse virtually the whole of linguistics. Here I deal with linguistic models at a relatively high level of organization (as opposed to micromodels of phonological, morphological, and syntactic patterns in language). I consider the following genres of linguistic models:

- Scripts
- Propositional models
- Sound symbolic models
- Lexical models
- Grammatical models
- Verbal formulas
- Trope models

Scripts are standardized conversation templates for organizing interactions in well-defined, goal-oriented situations. A more elaborate discussion of script models is presented below in the section on functional dimensions of cultural models (task models). Scripts are really ritualized conversations and are pervasive in discourse. The basic unit of any script is a conversational unit which linguists sometimes call “a turn.” Turn-taking is often a highly scripted activity in conversations, and is modeled for children in a variety of conventional verbal games and routines (Garvey, 1977).

Propositional models are cultural models in the form of linguistic propositions. In logic, propositions are statements asserting or proposing a state of affairs. For Susanne Langer, propositional symbolic forms are characterized by discursiveness. They move around things rather than presenting them directly. Langer suggests that such discursive symbolisms as ordinary language or mathematics have a high degree of abstractness from which they derive their power to re-present experience rather than iconically modeling it (Langer, 1957). D’Andrade echoes Langer when he defines propositional schemas as “abstract, language-based representations” (D’Andrade, 1990:810).

The Ten Commandments are an important propositional model in the Judeo-Christian tradition. When the police read a criminal suspect his rights, the information is encoded in a propositional model. Western legal codes tend to be formalized as propositional models, though legal decisions based on “precedent” may actually use nonpropositional models as the basis for deciding cases.

Sound symbolic models are important features of all languages but have been relatively ignored by linguistics. Sound symbolic models convey important information through conventional phonological patterns. Phonesthetic are forms of burred onomatopoeia that unite whole classes of terms (e.g., glitter, glow, glisten, glimmer). Phonesthetic are discussed in more detail in Chapter 13. Phonological speech registers are pronunciation styles that index different contexts in a language. In Chapter 11, the cognitive implications of Samoan phonological speech registers are considered in detail.

Lexical models use sets of related terms to model forms of experience. Examples of different sorts of lexical models are taxonomies, lists of names or other linked items, dictionaries, and clearly defined subsets of vocabularies, such as honorifics or curse words. Thanks to the work of linguistic anthropologists and the tradition of ethnoscience, we know far more about taxonomies than we do about most other kinds of cultural models. For instance, Berlin et al., in a set of classic papers on folk taxonomies, have proposed that folk taxonomies are rarely if ever more than five levels deep. Moreover, there appear to be limits on how many classificatory terms will appear under any single node. The upward limit is fifty (Berlin et al., 1966, 1973; D’Andrade, 1990:797). While memory and other processing limitations appear to place universal constraints on taxonomies, the degree of elaboration of any domain and the salience of different taxonomic levels are culturally quite variable (Dougherty, 1978).

Grammatical models are highly abstract models of time, space, movement, and causality that are encoded by grammatical forms such as noun classes, verb aspect, tense structures, and agent markers. An early analysis of the cultural implications of such grammatical models was contained in classic papers by Edward Sapir and partic-

Verbal formulas encode traditional wisdom, specialized knowledge, or techniques in highly conventional forms of speech. Examples of verbal formulas are proverbs, sayings; traditional narratives, prayers, spells, and nursery rhymes. Clichés are highly conventional phrases that come ready-made for certain occasions; they are important (if annoying) linguistic resources that all speakers have, which serve to lubricate conversations by providing a degree of automatism in response patterns. In this sense, clichés are closely related to script models, though they are generally limited to phrases rather than comprising whole conversations.

Narrative is one of the more complex and important kinds of cultural model. It has a uniquely ambiguous status among verbal formulas. On the one hand, the term “narrative” refers to the activity of adjusting and creating reality through talking it out. In narrative, people continually make sense of their world “on the fly.” Through narrative, the flow of events is given an articulate form, made into a kind of model. Experience is literally talked into meaningfulness. In this sense of narrative, cultural models orchestrate the rules of conversation—such as turn-taking, topic control, and speech styles—but not necessarily the content of the narrative.

On the other hand, narrative also refers to the instituted result of this structuring process. Formalized narratives range from rumor and gossip through everyday recountings of ordinary events, to just-so stories, and ultimately to sacred myth narratives. Such formalized narratives are the negotiation end product of the narrative process. And, of course, the creative relationship between narrating as activity and narrative as product is mutual. Any formalized narrative is subject to renegotiation through further talk, as are the very norms of conversation.

The role of narrative in meaning construction becomes especially clear following anomalous or otherwise disturbing events. An earthquake strikes, a group of people witness a shooting, a baseball player makes an “impossible” catch to save a game, or an umpire makes an incomprehensible call to lose one. Any such unexpected event is, for normal people, relatively indigestible until it is processed by talk into a palatable form. Following such disturbing events, people generally become talkative. They tell and retell the story until the events are gradually domesticated into one or more coherent and shared narratives that circulate among the community of sufferers. The meanings are emergent in the narrative process.

Through narrative, the strange and the familiar achieve a working relationship. Narratives like this provide comfort in the familiarity of their sedimented forms, just as they provide excitement in the novelty and contingencies of their contents. Jerome Bruner sees narrative as among culture’s main resources for handling what he calls “an exception to the ordinary”:

All such stories seem to be designed to give the exceptional behavior meaning in a manner that implicates an intentional state in the protagonist (a, belief or desire) and some canonical element in the culture (national holiday, fund-raiser, fringe nationalism). The function of the story is to find an intentional state that mitigates or at least makes comprehensible a deviation from a canonical cultural pattern. [Bruner, 1990:49-50]

In this way, we can see the connection between the kinds of homespun narratives created on the fly to make sense of anomalous situations and the work of traditional narrative forms like fairy tales and children’s bedtime stories (Bettelheim, 1976). Both narrative genres provide a comforting framework within which to relate often discomforting events.

Tropes are important linguistic models that permit language to transcend literal reference. Tropes alter our understanding of things. Metaphor models are, with the exception of taxonomies, probably the best-studied cultural models. Recently, anthropologists have begun to pay more attention to the importance of metonym models, an important kind of trope that establishes a part-for-whole relation between two things. Smoke has a metonymic relation to fire, a flushed face has a metonymic relation to anger, a sickle (as in the Soviet flag) has a metonymic relation to the domain of horticulture and labor more generally. Because they define what Peirce called indexical relations, metonym models are particularly important in diagnostic procedures. Because speech is so thoroughly saturated with linguistic tropes, it is easy to overlook them in any account of cultural models. The complex relationship between metonymic and metaphor models is explored in detail in Chapters 7 and 8 in reference to the problem of totemic classification. Chapters 13 and 14 deal with the connection between these tropes and the cognitive processes involved with meaning construction.

Nonlinguistic Models

As the name suggests, nonlinguistic models are a heterogeneous collection of models that exploit a great diversity of sensory modes and representational forms. I divide nonlinguistic models into the following genres:

- Image schemas
- Action sets
- Olfactory models
- Sound image models
- Visual image models

Image schemas are highly abstract schemas that organize and relate a wide variety of different cultural models. Lakoff calls these “image schematic models” (Lakoff, 1987a:118) and defines them as “schematic images, such as trajectories or long, thin shapes, or containers” (pp. 113–114). George Lakoff and Mark Johnson (Lakoff and Johnson, 1980; Johnson, 1987; Lakoff, 1987a) have both argued that most of these schemas are derived from somatic experience (up-down schemas, center-periphery schemas, container schemas, movement schemas, and so on) and are commonly grounded in relation to bodily experience. While I generally agree with this understanding of the embodied character of image schematic knowledge, it is useful to distinguish these general spatial schemas from those that have a direct and explicit link with the body and its changing states, which I call kinesthetic schemas. Kinesthetic schemas model an individual’s relationship to the immediate environment through conventions affecting posture, interpersonal space, and muscle tone. Bowing, sitting, walking, and even sleeping are often highly stylized through kinesthetic
cultural models and convey important cultural information about status, mood, and relationship.

Emotion models have been generally studied as linguistic models (Lakoff, 1987a; Lutz, 1988; Lutz and Abu-Lughod, 1990); the dynamic feeling states associated with conventional emotions have not received the same kind of attention (though see Langer, 1967). These bodily states are also subject to cultural modeling and would fall under the general rubric of “kinesthetic schemas.” The most elaborated and self-conscious kinesthetic schemas are associated with dance.

Action sets are gestural models that have a structure much like a conversation. Simple, stylized body movements can become integrated into a coordinated interchange. Children sometimes spontaneously invent or improvise on conventional action sets in the form of games that require reciprocal actions and movements. When action sets become institutionalized, they become cultural models. Action-coordination play sets appear to be a very basic way in which individuals coordinate relationships. The most primitive action-coordination play set is undoubtedly the peek-a-boo game between infants and their caregivers. Hand-shaking, clapping games among children, mutual bowing, and embracing are other examples of culturally salient action sets that are usefully thought of as gestural conversation scripts. Other common cultural genres employing action sets are conventional greetings and threat displays. Highly complex action sets often in conjunction with other kinds of models are what we normally refer to as ritual performances.

Smells are sometimes orchestrated as olfactory models. Because of their special relation to long-term memory, olfactory models are often used to mark special occasions, individuals, or relationships. The use of incense or perfumes to create a powerful atmosphere for a special occasion is very common but has hardly been studied by anthropologists. Despite their importance as cultural models, we seem to lack an adequate vocabulary or set of concepts for analyzing smells. It is likely that smell has a distinct status as a model because of its relatively inarticulate nature and its special relation to memory (Sperber, 1975).

Sound image models, because of their interest to linguists and ethnomusicologists, have been better studied than olfactory models. Many rituals use sounds as an important component. Obviously, the most important sound image models are musical forms that figure prominently in many areas of life. (For ethnographies that stress the cultural significance of sounds image models, see Basso, 1985; Feld, 1982; and Schieffelin, 1976.)

Visual image models have been well documented by anthropologists and art historians. These include iconographic models—culturally salient paintings and decorative motifs (Morphy, 1991; Munn, 1966, 1973; Reichard, 1974)—and color symbolism (Reichard 1974; Turner 1967a). Though there is nothing especially new about the study of sound or visual image models, much less is known about the cognitive implications of the stress on one sensory modality over another. The Kaluli of New Guinea, for example, seem to privilege sound image models in meaning construction, living as they do in a tropical forest where much is accessible only through sound and not visually. Polynesians, by contrast, seem to stress visual models—bright colors and large forms (as in houses or bodies), reflecting the presence of spiritual power (mana); (see Koskinnen, 1968; Shore, 1989).

FUNCTIONAL DISTINCTION AMONG MODELS

While function is sometimes closely tied to form, a functional typology of cultural models actually looks quite different from an analysis of structural types. Because cultural models are symbolic representations of reality, it does not often occur to anyone to ask what different kinds of work models do. Representation sometimes seems to be a self-evident function that requires no further comment. Yet cultural models actually have a wide variety of functions. Up to this point, no attempt has been made in the cultural models literature to outline in detail the major functions of cultural models. This section deals with pragmatic aspects of cultural models, classifying them in functional terms.

These functional classifications are orthogonal to the structural classification of models, viewing many of the same models from a different vantage point. Thus a particular genre of cultural model might serve several different functions. Or several distinct genres might all serve a similar function. Because there is no simple one-to-one mapping of functions to structures for cultural models, it is important to make both kinds of distinction.

From a functional perspective, it is useful to divide models into three general classes:

- Orientational models
- Expressive/conceptual models
- Task models

Orientational Models

Orientational models provide members of a community with a common framework for orienting individuals to one another and to what Hallowell called their behavioral environment (Hallowell, 1955). There are several important kinds of orientational models:

- Spatial models
- Temporal models
- Social orientation models
- Diagnostic models

Spatial Models

Spatial models orient people to the physical environment. There are many kinds of models that function for spatial orientation. Important examples include the following:

- Area maps of all kinds of geographic entities
- Navigational models such as Micronesian star charts (Hutchins, 1991); verbal formats for giving traveling directions
- Route maps realized in propositional form, pictorial form, or (as is common among Australian aborigines) in song lyrics
- Models of interpersonal space, which code for aspects of power and intimacy
• Context markers, which frame spaces as distinctive behavioral contexts (sports fields, play frames, and performance frames are all examples of spatial context markers)

Temporal Models

Temporal models orchestrate culturally specific time frames. Important kinds of temporal model include the following:

Incremental models, which show the progress of time, sometimes as measured from a beginning point. All manner of watches, stopwatches, some calendars, and oral counting schemes model the forward movement of time. A special kind of incremental temporal model measures the passage of time either from a significant past event or in relation to a significant future event. These temporal schemes often model time in religious traditions by providing mythical orientational points toward which or away from which time is understood to flow.

Decremental models structure the counting-down of time. Many games are temporally organized by decremental models. The count-down NASA uses for its space launches is a familiar decremental model of time. As with incremental models, decremental models may use digital or analog coding (such as an hourglass or, in basketball, a shot-clock). Radioactive dating techniques in paleoanthropology employ decremental time models based on the half-lives of particular radioactive elements.

Cyclical models provide a punctuated view of time viewed as cycles. Javanese and Balinese gamelan music employs a complex cyclical framework of sound (McPhee 1966), which has its analogues in Balinese calendars, kin terms, and cycles of personal names (Geertz, 1973c). Like the walkabout schema of the Murungin, these complex cultural models all function to shape the perception of various spans of time as cycles.

Rhythmic models break up the flow of time into rhythmic segments for the purpose of framing musical or verbal expression. Metronomes, baton movements, clapping, body movements, and percussion instruments all aid in the conventional keeping of time.

Biographical models are conventional models for conceptualizing people's life cycles. Our biographical models tend to be incremental, focusing on aging or getting older. In some cultures, however, biographical models stress the cyclical nature of the human life cycle or the replacement of one personality by another.

Context-framing devices mark off special time frames in the same sense as spatial models frame places. Time is segmented into special spaces, such as sacred time, secular time, or game time.

Social Orientational Models

Social orientation models orient individuals and groups to one another and to a socially differentiated environment.

Models of social relations have been well studied by several generations of social anthropologists. Social relations are modeled in a great variety of ways. Best studied, no doubt, are the lexical models that map kin terminologies. Anthropologists have traditionally ordered these into taxonomies, most commonly semantic trees, using conventions for representing kin relations. Personal names and titles are other kinds of lexical models that organize social relations in complex ways.

Rethinking Culture as Models

Kin relations may also be modeled in numerous other ways. Metaphorical models for mapping kin relations are common. Evans-Pritchard made famous the complex metaphoric mappings between kin types and cattle types made by the Nuer (Evans-Pritchard, 1940). Australian aboriginal groups and some groups from Papua New Guinea model kin relations through analogical mappings of kin onto human body parts (Schieffelin, 1976; Shapiro, 1981).

Significant social relations are commonly modeled through verbal formulas such as chants, songs, proverbs, and narratives. Among many Australian aboriginal groups, iconic representations in the form of diagrams and track maps (now a popular form of tourist art) model mythically grounded kinship and marriage relations among groups (Morphy, 1991; Munn, 1973).

Social coordination is promoted through a number of different kinds of cultural models. Among the most important are rituals, highly scripted and formalized action sets that provide a shared behavioral framework for coordinating social relations. The coordinating function of ritual is particularly evident in greeting rituals and rites of solidarity, like cheers, huddles, and group dancing. Rituals involving songs and action sets are also common ways of coordinating group work activities.

Social role sets model the division of labor. In modern industrial organizations, work roles are modeled by taxonomic trees called organizational charts, which model functional and authority relations. The most famous non-Western cultural model of social roles is the Varna system of India and its elaboration into the various localized subcaste role-set models collectively known as the jajmani system. Here the division of labor is conceptualized through several kinds of cultural models, including metaphor models, narrative models, and elaborate ritual models.

Emotion models are an important kind of cultural model that has been extensively studied in recent years by anthropologists. I include them here as a form of orientational model to stress the orienting and communicative function of emotion models. As Levy has argued, emotions index fundamental qualities of relationships, and cultural models of emotion provide a degree of standardization in emotional response within a community (Levy, 1984).

Diagnostic Models

Diagnostic models provide conventional means of taking "readings" of important phenomena. In semiotic terms, they are conventional indexical models, readings of signs as indices of underlying states, causes, or conditions.

Medical diagnostic models include taxonomies and divination rites as well as metonymic and metaphorical models that read somatic symptoms in relation to classifications of disease types.

Checklists are models for taking inventory of complex procedures or collections of objects or people.

Divinatory models are strategies for uncovering hidden causes for a community's problems.

Meteorological models are models by which communities read the state of the natural world. They include all sorts of models for weather forecasting but also models for interpreting the relationships between natural events (seasons, floods, eclipses, volcanoes, storms, tides, etc.) and their social, moral and supernatural correlates.
Intention displays are cultural models by which members of a community read each others' intentions.

Expressive/Conceptual Models

Expressive and conceptual models crystallize for communities important but otherwise unspoken understandings and experiences. They are an important means by which shared personal experiences become objectified, conventionalized, and thereby transformed into cultural artifacts. I divide expressive/conceptual models into four subtypes:

- Classificatory models
- Ludic models
- Ritual and dramatic models
- Theories

Classificatory models were the bread and butter of ethnoscientific in the early 1960s and 1970s. Most of these models were predominantly lexical taxonomies of distinct domains like kinship, color, fauna, flora, disease, and foods. Early studies focused on classical models of classification (what anthropologists called componential analysis). Classification was assumed to be based on well-formed categories, defined in terms of the intersection of more primitive semantic components or attributes.

For Johnson-Laird, the classical approach to category formation is distinguished by its reliance on concepts such as “Boolean functions”—negation, conjunction, disjunction, and their combinations—of simple concepts” (Johnson-Laird, 1983:186). In the mid-1970s, the pathbreaking work of Eleanor Rosch and her associates shifted the focus away from the classical model of category formation to the role of “prototype effects” as manifested in exemplars, best cases, metonymy, typicity, and basic-level categories, Basic-level categories tend to be at a level of specificity intermediate between global inclusiveness and perceptual particularity. Basic-level objects are easily rendered as simple gestalts, making them easy to identify and use as perceptual templates. Children generally learn basic-level terms before they master more general or specific levels of categorization. Basic-level categorization employs part-to-whole associations (synechoche). They serve as exemplar models for the identification of related objects, both more general and more specific (Lakoff, 1987a:47).

Classificatory models may have a number of different functions, including diagnosis and orientation. Yet I have distinguished classification as a distinct function of cultural models. This is because, whatever else classificatory models may accomplish for people, the clarification of experience through classificatory models seems to be an irreducible end in itself.

Exemplars are culturally salient instances of objects, people, or events. Exemplars typify experiences for us in that they represent a best case or ideal version and become the model against which other similar experiences are matched. Exemplars account for many of the prototype effects in human categorization where not all examples are considered equally good instances of a category.

Exemplars come in many forms. Object exemplars are often the basis on which people classify objects. Person exemplars underlie the classification of significant others and are frequently modeled in stories, drama, pictorial forms, or through verbal tropes like metaphor or synecdoche (“He's a Don Juan!”). Person exemplars define heros, villains, and personality types on the basis of which people make sense of their social worlds. Event exemplars are a way in which people classify events in relation to typicality or predictability. Narrative exemplars are found in myth, story, and verse. They set out foundational scenarios and event structures that provide the basis for comparing and clarifying other events and situations. Exemplary narratives figure importantly in most religious traditions.

Ludic models include games, sports, and other playful genres like joke telling. While numerous functions have been suggested for ludic genres, they share with other kinds of cultural performances the power to crystallize, in a discrete performative frame, key cultural problematics. Chapters 3 and 4 deal with the importance of ludic models in modern life.

Ritual and dramatic models include all forms of dramatic performances. Like ludic models, ritual and drama are important ways that communities externalize and objectify otherwise inchoate or inarticulate experiences. Whatever purely personal functions such performances have, they have the social function of constituting experiences as public artifacts.

Theories are important cultural models that provide communities with a conceptual picture of a complex state of affairs. Scientific theories are a special kind of highly explicit theory model. Their creation and maintenance are constrained by the norms of the “scientific method.” Folk theories are the cultural equivalent of mental models of naive physics. Like scientific theories, folk theories are always empirically based in that they are motivated by complex human experiences. Unlike scientific theories, folk theories are often forms of tacit knowledge. They are also far more conservative than scientific theories and are more resistant (though not completely resistant) to empirical disconfirmation. Under the rubric “bricolage,” Levi-Strauss has studied some of the important symbolic strategies used in many cultures for maintaining these theories (Levi-Strauss, 1966).

One of the best-studied genres of folk theories is what has come to be called ethnopsychology—local theories of the person. Scholarly theories such as those put forward in treatises in the humanities and social sciences are like scientific theories in that they are self-conscious creations, subject to discussion and critical review. Unlike scientific theories, however, they are not usually subject to strict criteria of verification and falsification. Most theories are realized by propositional models, though theoretical knowledge is also commonly modeled nonpropositionally in diagrams, pictures, and action sets.

Task Models

These are culturally modeled strategies or programs for getting practical things done. Most of the pragmatic tasks humans do are aided by conventional models, models that facilitate (1) the memorability of complex procedures, (2) the predictability of results, and (3) the social coordination of complex tasks. I distinguish five basic genres of task models:

- Scripts
- Recipes
- Checklists
- Mnemonic models
- Persuasion models
Scripts are general performance models that include both verbal and nonverbal dimensions. They have a general form that can be adapted to a great variety of specific cases by slight modifications. The best-studied cultural script is the American restaurant script (Schank 1991; Schank and Abelson, 1977), though script models underlie a wide range of human interactions. The basic script for most ordinary (as opposed to highly formalized) scenarios is a kind of foundational schema that can be realized with many variations and has room for spontaneous individual variation as well.28 Sacred scripts, often associated with ritual models, tend to be far more constrained and (at least in theory) less open to this sort of variation.

Recipes are conventional task models for performing complex routines like dancing, making tools, preparing food, or harvesting crops. Many of these tasks can be performed through trial and error, without the aid of recipes. Whenever complex tasks are standardized and broken down into smaller segments embodied in a standardized form, we can speak of recipe models. While we normally associate recipes with language models (spoken or written), nonverbal kinesthetic or pictorial recipes are also possible, where techniques are modeled by picture or gesture. In dance, for instance, Laban Notation has been developed as a way of encoding discursively complex kinesthetic patterns, so that whole ballets may be presented in a highly analytic model as a kind of recipe.

Where techniques are modeled directly for imitation, we have mimetic models, which are quite different from the abstract discursive models we normally associate with the term "recipe." Mimetic models often involve the close interaction of teacher and learner, such that the learner is taught by a combination of repeated observation and "guided participation," where the teacher verbally and physically moves the student through the motions of the target activity (Lave, 1990; Rogoff, 1990). Here an abstract set of procedures is modeled for a learner as a set of guided practices rather than a set of analytic propositions.

Checklists are standardized inventories of functionally related objects or persons. Most written cooking recipes in the West begin with a checklist of ingredients. While the term "checklist" suggests a written model, inventories are commonly taken orally. To aid in memory, oral checklists like roll calls or pilots' preflight checklist routines tend to be rhythmically chanted or even sung, as in the U.S. Military.

Mnemonic models are used to promote the memorability of important and frequently used information. In oral traditions, prosodic devices like rhythm, rhyme, alliteration, and melody are commonly used as mnemonic aids. We all have a fairly rich stock of mnemonic models, most of them learned while we were quite young. Familiar examples are times tables, the calendrical rhyme "Thirty Days Hath September..." and the spelling aid that begins "i before e except after c." Recent studies of epic forms of poetry have suggested that these long narrative forms embodied many formal characteristics whose function was to aid memorability (Havelock, 1982).

Persuasion models are conventional ways in which people seek to influence the hearts and minds of others. Persuasion models include a wide variety of specific conventions like prayer, sacrifice, begging, debate, sorcery, love magic, rational argument, sympathetic or contagious magic, apology, commands, and promising. From these examples it is clear that many, but certainly not all, persuasion models are verbal models. Conventionalized kinesthetic models also serve as persuasion models, as when beggars adopt a conventionalized begging posture as part of their plea.

DIVERSE SENSORY MODALITIES

In concluding this typology of cultural models, I should note that models differ significantly in their primary sensory modality. Visual models are different in their formal and cognitive properties from verbal models, written models, or kinesthetic models. This implies that what may abstractly seem like a single model (say, a ritual) is actually two quite different models, depending on whether one is observing the ritual or participating in it. In the latter case the ritual schema is realized as a predominantly kinesthetic model and only secondarily as a visual experience. For observers, the ritual schema is realized as a model heavily (though not exclusively) dependent on visual imagery.

Until the advent of photography, performers had little opportunity to see themselves perform, so that a performer's experience of virtually any cultural performance was experienced largely kinesthetically and aurally. Attending to sensory modalities as a central dimension of models has added virtue of reintroducing the subject's own experience as a central aspect of the study of cultural models.

The relationship between the dominant sensory modality of cultural models and human experience has been well studied from the point of view of the cognitive implications of literate as opposed to oral transmission of knowledge. This topic has been the subject of much research in psychology, history, and anthropology29 and is taken up in some detail in Chapter 6.

Relatively little is known about the cognitive implications of other distinctions in sensory modality among cultural models. For instance, are models encoded in non-propositional forms more tacitly known than propositional models? What is the general role of kinesthetic models in socialization, and how are they related to linguistically coded models? What are the experiential implications of modeling social relations through metaphor rather than through taxonomic trees? To what extent do anthropological conventions of genealogical representation which stress taxonomies and abstract diagrams misrepresent the actual models that people use in representing their social world to themselves and one another? These fascinating questions open up a host of important research possibilities, but they are all dependent on the kind of detailed classification of cultural models that has been outlined in this chapter.

CONCLUSION: THE CULTURAL MODELING OF HUMAN EXPERIENCE

This chapter has introduced the concept of cultural models in considerable detail. In the face of the anthropologist's current interest in how cultural forms are used creatively and strategically by people, the models approach to culture has considerable explanatory power. But to exploit the power of this idea, it was necessary to clarify a number of important distinctions. First, I distinguished between two kinds of men-
Rethinking Culture as Models

will be explored in relation to the cognitive processes involved in the ongoing construction of meaning that characterizes human intelligence.

Before we turn to these important general issues, we need to take these models out of doors and explore their complex life as they figure in a variety of cultural settings. The ethnographic heart of the book, which occupies the next ten chapters, will explore a great many of the cultural models and schemas described in this chapter with the intent of illuminating the social life of the mind. It is to this outside-in vision of human cognition that we now turn.

Notes


2. The recognition that experiential domains may be subject to different degrees as well different kinds of cultural modeling makes it possible to understand the powerful effect on individuals of immersion in a new culture. Long cross-cultural experience can profoundly alter individuals’ consciousness and provide them with new insights. These transformations take place by giving people access to models and experiences that were not represented or were underestimated in their native cultures. Cultural models in their absence can account for what Levy has termed “hypo-cognized” and “hyper-cognized” experiences (Levy, 1973).

3. Strauss defines these mental models (she calls them “cognitive schemas”) as “learned, internalized patterns of thought-feeling that mediate both the interpretation of ongoing experience and the reconstruction of memories” (Strauss, 1992:3). She distinguishes cultural models as “culturally formed cognitive schemas” (1992:3).


5. The best anthropological account of the relationship between personal knowledge and conventional symbolism (albeit one not in the cultural models tradition) is Obeyesekere’s Sri Lankan work (Obeyesekere, 1981, 1990).


7. Schank, 1991. See also Schank and Abelson, 1977, for a more detailed discussion of restaurant scripts.

8. See Strauss, 1992, for an interesting critique of Geertz’s analogy.


10. Johnson-Laird defines a model in terms of its specificity. Failing to make the distinction between models and schema, he considers the characteristic of characterizing models simultaneously in terms of both specificity and generality: “Although a model must be specific, it does follow that it cannot be used to represent a general class of entities. The interpretation of a specific model depends upon a variety of interpretive processes, and they may treat the model as no less than a representation sample from a larger set” (Johnson-Laird, 1983:157–158).

11. Lakoff is actually somewhat inconsistent in his use of the terms “models” and “schemas.” Thus, while he uses the term “schema” for such abstract entities as “kinaesthetic image schemas,” he calls the encompassing set of general mental structures idealized cognitive models (ICMs) (1987a:68). This would seem to reverse the more common usage of schemas for the more abstract mental structures. In any case it is not consistent with the usage in this book.

12. The fact that foundational schemas are rarely the subject of consciousness awareness creates a particularly thorny methodological problem. There may be no foolproof way to distinguish such general schemas, inferred by an outside observer from a collection of potentially...
specific models having no cognitive reality for a native, from a schema that is actually a
toolkit of analogies, and mental representation for the members of a community. The fact that an outside observer may
have a general schema common to a set of models does not in itself mean that this schema
inferred by the observer may be the mental construct of the observer.

The general schema may be the mental construct of the observer.

Even the acknowledged by natives of analogies between cultural models does not
fully account for the psychological reality of foundational schemas. In a given family of related mod-
els, the psychological reality of analogical schemas is limited by the fact that any one foundational
schema may be equally well accounted for by the fact that it is a general model.

A pattern thus would be a function of a foundational
schema. This is, of course, the common objection to structural analysis.

A common foundational schema. This, it seems, appears to suggest that because a common general structure can be inferred by an
outside observer from a collection of "texts," it must have a psychological reality for those
outside observers from a collection of "texts."