

12-1-1991

# Cognitive Foundations of Natural History: Towards an Anthropology of Science / Book Review

Terence E. Hays  
Rhode Island College, thays@ric.edu

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## Recommended Citation

Hays, Terence E., "Cognitive Foundations of Natural History: Towards an Anthropology of Science / Book Review" (1991). *Faculty Publications*. Paper 87.  
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quently, Lindholm cannot set up a hierarchy of preferences, an avowed goal of the book. When he says that "social structures and their accompanying *values*, as Weber long ago pointed out, are central for the way in which charismatic ecstasy will be *experienced*, understood and evaluated" (p. 171, emphasis added), Lindholm implies that charisma is more than sensation and contradicts his idea of charisma as sociologically irrational (ch. 3), as prior to its meaning (p. 35), and like a sexual "sensation of merger with the collective" going beyond standard cultural forms (p. 102).

Despite such problems, *Charisma* is a stimulating intellectual performance forcing one to think. We need more books like it.

**Cognitive Foundations of Natural History: Towards an Anthropology of Science.** Scott Atran. New York: Cambridge University Press, 1990. 360 pp. \$49.50 (cloth).

TERENCE E. HAYS  
*Rhode Island College*

Since the 1960s, ethnobiology has gone beyond the documentation of plants and animals deemed "useful" in specific societies' economies, or those that are "good to think" in their cosmological systems, to a nomothetic investigation of folk conceptualizations of the natural world as organizations of cultural knowledge. "General principles" and "universals" in the classification and naming of living things have been proposed that now play a major role in our growing understanding of human cognition.

In the first part of his book, Atran offers a new synthesis of the evidence from anthropology and cognitive psychology, outlining a theoretical framework that clarifies and resolves some long-standing issues while dissolving others as non-issues. Atran's proposed modifications of Brent Berlin's well-known analytic schema for the representation of folk taxonomic models of living things not only strengthen that schema, but make it possible to reconcile its basic structure with the criticisms and alternatives proposed by others. Suitably reformulated, it would appear that there *are* general principles of ethnobiological classification and nomenclature employed by laypersons everywhere, and that a human disposition to classify plants and animals taxonomically on the basis of morphological and ecological criteria is both universal and identically realized (so far as *categories*, though not their content, are concerned).

Atran further argues that the resulting taxonomies are *logically different from* other, "special purpose" orderings of the natural world (such as those motivated by functional or cosmological concerns), which usually are not properly taxonomic at all. Thus, debates over the purported "utilitarian" or "symbolic" bases of folk classification are seen to have defied resolution because they are rooted in the conflation of cognitive systems and processes that are not unitary in the first place.

Perhaps Atran's most far-reaching argument is grounded in his critique of "prototype theory," propounded by cognitive psychologists as the basis for categorization of all natural objects. Again he demonstrates that different *types* of cognitive processes are involved when people conceptually order living things *versus*, say, furniture or artifacts. If diverse "bodies of knowledge" are attained, stored, and transmitted in fundamentally different ways—some (such as those concerning the classification of living things and colors) according to pan-human, probably innate, dispositions, but others in terms of culture-specific interests—then it may be that:

culture should not be viewed as an integrated whole, relying for its transmission on undifferentiated human cognitive abilities. Rather, it seems that human cognitive resources are involved in different ways in the many more or less autonomous psychological subsystems that go into the making of culture. [pp. 49–50]

One such "subsystem" is that underlying scientific biology itself. In a dazzling display of scholarship, Atran traces the beginnings of modern biosystematics to folk classifications of plants and animals, with Aristotle exhibiting the same constraints as do the "folk" in Mexico and New Guinea, that is, those of "common sense." Folk systems, as responses to local "economies of nature," inevitably proved to be "inadequate for comprehending the living world at large," and after the Renaissance, when encompassing all of earth's living things in a single classificatory and explanatory system became the agenda, "the ordinary bounds of sense were transcended" (p. 45). Thus, while universal dispositions toward apprehending the natural world were the starting point of biological science, they had to yield to different modes of conceptualization and representation—an altogether new order of things in every sense of the word. And so Atran argues the potential of "the anthropology of science," by placing "the central problem of scientific thinking squarely within the

larger puzzle of the nature of human thought" (p. 267).

**Cultural Theory.** *Michael Thompson, Richard Ellis, and Aaron Wildavsky.* Political Cultures (Aaron Wildavsky, series ed.). Boulder, CO: Westview Press, 1990. 312 pp. \$49.95 (cloth), \$16.95 (paper).

DIANE AUSTIN-BROOS  
*University of Sydney*

Using the grid-group framework devised by Mary Douglas, the authors of this book generate a fivefold typology of "ways of life" or cultures: hierarchic, individualistic, egalitarian, fatalistic, and hermitic. With this typology they propose to replace a simpler one that represents societies merely as hierarchical or individualistic. The authors propose that social life in Western societies, and in other societies both present and past, can be interpreted as a pluralistic struggle between some or all of these ways of life. In any society, they suggest, one particular way of life is likely to be dominant from time to time.

The authors use their typology to review various examples of social analysis, including Edward Banfield's *The Moral Basis of a Backward Society* (Free Press, 1958), and Almond and Verba's *The Civic Culture: Political Attitudes and Democracy in Five Nations* (Princeton University Press, 1963). They liken their concerns to those of Daniel Elazar and his studies of "American political subcultures." The authors observe: "Like Elazar, we hope to show that there are important cultural variations within a nation, and that knowing these variations will lead to more powerful explanations of behaviour" (p. 233).

From the viewpoint of anthropology these aspirations may appear a little prosaic. Moreover, the stipulation of just five ways of life seems unduly restrictive. Two of these, the individualistic and egalitarian ways of life, as they are typified by the authors, are grounded firmly in industrialized or industrializing societies. The fatalistic way of life, as it is typified, could very well assume only forms of society organized as states. The types take little account of the kin-based, stateless societies, where political process might accord with different principles, not necessarily hierarchical. In sum, although the typology is proposed as universally applicable, it has a distinct bias toward the industrialized West. Written from the viewpoint of political pluralism, the book also exhibits a quite specific ideological leaning.

*Cultural Theory* is interesting, nevertheless, for two related reasons. First, the authors propose a "constrained relativism," in which they acknowledge significant cultural variation both between and within societies. They propose that this variation can be typified and treated as systemic, rather than as merely random. Second, they seek to reintroduce to social analysis a functional theory of culture wherein beliefs and values are reproduced over time because they are functional to particular ways of life. Integral to this view is a distinction between "social relations" and "cultural bias" or "shared values and beliefs," in which neither has a causal priority in analysis. A substantial part of the book is concerned with the review and critique of past functional theory, particularly as it pertains, in the work of Radcliffe-Brown and Parsons for example, to whole societies rather than to smaller subgroups.

This approach to the study of culture denies that culture is merely or mainly imaginative (and historically arbitrary) cognitive construction. The approach also refuses to reduce the complex phenomenon of encultured society to a mere epistemological moment presumed to operate beyond conditioning social relations. The book thus presents a challenge to current, largely phenomenological, views of culture. It is marred, unfortunately, by pluralism's inability to deal with the constraining force of structured power in the constitution of culture.

**Culture Embodied.** *Michael Moerman and Masaichi Nomura,* eds. *Senri Ethnological Studies*, No. 27 (*Tadao Umesao*, general ed.). Osaka: National Museum of Ethnology, 1990. 284 pp. n.p. (paper).

KATHARINE YOUNG  
*Merion, Pennsylvania*

In the introduction to *Culture Embodied*, mind and body are conjoined. Despite this fiat, the features of the mind/body problem appear through the lineaments of the investigations that ensue. Roughly, the papers move from gestures through movements to parts of the body, and finally, to concepts or images; from the concrete to the abstract, and from microanalysis to something on the order of phenomenology. At the philosophical level, the work is fairly unsophisticated; at the microanalytical level, especially with respect to conversation analysis, it is prepossessing.

Michael Moerman's opening essay, "Studying Gestures in Social Context," trans-