

of our own, Jacques Derrida would call it, logocentric assumption, one that acknowledges the formative influence of our conception of writing as a derivative recording of the spoken, but, if I understand Tyler correctly, he does not advocate, as Derrida would, a new episteme of writing. He argues that writing forces the split between signifier and signified, creates a shadow of reality, shifts "the locus of reality" to "a world of form indirectly available to the knower," and displaces the subject from the world. In a tour de force that is brilliant in its comprehensiveness if not in its detail, Tyler diagrams the implications of this conception of writing on Western thought/discourse. What he advocates is the elimination of *the idea of representation* and (contra Derrida) a return to the saying, to the oral, perhaps even to common sense and realism, to a writing (if it is possible) that creates what speech creates and does not merely imitate speech.

Despite its play, its subversiveness, its hyper-reflexivity, Tyler's project is ultimately naïvely salubrious. (Perhaps such a stance demands naïveté.) Although he (like Stoller and, to a lesser extent, Herzfeld) questions the epistemological assumptions of the dis-

course that has created anthropology and its by-products "culture," "society," and the "primitive," his questioning fails (he would maintain inevitably) to take account of the effects of material constraints (however culturally defined), of power (however institutionally deployed), and of desire (however socialized) on his own "talking" and "saying." Ironically, he shares this failure with his more positivistic colleagues in cognitive science. Whether we see, on empirical grounds, a determining relationship between socioeconomic reality and the cultural (including our own theories and descriptions of culture) or understand this relationship rhetorically, we have to recognize the moral and political consequences of such a juxtaposition. We have, in other words, to ask what are the implications of anthropology's self-questioning, its focus on language, talk, text, and meaning, and its flirtations with such hegemonic discourses as cognitive science and such subversive (albeit fashionable) ones as literary deconstruction.

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## Commons Viewed Ethnographically

**The Question of the Commons.** The Culture and Ecology of Communal Resources. BONNIE J. McCAY and JAMES M. ACHESON, Eds. University of Arizona Press, Tucson, 1987. xvi, 439 pp., illus. \$35. Arizona Studies in Human Ecology.

The "tragedy of the commons" is Garrett Hardin's evocative phrasing of the following dilemma: For open-access, finite resources, each user will gain the full benefit of exploitation but will share (or externalize) its cost over the group of users. As population grows, individuals have incentives to expand their exploitation well beyond the optimal yield or capacity of the resource. The rational, maximizing choice of each eventually and inevitably will bring ruin to all. Here is the back of Adam Smith's "invisible hand." Whether parking spaces, marine fisheries, atmospheric pollution, or the Sahelian drought, the logic is the same.

Hardin proposed only two solutions to this tragedy: turn the commons into private property, so that the long-term costs of exploitation, or conversely the benefits of conservation, are realized only by the user (internalized), or regulate the commons through coercive, governmental authority. Only thus could "the remorseless working of things" (Whitehead) be averted.

This collection of 18 papers by anthropol-

ogists, political scientists, and economists evaluates the Hardin argument against the evidence of ethnographic case studies. Most of the papers focus on fisheries, but commons associated with foraging, grazing, and cultivation come under scrutiny. The consensus of these analyses is important: commons seldom are open-access resources but often are managed through adaptively flexible, localized, and historically specific forms of internal social regulation. By qualifying the premise of Hardin's argument, the studies also broaden the range of possible solutions to the vexing issue of commons management. Although the authors and editors stop short of devising a formal model of the commons more comprehensive than Hardin's, collectively they sketch its outlines.

In Hardin's view, population growth was the preeminent threat to common resources. In contrast, papers in the McCay and Acheson volume emphasize political and economic factors. Thus, McCay argues that open access to natural resources became encoded in North American law as part of the colonial revolt against the aristocratic monopoly of commons in the Old World. And Durrenberger and Pálsson describe how Icelandic fish populations came under stress when the fisheries shifted from local subsistence production to participation in

expanding markets and capitalist forms of enterprise.

A closed territory and delimited community of users appear to be key conditions for the successful social management of common resources. Two systems of territory co-exist in the Maine lobster industry: a nucleated form that does not prevent overlapping use by adjacent communities, and a perimeter-defense model that successfully prohibits incursion. Acheson shows that the latter has beneficial economic and biological consequences, deriving from enhanced opportunities for internal management. Ostrom's comparison of alpine commons in Europe and Japan substantiates the hypothesis that systems of land tenure can be closely adapted to local use. These successful systems have had long periods for trial-and-error development, and they allow fairly close monitoring by community members. A Kwakiutl community (Pinkerton) successfully united to oppose national policies that threatened their common salmon resource, despite divergent economic interests. In Iceland, group action was enhanced by dependence of the whole economy on common fishing grounds. Internal stratification need not prevent community action; constrained alternatives may promote it.

The social regulation examined in these studies is not simply a poor or archaic substitute for Hardin's solutions. Management by property rights is ineffective for spatially concentrated but mobile resources that move unpredictably over large areas, be they lobsters (Acheson), fish stocks (Townsend and Wilson), or ephemeral grazing opportunities (Peters). And management by external authority can founder on conflicting political objectives, limited understanding, and constrained ability to monitor and regulate local constituencies and ecological conditions, whether in Malaysia (Anderson) or British Columbia (Pinkerton).

Flexibility closely matched to highly localized ecological conditions emerges as an important feature of these socially managed commons. In Tigray Province, Ethiopia, communities have a history of deliberately switching back and forth between private and communal land tenure (Bauer). A community depopulated by drought or needing to consolidate its defenses against political threat will shift to communal tenure in order to attract immigrants. When population growth leads to resource scarcity within the community, private land holdings are reinstituted, despite the social friction involved in allocating shares. In another case, located in lowland Borneo (Vondal), dry land is a privately held agricultural resource whereas swampland is a commons. Owing to shallow relief and seasonal inundation, private and

communal boundaries shift dramatically; a private plot of dry land becomes part of the commons when it is submerged.

Attempts to analyze common resource management must distinguish between conservation and incidental effects that may mimic conservation. Hames and Stocks, both analyzing lowland Amazonian populations, use foraging theory to suggest that some behaviors that have the effect of conservation actually may be the result of individual choices, made to enhance efficiency.

Many of these studies emphasize that conservation of communal resources is more likely in a community with shared values and beliefs. Belief systems can work against conservation, however. Boreal forest hunters who believed in the spontaneous regeneration of each slain animal could see no advantage to selective or restrained harvesting (Brightman). Even belief systems that appear to be like our own may operate quite differently. Though fishermen in Papua New Guinea (Carrier) have a thorough ecological knowledge of marine fish species and a system of private tenure, close analysis shows that they do not share the key elements of the bioeconomic model of Western resource management.

Commons managed by local social groups do fail, politically and ecologically, although their record in this respect may not differentiate them from management solutions like those set forth by Hardin. Taylor describes an Irish community that failed to take up an opportunity to purchase and make a commons of salmon-fishing rights. Egalitarian in ideology and defined largely by its opposition to landlords, the community lacked the internal authority and shared values necessary for local regulation. In some cases the failure is helped along by views like those that underlie the Hardin model. In Botswana colonial authorities mistakenly assumed that common grazing rights were based on open access (Peters). By doing so, they unwittingly created an open-access commons (with the predictable ecological consequences) that then had to be "protected" by instituting private property rights.

Together, these studies focus on small groups and small-scale commons, typically those related to subsistence activities of tribal or peasant populations, or localized fisheries. All give some attention to the political and economic systems that encompass and sometimes dominate these groups, preeminently nation-states and capitalism, but one will not find here explicit discussions of macro-scale commons (such as the atmosphere), the population side of the commons dilemma, or the status of commons in socialist nations.

In their summary, McCay and Acheson

argue that commons are social institutions, the result of communal activity, conflict, and consensus. Attention to their adaptive features and local, historical context is requisite to understanding their origins, success, and failure. It is a salutary message, well and diversely substantiated, that should gain the attention of anyone concerned with human ecology, population and resource management, or development.

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## Behavior with Tools

**Lithic Studies among the Contemporary Highland Maya.** BRIAN HAYDEN, Ed. University of Arizona Press, Tucson, AZ, 1987. xii, 387 pp., illus. \$35.

**Stone Tool Use at Cerros.** The Ethnoarchaeological and Use-Wear Evidence. SUZANNE M. LEWENSTEIN. University of Texas Press, Austin, TX, 1987. x, 228 pp., illus. \$42.50.

The origins of prehistoric archeology can be traced to mid-19th-century Europe and an audacious claim that pre-Adamic flint implements had been found in antediluvian French gravels. The enthusiastic pursuit of stone artifacts engendered by this heresy was not to be equaled again for another century. The 1960s and 1970s saw a resurgence of

lithic studies that, as evident in these two books, continues in full force today. Many current studies, however, have fallen well short of their advance billing. David Hurst Thomas has aptly characterized such studies as exercises in rainbow chasing. To remedy what he sees as an alarming regression toward atheoretical empiricism, Thomas recommends that lithic specialists focus on establishing a "body of mid-range theory addressed specifically at material consequences of lithic procurement, production, utilization, and discard" ("Contemporary hunter-gatherer archaeology in America," in *American Archaeology Past and Future*, D. J. Meltzer *et al.*, Eds.; Smithsonian Institution Press, 1986, p. 247). This is not a casual recommendation; at issue are the canons of archeological inference.

The epistemological basis of sound inference is the central concern of the two books reviewed here. Hayden *et al.* and Lewenstein demonstrate how current observations of stone tools (or attributes of individual tools) and their patterned distribution in time and space can be translated into reasonable inferences of prehistoric behaviors. These are undoubtedly two of the three most important books on stone artifacts to appear in recent years, the other being Robin Torrence's *Production and Exchange of Stone Tools* (Cambridge University Press, 1986). The three books complement each other nicely and, considered together, provide a comprehensive picture of the state of the art in lithic studies.

Mid-range theory, with its focus on material correlates of behavior, must of necessity be founded upon observations of artifact use. Because ethnographers often fail to do this adequately, archeologists such as Hayden *et al.* have been doing what can be described as "ethnography of material culture for archeologists," generally erroneously called "ethnoarcheology." From their research in Highland Maya communities of Guatemala and Chiapas, Mexico, Hayden and his fellow contributors (Margaret Nelson, Michael Deal, and Gayel Horsfall) describe modern manufacture, use, and discard of manos and metates (stone milling stones), stone choppers and pics (used to manufacture the manos and metates), and glass tools. Implications of these data for current debates in lithic studies, archeology, and social science are addressed convincingly. Among the dozens of issues the authors consider are tool manufacture, use, and discard; quarries, workshops, activity areas, and refuse zones; tool storage and curation; the organization of work and learning behavior; design theory and the material, technological, functional, and social constraints on tool form; and craft specialization, resource monopoli-



"Removal of large flakes from the metate blank using two-handed pics. The flake just removed from the dark area on the side of the metate blank can be seen lying amid quarry debris just below the pic. Note the pic used under the metate blank to elevate the edge being worked." [From *Lithic Studies among the Contemporary Highland Maya*]