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MIRRORS AND WINDOWS: Sociocultural Studies of Human-Animal Relationships

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■ **Abstract** Humans' relationships with animals, increasingly the subject of controversy, have long been of interest to those whose primary aim has been the better understanding of humans' relationships with other humans. Since this topic was last reviewed here, human-animal relationships have undergone considerable reexamination, reflecting key trends in the history of social analysis, including concerns with connections between anthropology and colonialism and with the construction of race, class, and gender identities. There have been many attempts to integrate structuralist or symbolic approaches with those focused on environmental, political, and economic dimensions. Human-animal relationships are now much more likely to be considered in dynamic terms, and consequently, there has been much interdisciplinary exchange between anthropologists and historians. Some research directly engages moral and political concerns about animals, but it is likely that sociocultural research on human-animal relationships will continue to be as much, if not more, about humans.

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INTRODUCTION

The topic of humans' relationships with animals has a venerable history in anthropology. It is also an area of renewed interest, with a new sense of urgency. One

might expect that as anthropologists increasingly work in more urban locales and in communities where people are rarely involved in caring for livestock or hunting, animals might figure less prominently in their research. In recent years, however, anthropologists have paid much attention to humans' relationships with animals, a topic undergoing new scrutiny in many other disciplines as well, including biology (Birke & Hubbard 1995, Kellert & Wilson 1993), geography (Wolch & Emel 1998), and literature and cultural studies (Ham & Senior 1997). There have been a number of interdisciplinary conferences on the subject, including the 1995 forum at the New School for Social Research in New York (see Howe 1995) and a 1999 conference in Bath, England. Anthropologists have contributed to various interdisciplinary volumes pertaining to humans' relationships with animals, many of them based on such conferences (e.g. Arnold 1996, Dundes 1994, Hoage & Deiss 1996, Ingold 1988, Manning & Serpell 1994, Sheehan & Sosna 1991), and to a new journal, *Society and Animals*. Animals, of course, are a popular topic in the trade press as well, with anthropologists joining other scholars writing books on the subject geared toward, or at least marketed to, popular audiences eager for animal stories or for insight into human-animal relationships: A Shakespeare scholar has written about people and dogs (Garber 1996); an ethnographer known to anthropologists for research among the Koyukon has produced a book about Americans' relationships with deer (Nelson 1997); a cultural anthropologist has made the bestseller lists with an "ethnography" of a pack of dogs (Thomas 1993).

In a discussion of the heightened interest in humans' relationships with other species, Martin (1995) suggests that such interest is perhaps inspired by the considerable amount of boundary crossing going on in the contemporary world, not just between humans and animals but involving all sorts of other categories as well, including humans and machines, society and nature (Martin 1995:269). Indeed, boundaries are a matter of concern. However, it is not only the crossing of boundaries but also the way they are subject to continual redefinition and conflict that is of interest. Whereas it was once common to assume that some sort of conceptual boundary between human and animals, like that between culture and nature, was universal among humans, recent scholarship notes a greater degree of cultural and historical diversity in this regard. As categories, both animals and nature are now more likely to be described as culturally and historically specific, with some scholars arguing that in many non-Western societies, nature is not a category that ordinarily can be opposed to culture or society (Descola 1994, Descola & Pálsson 1996, Noske 1997, James 1990, Scott 1996, Willis 1990b:6–8). There are also discussions of societies with no notion of animality and without "animals" as a distinct category of beings (e.g. Rival 1996, Howell 1996). Even in non-Western societies that do share human-animal oppositions, these often seem not to involve a hierarchy of value; boundaries between human and animal are fluid, with animals thought of as persons (or capable of personhood), with humans thought capable of being reincarnated as animals and vice versa, with animal creator figures, and with tricksters thought to be able to manifest themselves in either human or animal form.

ANIMALS, ANIMALITY, AND THE COLONIAL ORIGINS OF ANTHROPOLOGY

Coetzee's novel *Waiting for the Barbarians* (1980) suggests an array of reasons, more than can be addressed here, for the continuing importance of animals to anthropology as a discipline coming to terms with origins in colonialism. The tale's narrator is a country magistrate, biding time before retirement at the edge of an unspecified empire. When imperial forces launch a campaign of terror against the native fisherfolk and tribal pastoralists, the magistrate is unsettled by what seem to him terribly unfortunate misunderstandings; his own policy for dealing with the native communities has been to protect them from "civilization," encouraging them to continue living in what he terms "a state of nature" (Coetzee 1980:19). Though disturbed by the imperial onslaught, the magistrate finds distraction in particularly colonial pleasures: hunting antelope, excavating the ruins of a "lost civilization," and cultivating an obsession with a barbarian victim of imperial torture, whom he makes his mistress. One day he purchases a silver fox cub from a trader and brings it home to the quarters he shares with the barbarian girl. The girl cannot understand his desire for the fox and will admit no understanding when he quips, "People will say I keep two wild animals in my room, a fox and a girl" (Coetzee 1980:34). After his sympathies with the barbarians cost the magistrate his position and nearly his life, he finds himself on the other side of the border of animality: He becomes "a filthy creature who for a week licked his food off the flagstones like a dog because he had lost the use of his hands"; he lives "like a starved beast at the back door, kept alive perhaps only as evidence of the animal that skulks within every barbarian-lover" (Coetzee 1980:124).

Coetzee's novel offers a condensed version of the colonial role of modernist anthropology and its relationship to distinctions involving animals. Distinctions between human and animal, Coetzee makes clear, are closely related to other distinctions, including male and female, civilized and primitive. Like the magistrate, anthropologists have been involved in observing and classifying peoples with very different uses for animals and with different ways of relating to them and the environment. Many anthropologists, at least in the past, have shared the magistrate's fascination with otherness as well as his assumptions that the colonized are closer to nature and animality (and that they should remain that way).

Ideas like those of Coetzee's narrator about animals and nature have been charted historically in an influential work by Keith Thomas (1983). Thomas locates the emergence of a "modern sensibility" about nature in England between 1500 and 1800. It was then, Thomas argues, that the idea of nature as something to be appreciated and conserved gradually began displacing the view preeminent in medieval times, that other life forms had been created expressly for the purpose of human exploitation. According to Gurevitch (1992), medieval Europeans tended not to separate nature from society, but by the sixteenth century, nature, including animals, had become a realm from which humans were often thought to stand apart, or more specifically, above. According to Ritvo (1987), whose study of English people's relationships with animals takes up where Thomas's ends, it was

only after Europeans no longer felt at the mercy of nature, when “science and engineering had begun to make much of nature more vulnerable to human control” that nature began to be viewed with affection and nostalgia (Ritvo 1987:3). Stories about animals, unless fitting within the growing field of natural history, came to be seen as children’s fare (Howe 1995:656). In early modern Europe, however, nature was still considered a force to be subdued, and clergy were especially inclined to emphasize that humans were both radically different from and superior to all other creatures. Although Thomas reports that alternative perceptions flourished as well, the dominant view, as the colonial era began, was that “man stood to animals as did heaven to earth, soul to body, culture to nature” (Thomas 1983:35).

With animality posited as something inferior to humankind, and as something to be conquered and exploited, early modern Europeans made concerted efforts to maintain distinct boundaries between themselves and animals: “Wherever we look in early modern England, we find anxiety, latent or explicit, about any form of behavior which threatened to transgress the fragile boundaries between man and the animal creation” (Thomas 1983:38). Bestiality was thus the most serious of crimes, often a capital offence (Thomas 1983:39). This concern with the human-animal boundary has also been used to explain medieval Europeans’ fear of werewolves, beings that metamorphosed back and forth between human and animal (Cohen 1994:65). There was also much preoccupation, in medieval and early modern Europe, with monsters and mythical beasts, including the half-animal, half-human cynocephali, centaurs, and manticores (Davidson 1991; Salisbury 1994, 1997; White 1991). Despite the church doctrine of human-animal separation, humans were often perceived as sharing behaviors and qualities with animals, encouraging the perception of a beast existing within humans, a beast that required taming and vigilance (Salisbury 1997, Ingold 1994b). Thomas’s most amusing example of anxiety about maintaining the human-animal boundary comes from colonial New England, where clergyman Cotton Mather wrote at length about how he might differentiate himself “from the brutes”—a concern intensified on an occasion when he was “emptying the cistern of nature” and found himself joined by dogs doing the same. His solution to the problem posed by such bodily similarity was to cultivate the most “holy, noble, divine” thoughts whenever he might be required “to answer the one or other necessity of nature” (Thomas 1983:37–38), thus at once separating mind from body, culture from nature, human from animal.

If humanity were closer to the divine, then people thought inferior to others—women, the insane, the Irish, American Indians, Africans, poor people of any race or gender—were apt to be associated with animality, if not monstrosity (Curtis 1997; Palencia-Roth 1996; Mullan & Marvin 1999; Pagden 1982; Ritvo 1987; Salisbury 1994, 1997; Schiebinger 1993; Thomas 1983). Many Europeans seem to have agreed with Robert Gray’s claim in 1609 that “ ‘the greater part of earth’ was ‘possessed and wrongfully usurped by wild beasts...or by brutish savages, which by reason of their godless ignorance, and blasphemous idolatry, are worse than those of beasts’ ” (Thomas 1983:42), and with the doctor who sailed

with Columbus to the New World and returned to attest that the region's inhabitants' "bestiality exceeds that of any beast" (Descola 1994:2). If the traditional teaching of the church was that animals were created to be exploited by humans, and colonized peoples were more like animals than humans, the enslavement and exploitation of the colonized was in keeping with their nature and with a divine plan (Pagden 1982, Palencia-Roth 1996). When colonized populations were perceived, even incorrectly, as lacking the use of "beasts of burden," that was all the more reason to consider them uncivilized and inferior, a rationale used by a Canadian judge in 1991 to justify the denial of Gitksan and Witsuwit'en land claims in British Columbia (Mills 1994:14–16).

The role of animals in colonial enterprises was extensive. Spanish conquistadors traveled with mastiffs and greyhounds, animals bred and trained for use in war and for tracking; in the New World, they were turned against native people for sport and used as instruments of terror (Schwartz 1997:162–63). Animals had seemingly more peaceful roles as well: European settlers brought with them to Australasia and the Americas such "self-replicators" as horses, cows, sheep, chickens, goats, pigs, and bees (along with unwelcome stowaways such as rats). Many of the introduced species quickly established feral populations. Sometimes such "seeding" was a part of the colonizers' preliminary preparations, intended to provide human followers with a ready-made food supply. In many cases, ecosystems were rapidly transformed and native species displaced or wiped out (Crosby 1986, Melville 1994). Wolf (1982), among others, has described how native peoples often had their own uses for new animals or found new uses for old ones, with horses allowing the Plains Indian groups who obtained them to expand at the expense of neighbors without them, and with many North American groups that had previously hunted primarily for subsistence becoming suppliers for the European market in furs and deerskins. In Africa, similarly supplied commodities included rhino horns, ivory, and hippopotamus skins (MacKenzie 1988). According to MacKenzie, ivory lured Europeans to the African interior, with ivory hunters doing much to prepare the way for further imperial expansion (1988:121).

If wild animal products helped to provide economic motivation for imperialism and if domestic animals facilitated the establishment of colonies, it has been argued that hunting and the collection and display of exotic species played an important ideological role. Examining the development of Regent's Park Zoo and other animal exhibitions, Ritvo writes that the "maintenance and study of captive wild animals offered an especially vivid rhetorical means of reenacting and extending the work of empire" (1987:205; see also Hoage & Deiss 1996, Mullan & Marvin 1999). Hunting and the display of trophies performed a similar function: As Ritvo puts it, "rows of horns and hides, mounted heads and stuffed bodies clearly alluded to the violent, heroic underside of imperialism" (1987:248). Hara-way (1989) depicts the collecting, study, and display of nonhuman primates as more than just an ideological or rhetorical part of the colonial apparatus. Writing of what she terms "simian orientalism," including the early twentieth century collecting practices of the American Museum of Natural History and the establishment of regional primate research centers sponsored by the National Institutes of

Health, Haraway contends that “literally and figuratively, primate studies were a colonial affair, in which knowledge of the living and dead bodies of monkeys and apes was part of the unequal exchange of extractive colonialism” (1989:19–25). Nonhuman primates, for example, obtained from European colonies, were a central tool, Haraway notes, in the development of tropical medicine.

MacKenzie’s study (1988) of connections among hunting, conservation, and British imperialism focuses more on game legislation enacted in the colonies, and on the process by which indigenous populations lost the ability to hunt for subsistence as hunting for sport became a colonial privilege, or even a duty in places where the British took on the role of protecting communities from vicious predators, such as the “man-eating” tigers of India. As game became scarcer, colonial policy shifted toward conservation, conquering through force giving way to, as Ritvo describes it, “an urgent need to husband and manage, to protect and exploit” (1987:288). This shift to conservation is also examined by Haraway in her study of the hunters and taxidermists who collected specimens for the “Age of Mammals” exhibition in the American Museum of Natural History: Hunting African elephants and apes, first with guns and then with cameras, was perceived as an encounter with nature, constructed as a purifying antidote to the ills of civilization (Haraway 1989:26–58; see also Mullan & Marvin 1999).

With the research in natural history that flourished in the colonial era, Darwinism and the work of other naturalists challenged the notion of the divine plan of creation, in some ways replacing the idea of a fundamental separation between humans and animals with that of similarity and kinship. Earlier hierarchical patterns remained secure, however: In Darwinian terms, perceptions of inferiority and superiority, as well as the colonial project, could be justified and explained in terms of evolution (Ritvo 1987:39–42, Kuper 1997). As Yanagisako & Delaney (1995b) point out, “in Darwinian theory the natural order retained both the hierarchical order of Creation and its God-given quality; the difference is that the power no longer came from God, it came from Nature” (1995b:5). Darwinism also left unchanged the dichotomies between wild and domestic, savage and civilized (Noske 1997:68–70; Ritvo 1987:16, 1991). Those peoples considered primitive were thus still considered to be more closely related than other humans to animals. There were also other means of delineating human-animal boundaries (see, for example, Noske 1997, Ritvo 1991): Humans might be animals, but humans alone possessed rationality, language, consciousness, or emotions. Among mid-twentieth century anthropologists, the Man-the-Hunter hypothesis proposed that at a certain point *Homo sapiens*, with the males of the species providing the momentum, took a fundamental turn away from their closest animal relatives (Cartmill 1993; Ingold 1994b:26; Noske 1997:102–4; Haraway 1989, 1991: 81–108). Anthropologists continue to argue about the boundaries between humans and animals, with ongoing debates about whether, for example, chimpanzees have culture or history (see, for example, Boesch & Tomasello 1998, Premack & Premack 1994).

Though some early anthropologists critiqued racist evolutionism, Nick Thomas argues that modern cultural anthropology nonetheless has retained ties to

colonial natural history, with its “language of typification” and its emphasis on documenting varieties of creatures, each with their “specific and distinct natures” (Thomas 1994:89). Though the authoritative discourse of difference might have shifted from race and physical features to cultures, patterns of description positing an essential type or nature have persisted, Thomas argues, from Buffon’s *Natural History* to Dumont’s *Homo Hierarchicus* and Geertz’s *Islam Observed* (Thomas 1994:65–104).

HUMANS AND ANIMALS IN THEORY AND PRACTICE

Although many are trying to depart from the colonialist program of identifying the essential natures of cultures, anthropologists investigating human beings and their relationships with one another have continued to find it especially useful to analyze humans’ relationships with animals, including the meanings assigned to animals, ways of classifying them, and ways of using them—whether as food, stores of value, commodities, signs, scapegoats, or stand-in humans. In an essay on the documentary *Cane Toads*, about the ultimately disastrous introduction of *Bufo marinus* to Queensland, Australia, and the great diversity of sentiments toward the species expressed by the region’s human inhabitants, Taussig writes that the film deploys “a quite extraordinarily effective method of sociological inquiry—namely the reading of societal meanings into the animal kingdom” (1992:80). At this point, there have been so many anthropological and historical studies centered around human-animal relationships that this particular body of literature offers an especially convenient vantage point from which to trace trends in the history of social thought and analysis.

The topic of humans’ relationships with animals was last the subject of a chapter in the *Annual Review of Anthropology* in 1985 (Shanklin 1985). That review was a survey of the variety of ways anthropologists had been writing about animals, from studies of domestication and cultural ecology to those focused on such topics as sacrifice, myth, and metaphor. Shanklin, who stated that “the investigation of human and animal interaction may well be one of the most fruitful endeavors of anthropology” (1985:380), concluded that anthropologists had tended to consider animals more often as food than as symbols, and she argued for a need to integrate “different dimensions in a nondeterminist approach” (1985:398). The explanation by Harris (1974) of the sacredness of Indian cattle was an example of an economic, utilitarian perspective; in stark contrast were symbolic and structuralist approaches, such as that used by Douglas in analyzing dietary codes, metaphor, and ritual pertaining to animals (e.g. Douglas 1957, 1970; see also Douglas 1990), or as used by Leach in connecting the use of animals in insults to dietary and sexual prohibitions (1964).

Though Shanklin (1985) focused on studies involving domestic animals, her contrast between sustenance and symbol derived in part from the debates over explanations of totemism. In particular, she made reference to the oft-cited claim by Lévi-Strauss (e.g. Lévi-Strauss 1963) that it was a mistake to explain the use of

animal totems in terms of any past or present economic value of the particular species employed [for a brief overview of the totemism debates, see Willis (1990b: 2–4)]. Animals, Lévi-Strauss had asserted, serve well as totems because they are “good to think” rather than because they are “good to eat” (Lévi-Strauss 1963: 89), or in Leach’s translation of Lévi-Strauss’s French, using animals as totems makes sense because of their value as “goods to think with” rather than because they might be (or once have been) “goods to eat” (Leach 1970:31–32). For Lévi-Strauss, animal species, with their many observable differences and habits, offered “conceptual support for social differentiation” (Lévi-Strauss 1963:101), a way of naturalizing social classifications, particularly those pertaining to marriage rules and descent, for humans who lacked such visible or “natural” means of distinction.

Although it could perhaps be misleading to equate Lévi-Strauss’s analysis of totemism with the study of animals as symbols (Sperber 1975), in 1985 the contrast between “good to think” and “good to eat” illustrated substantial differences in approaches, including those sometimes described as intellectualist and utilitarian, or symbolic and materialist, not just in the study of human-animal relationships but in anthropology more generally. The perception by Shanklin (1985) of a need for integration, however, seems to have been widely shared, and since 1985 many studies concerning humans’ relationships with animals have sought explicitly to close gaps between widely different approaches. Although many have continued to find it useful to consider relationships between categories, including human and animal, nature and culture, or corpse and meat (Vialles 1994), the trend has been to pay greater attention to how such categories relate to social practice, as well as how they might vary in their construction and deployment, change over time, and be related to systems of power, inequality, and value-making.

Food and Food for Thought

A number of anthropologists have attempted explicitly to combine economic, ecological, and structuralist or symbolic perspectives while paying greater attention to practice and to change over time. Such integration has been especially evident, not surprisingly, in studies of cases where animals serve as an important food source. Although there has been a move away from ecological determinism, there has also been an attempt to avoid the extreme intellectualism of Lévi-Strauss and other structuralists, who sometimes gave the impression of playing clever mind games, using ethnographic information far removed from any individual actors and any particular cultural or historical context. An example of one recent trend is Pálsson, who has argued in favor of the “integration of human ecology and social theory” (1996:64). This goal is evident in his consideration of how fish and other “water beings” have proven especially good to think with in Iceland, using what is in some ways a classically structuralist approach; but rather than taking a synchronic view removed from practice and material forces, Pálsson (1994; see also Pálsson 1991) explores how conceptual frameworks have changed in relation to changes in the political economy of fishing, from the era of subsistence fishing to that of the commercial fishing industry. Descola’s ethnography of

the Achuar (1994) is synchronic but stays closely attuned to everyday practices, individual differences, and environmental conditions. The Achuar's extraordinary knowledge of other species in the Upper Amazon is, according to Descola, "not governed exclusively by utilitarian considerations" (1994:4). "It is hard to see what economic benefits could possibly accrue from differentiating between thirty-three different species of butterfly, not one of which is put to practical use," writes Descola (1994:82), noting that the Achuar seem to be every bit as knowledgeable about the behavior of creatures they do not hunt as about those they do (Descola learns much from Achuar taxonomies, but in an article in which he takes a comparative approach to conceptions of human and nonhuman relationships, Descola argues the importance of paying equal attention to social practice and avoiding simplistic generalizations, pointing out that "except in the western scientific tradition, representations of nonhumans are not usually based on a coherent and systematic corpus of ideas" (Descola 1996:86) [for related but different views of the relationship between environmental knowledge and practice, see Morris (1998), Scott (1996), Richards (1993), Whitehead (1995)].

In recent years, studies of hunters and hunting have often considered animals as both food and "food for thought," and such studies have stressed the complexity and variability of people's ideas about animals (e.g. Bird-David 1990, Brightman 1993, Marks 1991, Morris 1998, Scott 1996, Tanner 1979). In his extensive examination of the relationships Rock Cree hunters in Northern Manitoba have with animals, Brightman (1993) places even greater emphasis than Descola on the importance of inconsistency. "Cree representations of the human-animal relationship are profoundly and perhaps necessarily chaotic and disordered," Brightman writes. "The human and animal categories are themselves continuous rather than discrete, and their interpenetration seems to preclude stable representations of causality or sociality in hunter-prey interactions" (1993:3). Combining Marxist and semiotic perspectives, Brightman argues that environmental and technological forces set certain parameters on, but do not "determine," Cree hunting practices or their conceptual relationships with animals (1993:339). As Descola noted among the Achuar, Brightman observes that Cree taxonomies and general knowledge about particular animals do not always conform to expectations based on utility (1993:349–53).

If anthropologists writing of hunters have labored to make the point that the ideas and practices of hunters are not entirely explicable by economic factors, those writing about pastoralists have faced nearly the opposite task, arguing against those supposing that pastoralists' attitudes toward their livestock are economically irrational. In the past 10 years or so, studies of pastoralists have been focused more often on political and economic change, as well as on the dealings of pastoralists with governments and assistance organizations. Pastoralism entails not just a particular sort of relationship with animals and the environment but also particular kinds of relationships among humans (Ingold 1980), and all of these relationships have been transformed by colonial and neocolonial processes and policies. Consequently, in his review of recent research on pastoralism, Fratkin notes a shift "from *cultural* ecology to *political* ecology" (1997:236). This

shift is especially evident in the study by Ferguson (1990) of the “development” industry in Lesotho and what he describes as attempts to depoliticize political and economic policies. Ferguson examines what development planners have presumed to be irrational and “traditional” approaches to livestock management. Promoting the commercialization of livestock production, planners have been particularly frustrated by decisions made by Basotho livestock owners about, for example, when to buy and sell herds. Ferguson relates decisions by individuals about animals to age and gender divisions in rural communities reliant on male migratory wage labor. Unlike “women’s animals” (pigs and chickens), cattle are at the disposal of men only, and in part because of their role as bridewealth, cattle link men to their communities in ways that other property cannot. Men use livestock as a sort of “retirement fund” to which women, often with immediate needs for cash, cannot lay claim. Ferguson explains (1990:159): “Under the terms of the Bovine Mystique, resources invested in livestock can be expected to stay there and patiently wait for the migrant’s return to the village without being eaten away by the real but less than compelling needs of his dependents. At the same time, they visibly support his family, symbolize his own presence, and establish his place in the community as a secret Maseru bank account could never do.” In such contexts, the economic and symbolic values of animals are inseparable [a connection also developed in two studies of guinea pig production in the Andes (Archetti 1997, Morales 1995)]. In a similar analysis of the value and meaning of cattle among the Tshidi Barolong, Comaroff & Comaroff (1991) argue that cattle were once used as an “alibi for distinctions of rank, gender, and social power,” and now, when relatively few Tshidi can afford them, they serve as “a tragic icon of a vanished world of self-determination” (Comaroff & Comaroff 1991:47, 55; see also Comaroff 1990).

Pursuing a different angle and writing perhaps in a more celebratory fashion of pastoralism as “a highly productive and viable way of life,” Galaty (1989:229) explores not just the meaning and value of cattle but also the cognitive skills that have allowed Maasai to recognize hundreds of individual animals and to describe, name, and classify them according to appearance, reproductive status, history of acquisition, and genealogy. Such skills have diminished as Maasai have taken up more commercialized ranching or abandoned cattle production altogether. Other studies include an examination of how the relationships of East African pastoralists with their cattle have shaped systems of aesthetic value (Coote 1992). In a study of Somali oral poetry, Samatar notes that he has yet to learn of a prominent Somali poet of the past two centuries whose poetry has not been in some way about camels (Samatar 1982:18), a preoccupation he explains with an exploration of how camels, for Somalis, have been about so many things, including food, affluence, security, and social relationships.

Not all studies of situations where animals serve as food attempt such an integration of the conceptual and the material. In industrialized economies, except for vegetarians, consumers are not inclined to give much thought to the animals they eat, at least not as animals and food both; people eat “meat,” not “animals.” Perhaps such contexts lend themselves more readily to approaches focused on either

the conceptual or the material. Vialles (1994) examines the question of precisely what is meat, taking a structuralist approach to abattoirs in south-west France, though departing from more classical structuralist analyses in its consideration of the historical context and careful attention to labor practices. In contrast, studies of industrial meat production in the United States have tended to avoid conceptual issues, focusing instead on political and economic transformations of rural communities and factory farming's environmental consequences (Stull et al 1995, Thu & Durrenberger 1998) [for a consideration of political, economic, environmental, and moral concerns, see Noske (1997)].

Identities and Differences

We polish an animal mirror to look for ourselves.
Haraway (1991:21)

In his much criticized but extraordinarily influential analysis of Balinese cockfights, Geertz describes cockfighting as a "metasocial commentary," especially about status relationships. Balinese men, Geertz argues, identify with their cocks to the point that it is really men fighting in the cock ring and the cockfight is a story the Balinese "tell themselves about themselves" (Geertz 1994:121). In a multidisciplinary collection of writing on cockfights (Dundes 1994), Geertz (1994) now usefully appears alongside the very different analysis of cockfighting in the Philippines by Guggenheim (1994). Guggenheim (1994) summarizes some of the main objections to Geertz's approach, including its lack of concern with history, with diverse viewpoints, and with what cockfights might do for people other than provide a "sentimental education." In Guggenheim's analysis, "far from illuminating the principles of Philippine social structure, cockfighting hides them" (1994:161); he agrees with Geertz that the cockfight tells people a story, but he urges us to ask why "that particular story, and how accurate a story is being told" (1994:168). In the Philippines, he argues, "cockfighting reflects, reconstitutes, and distorts sociopolitical processes" and suggests that similar ideological obfuscation might be at work in Bali (1994:167).

Even Geertz admitted that the cockfight did not provide a master key to Balinese culture (1994:123), though it seemed to many readers as if he treated it as just that. But despite widely shared concerns about some of Geertz's methods and conclusions, "animal acts" (Ham & Senior 1997) have continued to serve as an especially convenient window for cultural analysis (Ohnuki-Tierney 1990:150). Examples include studies of rodeos and other horse-related performances (e.g. Lawrence 1985, 1994) and studies of wren-hunting rituals (Lawrence 1997), studies that tend, however, like that of Geertz (1994), to focus exclusively on matters of meaning and interpretation. Ohnuki-Tierney (1987, 1990) takes a wide-ranging, more historical approach to monkey performances in Japan, emphasizing their varying and negotiated meanings; Douglass (1997) and Pink (1997) have studied bullfighting and other "taurine games" in Spain in relation to conflicts over gender and the construction of national and regional identity. There is also the examination by Darnton (1991) of the torturing of cats by a group of exasper-

ated apprentices of a printer in eighteenth century Paris: The cats, Darnton argues, served as stand-ins for the master printer and his cat-loving wife. New varieties of animal performances have been proliferating of late in the form of animal theme parks, advertising, and an “all animals, all the time” cable television channel [for performing animals at Sea World and elsewhere, see Davis (1997), Desmond (1995, 1999); for zoos, see Mullan & Marvin (1999); for dinosaur spectacles, see Noble (1999); for animals in advertising and “talking animal” narratives, see Baker (1993)]. Mullan & Marvin (1999) argue that much of the appeal of watching animals in zoos lies in the fascination provided by “the oscillation between ‘like us’ and ‘not like us’ ” (1999:159); a similar dynamic may account for much of the appeal of other animal spectacles, including wildlife documentaries, particularly in a period when there has been so much ideological flux in understandings of human-animal relationships. Because the economic aspects of commodified entertainments are so striking and because the roles that animals play in them are frequently a matter of considerable controversy, it is likely that future research will continue to explore material dimensions as well as multiple, contingent, and contested meanings.

The political and economic dimensions of classification systems have also become increasingly apparent. Foucault (1970) mentions a passage from Borges, which quotes “a certain Chinese encyclopedia,” with its bizarre taxonomy of animals that begins with “belonging to the Emperor” and concludes with “those that from a long way off look like flies” (Foucault 1970:xv). For Foucault, this exotic and incomprehensible ordering of beings invites inquiry into “the thought that bears the stamp of our age and our geography” and “our age-old distinction between the Same and the Other”; of particular concern is the emergence of the category “man,” a category that has been so important in the rise of anthropology as a discipline (Foucault 1970:xv). Anthropologists found taxonomies of interest long before Foucault, and recently some have argued that in fact many “folk taxonomies” are often surprisingly similar to the ones that scientists have devised; such analyses have tended to stress a “real world” of nature, a world of which humans, both Western and non-Western, both scientists and subsistence hunters, have been rational and intelligent observers (Atran 1990, Richards 1993). Since the work by Foucault (1970), however, many have examined classifications, both scientific and vernacular, with very different questions, questions concerning the social construction of identity, including how systems of identities and differences have been constructed and whose purposes they may have served, how they relate to systems of power and inequality, and how they have been contested and transformed (e.g. Borneman 1988; Einarsson 1993; Hayden 1998; Haraway 1989, 1991, 1997; Morton & Smith 1999; Mullin 1999; Ohnuki-Tierney 1987, 1990; Ritvo 1987, 1997; Salisbury 1997, Schiebinger 1993).

Although anthropological discussions of totemism have always been about the social construction of identities, political dimensions tended to be obscured when relatively uncontested identities were considered in static terms. Haraway (1989, 1991, 1997) has been among the most influential of those exploring the political aspects of identities defined in relation to animals and nature. Definitions of

nature, like definitions of human, are not, Haraway (1989) argues, neutral but have been continually constructed and reconstructed in political contexts in which they have reflected some interests and not others. Haraway has roamed broadly around the history of science, museums, and mass media asking questions not only about human and animal relationships but also about race, class, gender, and colonialism. Whereas structuralists tend to write as if oppositions between nature and culture or humans and animals are fixed in place and relatively outside the bounds of individual negotiation, poststructuralists have been more inclined to ask questions such as that asked by Haraway (1997:75): "What gets to count as nature, for whom, and at what cost?" Of particular concern to Haraway, and to other scholars asking similar questions, are nonhuman primates who, Haraway argues, have occupied the "border zones" between nature and culture, providing "origin stories" for "man" and a means of defining what is human (Haraway 1989, 1991, 1997; Noble 1999; Strum & Fedigan 1999).

Of course, humans' perceptions of nonhuman primates have varied culturally and historically. Asquith (1996) argues that some of the important differences between Japanese and American primatology have resulted from culturally specific notions of what is uniquely human and the different ways of valuing types of human interaction. Ohnuki-Tierney (1987, 1990) explores how monkeys in Japan have served as a means of defining what it means to be human and what it means to be Japanese. Monkeys have been portrayed, in different periods, as mediators between deities and humans, as scapegoats, and as clowns; Ohnuki-Tierney emphasizes the monkey's multiple meanings (1990:128,148) [for an analysis of very different perceptions of nonhuman primates among the Mende, see Richards (1993)].

Schiebinger (1993) also addresses perceptions of nonhuman primates, but with a focus on "gender in the making of modern science" in seventeenth and eighteenth century Europe. Her analysis of "why mammals are called mammals" addresses the gender politics behind Linnaeus's carefully considered choice of the term *Mammalia*, "meaning literally 'of the breast'—to distinguish the class of animals embracing humans, apes, ungulates, sloths, sea cows, elephants, bats and all other organisms with hair, three ear bones, and a four-chambered heart" (Schiebinger 1993:40). *Mammalia*, Schiebinger argues, was not an illogical or unreasonable choice for Linnaeus but was one he made over other reasonable choices in a particular political climate, a climate that included complex attitudes toward breasts, thought to represent "both the sublime and the bestial in human nature" (1993:53), concerns about women's roles in society, and a campaign, in which Linnaeus was directly involved, against the practice of wet nursing (1993: 65–68). In Schiebinger's account, as well as in Ritvo's (1997), scientific nomenclature thus reflects not just "scientific" concerns, but also concerns about national identity, race, class, gender, and individual and collective tastes.

As Ritvo writes in an examination of gender stereotypes in discourse on animal husbandry, "animal-related discourse has often functioned as an extended, if unacknowledged metonymy, offering participants a concealed forum for the

expression of opinions and worries imported from the human cultural arena" (Ritvo 1991:70). Scientists studying animal behavior have been apt to term such tendencies anthropomorphism. There is now much rethinking of that term and the practices to which it has been applied, but anthropomorphism has long been considered an error in need of correction, if not a disease in urgent need of containment, usually caused by undue sentimentality or ignorance (Mitchell et al 1997). Sociocultural analysis has generally not accommodated such neat categorization regarding humans' perceptions of animals. Borneman (1988), for example, analyzes the construction of horse breeds among American horse breeders as a form of "reverse totemism," in which breeders project their perceptions of race and national identity in their categorization of horses. Especially in the United States, breeders perceive breeds such as Arabian and Quarter Horses as "natural" categories, whose biological purity must be maintained, rather than as the product of concerns about, for example, American national identity, as in the case of Morgans, thought to embody the essence of an American spirit and character [on the construction of breeds of pets and livestock in nineteenth century England, see Ritvo (1987, 1996); on constructions of Australian national identity and attitudes toward various species, see Morton (1990), Morton & Smith (1999)]. Breeding programs guided by somewhat similar concerns about purity and national identity were supported by Nazis, both with humans and with dogs, "man's best friend" (Arluke & Sax 1995). There are now computer programs that simulate ecosystems, reproduction, and evolution; as explored by Helmreich (1998) in his work on Artificial Life, cyberspace allows plenty of room for human gender identities to influence the creation of "virtual organisms."

Among beekeepers, Tsing considers "the culture of bee nature and the 'nature' in bee culture" (1995:115): In European peasant traditions, bee lore employed the terminology of household and family [for interesting discussions of human-bee relationships, see also Thomas (1983:62–63, 96–97)]. By the late nineteenth century, American beekeepers were more apt to draw on the language of industrial production (worker bees producing efficiently); discourse on varieties of bees has shifted from an emphasis on national origin among European bees (German bees, Italian bees, etc) to one reflecting models of racial difference (European, Asian, and African bees). Tsing, however, stresses that "our views of nature are not a simple reflection of our valued standards and ideals: our observations of nonhumans present continual challenges to our cultural agendas that require new inflections and transpositions of our cultural sense" (1995:137). In the bitterly fought "science wars," the idea that nature is a cultural construct is one of the more divisive; Tsing's phrasing suggests some possibility of common ground.

Recent work on human-animal boundaries emphasizes the flexibility of these boundaries and the way they are constructed by individuals in specific contexts. Lundin (1999:73) calls for a shift from "discourse analysis to more action-oriented analysis" in a discussion of her research on people's responses to xenotransplantation (the transplanting of animal cells, tissues, and organs into human bodies, an increasingly common medical treatment). Xenotransplant recipients' construction of human-animal boundaries takes place in an arena in which

boundaries have become mighty confusing, with organs destined for humans harvested from animals bearing human DNA. Lundin (1999) suggests that such a context makes the “diversity and flexibility” of categories more evident, but it is possible to find similar degrees of diversity and flexibility in contexts far removed from the frontiers of medicine. Arluke & Sanders (1996) explore ways in which people working in laboratories and animal shelters construct boundaries between themselves and animals, ways that either permit or prohibit caring and concern about the fate of their charges, varying according to individual workers and the particular animals involved [for a discussion of similar processes at work among employees of abattoirs, see Vialles (1994)]. Consequences of categorization have also been noted in relation to environmentalism: For example, Australian environmentalists fight to conserve indigenous species and vilify “feral animals” (Morton & Smith 1999); people interested in protecting whales from hunting stress the characteristics whales share with humans (Einarsson 1993). Recent reconsiderations of anthropomorphism among scientists studying animal behavior have been related to changes in the value attributed to animals and the environment: “To attribute human characteristics to animals is a negotiation of value among humans” (Caporael & Heyes 1997).

In an age of rapidly expanding commodification, people find ways of constructing boundaries and values to suit all sorts of purposes, including the pursuit of profit: “Biodiversity prospectors” embark on taxonomic projects with an eye for how species might be marketed and sold as well as “conserved” (Hayden 1998); sheep are cloned and transgenic animals produced as new kinds of marketable commodities (Franklin 1997, Haraway 1997). Knowledge of value and categories can be a source of less-tangible profit as well: The construction of dog breeds and knowledge of standards of evaluation have been related to identities centering around class, ethnicity, national identity, and gender (Caglar 1997, Mullin 1996, 1999, Ritvo 1987) [for connoisseurship and value regarding animals, see a dissertation being completed at the University of Edinburgh that considers the evaluation of racehorses (R Cassidy, personal communication)].

Attention to differences in the ways people relate to animals reunites two long-divorced meanings of the term culture: the modern use, indicating groups of people; and the more-antique notion, meaning a process, the tending of something, especially other species (Williams 1985:87). Such reunification is especially evident in considerations of “bee culture” (Tsing 1995), “zoo culture” (Mullan & Marvin 1999), and “horse culture” (H Ragoné, personal communication), but it is also evident in studies of other contexts in which animals are commodities around which people form communities with distinctive identities, discourses, and practices.

Conflicts and Contradictions

Increasingly, animals serve all at once as commodities, family members, food, and the embodiment of “nature”; it is therefore no wonder that they should be the focus of conflict. In industrialized consumer-oriented economies, people are often most familiar with animals as pets. Pets are commodities that many people

use, like other consumer goods, as a means of constructing identities; however, they are also often considered members of families and serve as companions and the focus of nurturing and caretaking behavior, providing considerable emotional attachments and satisfactions (Arluke & Sanders 1996, Caglar 1997, Thomas 1983). Of course, anthropologists know that Westerners are not the only pet-keeping people (see, for example, Descola 1994), but it is likely that social and economic conditions encourage many middle-class people to make substantial emotional investments in their relationships with animal companions.

Although pet keeping—along with concerns about the future of the earth—may encourage more positive perceptions of certain kinds of animals, industrial capitalism also offers great incentive for animals to be treated as objects, machines, or “natural resources.” Though a small but vocal minority has been motivated to protest such practices, most people find them easy to ignore. In Western society, people have become less inclined to think of animals as food even while consuming more meat than ever before: Shrink-wrapped packages or precooked meals are conceptually connected with “animals” only with imaginative effort (Nelson 1997:7, Vialles 1994). Slaughterhouses and meatpacking plants have moved to the outskirts of cities, if not outside them altogether, and whether vegetarians or not, few people want to know about what goes on in them or about the people who work there (Vialles 1994:7). If the killing of individual animals for food has the potential to disturb, Vialles notes that industrial slaughter tends to be even more disturbing because of its potential to evoke the mass extermination of human beings (Vialles 1994:31).

Despite their extensive commodification (in the form of actual animals and in representations), “wild” animals, considered even more a part of “nature” than pets, are valued as a refuge from consumer capitalism. In theme parks, ecotourism, and mass media, contact with “charismatic megafauna” such as whales and orangutans appeals to consumers as a sort of “anticonsumption,” no matter how profitable to transnational corporations. Sea World and parent company Anheuser-Busch and *National Geographic* and sponsor Mobil Oil have been selling, among other things, emotionally charged stories about “boundary crossing,” as Davis describes them, stories about “the bridging of distances between alien species, the far-away and the self” (Davis 1997:35, Haraway 1989). These “family romances” with their public pets, such as Shamu (not actually a single whale, but a means of personifying Sea World in any number of whales) and Koko (“the talking gorilla”), provide incentive for further commodification and exploitation, but they also encourage audiences to take greater interest in conservation and the treatment of captive animals. Haraway notes a “busy two-way traffic” between forest and laboratory as nonhuman primates are violently captured from the wild and others are “rehabilitated” (1989:132). Whales are pulled from the sea to become star performers, and then Time-Warner, owner of the Six Flags parks, releases movies fueling a campaign to rescue Keiko/Willy from captivity, a movement that does not hurt movie sales or park attendance (Davis 1997:27–28).

As Sperling notes, “the animal rights movement is part of the landscape of late twentieth-century life” (1988:23) [for animal rights activism, see also Dizard

(1999), Feit (1998), Muth (1999), Wenzel (1991)]. The controversial aspects of human-animal relationships are likely to encourage greater interest in sociocultural analysis of these relationships, but animal rights activists are apt to find the relevant anthropological and historical studies at least partly unsatisfying. Noske (1993, 1997) argues against anthropologists' "anthropocentrism" and critiques their lack of concern for animal welfare and for failing to consider human-animal relationships from the perspective of animals. In Noske's view, anthropologists should be as willing to consider animals' relationships with people as they are humans' relationships with animals and should not perpetuate the objectification of animals by focusing only on the human side of such relationships [for a discussion of this issue, see also Martin (1995)]. My impression is that scholars studying human-animal relationships seem to vary considerably in their attitudes toward animals, to the extent that these can be discerned, but Noske is right that sociocultural research in this area tends to be as much if not more concerned with humans' relationships with other humans and has rarely departed from anthropocentrism. This is as true of research focusing on contemporary controversies over the treatment of animals as it is in work on more traditional topics, such as totemism. Noske's proposal is, I believe, worthy of consideration. It does raise a number of problems for cultural anthropologists, just one being the fact that very few of them know much about animals other than primates (and most know extremely little about primates other than humans). Anyway, many scholars working in this area are likely to feel that anthropocentric research leaves them with more than enough to keep them busy [although primatologists have begun to undertake sociocultural research on humans in considering relationships between human and nonhuman primates (e.g. Wheatley 1999)].

Much historical and anthropological research on conflicts regarding animals focuses on making sense of why and how people's views about animals differ. Darnton's (1991) essay on an eighteenth century incidence of cat torturing relates differing perceptions of cats to the different material conditions of workers and printers and their wives (as well as to an intricate history of associations regarding women and cats); Ritvo examines similar cases of animals used to express class conflict in nineteenth century England (1987:149). In an article on recent controversies over fox hunting in England, Fukuda explains that her "intention is not to contribute to the moral judgement on hunting, but to illustrate the way in which the notion of cruelty is dependent on people's mode of livelihood" (1997:2).

Many would argue that work such as Fukuda's does contribute to debates about morality, even if readers are left to wonder about the researcher's perspective on such debates. Other anthropologists have entered moral and political debates more forthrightly. Nelson (1997) (who, incidentally, does consider the relationship of deer with people as well as of people with deer) offers an impassioned defense of deer hunting, although he does not belittle antihunting perspectives and he condemns some of the ways deer have been used in scientific research [for a more critical view of hunting in the United States, see Cartmill (1993)]. In her study of animal rights activists, Sperling (1988) discusses her own ideas about the morality of using animals in laboratory experiments (she takes a

much more moderate position than do the activists) but maintains a focus on relating activists' views to wider social and cultural patterns; for example, following Haraway's lead, she connects perceptions of animal suffering to, among other things, Christian narratives of sacrifice and salvation. Haraway is also open about her positions on moral and political questions regarding animals, but her positions—on the use of animals in laboratory research, the patenting of transgenic organisms, or the conservation of species in the wild, for example—tend to be complex, concerned with relationships among humans, and are unlikely to satisfy anyone with an agenda narrowly focused on the protection of particular species.

Haraway is unusual in the degree to which she allows moral and political concerns about both people and animals to remain in the picture while articulating positions that do not align neatly with any particular faction in controversies surrounding animals. Since the end of the colonial era, cultural anthropologists have often taken on the role of advocates for the communities they study, and with respect to transnational conflicts over animals, that has increasingly meant opposing conservationists and animal rights activists, whose campaigns have imposed hardships on communities dependent on hunting and fishing or on agriculture that conflicts with efforts to protect endangered species (or species, such as African elephants and some cetaceans, considered in the West to be particularly worthy of protection even though not facing extinction). Some anthropologists may also assume that rural people, especially those belonging to indigenous communities, have a more "authentic" relationship to animals than urban middle classes. In a work he describes as advocacy anthropology, Wenzel (1991) terms the 1983 European Economic Community (EEC) ban on importing sealskins a form of neocolonialism. Though many might find overly simplistic his argument that the EEC ban represents the destruction of Inuit culture, Wenzel argues persuasively that the collapse of the sealskin market has had a devastating impact on Inuit hunters, who prior to the ban were dependent on the cash gained from supplying sealskins to the world market. Wenzel joins other researchers in critiquing activists who have romanticized indigenous peoples perceived as properly "traditional" while casting modern-day hunters of specially-valued species as "barbaric": Einarsson (1993) argues the case of Icelandic whalers (with a vehement defense of anthropocentrism); Kalland (1993) argues the case of whaling communities in Northern Norway [for the anti-fur movement, see Emberley (1997), who critiques the publicity campaigns by the animal rights organization, Lynx, although she is more critical of pro-fur forces than is Wenzel]. Caulfield's (1997) study of Greenlanders' struggles with the International Whaling Commission notes some signs of rapprochement between whalers and Greenpeace activists willing to concentrate on conservation rather than the "rights" of whales [related studies of conflicts over conservation include Neumann (1998)].

CONCLUSION

Sociologists Arluke & Sanders (1996) claim that because research on human-animal relationships by anthropologists primarily has addressed "traditional

societies," it is of limited value to those seeking to better understand humans' relationships with animals in industrialized regions (1996:3). It is true that much research by anthropologists involving humans' relationships with animals has been conducted in areas peripheral to industrial capitalism and often has not acknowledged the degree to which those regions have been affected by global processes of transformation. But at the same time scholarship has demonstrated the fallacy of simple dichotomies between traditional and modern (e.g. Ferguson 1990, Wolf 1982), many anthropologists have been carrying out research in less "traditional" settings. Research on humans' relationships with animals has been no exception to this pattern, as demonstrated by the great diversity of studies reviewed here. Meanwhile, research continues in non-Western contexts, on both more- and less-traditional topics, but more often with greater attention to social change, power, agency, and the negotiation and instability of categories and meanings. With the rise of ecotourism, a global traffic in exotic animals, the spread of factory farming, and transnational conflicts over conservation and the treatment of animals, it is especially important that humans' relationships with animals in one part of the world be considered in relation to those in others.

For those wanting to better understand human-animal relationships anywhere, the geographical focus of existing anthropological research might well seem less of a limitation than the fact that sociocultural research has so often approached relationships between humans and animals as a convenient window from which to examine a great many other aspects of human societies, rather than as being of particular interest in themselves. Increasingly, however, human-animal relationships are considered a worthy focus of investigation, a trend likely to continue in anthropology as well as in other disciplines. Although alternatives to more anthropocentric approaches may be worthy of consideration and of popular interest, existing studies suggest the value of continuing to consider humans' relationships with other species in relation to specific cultural and historical contexts and the ways in which such relationships are influenced by humans' relationships with other humans.

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LITERATURE CITED

- Archetti EP. 1997. *Guinea Pigs: Food, Symbol and Conflict of Knowledge in Ecuador*. Transl. V Napolitano, P Worsley. Oxford, UK: Berg
- Arluke A, Sanders CR. 1996. *Regarding Animals*. Philadelphia: Temple Univ. Press
- Arluke A, Sax B. 1995. The Nazi treatment of animals and people. See Birke & Hubbard 1995, pp. 228–60
- Arnold AJ, ed. 1996. *Monsters, Tricksters, and Sacred Cows: Animal Tales and American Identities*. Charlottesville: Univ. Press Virginia
- Asquith PJ. 1996. Japanese science and Western hegemonies: primatology and the limits set to questions. See Nader 1996, pp. 239–58
- Atran S. 1990. *Cognitive Foundations of Natural History: Towards an Anthropology of Science*. Cambridge, UK: Cambridge Univ. Press
- Baker S. 1993. *Picturing the Beast: Animals, Identity and Representation*. Manchester, UK: Manchester Univ. Press
- Bird-David N. 1990. The giving environment: another perspective on the economic system of gatherer-hunters. *Curr. Anthropol.* 31(2):189–96
- Birke L, Hubbard R, eds. 1995. *Reinventing Biology: Respect for Life and the Creation of Knowledge*. Bloomington: Indiana Univ. Press
- Boesch C, Tomasello M. 1998. Chimpanzee and human cultures. *Curr. Anthropol.* 39(5):591–614
- Borneman J. 1988. Race, ethnicity, species, breed: totemism and horse-breed classification in America. *Comp. Stud. Soc. Hist.* 30(1):25–51
- Brightman RA. 1993. *Grateful Prey: Rock Cree Human-Animal Relationships*. Berkeley: Univ. Calif. Press
- Baglar AS. 1997. “Go Go Dog!” And German Turks’ demand for pet dogs. *J. Mater. Cult.* 2(1):77–94
- Caporael LR, Heyes CM. 1997. Why anthropomorphize? Folk psychology and other stories. See Mitchell et al 1997, pp. 59–73
- Cartmill M. 1993. *A View to a Death in the Morning: Hunting and Nature through History*. Cambridge, MA: Harvard Univ. Press
- Caulfield RA. 1997. *Greenlanders, Whales, and Whaling: Sustainability and Self-Determination in the Arctic*. Hanover: Univ. Press of New Engl.
- Clutton-Brock J, ed. 1989. *The Walking Larder: Patterns of Domestication, Pastoralism, and Predation*. London: Hyman
- Coetzee JM. 1980. *Waiting for the Barbarians*. Harmondsworth, UK: Penguin
- Cohen E. 1994. Animals in medieval perceptions: the image of the ubiquitous other. See Manning & Serpell 1994, pp. 59–80
- Comaroff J. 1990. Goodly beasts and beastly goods: cattle and commodities in a South African context. *Am. Ethnol.* 17:195–216
- Comaroff J, Comaroff JL. 1991. “How beasts lost their legs”: cattle in Tswana economy and society. In *Herders, Warriors and Traders: Pastoralism in Africa*, ed. JG Galaty, P Bonte, pp. 33–60. Boulder, CO: Westview
- Coote J. 1992. “Marvels of everyday vision”: the anthropology of aesthetics and the cattle-keeping nilotes. In *Anthropology, Art, and Aesthetics*, ed. J Coote, A Shelton, pp. 245–73. Oxford, UK: Oxford Univ. Press
- Crosby A. 1986. *Ecological Imperialism*. Cambridge, UK: Cambridge Univ. Press
- Curtis LP. 1997. *Apes and Angels: The Irishman in Victorian Caricature*. Washington, DC: Smithsonian Inst. Rev. ed.
- Darnton R. 1991. Workers revolt: the great cat massacre of Saint Severin. In *Rethinking Popular Culture: Contemporary Perspectives in Cultural Studies*, ed. C Mukerji, M Schudson, pp. 97–120. Berkeley: Univ. Calif. Press
- Davidson AI. 1991. The horror of monsters. See Sheehan & Sosna 1991, pp. 36–67

- Davis SG. 1997. *Spectacular Nature: Corporate Culture and the Sea World Experience*. Berkeley: Univ. Calif. Press
- Descola P. 1994. *In the Society of Nature: A Native Ecology in Amazonia*. Transl. N Scott. Cambridge, UK: Cambridge Univ. Press
- Descola P, Pálsson G, eds. 1996. *Nature and Society: Anthropological Perspectives*. London: Routledge
- Desmond JC. 1995. Performing "nature": Shamu at Sea World. In *Cruising the Performative: Interventions into the Representation of Ethnicity, Nationality, and Sexuality*, ed. SE Case, P Brett, SL Foster, pp. 217–37. Bloomington: Indiana Univ. Press
- Desmond JC. 1999. *Staging Tourism: Bodies on Display from Waikiki to Sea World*. Chicago: Univ. Chicago Press
- Dizard JE. 1999. *Going Wild: Hunting, Animal Rights, and the Contested Meaning of Nature*. Amherst: Univ. Mass. Press
- Douglas M. 1957. Animals in Lele religious symbolism. *Africa* 27(1):46–58
- Douglas M. 1970. *Natural Symbols*. New York: Vintage
- Douglas M. 1990. The pangolin revisited: a new approach to animal symbolism. See Willis 1990a, pp. 25–36
- Douglass CB. 1997. *Bulls, Bullfighting, and Spanish Identities*. Tucson: Univ. Arizona Press
- Dundes A, ed. 1994. *The Cockfight: A Casebook*. Madison: Univ. Wis. Press
- Einarsson N. 1993. All animals are equal but some are cetaceans: conservation and culture conflict. See Milton 1993, pp. 73–84
- Emberley JV. 1997. *The Cultural Politics of Fur*. Ithaca, NY: Cornell Univ. Press
- Feit HA. 1998. *Social movement re/actions to disorder: reimagining the human family in animal rights*. Presented at Annu. Meet. Am. Ethnol. Soc., Toronto
- Ferguson J. 1990. *The Anti-Politics Machine: "Development," Depoliticization, and Bureaucratic Power in Lesotho*. Cambridge, UK: Cambridge Univ. Press
- Foucault M. 1970. *The Order of Things: An Archaeology of the Human Sciences*. New York: Random House
- Franklin S. 1997. Dolly: a new form of transgenic breedwealth. *Environ. Values* 6: 427–37
- Franklin S, Ragoné H, eds. 1998. *Reproducing Reproduction: Kinship, Power, and Technological Innovation*. Philadelphia: Univ. Penn. Press
- Fratkin E. 1997. Pastoralism: governance and development issues. *Annu. Rev. Anthropol.* 26:235–61
- Fukuda K. 1997. Different views of animals and cruelty to animals: cases in fox-hunting and pet-keeping in Britain. *Anthropol. Today* 13(5):2–6
- Galaty JG. 1989. Cattle and cognition: aspects of Maasai practical reasoning. See Clutton-Brock 1989, pp. 215–30
- Garber M. 1996. *Dog Love*. New York: Simon & Schuster
- Geertz C. 1994. Deep play: notes on the Balinese cockfight. See Dundes 1994, pp. 94–132
- Guggenheim S. 1994. Cock or bull: cockfighting, social structure, and political commentary in the Phillipines. See Dundes 1994, pp. 133–73
- Gurevitch AI. 1992. *Historical Anthropology of the Middle Ages*. Transl. J Howlett, S Rowell. Oxford, UK: Polity
- Ham J, Senior M, eds. 1997. *Animal Acts: Configuring the Human in Western History*. New York: Routledge
- Haraway DJ. 1989. *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. London: Routledge
- Haraway DJ. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge
- Haraway DJ. 1997. *Modest_Witness@Second_Millennium.FemaleMan©_Meets_OncoMouse™*. New York: Routledge
- Haraway DJ. 1999. For the love of a good dog: webs of action in the world of dog genetics. Presented at Wenner-Gren Conf. on "Anthropology in the Age of Genetics," Tereopolis, Brazil

- Harris M. 1974. *Cows, Pigs, Wars and Witches*. New York: Vintage
- Hayden C. 1998. A biodiversity sampler for the millennium. See Franklin & Ragoné 1998, pp. 173–206
- Helmreich S. 1998. Replicating reproduction in artificial life: or, the essence of life in the age of virtual electronic reproduction. See Franklin & Ragoné 1998, pp. 207–34
- Hoage RJ, Deiss WA, eds. 1996. *New Worlds, New Animals: From Menagerie to Zoological Park in the Nineteenth Century*. Baltimore, MD: Johns Hopkins Univ. Press
- Howe N. 1995. Fabling beasts: traces in memory. *Soc. Res.* 62(3):641–60
- Howell S. 1996. Nature in culture or culture in nature? Chewong ideas of “humans” and other species. See Descola & Pálsson 1996, pp. 127–44
- Ingold T. 1980. *Hunters, Pastoralists and Ranchers*. Cambridge, UK: Cambridge Univ. Press
- Ingold T, ed. 1988. *What is an Animal?* London: Routledge
- Ingold T, ed. 1994a. *Companion Encyclopedia of Anthropology*. London: Routledge
- Ingold T. 1994b. Humanity and animality. See Ingold 1994a, pp. 14–32
- James W. 1990. Antelope as self-image among the Uduk. See Willis 1990a, pp. 196–203
- Kalland A. 1993. Management by totemization: whale symbolism and the anti-whaling campaign. *Arctic* 46(2):124–33
- Kellert SR, Wilson EO, eds. 1993. *The Biophilia Hypothesis*. Washington, DC: Island
- Kuper A. 1997. On human nature: Darwin and the anthropologists. In *Nature and Society in Historical Context*, ed. M Teich, R Porter, B Gustafsson, pp. 274–94. Cambridge, UK: Cambridge Univ. Press
- Lawrence EA. 1985. *Hoofbeats and Society: Studies of Human-Horse Interactions*. Bloomington: Indiana Univ. Press
- Lawrence EA. 1994. Rodeo horses: the wild and the tame. See Willis 1990a, pp. 222–35
- Lawrence EA. 1997. *Hunting the Wren: Transformation of Bird to Symbol: a Study in Human-Animal Relationships*. Knoxville: Univ. Tenn. Press
- Leach E. 1964. Anthropological aspects of language: animal categories and verbal abuse. In *New Directions in the Study of Language*, ed. E Lenneberg, pp. 23–63. Cambridge, MA: MIT Press
- Leach E. 1970. *Claude Lévi-Strauss*. Chicago: Univ. Chicago Press
- Lévi-Strauss C. 1963. *Totemism*. Transl. R Needham. Boston: Beacon
- Lundin S. 1999. The boundless body: cultural perspectives on xenotransplantation. *Ethnos* 64(1): 5–31
- MacKenzie JM. 1988. *The Empire of Nature: Hunting, Conservation and British Imperialism*. Manchester, UK: Manchester Univ. Press
- Manning A, Serpell J, eds. 1994. *Animals and Human Society*. London: Routledge
- Marks SA. 1991. *Southern Hunting in Black and White: Nature, History, and Ritual in a Carolina Community*. Lawrenceville, NJ: Princeton Univ. Press
- Martin E. 1995. Working across the human-other divide. See Birke & Hubbard 1995, pp. 261–75
- Melville E. 1994. *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico*. Cambridge, UK: Cambridge Univ. Press
- Mills A. 1994. *Eagle Down is Our Law: Witsuwit'en Law, Feasts, and Land Claims*. Vancouver, Can.: Univ. Br. Columbia Press
- Milton K, ed. 1993. *Environmentalism: The View from Anthropology*. New York: Routledge
- Mitchell RW, Thompson NS, Miles HL, eds. 1997. *Anthropomorphism, Anecdotes, and Animals*. Albany: State Univ. New York Press
- Morales E. 1995. *The Guinea Pig: Healing, Food, and Ritual in the Andes*. Tucson: Univ. Ariz. Press
- Morris B. 1998. *The Power of Animals: Malawian Culture and Mammalian Life*. Oxford, UK: Berg
- Morton J. 1990. Rednecks, ‘roos, and racism:

- kangaroo shooting and the Australian way. *Soc. Anal.* 27:30–49
- Morton J, Smith N. 1999. Planting indigenous species: a subversion of Australian ec-nationalism. In *Quicksands: Foundational Histories in Australia and Aotearoa*, ed. K Neumann, N Thomas, H Ericksen, pp. 153–75. Sydney: Univ. New S. Wales Press
- Mullan B, Marvin G. 1999. *Zoo Culture*. Urbana: Univ. Illinois Press. 2nd ed.
- Mullin MH. 1996. *Art, dogs, and women: gender, value, and evaluation in private and public spheres*. Presented at Annu. Meet. Am. Anthropol. Assoc., 96th, San Francisco
- Mullin MH. 1999. *Nature, culture, and the commodification of dogs*. Presented at Annu. Meet. Am. Ethnol. Soc., Portland, Ore.
- Muth R. 1999. Bambi, Babe, and Free Willy: the social meaning of animals in advanced industrial society. Presented at Annu. Meet. Am. Ethnol. Soc., Portland, Ore.
- Nader L, ed. 1996. *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*. New York: Routledge
- Nelson R. 1997. *Heart and Blood: Living with Deer in America*. New York: Knopf
- Neumann RP. 1998. *Imposing Wilderness: Struggles over Livelihood and Nature Preservation in Africa*. Chicago: Univ. Chicago Press
- Noble BE. 1999. Politics, gender, and worldly primatology: the Goodall-Fossey nexus. See Strum & Fedigan 1999. In press
- Noske B. 1993. The animal question in anthropology. *Soc. Anim.* 1(2):185–90
- Noske B. 1997. *Beyond Boundaries: Humans and Animals*. Montreal, Can.: Black Rose
- Ohnuki-Tierney E. 1987. *The Monkey as Mirror: Symbolic Transformations in Japanese History and Ritual*. Princeton, NJ: Princeton Univ. Press
- Ohnuki-Tierney E. 1990. The monkey as self in Japanese culture. In *Culture Through Time: Anthropological Approaches*, ed. E Ohnuki-Tierney, pp. 128–53. Stanford, CA: Stanford Univ. Press
- Pagden A. 1982. *The Fall of Natural Man: The American Indian and the Origins of Comparative Ethnology*. Cambridge, UK: Cambridge Univ. Press
- Palencia-Roth M. 1996. Enemies of God: monsters and the theology of conquest. See Arnold 1996, pp. 23–49
- Pálsson G. 1991. *Coastal Economies, Cultural Accounts: Human Ecology and Icelandic Discourse*. Manchester, UK: Manchester Univ. Press
- Pálsson G. 1994. The idea of fish: land and sea in the Icelandic world-view. See Willis 1990a, pp. 119–33
- Pálsson G. 1996. Human-environmental relations: orientalism, paternalism and communalism. See Descola & Pálsson 1996, pp. 63–81
- Pink S. 1997. *Women and Bullfighting: Gender, Sex and the Consumption of Tradition*. Oxford, UK: Berg
- Premack D, Premack AJ. 1994. Why animals have neither culture nor history. See Ingold 1994a, pp. 350–65
- Richards P. 1993. Natural symbols and natural history: chimpanzees, elephants and experiments in Mende thought. See Milton 1993, pp. 144–59
- Ritvo H. 1987. *The Animal Estate: The English and Other Creatures in the Victorian Age*. Cambridge, MA: Harvard Univ. Press
- Ritvo H. 1991. The animal connection. See Sheehan & Sosna 1991, pp. 68–84
- Ritvo H. 1996. Barring the cross: miscegenation and purity in eighteenth- and nineteenth-century Britain. In *Human, All too Human*, ed. D Fuss, pp. 37–58. New York: Routledge
- Ritvo H. 1997. *The Platypus and the Mermaid, and Other Figments of the Classifying Imagination*. Cambridge, MA: Harvard Univ. Press
- Rival L. 1996. Blowpipes and spears: the social significance of Huaorani technological choices. See Descola & Pálsson 1996, pp. 145–64
- Salisbury JE. 1994. *The Beast Within: Animals in the Middle Ages*. New York: Routledge

- Salisbury JE. 1997. Human beasts and bestial humans in the Middle Ages. See Ham & Senior 1997, pp. 9–22
- Samatar SS. 1982. *Oral Poetry and Somali Nationalism: The Case of Sayyid Mahammad 'Abdille Hasan*. Cambridge, UK: Cambridge Univ. Press
- Schiebinger L. 1993. *Nature's Body: Gender in the Making of Modern Science*. Boston: Beacon
- Schwartz M. 1997. *A History of Dogs in the Early Americas*. New Haven: Yale Univ. Press
- Scott C. 1996. Science for the west, myth for the rest? The case of James Bay Cree knowledge construction. See Nader 1996, pp. 69–86
- Shanklin E. 1985. Sustenance and symbol: anthropological studies of domesticated animals. *Annu. Rev. Anthropol.* 14:375–403
- Sheehan JJ, Sosna M, eds. 1991. *The Boundaries of Humanity*. Berkeley: Univ. Calif. Press
- Sperber D. 1975. *Rethinking Symbolism*. Cambridge, UK: Cambridge Univ. Press
- Sperling S. 1988. *Animal Liberators: Research and Morality*. Berkeley: Univ. Calif. Press
- Strum S, Fedigan L, eds. 1999. *Primate Encounters: Models of Science, Gender, and Society*. Chicago: Univ. Chicago Press. In press
- Stull DB, Broadway MJ, Griffith D, eds. 1995. *Any Way You Cut It: Meat Processing and Small-Town America*. Lawrence: Univ. Press Kansas
- Tanner A. 1979. *Bringing Home Animals: Religious Ideology and Mode of Production of the Mistassini Cree Hunters*. New York: St. Martin's
- Taussig M. 1992. *The Nervous System*. New York: Routledge
- Thomas EM. 1993. *The Hidden Life of Dogs*. Boston: Houghton Mifflin
- Thomas K. 1983. *Man and the Natural World: A History of the Modern Sensibility*. New York: Pantheon
- Thomas N. 1994. *Colonialism's Culture: Anthropology, Travel and Government*. Princeton, NJ: Princeton Univ. Press
- Thu KM, Durrenberger PE. 1998. *Pigs, Profits, and Rural Communities*. Albany: State Univ. New York Press
- Tsing AL. 1995. Empowering nature, or: some gleanings in bee culture. See Yanagisako & Delaney 1995a, pp. 113–43
- Vialles N. 1994. *Animal to Edible*. Transl. JA Underwood. Cambridge, UK: Cambridge Univ. Press
- Wenzel G. 1991. *Animal Rights, Human Rights: Ecology, Economy and Ideology in the Canadian Arctic*. Toronto: Univ. Toronto Press
- Wheatley B. 1999. *The Sacred Monkeys of Bali*. Prospect Heights, IL: Waveland
- White DG. 1991. *Myths of the Dog-Man*. Chicago: Univ. Chicago Press
- Whitehead H. 1995. The gender of birds in a Mountain Ok culture. See Yanagisako & Delaney 1995a, pp. 145–76
- Williams R. 1985. *Keywords: A Vocabulary of Culture and Society*. New York: Oxford Univ. Press
- Willis R, ed. 1990a. *Signifying Animals: Human Meaning in the Natural World*. London: Routledge
- Willis R. 1990b. Introduction. See Willis 1990a, pp. 1–24
- Wolch JR, Emel J, eds. 1998. *Animal Geographies: Place, Politics, and Identity in the Nature-Culture Borderlands*. London: Verso
- Wolf E. 1982. *Europe and the People without History*. Berkeley: Univ. Calif. Press
- Yanagisako S, Delaney C, eds. 1995a. *Naturalizing Power: Essays in Feminist Cultural Analysis*. New York: Routledge
- Yanagisako S, Delaney C. 1995b. Naturalizing power. See Yanagisako & Delaney 1995a, pp. 1–22