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Beyond protein and calories

Our starting point is to recognise that subsistence and economy are not synonyms. Subsistence refers to what people live on; economy deals with the management and mobilization of resources. This is true, of course, for all societies at whatever level of organisational complexity and indicates that if we use only palaeoeconomic data to talk of calories and nutrients, an enormous amount of potential information is being ignored. The questions that any research design should address deal with the links between the management of basic resources (plants, animals, raw materials) and people, and with the transformation and maintenance of institutions within the process of social change and reproduction. (Barker and Gamble 1985:5)

Animals have touched the life of every human. Some of us hunt them, some raise them for food and other products, and some keep them as pets. We may take pleasure from watching birds and other wild animals, and we may struggle to keep some animals, such as mice and rats, away from our houses. Many of us eat them, some use their meat or other body parts medicinally, and we make clothing and other products from their skins and fur. Even if we have little direct contact with animals and use no animal products (surely a very rare occurrence), they provide a rich source of symbolism and metaphor: not only food but also food for thought (Gifford-Gonzalez 2007:10, Lévi-Strauss 1963:89).

The social and symbolic importance of animals stems both from their pervasiveness in our lives and from their animate nature (Digard 1990:220; Galaty and Johnson 1990; Kent 1989). They move and act, are like us and yet different. We value and often admire them, and yet we exploit them. This ambiguity and discomfort permeate human–animal relations. The sense of guilt that is always present to some degree when we kill, confine, and control animals adds to the intensity of our feelings about them (Serpell 1986).

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What is an animal?

In this book, I use the word “animal” as shorthand for nonhuman animals. Of course, the opposition of humans and animals is artificial and anthropocentric. Humans are one animal species among many; like all other species we are by definition unique, but we do not logically form a category opposed to (and above) all other species. There is a long history of attempts to define the essence of humanity in a way that excludes all other species, and these efforts have become increasingly tortured as we learn more about the behavior of other animals. Possession of a soul, consciousness, language, tool use or manufacture, and culture have been favorite distinguishing traits. Yet all of these supposedly human traits have been claimed (if often hotly disputed) for assorted nonhuman animals, leaving the boundary between humans and animals much fuzzier (Corbey 2005; Gowlett 2009; Griffin 2001; Heinrich 1999; Ingold 1988; Kowalski 1991; Pepperberg 1999; Ritvo 1999; Sayers and Lovejoy 2008; Weir and Kacelnik 2006; Whiten and van Schaik 2007).

ANTHROPOCENTRISM AND ANTHROPOMORPHISM

Dueling tendencies to anthropocentrism and anthropomorphism inform our conceptions of our relations to other animals, although both can be present simultaneously when we uncritically project human traits onto other species (Lockwood 1989). Each carries its own pitfalls. Anthropocentrism inscribes a sharp human–animal boundary and privileges humans strongly, whereas anthropomorphism erases the boundary and risks denying animals their own unique identities. Biologists have long debated the relative dangers of anthropomorphism and anthropocentrism. For much of the 20th century anthropomorphism was reviled in studies of animal behavior. The attribution of any “human” qualities to animals, particularly mental states such as emotions or intentionality, was seen as unwarranted projection that interfered with scientific understanding (e.g., Breland and Breland 1966; Broadhurst 1963; Kennedy 1992). However, anthropomorphism is not applied to all traits shared by humans and other animals, but is only invoked as a critique for those characteristics seen as defining humanity, which themselves have been historically and culturally variable (Asquith 1997; Cartmill 1993; de Waal 2001; Guthrie 1997; Ham and Senior 1997; LaCapra 2009; Milton

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2005; Ritvo 1999; Salisbury 1994). More recently, anthropomorphism, in the sense of relying on an empathetic understanding to interpret animal behavior, has been recast in a positive light as increasing the accuracy of scientific knowledge (Bekoff 2004; Cartmill 2000; Crist 1999; Daston and Mitman 2005; de Waal 2001; Goodall 1990; Keeley 2004; Lockwood 1989). Moreover, through its insistence on judging intelligence in other species according to how much it resembles human cognition, anthropocentrism can be seen as at least as great a problem as anthropomorphism in studies of animal intelligence (Barrett et al. 2007; Emery 2006).

In fact, the human–animal boundary, and its patrolling through accusations of anthropomorphism, is less a scientific than a moral phenomenon (Cartmill 2001). Whether we see ourselves as inside or outside of nature, one species among many or set apart from all others, has ethical consequences. The nature of those consequences is not necessarily clear, however. One way to erase the boundary is to treat humans like any other animal, as in human behavioral ecology. Some have argued that this approach risks naturalizing social phenomena such as gender distinctions (Crist 1999; McCaughey 2007). Others see the human–animal divide as enabling the exploitation of women and other groups by likening them to animals (Dunayer 1995; Mullin 1999), although it can also be argued that the denial of biological determinism, hence privileging culture, depends on a sharp human–animal boundary (Birke 1995; Corbey 2005): “[O]ur anthropocentric assumption that humans operate in a distinctly separate and superior sphere to the merely biological one informs the whole of anthropology through the presupposition of the distinction between culture and nature” (Kenrick 2002:193).

Another way to breach the human–animal boundary is to extend the ethical system we apply to humans to other species as well. It is easier to use nonhuman animals (for food, other products, labor, or companionship) if we regard them as belonging to an entirely different category from people. Extending personhood to some or all other animal species renders many of these relations problematic, although those who advocate doing so may see the implications as ranging from treating animals as well as possible while we utilize them, to refraining from killing (and eating) them, to ending the keeping of domestic animals and minimizing contact with wild ones (Fausto 2007; Franklin 1999; LaCapra 2009; Milton 2005; Ryder 2000; Serpell 1986).

These implications depend in large measure on the notion of personhood, which is also culturally variable. In contemporary western society, personhood tends to be understood in terms of rights and, to some extent, responsibilities (LaCapra 2009). Thus, according personhood to other species would mean extending human rights to them. However, doing so ironically projects an anthropocentric (and indeed Eurocentric) notion of rights and relations onto other species (Corbey 2005; Franklin 1999; Fuentes 2006; Tapper 1988). Many cultures, especially foragers, grant some form of personhood to (some) animals (Brightman 1993; Hugh-Jones 1996b; Kenrick 2002; Morris 1998; Nadasdy 2007; Russell 2010; Willerslev 2007). This personhood is cast not in terms of rights (the terms in which we grant personhood to corporations, for example), but of relations: Persons are entities with which humans enter into social relations. Typically this personhood applies to some but not all animals and not all the time; it is often accorded on an individual rather than a species basis. Crucially, animal personhood is not a barrier to killing and eating animals for these groups; rather, consumption is part of the relationship.

Neither anthropocentrism nor anthropomorphism is limited to modern western society, however, although they take particular forms there. My ethnographic readings indicate that most societies have a term and concept for “animal” in opposition to humans that approximate ours (e.g., V. Anderson 2004; Copet-Rougier 1988). The occasional groups that do not define animals as a category include both foragers (Howell 1996) and farmers (Luxereau 1989). Careful examination of human–animal relations reveals a range of approaches, from anthropomorphic to anthropocentric, relational to exploitive, in any society, which vary situationally (Brightman 1993; Kenrick 2002; Morris 1998).

Some of the most interesting work on anthropomorphism treats it not as an impediment to the scientific understanding of animals, but as a feature of human cognition (Eddy et al. 1993). One can then consider why we tend to anthropomorphize and what has resulted from it. As Stewart Guthrie (1997) notes, we behave anthropomorphically with tremendous frequency, talking to plants and inanimate objects as well as animals, imputing motivations to events, and so on. He suggests that we have been selected to anthropomorphize because we are social animals, so it is adaptive to seek intentionally motivated explanations for occurrences. We are more likely to suffer dire consequences from failing to

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understand a genuine motivation than from seeing motivation when it does not exist. Guthrie (1993) believes that our inclination to anthropomorphize underlies the origin of religion. Agustín Fuentes (2006) suggests that our anthropomorphic ability to empathize with other species is rooted in our common mammalian heritage, combined with our uniquely human consciousness. Many have attributed it to our hunting heritage, noting that predators benefit from identifying with their prey; certainly human hunters tend to do so (Alger and Alger 2003; Willerslev 2007). Brian Morris (2000:20–1) calls this theriomorphic thinking, but most include it in anthropomorphism. Nurit Bird-David (1993) suggests that foragers conceive of their relation to nature in terms of human relations, although the form varies. James Serpell (2002) argues that anthropomorphism is what enables the pet relationship and what makes it rewarding for humans. In contrast, animals may suffer through being selected to look more humanlike. Because he sees pet keeping as the origin of animal domestication, anthropomorphism is responsible for all our domestic animals in Serpell's view. Steven Mithen (2007) makes a similar argument that both plant and animal domestication result from a misapplication of social intelligence (treating other species like humans and entering into relations with them; in this case caring, parental relations). Mithen believes that this misapplication became possible when the separate modules for social, natural, and technical knowledge became connected in the minds of modern humans, probably in the Upper Paleolithic.

In this book, I self-consciously engage in anthropocentrism in that, as an anthropologist, my interest in animals lies in using them to understand people (Mullin 1999). However, we cannot understand people unless we acknowledge that they have often related to animals in ways we might consider anthropomorphic. Justin Kenrick (2002:194) instead argues that foragers' "understanding is not anthropomorphic, in the sense of a one way projection from an active social sphere onto a passive natural one, it is . . . a process of mutual perception and interaction between species, including humans."

Animals and zooarchaeology

Zooarchaeology has grown and changed along with its parent discipline of archaeology. When archaeologists first decided it would be useful to

know something about the animal bones they excavated as well as the artifacts, they delivered the bones to a friendly zoologist, who obliged with a species list. As some of these zoologists became interested in archaeological collections as a useful record of changes in animal morphology and distribution, they began to measure the bones to document size changes and to consider questions such as when and where domestication occurred and how it might be recognized (e.g., Allen 1920; Bäumlner 1921).

This information was of some interest to archaeologists, but as with other related disciplines, they came to feel that zoologists were not asking the questions of greatest relevance to archaeology. Therefore, roughly in the 1970s, archaeologists started to acquire expertise in the arcane skills of identifying scraps of animal bone, and, in line with the concerns of processual archaeology, shifted their focus to how ancient peoples used their animals: hunting and herding strategies, butchering techniques, transport of animal parts, and so on. Methodological discussions focused initially on quantification: What is the most accurate way to determine the relative contribution of different animal species to the diet (e.g., Bökönyi 1970; Casteel 1978; Grayson 1973, 1979; Krantz 1968; Perkins 1973a; Ringrose 1993; Uerpmann 1973; J. Watson 1979; White 1953a; Winder 1991). Later, techniques for determining age at death, needed to construct mortality profiles indicative of different hunting and herding practices, came to the fore (e.g., Chaplin 1969; Cribb 1984; Elder 1965; Higham 1968; Klein 1982; Lyman 1987; O'Connor 1998; Payne 1973; Perkins 1964; Redding 1984; Stiner 1990).

In the last 30 years, zooarchaeologists have come to realize that it is naïve to interpret faunal assemblages recovered from archaeological sites as though they directly reflect human behavior (Binford 1981). It is first necessary to understand the history of the assemblage: how it was created and how carnivores, weathering, fluvial transport, and other agents have modified it. In some cases, the analyst must demonstrate that humans were involved at all. Developing the tools to do this has been a major focus of zooarchaeological research in recent decades and has vastly increased the sophistication of our taphonomic understanding (e.g., Andrews 1990; Behrensmeyer 1978; Behrensmeyer and Hill 1980; Binford 1981; Binford and Bertram 1977; Brain 1969, 1981; Fisher 1995; Gifford 1981; Hanson 1980a; Higham 1968; Hill 1979; Lyman 1984, 1994; Meadow 1980; Shipman 1981; Thomas 1971). It is no longer

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acceptable to attribute skewed body part distributions, for example, to human choices without first rigorously examining other potential causes.

Beyond protein and calories, and even attrition

Perhaps because the explosion in taphonomic research was in large measure driven by a debate about whether early hominids were hunters or scavengers (see Chapter 4), although methodological sophistication has increased by leaps and bounds, the questions addressed have remained focused on basic subsistence. Until quite recently, faunal analysts largely limited themselves to the reconstruction of diet and procurement strategies. Implicit in this approach is the assumption that the only role that animals played in prehistoric societies was as a food source: calories and protein. One major challenge to this view is Andrew Sherratt's notion of the Secondary Products Revolution (see Chapter 8), which argues that the (relatively late) use of milk, wool, and animal traction represents a crucial intensification in the exploitation of domestic animals (Sherratt 1982, 1983). Sherratt's shift in focus from meat to the living animal is an important step, but remains narrowly utilitarian.

I will argue that zooarchaeologists have inappropriately narrowed their interpretations by seeing animals only in terms of protein and calories. In every known contemporary society, animals, and indeed meat, are much more than this. They fulfill a variety of roles – as pets, symbols, wealth, objects of feasting and sacrifice, and so on. Hunting and herding do not exhaust human–animal relationships. The social and symbolic functions of animals and meat may often be of equal or even greater importance than their dietary role. Although social and symbolic issues have come to the fore in archaeology in general, not only in postprocessual approaches but across theoretical schools, zooarchaeologists have lagged behind. Of course, there are notable exceptions: Such scholars as Diane Gifford-Gonzalez, Pam Crabtree, Kathleen Ryan, and Richard Meadow were addressing some of these issues in the 1970s–1990s, and in the last decade or so there has been a considerable shift in interpretations. However, the narrow economic focus still predominates.

I do not deny that people must eat, that protein and fat are critical nutrients of which meat is an excellent and frequently used source, nor that the subsistence and utilitarian roles of animals are important. Rather I suggest that the subsistence role of animals has been privileged to

the exclusion of all others and that this constitutes a serious problem in interpretation. It is not merely that treating animals solely as sources of protein and calories produces incomplete interpretations that focus on a narrow sphere of human life. Ignoring the importance of other factors in human interactions with animals is likely to yield interpretations that are just plain wrong. If a mortality profile created by bridewealth requirements (see Chapter 8) is interpreted as though it were created by decisions to maximize meat or milk, the subsistence strategy will be obscured rather than elucidated. Therefore, even if the goal is to study subsistence, we must take into account the entire spectrum of human–animal relationships. Just as we must consider the effects of taphonomic forces that have transformed faunal assemblages, so we must consider the full range of human behaviors that may have produced them, or our interpretations will be equally naïve.

In this book, then, I attempt to redress the imbalance in zooarchaeological interpretations. I give short shrift to subsistence not because I devalue it, but because it has been addressed well and thoroughly elsewhere. Likewise, I spend little time on the crucial topic of taphonomy, which has not lacked visibility in recent years. Instead I try to fill in the gaps in modeling ancient human uses of animals and their products by concentrating on the areas that have received less attention in zooarchaeology. Many of these areas revolve around the value and meanings of living animals: animal symbolism, animals as wealth, animals as pets. Although we only see the remains of dead animals, we should remember that in many cases the living animals might have been more important than their meat. Meat itself has significance beyond the merely nutritional, and it tends to be valued out of proportion to its actual contribution to the diet. Hence I also consider the valorization of meat, and specifically the importance of meat sharing, feasting, and sacrifice.

The archaeological literature on these topics is limited, although growing fast. Thus I draw to a large extent on the scholarship of other disciplines: ethnography, history, classics, and religious studies. Although it is beyond the scope of this book to provide detailed zooarchaeological analyses, I outline the ways in which we could incorporate these insights into zooarchaeological studies and interpretations and what changes in method are needed to explore these questions adequately. Primary among these methodological changes are a greater focus on contextual analysis and the integration of information from other materials. I also explore

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what we can say about human society based on the work done so far, in particular exploring the role of animals and meat in the construction of gender.

I address myself particularly to prehistorians, because those working in periods with documentary evidence have found it harder to ignore these issues. However, most of the discussions here are applicable to later periods as well, which I cover to some extent. My own expertise is in Old World archaeology, so there is no doubt a bias toward concerns and examples from this area. I do not limit myself in geographical scope, however, and New World archaeologists should find much that speaks to their interests as well. I aim both to suggest to zooarchaeologists how they might enrich their interpretations and to inform archaeologists in general of the vast potential of animal remains to illuminate ancient social life. One consequence of the subsistence focus in zooarchaeology is that animals have been given short shrift in archaeological syntheses (see Robb 2007 for a notable exception).

My goal is to place the social at the center of zooarchaeology. I operate from a basis in practice theory (Bourdieu 1977; Giddens 1979; Pauketat 2001; Robb 1999), focusing on the power relations enacted in social life. My primary interest lies in the kind of societies described by Pierre Bourdieu (1977:183–4):

In societies which have no “self-regulating market” (in Karl Polanyi’s sense), no educational system, no juridical apparatus, and no State, relations of domination can be set up and maintained only at the cost of strategies which must be endlessly renewed, because the conditions required for a *mediated, lasting appropriation* of other agents’ labour, services, or homage have not been brought together. . . . [These are] social universes in which relations of domination are made, unmade, and remade in and by the interactions between persons.

In these societies, many of these relations are enacted through animals and their products, and we ignore them at our peril. There is a growing awareness of the importance of social factors in zooarchaeology across theoretical paradigms, as evident, for example, in the recent surge in costly signaling models in human behavioral ecology approaches (e.g., Aldenderfer 2006; Codding et al. 2010; McGuire and Hildebrandt 2005). These models attempt to incorporate what others might call prestige or social capital into evolutionary accounts.

In the chapters that follow I often paint with a broad brush, offering sweeping generalizations and quasi-universal statements about human–animal relations. My excuse is that I am making the case for considering these possibilities in interpreting animal bone assemblages. Ultimately, I hope to stimulate richer, more complete accounts of local prehistories, from which we can build a fuller understanding of the history of human–animal relations.