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Carnivory: The First 1.8 Million Years

How did humans come to remake the bodies of other gregarious large vertebrates into concentrated reservoirs of food energy—and with what implications for present-day trends in human nutrition, the spaces of human habitation, our systems of law, and our sense of what it is to be a person? This project looks at contemporary shifts in the nature of human efforts to shape animal metabolism. I will situate these shifts in the context both of the sciences of human origins and human economy, and of the colonial encounters in which those sciences assumed their current disciplinary forms. Specifically, I propose to use the history of the introduction of livestock into the Western Desert of Australia and the assimilation of the Indigenous population into the livestock station economy as a lens by which to focus our understanding of the contemporary global transition to a diet based on intensive livestock production.

In the course of my research on the relationship between anthropology and property law in the Western Desert of Australia I made three observations: First, that the introduction of livestock was, from the perspective of Indigenous Australians, the single most transformative aspect of colonization. Second, that the disruption of local subsistence habits, instigated by the stocking of the desert, was inseparable from the change in diet experienced by Indigenous Australians who, stripped of the environmental base for foraging, were drawn into the livestock station economy. Third, that the shift from foraging to station life experienced by Indigenous Australians between 1890 and 1970 proved catalytic for the science of human behavioral ecology, with anthropologists debating at what point a postulated precontact Late Holocene climax ecosystem, in which “Man the Hunter” was the protagonist, had unraveled. Around 1970, ecologist argued that the livestock station era marked the end of the Holocene in the Western Desert—but they did not have a name for what came next.

Today we do. In 2010 the International Commission on Stratigraphy formed a working group to consider extending the stratigraphic timeline to include a new epoch, the Anthropocene. Much of what is new (*cene*) about the scale and intensity of human interventions (*anthropo*) in the earth is the degree to which this one species has extended its dominion over living things: over the distribution of plant and animal bodies in space and time, over the flow of genes through bodies and populations, and over the flow of energy up the chain of animacy from solar radiation to plants to animals (often via fossilized plant residues) to humans.

At the heart of the changes encapsulated in the term “Anthropocene” is a two-sided transformation in the character of human interventions in the lives of other animals. On one side is the *livestock transition*, a shift in the modal strategy of terrestrial vertebrate production from an extensive system relying on non-arable pastureland to an intensive one relying on feedstocks derived from cereals and oilseeds. This is coupled with a parallel transition in human nutrition from a predominantly vegetarian diet to one based substantially on animal products. Today, livestock production requires 30 percent of Earth’s dry surface area and 78 percent of agricultural land, including a third of all cropland, and accounts for 18 percent of greenhouse gas emissions. Between 1960 and 2000, per capita meat consumption in the developing

world more than doubled; in China it more than quadrupled (Steinfeld et al. 2006, 74, 112; Kearney 2010, 2795). When we ask how we're going to feed a world of nine billion people, what we are asking is how are we going to feed a world of nine billion *carnivores*—and, what are we going to do with the waste generated by producing and consuming animals on this scale.

In the Western Desert livestock station era we see three patterns with implications for global trends: the introduction of large-scale livestock production was a cause rather than a consequence of a nutrition transition; the intensification of animal production was tied to the colonization of a human population; and the transformation of animal production and consumption inspired novel theories of property, economic value, and the ecology of human–animal relations.

The station era serves both as parable for and exemplar of a broader phenomenon, the formation of a planetary "anthrome" (anthropogenic biomes) in which animal bodies, patterns of land use, tastes, scientific expertise, and law circulate widely. These days we are all adherents of the station diet. By starting with the questions of when, how, and under what circumstances anthropologists first observed shifts in subsistence habits among Indigenous Australians newly acclimated to life on cattle stations, I propose, first, to trace out the emergence of contemporary institutions of human science related to the behavioral ecology of foragers, the origins of human carnivory, and the production of food, and second, to clarify what is at stake in public debates over the role of animals in the human diet.

The livestock and nutrition transitions embody an epochal transformation, not just in food-related behavior but in human attitudes toward other animals: the global diffusion of a worldview in which nonhuman animals occupy an ontic order separate from that of humans— they are less agentive, less endowed with moral qualities, less animate. What is congealed in the bodies of large vertebrates raised for food is not just protein or energy but the epistemic and political will to treat species identity as a categorical limit between like and other. This is one meaning of the term Anthropocene: we are entering an epoch defined by humanity's self-ascription of a distinctly nonanimal identity. Here, drawing on recent efforts to characterize gross patterns in social ontologies of the animate, I ask: What consequences, environmental, political, and ethical, devolve from reifying conspecificity?

The broader aim of this project is to trace out the epochal transformation of metabolic life at every level of self-organization, from intestinal microbiome to planetary anthrome, over the past 120 years and to demonstrate that: 1) we would do well to understand the subjection of non-human vertebrates and the subjection of human populations as aspects of a single phenomenon and 2) to recognize that the political beta-diversity *within* the human species—the inequalities, among human populations, in access to the social and material bases of human flourishing, including adequate nutrition—is similar in kind to the gap in political status *between* humans and other vertebrates; and indeed, 3) a postcolonial reconciliation that aspires to the melioration of relationships between colonized and colonizer within the human species is inadequate: reconciliation must extend to the relationships between humans and other animals.