## **Fermenting Ethics**

Poaching Heather Paxson

Jacob Metcalf, University of California, Santa Cruz

Heather Paxson's article, "Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States" (Paxton 2008) introduces the concept of *microbiopolitics* through an ethnography of raw-milk cheese cultures in the U.S. and abroad. Playing off of Foucault's concept of *biopolitics*, the governance of populations through the subjugation of bodies (Foucault 1978), Paxson uses the micro-biopolitics of raw milk cheese to illustrate the way in which "dissent over how to live with microorganisms reflects disagreement about how humans ought live with one another" (2008:16). Following Pasteur's discovery of microorganisms, biopolitics became in part a matter of finding a "pure relationship" between humans that could exclude microbial agency (Latour 1988). Although Foucault introduced biopolitics in *The History of Sexuality*, he suggested that he could have just as well written a genealogy of food, and so it is fitting that a post-Pasteurian microbiopolitics is thus a matter of finding a right relationship between humans and microbes through the literal and figurative fermentation of food cultures (Zwart 2000). As an ethnography of new-yet-ancient methods of cheese making, Paxson poses an unresolved challenge – what will a right relationship look like?

Raw milk contains a diversity of microorganisms, some good for making cheese, others not very good for human alimentary systems. Cheese-making requires fostering conditions in which preferred microbial cultures can flourish and produce the desired type of cheese. Ancient methods of cheese making made use of regional microbial cultures embedded in the walls of cheese houses and caves to inoculate milk. Following Pasteur's introduction of sterilization techniques to cheese making in 1863, milk is often heated to kill all resident bacteria in milk, whether pathogenic or not. In the United States, federal regulations require raw milk cheese to be differently classed, with the result that young raw milk cheese is illegal to sell. Recent coalitions of foodies, farmers, conservative Christians, and libertarians have coalesced around resistance to these regulations, arguing that raw milk cheese is safer, healthier, and more delectable than the dominant pasteurized milk cultures.

These coalitions are at the center of a potential shift in what Paxson calls microbiopolitics, "the recognition and management, governmental and grassroots, of human encounters with the vital organismic agencies of bacteria, viruses, and fungi" (2008:18). Where Pasteurian ontological politics identifies microbial life as a threat to be rationally managed by the government for the health of consumer-citizens, the new post-Pasteurian ontological politics claims that microbes are essential allies in the pursuit of human well-being, and they form a nexus around which right relations between farmer, land, animal, and eater must be constructed. Paxson writes that "microbiopolitically, raw-milk cheese might be forwarded as a biotechnology for regionalism or, in more contemporary argot, for localism, the expression of a people's connection to a piece of land" (26).

Paxson cites the now-oft-cited statistic that 90% of the genetic material in "us" is "not us," but rather belongs to "our" microbiome. Despite being a committed post-

Pasteurian, no matter how many times I hear this I still experience a little ontological whiplash. Much like a fine cheese, we have a microbial rind holding us together. If Paxson is preparing a book from this project, I strongly suggest she title it "We Have Never Been Eukaryotes." Since this piece was published in 2008, the concept of our microbiome appears to be rapidly inoculating scientific practices and popular cultures. Yet, it is not clear what we will make of post-Pasteurian life. When the microbiome shows up in the science news, you will see a gesture toward this whiplash, but it is quickly subverted by the reductionistic impulses of biomedicine – will we solve obesity by manipulating gut bacteria? Will microbial ecologies fill in the causal gaps in the story of human diversity that human genome projects have failed to explain? These questions are unfortunate because they are in concert with the worst of our biotechnological impulses. When we are faced with worldly problems our impulse is to strip away the world in search of a solution – if we have unfriendly bacteria in our cheese, the solution is to wage war on all bacteria. Paxson's work is a welcome corrective to this impulse because she invites us to dwell with the biopolitics of the post-Pasteurian shift – how will we organize a good life with our tiny messmates?

Importantly, the good life Paxson gestures toward does not look *pre*-Pasteurian. There is no room for pretending that humans can easily get along with all microbial life in all forms. What makes the subjects of her ethnography post-Pasteurian is that their practices are grounded in an onto-ethico-epistemology of the fundamental relationality of micro- and macro-lives – there is no "me" without "we," and most of the time the "we" is so small that we cannot see it and so multiple that we cannot count it. As with most farmers, these commitments are deeply practical and don't leave much space for sentimentality: there are procedures for keeping one's shoes clean, there are microbial cultures imported from France, and there are thoroughly empirical claims about cholesterol, digestion and immune system functions. This, I suggest, is the purpose of multi-species ethnography – figuring out how to re-narrate life on earth with a fidelity to interdependence, but without the pretense that a good life can exist without a little sanitation. And as a philosopher among anthropologists, I would also like to insist on the ethical dimension of this project. As María Puig de la Bellacasa argues in the context of permaculture farming, the ethics of food technoscience cannot be a matter of searching for stable norms managed by humans alone but must be understood as constructing an alter-biopolitics of new material configurations that can sustain the co-flourishing of humans and non-humans alike (Puig de la Bellacasa 2010). Pasteurian biopolitics survives amidst an ethos of sterilization, a denial of the rind that holds us together. This alter-biopolitics must learn to address questions about who lives and dies once that denial is subverted. What we see in all of these multispecies narratives, is that there is no neutrality when the "we" that is the "me" constitutes our bodies. We all have stakes in who is on our boots and whose fingers poke holes in our cheese.

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## "We Both Wait Together"

Poaching Agustin Fuentes

Matei Candea, Durham University

Poachers, whether of animals or of papers, must first themselves be captured by their prey, attached and drawn to it. Some papers capture you slowly, through a diffuse and pervasive intoxication; others capture you swiftly and instantly, springing a trap in one paragraph or even one sentence. In the case of Agustin Fuentes' paper "Naturalcultural Encounters in Bali" (2010), I can pinpoint the precise moment when the trap was sprung and I became utterly captured by his account of Balinese temple macaques and their humans. The line comes from a Balinese bus driver sitting outside a temple on a slow tourist day. Speaking of the macaques who are sitting nearby, enjoying the same shade, the driver says: "They are here, we are here, as long as they don't damage the (side) mirrors on my minivan, we both wait together" (2010:612). What are they waiting for? Fuentes quotes a young tour guide in another temple: "We are both waiting for the tourists, we'll both go to work soon" (612).

Fuentes' paper describes interspecies interactions between macaques and humans in Bali from a novel and methodologically experimental perspective: himself a primatologist by training, Fuentes brings together the insights of primatology and socio-cultural anthropology in order to map the multiple ways in which the biological, social, epidemiological, economic, cultural, and geographic worlds of these two primate species intersect and interface. His paper describes Balinese temples as spaces of encounter for the multiple and diversely aligned (or misaligned) interests of macaques, local ritual specialists, farmers, primatologists, and tourists. A similarly entangled naturalcultural world is the focus of my own ongoing ethnography of a research station in the South African Kalahari (Candea 2010): it involves not macaques but meerkats, not temple specialists engaged in otherworldly macaque-mediated transactions, but behavioral biologists, who track the meerkats in search of insights about the evolution of cooperation or altruism. In other respects, our accounts resonate: in the Kalahari, as in Bali, there are tourists who are in search of an authentic interspecies encounter and who, by local standards, seem to "get it wrong," just as there are local farmers who