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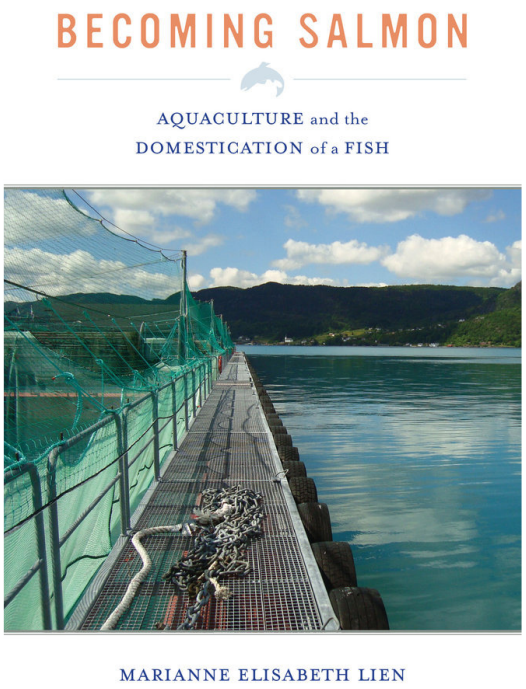
Review Article

Reuben Message

Newcomers to the Farm?

Marianne E. Lien, *Becoming Salmon: Aquaculture and the Domestication of a Fish.* Oakland, CA: University of California Press, 2015. 214pp. $85.00 (hb); $35.00 (pb).



Becoming Salmon: Aquaculture and the Domestication of a Fish is an ethnographic study of contemporary salmon farming practices in Norway, situated at what its author calls the "generative interface" (18) of science and technology studies (STS) and anthropology. Building on earlier experience of fieldwork on salmon farms in Tasmania, and working in close collaboration with STS scholar John Law, Marianne Lien attempts to tie the "ontological turns" in STS and anthropology together, whilst at the same time exploring new perspectives on animal domestication. Aiming to decenter the human methodologically and conceptually, Becoming Salmon reflects many of the concerns expressed by the so-called "nonhuman turn" (Grusin), and will be of wide interest to scholars in animal studies and cognate fields.

Lien's intervention is timely. Aquaculture is now the world's fastest growing food-producing sector. More fish intended for human consumption are now produced on fish farms than by wild capture. Salmon make up only a fraction of this business, the majority being comprised freshwater fin fish or crustaceans, farmed largely in Asia. Nevertheless, they are a highly significant fraction — especially in the cold north Atlantic, and especially for Norway, a country that has in recent years been producing over half of world's total table-bound tonnage of the fish. Salmon farming is big business, and is conducted on veritably industrial scale. "If we ever look back at a time when Atlantic salmon underwent dramatic changes, it would be right now," Lien writes, "and the hot spot would be the fjords of western and northern Norway" (166). Appropriately, according to Lien's publisher, *Becoming Salmon* is the first ethnographic study of this rapidly developing sector. A readable and intelligent book, it should become a landmark study of a practice that — as its author wants to say — is symbolic of our changing relationship with nature in the Anthropocene.

While forms of fish farming have existed for centuries, the present mode of cultivating salmon is a recent development, only a handful of decades old. As early as the nineteenth century, salmon were artificially bred and released back into the rivers, thus augmenting wild stocks (see Wilkins; Nash). But today, the entire life cycle of the salmon is administered to: from the fertilization and incubation of the eggs, to the fish's rearing up and growing out, first in fresh and then in marine pens, and finally on to slaughter and market. Except for incidents of escape, there is no mixing between captive and wild populations, and, apart from those occasions where migrating wild salmon pass nearby to the coastal grow-out pens of the farmed salmon (where they become prone to parasitical infections characteristic of their captive cousins), no physical proximity exists. The novelty of this system provides a substantive rationale for Lien's framing her encounters with salmon farming in terms of "domestication": are the salmon on modern salmon farms a new species of domesticate?

Whereas most animal domestications belonged to prehistory, the suggestion here is that, to the contrary, salmon farming now represents a unique opportunity to study to domestication in action (see also Lien). As the title of the project from which Lien's monograph arose put it, are salmon "Newcomers to the Farm?" At the same time, Lien treats aquaculture as a site through which to rethink familiar anthropocentric, control-oriented conceptions of domestication in terms of metaphors of "mutuality, uncertainty and tinkering" (3). In effect, this leads to a view in which "domestication" emerges less as a theory through which to interpret changing human-animal relations historically, than as a name for an emergent mode of species co-existence, a lived ethics based on

appreciation of ambivalence. Standing alone, this is a valuable contribution with clear normative undertones. Yet it also inhibits the ability to answer those concrete, underlying questions raised by the study's own substantive rationale.

Methodologically, Lien's approach "seeks to expand and explore the idea of what a human ethnographer can be and do as a situated and embodied sentient being" (15). This view takes her towards a "more-than-human" view of sociality (cf. Tsing). In doing so, she approaches salmon aquaculture as a site for exploring the multiple agencies and relations (human and animal) involved in domestication as an open-ended practice. Tracing heterogeneous interactions, Lien tries to describe how all the elements comprising the salmon aquaculture industry, from the fish to the human worlds associated with them, are mutually constituted in processes she calls "biosocial becomings" (drawing especially on Ingold and Pálsson).

In search of becomings, Lien becomes a participant observer on salmon farms, salmon slaughterhouses, and various administrative locations associated with the salmon farming industry. Lien plays close attention to the various activities through which what she calls the new "salmon domus" gets done at these various sites. This means describing how its objects, she says, are not given for apprehension, but are rather locally stabilized, or "come into being" in relational practices. Thus, chapters are entitled: "Becoming Hungry," "Becoming Biomass," "Becoming Scalable," "Becoming Sentient," and "Becoming Alien." Through each of these, and while dealing with tangible economic or ethical issues (like feed conversion ratios or fish welfare), Lien emphasizes that, despite what are clearly highly rationalised environments, improvisation and unpredictability are endemic to the mixing of people, technologies and animals. For instance, at the conclusion to an absorbing chapter on the salmon welfare, Lien argues that even in such "highly commoditized food production sites ... sentience and care may unfold," and that, in practice, outcomes will always remain "chronically uncertain," "noncoherent," and "multiple" (146).

This reflects the central contradiction that runs through the book: the "tension of order and becoming — or of history and process" (166). For Lien, domestication cannot be a boundary between nature and culture in the process of being pushed back by human action alone, so as to stamp new (cultural and historical) order onto the face of raw nature; it is a rather a mutuality of human and animal that is indefinite and reversible, a biosocial becoming. Contrasting this perspective with an earlier monograph on salmon biologists and aquaculture is instructive.

For environmental sociologist Rik Scarce, work at salmon hatcheries is geared towards the "instrumental rationalisation" of nature in processes of "social construction (7)." These social processes were nearly total – except for some unconstructed dimensions of nature that provided "resistance." This property Scarce described with the fishy metaphor "slippery" (86), suggesting a sense in which nature slithers away from the controlling designs of man. Such a treatment of the relationship between culture and nature is clearly rejected by Lien as historicist and order-imposing. When she (writing on this occasion with her collaborator Law) likewise fell upon the metaphor of "slippery" (Law and Lien), it was to suggest an agentive capacity of fish, in which their very material textures participate in the different ways in which their existence is enacted or performed, and thus stabilized, in various salmon farming practices (see also Lien and Law). The shift in Lien from a register of "construction" to "performance" is an argument against the coherence of history and the boundaries of the Anthropos in conceptions of domestication. It also, however, involves ontological claims.

Lien wants to challenge conventional representational paradigms in anthropology by means of "a persistent and uncompromising questioning of the world as it is … [a movement] from a concern with epistemology to an unsettling of conventional ontology" (21). Noting that anthropologists faced with the problem of "home blindness" (Lien is herself Norwegian) will normally have the option of resorting to comparisons in order to prompt methodological defamiliarization of what is taken for granted, for Lien this route begs an ontological question, because it assumes a prior "idea of what is" (21, emphasis in original). That is, she says, to compare we need to have a conception of what the units being compared are. But this is just what her ethnographic practice wishes to establish by describing the "very emergence of such phenomena" (21). The alternative, she feels, comes down on the side of history, order, and of foreclosures of possibility — not of process and becomings.

Lien's contrasts and vocabulary recall Deleuze's ontological distinction between being and becoming. But she never cites Deleuze (or Bergson). In fact, "becoming" is not defined in its own right (and, unusually for the prominence the word has in the title and text, does not appear in the index either). These gaps, however, arguably help to maintain consistency with *Becoming Salmon*'s primary theoretical input: actor-network theory (ANT), and especially Law's successor project of "material-semiotics" (see Law). This is the variety of STS that interfaces with anthropology in the book. Consequently, situating ethnographic practice at the "deepest ontological level" means adopting a strong social nominalism and a fundamental emphasis on relationality. These are reflected in the ambition of depopulating reality of apparently specious entities,

principally those supposedly designated by collective and abstract nouns. Thus Lien's approach strives, as she says, not to assume that "nature, society, people, market, gender, ethnic groups, and the like *actually exist*" (22, emphasis added). In this so-called "empirical" or "practical" ontological turn, what exists, in fact, is only "what comes into being through relational practices" (22). What a salmon *actually is*, is ultimately its relations, and since these are constantly changing and multiple, so too are salmon. What salmon *are* are practice generated realities, and as Lien and Law put it, "realities simply do not exist outside of the relations done in practices" (82).

In the form of ANT, the essence of this kind of ontic relationalism has been around for some time (e.g. Latour). It is inseparably connected to a rejection of what Law himself once called a "backcloth" approach to the interpretation of fact and artefacts, in which entities (principally nonhuman) are reduced to other entities (principally human or social) in the process of explaining them. Fundamentally, as is well known, the effects of this onto-methodological conjuncture are approaches that abhor a frame — or at least deny that the researcher can simply select an appropriate frame for analysis. We must appreciate then that it is squarely in reference to this problematic that Lien wants to shed the "epistemological anthropological approach" founded on "nature, society, person, market", etc (23). These are frames (or contexts, or even hypotheses), and as such impose "order" and come down on the side of "history," for instance, as epochs of culture-nature relations in which animals are seen as non-acting objects. They do not therefore come down on the side of "becoming," "generative process," and "noncoherence."

We can appreciate this at work in an ethnographic anecdote. Lien describes the temptation of assimilating the fact of the salmon pens in the fjord to the genealogy of domestication implied by the sheep observed grazing on the slopes of the fjord around her — that is, to the history of agricultural husbandry (18). But she quickly retracts this option, because it is not only simplistic, but "fails to question the relation between ongoing material practices and discursive domains." "More precisely, the comparison diverts analytical attention away from the generative agency of people-and-things [and animals] to the self-sealing metaphysics of conceptual categories" (19). Comparisons foreclose, are associated with "ordering," and inhibit "curious inquiry"(165), as she says elsewhere, because they are presumed to pose standard (reductionist and anthropocentric) ontologies.

The distaste for frames and their tendency to impose order suggests an obvious difficulty for Lien. "Domestication," the subject of her subtitle and key to her monograph, is clearly itself a frame. Lien acknowledges this dilemma: "even

domestication," she admits, belongs to the list of frames she wants to decenter (human, nature, society, etc.) (23). This is consequential, because it establishes an unresolved contradiction between the recent anthropological interpretations of domestication Lien enlists and bends towards, and the theoretical infrastructure tasked in *Becoming Salmon* with being their scaffolding.

When anthropologists like Helen Leach and others (e.g. Leach; also Mullin and Cassidy) propose views of domestication based on mutuality and co-shaping of human and animal bodies and societies, and contrast this to older anthropocentric ideas of domestication as unidirectional models of control and confinement of animals lives, they are typically proposing what they see as a more appropriate frame or concept through which to understand a phenomenon. That the contents predicated on this frame are congruent with Lien's preferred metaphors of mutuality and uncertainty does not change this — it's just another kind of frame. Moreover, the revisions apply to the concept of domestication as understood by other and previous anthropologists: as a hypothesis, it is presumably intended to apply trans-historically and be universally applicable. That is to say, the suggested frame should apply equally to analysis of domestication processes occurring today and those associated with our Neolithic ancestors and their emergent companion species.

It unclear to what degree Lien's tendency to view reality in terms of flux, process, and mutuality comes from a prior theoretical commitment, or is an extrapolation of empirical observations about the apparently fluid, novel character of the contemporary world. Lien both emphasizes the empirical warrant (contemporary salmon aquaculture suggests a new phase in the history of domestication), and says that "biosocial becomings" are what have "already and always" defined the co-constitution of humans and animals (15). We are thus left wondering whether Lien intends her view of domestication to apply to all instances of domestication, and whether we are supposed to see it as a superior view; whether it applies only to contemporary domestications, or even only to salmon aquaculture in the fjords of western and northern Norway? What really justifies her selection of this frame and the predicates she associates with it?

Thus on the one hand, the possibility is left open that some domestications are best comprehended via models of confinement and control – but others' not, in which case the conditions for each type remain to be specified. The shift from the epistemological to the ontological register, and from "ordering" to "curious inquiry", thus leaves much of importance unanswered, and room for confusion about what the conceptual

contribution of this book — and the more-than-human ethnographer — is to our understanding domestication and the wider literature on the subject.

On the other hand, however, one could ask however whether, in Lien's hands, domestication is any longer an analytical concept at all? The "salmon domus," Lien concludes, is just what happens as salmon and people "make space for one another" (165). Sacrificing explanatory pretensions, "domestication" seems to become simply a way of encouraging us to think-feel open-endedly about how to live together better today. This is a powerful imaginative achievement, and consideration of it might shed some light on how and why Lien selected and ordered her conception of domestication in the way she did. Nevertheless, it seems to leave the centrality of the idiom of domestication as a frame hanging somewhat askance, given the empirical pretext of intensive salmon aquaculture as the most recent turn of the great wheel of domestication. Additionally, and more practically, the book exhibits a glaring omission in its limited consideration of salmon genetics. Should we, as some now suggest, see *Salmo domesticus* as a distinct species on the basis of its genetic difference to its wild forebears? Is farmed Atlantic salmon still a salmon? Such matters are at the forefront of scientific commentary on the subject, and they go to the heart of the promise, substantive rationale, and thus shortcomings of *Becoming Salmon*.

It is notable that one of the strongest moments in the book, however, occurs precisely when the author takes her own advice and explores beyond the confines of a familiar framework imposed, as Lien herself says, by "the rigid ethnographic commitment to the observation of heterogeneous material practices as practices in actor-network theory and material semiotics" (163). In the chapter "Becoming Alien," she explores the plight of the "escaped farmed salmon." Normally, these are treated as alien contaminants of rivers, despised by conservationists and anglers. But Lien, with persuasion and grace, shows that they can hardly be said to have "escaped"; they, rather, by some accident or other, became "homeless" — they are more like refugees, survivors or *fredløs* (outlaws) (161–162). In this move, Lien acknowledges that she upends precedent and imposes her own frame by making an intervention "at the level of representation" (163), or epistemology. In doing so, she goes beyond what can be physically seen, beyond the discourse of her human informants, and (perhaps) closest to the experience of her animal subjects. What she says becomes immediately and non-trivially political, too. It's in moments like this that the eyes and instincts of the ethnographer studying an under-examined, consequential, and pressing contemporary issue overcome the smarts of the practical empirical ontologist. As has been recorded previously (cf. Lynch), the value of a work associated with the "ontological turn" (at least in STS) here seems to shine

through as much despite, rather than as a result of, any particularly novel theoretical-ontological commitment.

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