

Industrial Scale Surrogacy

*Animal Agriculture and the
Politics of Reproduction*

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Abstract: In this paper, I explore the multiplication of animal life which has been the general tendency of capitalist agriculture, and its implications for thinking about animals and the politics of reproduction. I will firstly focus on the forced gestational labour that is required by a large number of animals in food systems today to mass produce animal-based food commodities. Secondly, I will consider this mass scale reproduction and its relation to *social reproduction* which makes possible all production under capitalism. As I shall argue, animals perform metabolic and gestational work to create a means of subsistence for humans; thus, animals have a fundamental role under capitalism in enabling human social reproduction (the “reproduction of reproduction”). Finally, I will conclude by reflecting on Sophie Lewis’s book *Full Surrogacy Now* and its potential implications for thinking about animals in food systems. Building on the work of feminist animal studies and labour theory, I argue that those who advocate for the rights of animals would arguably benefit from understanding the distinct and indispensable role of reproduction as a site of tactical intervention.

Keywords: *capitalism; animal agriculture; surrogacy; reproduction; social reproduction*

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The wealth of societies in which the capitalist mode of production prevails appears as “an immense collection of commodities”; the individual commodity appears as its elementary form.

Karl Marx, *Capital* Vol. 1, 125.

Animals in food systems today appear to us as a vast multiplicity of lives, beings who will soon be made to die, numbingly enumerated in official data sets, but almost impossible to fully conceptualize due to the sheer scale of their utilization by human societies. UN Food and Agriculture statistics inform us that in 2022 there was a standing stock of some 34 billion land animals within food systems.¹ However, this figure hides the sheer volume of animal life that is born, raised, and killed each year, in an infinite cycle of life, death, and life again. For example, in human food systems around 83 billion land animals were slaughtered in 2022.² Data remains unclear on fishes killed for human food consumption, though estimates range up to 2.2 trillion wild fishes caught and killed annually,³ and up to 171 billion fishes slaughtered in fish farms.⁴

A key driver of the sheer volume of animals killed for food today is the rising per capita consumption by humans. In 1961, global per capita meat consumption, excluding fishes and seafood, was at 23kg per person; in 2014 this had nearly doubled to 43kg per person.⁵ Per capita fish consumption has also more than doubled.⁶ While in some parts of the world per capita dairy consumption has declined, we know that dairy consumption continues to climb in other parts of the world, such as the Global South.⁷ In our food systems, production requires reproduction. In order to bring into

- 1 UNFAO, *Food and Agricultural Data*.
- 2 UNFAO, *Food and Agricultural Data*.
- 3 Mood and Brooke, “Fishes Caught from the Wild”.
- 4 Mood et al., “Farmed Fishes Killed for Food”.
- 5 Ritchie et al., “Meat and Dairy Production”.
- 6 UNFAO, *State of World Fisheries*, 3.
- 7 See OECD-FAO, *Agricultural Outlook 2018–2027*, 163–301.

being the billions of juvenile animals contained in food systems, or birth the trillions of life forms that will be captured in our water ways, animals who have a reproductive capacity must be conscripted into the production process: that is, animals are required to engage in a “metabolic labour”,⁸ or, more narrowly, what might be described as “gestational” labour, in order for this vast multiplicity of animals to be born.⁹

This paper builds on the ideas outlined in my book *Animals and Capital*, casting a spotlight on the politics of reproduction that circulates capitalist animal agriculture. Firstly, I will explore the reproductive labour of animals. Gestational labour is at least one way I would like to think about *reproduction* in the context of capitalist animal agriculture: namely, the reality that today mass scale forced gestational labour is required by a huge number of animals in food systems. Here, in order to create billions of lives — lives at scale — a similarly large-scale labour force of nonhuman animals must be engaged in continual reproductive labour. Secondly, I will consider this reproduction and its relation to *social reproduction*, or the totality of labour processes outside of “formal production” under capitalism, including unpaid care work, which makes possible production under capitalism. As I shall argue, animals perform metabolic and gestational work in order to create a means of subsistence for humans; thus, as I shall argue, they reproduce human social reproduction. In other words, the vast number of animal bodies within capitalist animal agriculture now sustains human life on the planet, at scale. Finally, I will discuss the implications of Sophie Lewis’s important book, *Full Surrogacy Now*, for thinking about animals in food systems. As I shall argue, building upon feminist animal studies and labour theory, reproduction is central to capitalist animal agriculture, and those who advocate for the rights of nonhuman animals would benefit from understanding the distinct and indispensable role of reproduction as a site of tactical intervention.

8 Beldo, “Metabolic Labour”.

9 Lewis, *Full Surrogacy Now*.

Animals in Capitalist Food Systems and the Politics of Reproduction

In my view, animals involved in food production take at least three forms under capitalism.¹⁰ Firstly, animals are the “raw materials” that circulate within production processes; these raw materials are the starting point for the transformation of living beings into the consumption commodities that will eventually emerge from animal agriculture. As discussed, today these raw materials circulate at a mass scale, with vast production networks across the planet. This process of transformation — from raw material to consumption commodity — is typically, but not always, “out of sight” for those who purchase the end product, in the “hidden abode of production”.¹¹ Secondly, today most animals within animal agriculture will become consumption commodities in the form of food. Animal parts and derived products which assume the consumption commodity form of “food” appear the most familiar to us because these commodities visibly proliferate in human worlds, in supermarkets, butchers, cafeterias, restaurants, and homes. Here, the immense scale of the proliferation of these commodities — which has accelerated over the last century — defies imagination. These two different appearances of animals within the value circuit of capitalism — alive as a raw material, dead as meat — represent different use values. The raw material is useful as a means of generating surplus; the consumption commodity is positioned as useful for reproducing life as a means of subsistence, by and large, for human populations. Finally, in the third form, animals appear as labour when their placement within production necessitates that they produce value. While animals have traditionally not been seen as labourers, there is now scholarship in animal studies and post-humanism which has positioned animals as workers within systems of value.¹² My argument is that in the case of food production,

10 See Wadiwel, *Animals and Capital*, 1–14.

11 Marx, *Capital* Vol. 1, 279.

12 See for example Hribal, “Animals are Part of the Working Class”; Coulter, *Animals, Work, and the Promise*; Cochrane, “Labour Rights for Animals”; Collard and Dempsey, “Life for Sale?”; Haraway, *When Species Meet*; Barua, “Nonhuman Labour”; Barua, “Animating Capital”.

animals within food systems work on themselves through a metabolic labour to become a consumption commodity.¹³

Of course, not all food animals will become products themselves (at least not directly). Dairy cows appear within production as labourers, designed to produce milk, but, as a necessity of this production, also perform gestational labour to birth new animals through forced insemination, which triggers the process of lactation.¹⁴ When dairy cows have completed their working life, their “spent” bodies will become raw materials, eventually becoming consumption commodities when they are sold as “soon-to-be-dead”.¹⁵ Reflecting on dairy cows reminds us of the diversity of metabolic work that animals do within food systems: some animals labour on themselves as raw materials to produce their own bodies as food; others metabolize or gestate “products” — milk, eggs, etc. — which are alienated and commodified as part of production process.

In all of these contexts of animal labour and production, the power of capitalist animal agriculture to multiply animal lives at scale — that is, to reproduce living animals as raw materials and labour in order to amass commodities (as dead meat and other products) — is crucial. Here we see capitalism rehearse a story of overproduction which has been its long run tendency; animals are just one chapter. In this context, what happened to animals under capitalism is a mirror of the same story we find repeated with any number of other products — automobiles, televisions, mobile phones, bottled water — they were multiplied through intensive production with the goal of producing profit. However, one difference between these other products and the outputs of animal agriculture is that, in multiplying animal-based food products, there must be a multiplied mass scale production of populations of living animals, and an attendant politics of reproduction of life, in order to establish the means of subsistence and survival for human populations. In this respect, the rise of capitalist animal agriculture is a biopolitical process of establishing

13 Wadiwel, *Animals and Capital*, 91–129.

14 Wadiwel, “Dairy Cow Labour Process”.

15 Gillespie, “Afterlives of the Lively Commodity”.

one large-scale population of living beings—animals—and placing them into relationship with another population—humans—who increasingly rely on these beings to survive. This relationship is antagonistic, as survival for humans is dependent upon the mass suffering and death of animals.

This process of the accelerated expansion of the reproduction of animals as consumption commodities reflects the interaction between capitalism and the industrialization of human food supplies. In a structural sense, this is in part related to capitalism's strategy for the reproduction of human labour. For example, Raj Patel and Jason Moore have argued that selective breeding and industrialization of chicken production reduced effective food prices, thus keeping down the (human) wage cost of the economic system.¹⁶ In this context, where cheaply available food drives down the cost of labour, animal-based foods have become a central pillar of subsistence globally for waged human work that is employed in "formal" sites of production (the factory, the office, etc.). However, animal-based foods are not only the means of subsistence for humans engaged in waged work or so-called "formal" production. This is because, as discussed above, animal-based foods are increasingly the imagined priority means of subsistence for almost all humans, and thus support and maintain human life engaged in other activities and labour outside of "formal" production, such as, for example, care work.

The evolving role of animal-based foods globally thus has implications for how we understand "social reproduction theory" more generally. Social reproduction theory attempts to not just understand what happens for workers in the scene of production, but also, as Tithi Bhattacharya describes, "the complex network of social processes and human relations that produces the conditions of existence for that entity".¹⁷ In other words, social reproduction theory attempts to account for relations, energies, and labour outside of the formal sphere of production, including care labour regimes and forms of facilitation that enable formal production to occur. Because

16 Patel and Moore, *History of the World*, 3–5.

17 Bhattacharya, "Mapping Social Reproduction Theory", 2.

animal-based foods have been positioned as the means by which the labour of human social reproduction can occur, then this food becomes the means for *the reproduction of reproduction*.¹⁸ In other words, animal life has been positioned as one of the priority means by which almost all human life and labour is reproduced. Kelly Oliver reminds us that we have a “fundamental indebtedness” to animals.¹⁹ To an extent, this idea that animals enable the reproduction of reproduction helps us make sense of the scale of this indebtedness, which capitalist animal agriculture has enabled in an unprecedented way. Vast multiplicities of animals have been created to be indispensable to the metabolism of human life within capitalism; humans are increasingly made and remade through the birth and extinguishment of animal life.

There is another observation that might be made here on the relationship between animals and social reproduction theory. A key intuition of social reproduction theory is the suggestion that the line between formal and informal production under capitalism is in effect immaterial, and that today we are witnessing the total subsumption of all of life, public and private, into the value chains of capitalism; as Antonio Negri suggested: “Society appears to us as capital’s society. It is through this passage that all social conditions are subsumed by capital, that is, they become part of its ‘organic composition’”.²⁰ In this context, it is useful to note that when we observe the worlds of animal labourers—from broiler hens to dairy cows to aquaculture fishes—we find an absolute collapse of any distinction between “productive” and “unproductive” labour. This is because the whole of the lives of animals have been subsumed by the rhythms of capital and, therefore, there is arguably no clear “social reproduction” for animals. A condition of the surplus production of animal agriculture is the exacting incorporation of the whole life of the animal within the production process: birth, life, nutrition, sexuality, sociality, sleep, and death are all precisely coordinated and timed to enable profitability. This means that the factory farm, by definition,

18 See Wadiwel, *Animals and Capital*, 77–90.

19 Oliver, *Animal Lessons*, 22.

20 Negri, *Marx Beyond Marx*, 114.

seeks to turn all social time into productive time (for capitalism) and manages life and death ruthlessly to optimize this relation.

Here, the multiplication of animal lives—as raw materials, and as labour—in order to produce commodities, highlights the centrality of the politics of *reproduction* to production. Almost all systems of domestication imply the governance of reproduction,²¹ which, within capitalist animal agriculture, is key to profitability.²² Here, in order for the raw materials of animal food supplies to become available (that is, the mass of living animals), a section of the animal workforce must be compelled to perform forced gestational labour. This is key to the overproduction of animal bodies within food supplies which in turn enables the production of surplus money in capitalist economies. For example, of the seventy-five million pigs in the United States today, 6.4 million sows must be continually subject to forced insemination and gestation in order to produce litters of piglets who will become the raw materials of the hog industry.²³ Control over reproduction is also central to the emergence of aquaculture or fish farms globally: for example “hatcheries” are an important and growing component of value chains, providing millions of juvenile animals to aquaculture systems.²⁴

This politics—or, perhaps more appropriately, biopolitics—of animal reproduction is of course tethered to patriarchy and the normative gender systems that govern human lives. Feminist animal studies scholars have argued that industrial modalities of reproductive control cannot be understood in isolation from the human politics of gender, since human gender relations appear mirrored in the ruthless controls applied to animals who have reproductive capacity.²⁵ As Kathryn Gillespie summarizes in relation to dairy cows:

21 Clutton-Brock, *Animals as Domesticates*, 3.

22 On biopolitics and its applications to industrial animal agriculture, see Wadiwel, “Biopolitics”.

23 USDA, *Quarterly Hogs and Pigs*.

24 See Allan and Burnell, *Advances in Aquaculture Hatchery Technology*. See also Wadiwel, “Factory Farms for Fishes”.

25 See for example Adams, *Sexual Politics of Meat*; Plumwood, *Feminism and the Mastery*; Gruen, “Dismantling Oppression”; and April, “Readying the Rape Rack”.

her value is explicitly tied to her function as a reproductive machine [...] A dollar value is placed not only on her body as a reproductive unit but also on each individual pregnancy. [...] This industry discourse is also more generally a reflection of the way the female animal body is viewed—that because biologically she *can* reproduce, “staying pregnant” must be the inherent function and purpose of her life.²⁶

From the standpoint of production in capitalist animal agriculture, the efficient production of surplus will depend upon the ruthless subsumption of almost all nonhuman pre- and postnatal processes of insemination, gestation, care, and nutrition. Here the production process intervenes systematically through segregation and control over animal populations in order to govern the timing and frequency of reproduction. We find the use of brutal forced insemination practices and regimes of gestation. There is also the routine alienation of animals from their birthing parents, as juveniles are removed from one value chain and inserted into productive processes elsewhere as new “raw materials”.²⁷

I highlight this global mass scale industrial control over the reproduction of animal life to point to both its seemingly irreplaceable centrality in contemporary food systems, but also the unique social or, perhaps, antagonistic “kinship” relation that it generates between animal and human populations, mediated through the capitalist economic system. Today billions of animals are birthed into machine-like production processes, alienated from their birth parents as a condition of production, to enable human food supplies that, in turn, sustain billions of human lives. Here in a quite direct sense, almost all domesticated animals exist within relations of domination where a mass scale, industrially mediated, modality of *surrogacy* is a mainstay structuring reality. Almost all animals, as a condition of production, will experience forced separation from the

26 Gillespie, “Sexualized Violence”, 1329.

27 This is of course central to dairy industries, which typically use routinized, forced, industrial scale artificial insemination to induce reproductive processes, with the aim of controlling and directing lactation towards the production of milk for human consumption. See Gillespie, *Cow with Ear Tag #1389*; Wadiwel, “Dairy Cow Labour Process”.

animals who performed the gestational labour to produce them. The relations with the billions of beings who have brought them into the world will be replaced by relations with substitute care animals, humans, and machines who perform the labour of nurturing and maintaining life. Thus, the composition of animal and human populations, through the quest for endless surplus and the drive to reorganize the means of subsistence, have evolved under capitalism. Not only have relations between animals and humans been dramatically altered with hundreds of billions of animal lives forced into mechanistic production systems to sustain human food supplies. But relations between animals themselves have been altered: kinship and care relations between animals have been disrupted and are now mediated through an industrial form of surrogacy.

Gestational Labour, Industrial Surrogacy, and Animal Advocacy

With these notes in place on animals and reproduction, I want to steer now to think in a more focused way on the large-scale gestational labour of animals within industrial agriculture, and the promise of this space as a tactical focus for animal advocacy. I note that the reproductive or gestational work of animals such as dairy cows have some resonance with existent forms of human labour, where metabolic processes are drawn on to produce a product which can be alienated from the body of the producer, allowing for repeated production cycles to be completed by the same body.²⁸ In this context, it makes sense to draw from scholarship in feminist labour studies, particularly in relation to commercial surrogacy,²⁹ and other “body work”³⁰ which have paid attention to the ways in which the metabolism of the body can become a site for value production. In my view, Amrita Pande’s theorization of commercial surrogacy in India is particularly useful, as it provides a way of understanding the work of a body that is both means of production and labour.³¹ While

28 See Wadiwel, “Dairy Cow Labour Process”.

29 See for example Oliver, “Marxism and Surrogacy”; Limki, “Coloniality of Work”; Pande, “Global Reproductive Inequalities”; and Lewis, *Full Surrogacy Now*.

30 See Cohen et al., “Body/Sex/Work Nexus”.

31 Pande, *Wombs in Labor*, 90.

all labour requires the “rental of the use of one’s body by somebody else”,³² what Pande’s analysis captures—which is also applicable to the gestational labour of animals—is the way in which the metabolism of the body can be subsumed by the production process, so that the outcome of this metabolism becomes the product, even if this product is intimately connected to the body of the labourer themselves.³³ Just as in regimes of human commercial surrogacy, in animal agriculture the “product” of the gestational labour of animals is the juvenile animal, who will become a raw material in a different value chain; this is, as I have suggested above, a large scale form of industrially mediated surrogacy.

In *Full Surrogacy Now*, Sophie Lewis argues that debates around human surrogacy offer an opportunity to position all gestational labour, and not just commercial surrogacy, as “work”.³⁴ One of the important contributions of Lewis’s book is the challenge to the assumption that there is something natural or beneficent about gestational labour, drawing attention to the reality that, for many humans, this work is essentially non-consensual and is forced onto those with gestational capacity by norms, work arrangements, or law.³⁵ This is one reason why Lewis suggests that commercial surrogacy is useful to contemplate, as this form of commodified labour pulls apart the inherited norms around care work and family:

“Surrogate,” more than “reproductive” or “feminized,” might be a word that proves useful for that field in bringing together the millions of precarious and/or migrant workers laboring today as cleaners, nannies, butlers, assistants, cooks, and sexual assistants in First World homes, whose service is figured as dirtied by commerce, in contrast to the supposedly “free” or “natural” love-acts of an angelic white bourgeois femininity it in fact makes possible. Surrogacy, in its current connotation, is the lie and the truth of their situation. It speaks of the millions of living bodies secretly crouching inside the automatons, and behind

32 Pande, *Wombs in Labor*, 106.

33 Pande, *Wombs in Labor*, 135.

34 Lewis, *Full Surrogacy Now*, 44.

35 See Lewis, *Full Surrogacy Now*, 7–8.

the customer-service machine interfaces, of what Kalindi Vora has called “surrogate humanity.”³⁶

This reframing of surrogacy labour for Lewis becomes a pathway for a more radical imagination around the collectivization of this form of production, and how this labour is distributed, effectively rupturing normative social relations:

For if babies were universally thought of as anybody and everybody’s responsibility, “belonging” to nobody, surrogacy would generate no profits. Would it even be “surrogacy” at this point? Wouldn’t the question then simply be: how can babymaking best be distributed and made to realize collective needs and desires?³⁷

While Lewis does not extend this analysis to thinking about animals in animal agriculture,³⁸ in my view there is much to be gained by this approach. Firstly, in denaturalizing gestation and treating it as labour, Lewis creates a framework for understanding the conditions under which bodies who perform gestational labour consent to this work, and the processes of domination that force these beings to comply. This is highly relevant for thinking about animals in capitalist animal agriculture, since, as discussed above, this evolved system of production depends upon what might be described as a case of absolute “enforcement and control of the means of reproduction”.³⁹ Forced gestational labour is of course the basis of many historical forms of animal domestication, so in a sense there is nothing new in making this observation. However, arguably today capitalist animal agriculture has refined this control over the means of reproduction to a level of scale and brutal precision that is truly without historical precedent.

36 Lewis, *Full Surrogacy Now*, 56.

37 Lewis, *Full Surrogacy Now*, 168.

38 In *Full Surrogacy Now*, Lewis has a human-centred framing, which reifies a sharp distinction between humans and other animals. Elsewhere Lewis does consider the possibility of “multispecies co-mothering”; see “Pastoral Tale of Ovine Surrogacy”. Relevant to Lewis’s thinking on animals, see also Lewis, “Electric Sheep”; “My Octopus Girlfriend”.

39 Limon, “Inventing Animals”, 65. See also Eisen, “Feminist Jurisprudence for Farmed Animals”.

In some respects, and relevant to thinking about the inter-relation between the violence experienced by animals, and other forms of social oppression, thinking broadly about forced gestational labour also reinforces the intuition that whether one is subject to reproductive control, and the nature of this control, is a measure of the imagined “humanity” of the victim. It is telling that intensified reproductive control marks the boundaries of the “normal” human and exposes to violence those outside, whether we think of controls over reproduction and family inherent to racialized slavery,⁴⁰ the systematic forced sterilization of some Indigenous peoples as part of colonial and settler colonial regimes,⁴¹ eugenicist management of the reproductive and sexual lives of people with disability,⁴² or the policing of trans and queer lives in a variety of contexts.⁴³ Should we be surprised in this context that what happens to animals in capitalist animal agriculture, completely naked and transparent in its commitment to ruthless reproductive control and mass scale forced gestational labour, and openly imposed upon billions of beings globally as part of food systems, research and companionship, should so clearly illustrate the logics which inform the biopolitics of normative gender politics, racism, and ableism?

Lewis’s radical demand for “full surrogacy now” — that is, the demand for collectivizing the labour of gestation and care, and in this process doing the work of dismantling the norms of the heterosexual family and its role within the production processes of capitalism⁴⁴ — have a curious set of implications for thinking about our future relations with animals. It should be noted — *prima facie* — that billions of animals already experience a distorted version of “full surrogacy now”, since, within contexts such as industrial animal agriculture, all animals experience industrially mediated surrogacy: all animals lose their connections with the beings that perform the

40 See for example Morgan, *Reckoning with Slavery*.

41 See Rademaker et al., “‘Too Many Aboriginal Babies’”; Moreton-Robinson, *Talkin’ Up to the White Woman*, 170–71.

42 Steele, “Disability, Abnormality and Criminal Law”.

43 See for example Spade, *Normal Life*.

44 See Lewis, *Abolish the Family*.

gestational labour of bringing them into the world and are compelled to experience post-natal “care” that is delivered by other beings and machines.⁴⁵ Here in animal agriculture we witness the full subsumption of gestational labour into capitalist production, and with this the construction of kinship relations between animals (and between humans and animals) that have destroyed the “natural” imagination of family. However, abolition of the family in this case has not replaced “the family” — as it has been normatively constructed — with relations of consent; quite the reverse. Nevertheless, despite this horrific and unsettling reality of reproductive politics within industrial capitalist animal agriculture, there are, in my view, at least two important implications of Lewis’s perspectives for animal advocates seeking to challenge animal agriculture and radically transform our food systems: firstly, the feminist demand that those who are compelled to do gestational labour should be able to refuse this work; secondly, and interconnectedly, the democratization and collectivization of the gestational labour required to allow life to flourish and reproduce itself. I will conclude by considering each of these in turn.

Contemplating the radical demand for animals to refuse gestational labour has profound implications for contemporary utilizations of animals. This is because control over reproduction offers a different focal point for thinking about the means of production under capitalism. Forged within the language of analytic philosophy and liberal political theory, much contemporary animal rights theory is centred around classic “negative” rights such as freedom from detention and torture, or rights to legal personhood. This traditional focus has in some ways shaped the strategies of animal advocates. Much animal advocacy today focuses on the trauma of mass confinement, the transport of animals, the act of killing, and, of course, the individual ethics of consumption.

However, this campaigning arguably under-emphasizes a central element that supports the whole structure of animal agriculture:

45 On the mourning of cows who lose their calves, see Gillespie, “Sexualized Violence”, 1326. See also Boyde, “Dairy Issue”.

namely the gestational work of billions of land animals, hundreds of billions of fishes in aquaculture systems, and trillions of wild fishes to reproduce raw materials and products within the capitalist economic system. In this context, the reproductive rights of animals are surely a unique tactical goal for advocates. This is because, quite simply, if animals had the right to refuse gestational labour then this would be the end of animal agriculture. This is because the reproductive work of animals in creating new animals within animal agriculture materializes the animal labour force and the eventual consumption commodities that would flow from this. From this standpoint, this gestational labour provided is crucial for the whole system of industrial agriculture, and with this, the positioning within capitalism of animals as a means of human subsistence, which, as I have discussed, is the means for human social reproduction, too. I note that much work within feminist animal studies has already highlighted the centrality of this reproductive labour.⁴⁶ However, I think Lewis's call for the refusal of gestational labour provides a different lens on this work by directing us to the structural importance of this gestational labour force—the means of reproduction—to our economies. There are other benefits to this different framing. Focusing on forced gestational labour within animal agriculture also allows animal advocates to tactically focus energies on different elements within the factory farm system; for example, the distinct layer of the human labour force involved in facilitating animal reproductive work in industrial settings.⁴⁷

The second demand, for the collectivization of gestational and care labour, is more complex to imagine for animals. Because the labour of animals is positioned as a means of subsistence for human populations, this labour cannot easily be shared, and perhaps can only be only meaningfully shared if humans are themselves willing to be available, on a reciprocal basis, to produce the means of subsistence for animal populations through their own metabolic and gestational labour (that is for humans and their body products to also

46 See, for example, Deckha, "Postcolonial, Posthumanist Feminist Theory"; "Salience of Species Difference".

47 See for example Blanchette, *Porkopolis*, 89–117.

become food). However, I think there is a different and more radical set of questions here in relation to whether the forced gestational labour of animals is necessary, and what it would mean to imagine economies without it. This involves challenging the idea that animals should be put to work for us in order to achieve our own enjoyment, sustenance, and liberation; and instead asking how the societies we might imagine can be built on shared visions of flourishing and pleasure, not on an antagonistic set of relations which can only imagine human flourishing based upon mass violence towards animals. If animals and humans were together collectively responsible for reproductive futures, then this would be a very different form of production; a different form of economy. Thinking about these alternative futures highlights the taken for granted centrality of mass forced gestational labour to our current reality; and the opportunities to imagine societies without it.

Works Cited

- Adams, Carol J. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory*. Continuum, 1990.
- Allan, Geoff L., and Gavin Burnell, eds. *Advances in Aquaculture Hatchery Technology*. Woodhead, 2013.
- April, Mackenzie L. "Readying the Rape Rack: Feminism and the Exploitation of Non-Human Reproductive Systems." *Dissenting Voices* 8, no. 1 (2019): 51–63. <https://digitalcommons.brockport.edu/dissentingvoices/vol8/iss1/8>.
- Barua, Maan. "Animating Capital: Work, Commodities, Circulation." *Progress in Human Geography* 43, no. 4 (2019): 650–69. <https://doi.org/10.1177/0309132518819057>.
- Barua, Maan. "Nonhuman Labour, Encounter Value, Spectacular Accumulation: The Geographies of a Lively Commodity." *Transactions of the Institute of British Geographers* 42, no. 2 (2017): 274–88. <https://doi.org/10.1111/tran.12170>.
- Bhattacharya, Tithi. "Introduction: Mapping Social Reproduction Theory." In *Social Reproduction Theory: Remapping Class, Recentering Oppression*, edited by Tithi Bhattacharya, 1–20. Pluto Press, 2017.
- Beldo, Les. "Metabolic Labor: Broiler Chickens and the Exploitation of Vitality." *Environmental Humanities* 9, no. 1 (2017): 108–28. <https://doi.org/10.1215/22011919-3829154>.
- Blanchette, Alex. *Porkopolis: American Animality, Standardized Life, and the Factory Farm*. Duke University Press, 2020.
- Boyde, Melissa. "The Dairy Issue: 'Practicing the Art of War.'" *Animal Studies Journal* 7, no. 2 (2018): 9–24. <https://www.uowoajournals.org/asj/article/id/282/>.
- Clutton-Brock, Juliet. *Animals as Domesticates: A Worldview Through History*. Michigan State University Press, 2012.

- Collard, Rosemary-Claire, and Jessica Dempsey. "Life for Sale? The Politics of Lively Commodities." *Environment and Planning A: Economy and Space* 45, no. 11 (2013): 2682–99. <https://doi.org/10.1068/a45692>.
- Cochrane, Alasdair. "Labour Rights for Animals." In *The Political Turn in Animal Ethics*, edited by Robert Garner and Siobhan O'Sullivan, 15–32. Rowman & Littlefield, 2016.
- Cohen, Rachel Lara, Kate Hardy, Teela Sanders, and Carol Wolkowitz. "The Body/ Sex/Work Nexus. A Critical Perspective on Body Work and Sex Work." In *Body/Sex/ Work: Intimate, Embodied and Sexualised Labour* edited by Carol Wolkowitz, Rachel Lara Cohen, Teela Sanders, and Kate Hardy, 3–27. Palgrave Macmillan, 2013.
- Coulter, Kendra. *Animals, Work, and the Promise of Interspecies Solidarity*. Palgrave Macmillan, 2016.
- Deckha, Maneesha. "The Salience of Species Difference for Feminist Theory." *Hastings Women's Law Journal* 17, no. 1 (2006): 1–38. <https://repository.uchastings.edu/hwlj/vol17/iss1/2>.
- Deckha, Maneesha. "Toward a Postcolonial, Posthumanist Feminist Theory: Centralizing Race and Culture in Feminist Work on Nonhuman Animals." *Hypatia* 27, no. 3 (2012): 527–45. <https://doi.org/10.1111/j.1527-2001.2012.01290.x>.
- Eisen, Jessica. "Feminist Jurisprudence for Farmed Animals." *The Canadian Journal of Comparative and Contemporary Law* 5, no. 1 (2019): 111–53.
- Food and Agriculture Organization of the United Nations (UNFAO). *Food and Agricultural Data*. Food and Agriculture Organization Statistical Database, 2022. <https://www.fao.org/faostat/en/#home>.
- Food and Agriculture Organization of the United Nations (UNFAO). *The State of World Fisheries and Aquaculture 2020: Sustainability in Action*. FAO, 2020. <https://doi.org/10.4060/ca9229en>.
- Gillespie, Kathryn. "The Afterlives of the Lively Commodity: Life-Worlds, Death-Worlds, Rotting Worlds." *Environment and Planning A: Economy and Space* 53, no. 2 (2021): 280–95. <https://doi.org/10.1177/0308518X20944417>.
- Gillespie, Kathryn. *The Cow with Ear Tag #1389*. University of Chicago Press, 2018.
- Gillespie, Kathryn. "Sexualized Violence and the Gendered Commodification of the Animal Body in Pacific Northwest US Dairy Production." *Gender, Place & Culture: A Journal of Feminist Geography* 21, no. 10 (2014): 1321–37. <https://doi.org/10.1080/0966369X.2013.832665>.
- Gruen, Lori. "Dismantling Oppression: An Analysis of the Connection Between Women and Animals." In *Ecofeminism: Women, Animals Nature*, edited by Greta Gaard, 60–90. Temple University Press, 1993.
- Haraway, Donna J. *When Species Meet*. University of Minnesota Press, 2008.
- Hribal, Jason. "Animals are Part of the Working Class: A Challenge to Labor History." *Labor History* 44, no. 4 (2003): 435–53. <https://doi.org/10.1080/0023656032000170069>.
- Lewis, Sophie. *Abolish the Family: A Manifesto for Care and Liberation*. Verso, 2022.
- Lewis, Sophie. "Do Electric Sheep Dream of Water Babies?" *Logic(s)* 8 (2019). <https://logicmag.io/bodies/do-electric-sheep-dream-of-water-babies/>.
- Lewis, Sophie. *Full Surrogacy Now: Feminism Against Family*. Verso, 2019.
- Lewis, Sophie. "My Octopus Girlfriend: On Erotophobia." *n+1* 39 (2021). <https://www.nplusonemag.com/issue-39/reviews/my-octopus-girlfriend/>.
- Lewis, Sophie. "A Pastoral Tale of Ovine Surrogacy True Crime." *Blind Field: A Journal of Cultural Inquiry*, 19 October 2021 <https://blindfieldjournal.com/2021/10/19/a-pastoral-tale-of-ovine-surrogacy-true-crime/>.

- Limki, Rashné. "On the Coloniality of Work: Commercial Surrogacy in India." *Gender, Work & Organization* 25, no. 4 (2018): 327–42. <https://doi.org/10.1111/gwao.12220>.
- Limon, Cressida. "Inventing Animals." In *Law and The Question of the Animal: A Critical Jurisprudence*, edited by Yoriko Otomo and Ed Mussawir, 54–70. Routledge, 2013.
- Marx, Karl. *Capital: A Critique of Political Economy*. Vol. 1. Translated by Ben Fowkes. Penguin, 1986.
- Mood, Alison, and Phil Brooke. "Estimating Global Numbers of Fishes Caught from the Wild Annually from 2000 to 2019." *Animal Welfare* 33 (2024): e6. <https://doi.org/10.1017/awf.2024.7>.
- Mood, Alison, Elena Lara, Natasha K. Boyland, and Phil Brooke. "Estimating Global Numbers of Farmed Fishes Killed for Food Annually from 1990 to 2019." *Animal Welfare* 32 (2023): e12. <https://doi.org/10.1017/awf.2023.4>.
- Moreton-Robinson, Aileen. *Talkin' Up to the White Woman: Aboriginal Women and Feminism*. University of Queensland Press, 2000.
- Morgan, Jennifer. L. *Reckoning with Slavery: Gender, Kinship, and Capitalism in the Early Black Atlantic*. Duke University Press, 2021.
- Negri, Antonio. *Marx Beyond Marx: Lessons on the Grundrisse*. Autonomedia, 1991.
- Oliver, Kelly. *Animal Lessons: How They Teach Us to Be Human*. Columbia University Press, 2009.
- Oliver, Kelly. "Marxism and Surrogacy." *Hypatia* 4, no. 3 (1989): 95–115. <https://doi.org/10.1111/j.1527-2001.1989.tb00594.x>.
- Organisation for Economic Co-operation and Development and the Food and Agriculture Organization. *OECD-FAO Agricultural Outlook 2018-2027*. OECD Publishing/UNFAO, 2018. https://doi.org/10.1787/agr_outlook-2018-en.
- Pande, Amrita. "Global Reproductive Inequalities, Neo-Eugenics and Commercial Surrogacy in India." *Current Sociology* 64, no. 2 (2016): 244–58. <https://doi.org/10.1177/0011392115614786>.
- Pande, Amrita. *Wombs in Labor: Transnational Commercial Surrogacy in India*. Columbia University Press, 2014.
- Patel, Raj, and Jason W. Moore. *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet*. University of California Press, 2017.
- Plumwood, Val. *Feminism and the Mastery of Nature*. Routledge, 1993.
- Rademaker, Laura, Jakelin Troy, and Julia Hurst. "'Too Many Aboriginal Babies'—Australia's Secret History of Aboriginal Population Control in the 1960s." *The Conversation*, 11 April 2024. <https://theconversation.com/friday-essay-too-many-aboriginal-babies-australias-secret-history-of-aboriginal-population-control-in-the-1960s-189249>.
- Ritchie, Hannah, Pablo Rosado, and Mark Roser. "Meat and Dairy Production." *Our World in Data*, 2023. <https://ourworldindata.org/meat-production#per-capita-meat-consumption>.
- Spade, Dean. *Normal Life: Administrative Violence, Critical Trans Politics, and the Limits of Law*. Duke University Press, 2015.
- Steele, Linda. "Disability, Abnormality and Criminal Law: Sterilisation as Lawful and 'Good' Violence." *Griffith Law Review* 23, no. 3 (2014): 467–97. <https://doi.org/10.1080/10383441.2014.1000223>.
- United States Department of Agriculture. *Quarterly Hogs and Pigs*. USDA, 27 June 2019. <https://downloads.usda.library.cornell.edu/usda-esmis/files/rj430453j/3b591k937/5m60r2937/rj430453j/3b591k937/5m60r2937/hgpg0619.pdf>.

Wadiwel, Dinesh J. *Animals and Capital*.
Edinburgh University Press, 2023.

Wadiwel, Dinesh. "Biopolitics." In *Critical
Terms for Animal Studies* edited by Lori
Gruen, 79–98. The University of Chicago
Press, 2018.

Wadiwel, Dinesh. "The Dairy Cow Labour
Process: Notes from Marx's Value
Theory." *Animal Studies Journal* 14, no.
1 (2025): 1–29. [https://doi.org/10.14453/
asj.1545](https://doi.org/10.14453/asj.1545).

Wadiwel, Dinesh. "Factory Farms for
Fishes: Aquaculture, Biopolitics and
Resistance." In *The Biopolitical Animal*,
edited by Felice Cimatti and Carlo
Salzani, 190–212. Edinburgh University
Press, 2024.