Agricultural Power: Politicized Ontologies of Food, Life, and Law in Settler Colonial Spaces

by

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Abstract

In this dissertation, I develop a theoretical account of agricultural power in the settler colonial contexts of Canada and the United States. By analyzing archival, historical, and legal documents, I argue that the imposition of animal agriculture not only functioned as a method of settler territorialization, but also relied on and reproduced western humanist ontologies of food, humans, animals, and land in these spaces. These ontologies are not objective accounts of reality but are contingent expressions of power that continue to shape alimentary norms and food law. Agricultural power is not constrained to the location of the farm, but is strategically deployed in various registers to re-secure animal-based ontologies of food. Based on an analysis of proposed food legislation and legal cases seeking to enjoin the use of the terms milk, meat, and eggs on plant-based food labels, I show that agricultural power works via law to reproduce "real" food as only animal-based. I then argue that agricultural power and its concurrent ontologies of food and animals continues to shape new meat technologies despite the absenting of the animal from its production methods. In-vitro meat represents a modified form of agricultural power where its target shifts from the location of the animal body to the animal cell. Agricultural power is then a mobile and shifting constellation of relations variously deployed through legal and cultural institutions to reproduce animal-based ontologies of food. Regardless of its point of application, the property status of nonhuman animals is foundational to its exercise.

Despite my critiques of the food ontologies produced and sustained by agricultural power, I argue that it remains a useful political project to ontologize food as a means of cultivating ethical relations between humans, animals, and the more than human world. To this end, I introduce a contextual ontological veganism premised on a distinction between edibility

and food, and where human and animal interests are weighed equally. In this sense, someone or something that is edible should only be ontologized as food based on an evaluation of the relations that produced this item and that are constituted through its consumption. Given how law and agricultural power co-articulate to ontologize animals as property, I propose that this food politics be structured by a non-anthropocentric legal subjectivity of beingness for nonhuman animals where they exist neither as property nor as persons, but are recognized as vulnerable, embodied, and relational (Deckha forthcoming). In so doing, the contextual ontological veganism outlined in this dissertation has legal, ontological, and ethical implications for how we understand ourselves and for how we relate to others through eating.

Dedication

For all of the others, and their others, who are targeted by agricultural power.

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Introduction

Food consumption is physiologically necessary but also intimate and personal even while it is shaped by political, economic, cultural, and social institutions and conditions. Eating is also ubiquitously tied to virtue, morality, ethics, class, and gendered expectations. Assumptions about how and what we eat is read on our bodies, and can shape moral panics—panic not only about the health of the individual, but about the well-being of a nation's healthcare system and even national security (see Kirkland 2011; Welsh 2011). In 2009, best-selling author and journalist Michael Pollan published *Food Rules: An Eater's Manual*. *Food Rules* contains 64 rules that Pollan claims will tell us what we *should* be eating. For Pollan, only real food should be considered food—meaning whole foods that are organic and in their natural state. He states that his book reveals "important truths about food" (2009, xvii). Heavily processed and/or industrially produced foods are *not* food, but are instead "edible like substances" (Pollan 2009, xviii).

Pollan's impetus for proposing these food rules is that the American public is unhealthy because of diets high in industrially produced and processed foods. This western diet, Pollan claims, is causing increased rates of obesity, type 2 diabetes, and other chronic illnesses. For Pollan, the problem facing America's relationship to food is that the public is oversaturated with information about the nutritional content of various foods, while simultaneously unable to discern what to *actually* eat:

> It's gotten to the point where we don't see *foods* anymore but instead look right through them to the nutrients (good and bad) that they contain, and of course to the calories—all these invisible qualities in our food that, properly understood, supposedly hold the secret to eating well. (2009, ix)

Pollan proposes that his rules will both simplify and improve the quality of life and the health of his readers who will consequently have the tools to discern real food from fake food. While

Pollan does not explicitly state that he is making ontological claims about food, in parsing what he calls real food from fake "foodlike substances," he shores up boundaries around what is and what is not food (2009, 5).

I suggest that Pollan's ontology relies on particular notions of temporality and tradition. For example, rule 2 states: "Don't eat anything your great-grandmother wouldn't recognize as food" (2009, 7). Accordingly, foods produced by modern technologies ought not to be considered food. As Pollan writes, "the rules in this section will help you to distinguish *real* foods—the plants, animals, and fungi people have been eating for generations—from the highly processed products of modern food science" (2009, 3 emphasis added). "Foodlike substances" on the other hand are "highly processed concoctions designed by food scientists…that no normal person keeps in the pantry" (Pollan 2009, 5). Rule 10 advises: "avoid foods that are pretending to be something they are not" such as margarine, soy-based mock meats, and artificial sweeteners (Pollan 2009, 23). Real food is positioned as "natural" and therefore "better"—it is also positioned as animal-based. *Food Rules* is therefore meant to re-familiarize readers with an inherent truth about food from which we have been led astray by corporate greed. Yet, an appeal to the historicity of food traditions assumes that traditions premised on "naturalness" are inherent to human cultures. At the same time, Pollan bemoans the case that alimentary norms have changed over time.

The question then is, how is it that contingent alimentary norms come to be taken as historically inevitable, and to what ends? This dissertation takes food ontologies as political events that are reproduced through methods of food production and eating that, over time, come to be taken as natural and politically neutral. Questions about the "what is" of food both shape how we eat and how we produce dominant ontologies of humans, and of animals who become

our food. As such, I argue that dominant ontologies of humans, animals, and food, are shaped by the deployment of agricultural power—a specific but mobile set of power relations that ontologically and materially position farmed animals as deanimalized units of private property, always already the products they will become upon slaughter.

Politicized Ontologies of Life

This dissertation takes a critical theory approach to ontologies. By this I mean that I attend to and analyze how human, animal, and food ontologies are both historically contingent, politically deployed, and reproduced through legal, social, and cultural registers. For example, in writing about the legacy of racial slavery in the context of the United States, Jared Sexton writes:

> Political ontology is not a metaphysical notion, because it is the explicit outcome of a politics and thereby available to historic challenge through collective struggle. But it is not simply a description of a political status either, even an oppressed political status, because it functions *as if* it were a metaphysical property across the *longue durée* of the premodern, modern, and now postmodern era. (2010, 36–37 emphasis added)

For Sexton (2010), political ontology is a powerful tool of social critique. Not only does it reject the notion that our prevailing ontologies are natural or inherent, but it opens possibilities for a critique of power relations and for thinking, being, and doing otherwise.

In examining the treatment of the animal in western philosophy, Derrida (1995, 2008) argues that the disavowal of the animal and of the animalistic functions as an ontological condition for the human, and serves as a metaphysical underpinning that structures and orders western geopolitical spaces and institutions. Derrida uses the neologism “carnophallogocentrism” to stress the interdependence of the consumption of animal flesh, the privileging of the masculine, and the exalted status of speech in the constitution of the (human)

subject. Matthew Calarco writes that, for Derrida, the concept of carnophallogocentrism addresses

> How the metaphysics of subjectivity works to exclude not just animals from the status of being full subjects but other beings as well, in particular women, children, various minority groups, and other Others who are taken to be lacking in one or another of the basic traits of subjectivity. (2008, 131)

Derrida is not the first to point out the racialized, colonial, gendered, ableist, and speciesist underpinnings of the human subject (see for example C. J. Adams 2010; Cuomo 1998; Donovan and Adams 1996; Gaard 2002; Grimshaw 1986; Harding and Hintikka 1983; Lange and Clark 1979; Lloyd 1984; Okin 1979; Plumwood 1991, 1993, 2002; Warren 1990). However, Derrida's work on "the animal" in western philosophy provides a frame to analyze how ontological claims about humans and animals are contingent, yet taken to be fundamental accounts of our reality. According to Derrida, in western philosophy, animals are ontologized as those who are without reason, speech, a relation to death, or responsibility toward others. Because of their supposed inferiority according to these metrics, and because of their subsequent exclusion from subjectivity, animals are rendered noncriminally killable, provided they serve as means to human ends (e.g., fabric, entertainment, experimental bodies, food) (Derrida 1995, 2008, 2011). For Derrida, the structured and ubiquitous subjugation of nonhuman animals represents an economy of sacrifice, and this economy is always already carnophallogocentric.

While ontology is usually considered a branch of metaphysics where objective accounts of reality are discovered and explained, Oksala (2010), building on Foucault's work, argues that there is no objective reality outside of politics, despite such claims. Following Sexton (2010), political ontologies are therefore claims about reality that *present themselves* as ontologically stable, but that are in fact thoroughly political. A critical ontological approach informs this work about food politics in settler colonial spaces. Our dominant conceptions about food, humans, and animals

function as ontologies in that they are taken to be *objective accounts of reality*, ourselves, the more than human world, as well as what we eat.

To instead take questions of the human, the animal, and food from a place of critical ontologies is to launch a more powerful social critique aimed at the destabilization of the "fundamental" truths tied to ontological claims. This framing allows for a sustained analysis of how ontologies tie into and reveal legal ontologies that are co-implicated in our current methods of food production, specifically, that of private property relations to animals and to land. To take a position of critical ontologies is to attend to how these concepts are instituted, and the relations they traverse, influence, and shape, with a view to the fact that over time they become sedimented to the extent that we take them as a metaphysical property and thus ontologically distinct. To focus on critical ontologies then, is to contest our very conception of reality and the ontologies we take as objective accounts of this reality. As Johanna Oksala writes, "reality as we know it is the result of social practices and struggles over truth and objectivity" (2010, 445). Ontological claims have material and symbolic implications that shape how power is exercised and structure our conception of reality. For Oksala, "ontology is politics that has forgotten itself" (2010, 445).

This dissertation analyzes archival data, historical materials, and contemporary legal cases, and draws on indigenous, philosophical, socio-legal, and animal studies scholarship to theorize the operation and implications of agricultural and colonial power. I show the historical contingency and political ends to which these forms of power are deployed, and propose an ontology of food that has the potential to resist colonial orderings of life. It is my position that a critical approach to ontologies allows us to attend to the operation of colonial power that attempted to erase a multitude of indigenous understandings and ways of being in the world. This is because a critical ontological project is explicitly tied to the political function of these ontologies, in such a way that we can

understand and challenge the material, symbolic, geographic, economic, and political contexts in which they function and are directed. This allows us to attend to the importance of how colonial powers continue to frame the world in *terms* of fundamental ontologies (e.g. indigenous people just "are" inferior, animals are food, land is a resource) when really this framing is always political. As I show in detail, specific accounts of the nature of humans and of animals were deployed and instituted to justify both the racial superiority of colonists and the colonial project. This also functioned to allow settler states to make property claims to territory.

The dissertation takes animal agriculture to be an institution foundational to settler colonialism that allowed for the institution of a "proprietary model of social relations" (Nichols 2017, 2), where relationships to land and domesticated animals are mediated through their status as property. As such, our current alimentary norms and the ontologies of food, animals, and humans that support and are remade through eating are historically rooted in projects of racial superiority and territorialization.

Agricultural Power

Chloë Taylor (2013b) and James Stanescu (2013) have argued that because of the specificity of the power relations that underpin the institution of animal agriculture, it is insufficient to merely apply existing accounts of power, such as sovereignty, discipline, pastoralism, and biopower to explain the treatment of farmed animals (see further Clarke 2007; Cole and Morgan 2013; Coppin 2003; Shukin 2009; Wadiwel 2016, 2002, 2015; Wolfe 2013). While it is certainly the case that these technologies of power are deployed towards various ends in practices of animal agriculture, the specificity and means by which they are applied requires its own analytic. For this reason, they argue that we must begin thinking in terms of agricultural power. This dissertation is an effort to respond to that call. My aim is not to develop a concept of

agricultural power that is universally applicable to all human-animal relationships in food production, but to show how, in the context of Canada and the United States, agricultural power works in concert with colonial power to institute ontological and material orderings of life in these settings.

I will argue that, in these contexts, the mediation of human-animal relations by property status and the ontologization of farmed animals as deaded life is fundamental to the exercise of agricultural power. By this, I mean that agricultural power works to deanimalize farmed animals; they are denied their animality as interdependent beings, with their own interests who, like humans, develop a sense of self in relation to others around them. Instead, they are reduced to input-output machines who can be manipulated and arranged to suit the needs of the institution at hand. Even in life, they exist as the products they will become upon their death (Guenther 2013; J. Stanescu 2013). Agricultural power, as I will show, not only works to institute animal agriculture as a dominant method of food production or as the most frequent way that humans in urban settings interact with animals, but its exercise is evident in legal cases that seek to preserve animal products as the norms from which plant-based alternatives are characterized as illegally labelled fake foods.

Agricultural power, as I argue, has also been over-applied to the extent that animal agriculture is a leading cause of climate change, frequently results in the transmission of zoonotic diseases, and provides the conditions in which pandemics are generated. I further contend that biotechnological responses, such as in-vitro and synthetic meats, represent a modified iteration of agricultural power that maintains an animal-based ontology of food, and is not an emancipatory alternative to animal agriculture and animal subjugation as many researchers and animal ethics have claimed (Hopkins and Dacey 2008; Schaefer and Savulescu

2014; Sebo forthcoming; Stephens 2013). However, how we relate to nonhuman others and how we eat can be otherwise. It is for this reason that the dissertation argues for a contextual ontological veganism that introduces a distinction between food and edibility as a means to resist the property status of nonhuman animals.

Summary of Chapters

Chapter one examines how the dominant ontologies of humans, animals and food are distinctly political and tied to nation-making in territories now called Canada and the United States. While Virginia Anderson has provided an extensive analysis of the institution of animal agriculture as a mode of settlement in the New England region of the United States, no such analysis exists in Canada. Indeed some scholars have discussed indigenous-settler relations surrounding agriculture (Anderson 2006; Bateman 1996; Fischer 2015; Kim 2015; Schmalz 1991; Shewell 2004; Woolford 2015), but animals are rarely considered subjects of colonialism in their own right. This absence is even more pronounced for farmed animals (noteable exceptions include Belcourt 2014; Robinson 2013, 2014). My argument is that our dominant food ontologies—specifically those that position animals as deadened life (J. Stanescu 2013)—in settler colonial contexts are historically tied to projects of nation-making which required ever increasing amounts of land to sustain settlers.

This chapter interrogates the relationship between animal agriculture and dominant ontologies of humans, animals, and food that sustain alimentary norms in Canada and the United States. I analyse historical research and archival data to show that in the settler colonial contexts of these regions, animal agriculture has been a primary mode of colonization. Farmed animals from Europe were introduced so that settlers could acquire land. This also functioned to institute a humanist politics of life wherein animals are transformed into property and ontologized as

deadened life. I follow Johanna Oksala's (2010) framework for the politicization of ontology to show that, in Canada and the United States, our dominant ontologies of food are not natural or inherent, despite popular beliefs about their inevitability. Instead, the food ontologies we take for granted (animal-based diets) and the methods of production associated with them (animal agriculture) rely on the human/animal dualism—a parsing of life implemented by and foundational to projects of settler colonialism.

While the first chapter focuses on the institution of western ontologies of life vis-à-vis relationships of private property, domestication, and desubjectification of farmed animals, the second chapter turns its attention to ontological questions of how we ought to determine edibility in light of the relationships between humanism, de-animalization, and land dispossession elucidated in the first chapter. The second chapter takes up the arguments made by feminist philosophers of food Val Plumwood (2000) and Lisa Heldke (2012). Plumwood suggests that we develop a food politics informed by sacred eating that rejects ontological veganism and instead embraces natural predation and the fact that we are all edible. Heldke argues for a relational ontology of food; rather than using biological designations to determine what is food, edibility should be determined by the relations entailed in the making of the food item in question. While both arguments are important, I argue that they continue to privilege human concerns above those of animals, despite their claims to contextual specificity, relationality, and thinking otherwise. Given the normalized and privileged place that animal products hold in western diets, combined with the historical imposition of animal agriculture in settler spaces as a function of colonialism, these are significant limitations.

Building on and responding to Plumwood's and Heldke's arguments, I develop a distinction between food and edibility to argue that decisions about what counts as "food" should

relate to the processes and relations entailed in the production and consumption of food items. Because of this, it is important to recognize non-human animals as edible, but to develop an ontology within which they are not food. I propose a relational and contextual vegan ontology of food that is premised on "beingness"—a legal subjectivity of animal life that precludes them from being property, but at the same time avows their difference from humans in ways that are ethically significant and politically meaningful (Deckha forthcoming).

The third chapter analyzes recent legal challenges in the U.S. and Canada that seek to maintain legislated definitions of milk, eggs, and meat as always animal-based. In these lawsuits, producers of plant-based foods are sued for labelling their products as milk, eggs, or meat. By attempting to define plant-based milk, eggs, and meat as "fake" and unequal substitutes for animal-based analogues, those bringing legal suit effectively recuperate dominant ontologies of food along the real/fake axis, while also protecting the financial interests of those who benefit from animal agriculture. In this way, we can understand these legal cases as a specific deployment of agricultural power that effectively maintains a tidy and separable ordering of humans, farmed animals, and edibility. Much more than concern over mere semantics or economics, I argue that lawsuits aimed to secure animal-based foods as the norm from which all other options deviate, are struggles meant to maintain relationships to food that are historically embedded in projects of humanism, white supremacy, nationalism, and able-bodiedness. Law is itself historically contingent and a necessary object of analysis. This is because law is a means by which animal life is organized as property, a site where foods are categorized and defined, and is a location where power relations specific to identity, the body, and consumption coalesce and reproduce.

The fourth chapter examines the potential implications of in-vitro meat (IVM) and synthetic (plant-based) meat in terms of our current food ontologies, and our ontologies of meat in particular. While researchers, animal ethicists, and biotech firms position IVM as the best of both worlds in that it will allow consumers to eat meat without the ethical, environmental, safety, or health concerns associated with agriculturally produced meat, I argue that these new technologies represent a modified exercise of agricultural power, not its alternative. I suggest that IVM is better understood as a response to the over-application of agricultural power (C. Taylor 2013b) that preserves dominant ontologies of the human, the animal, and of food as animal-based. IVM and synthetic meats are only articulable solutions because of the role of meat consumption in the constitution of the western human.

Arguments in support of these technologies claim that "real meat" is nothing more than a specific chemical composition (Brown 2016; Datar, Kim, and d'Origny 2016; Memphis Meats 2016; Hopkins and Dacey 2008; Schaefer and Savulescu 2014; Sebo forthcoming). These arguments, I show, rely on ontological claims about the authenticity of IVM, while simultaneously revealing meat to be a negotiated and contingent object. While these new meat technologies claim to be "clean" in the sense that animal death is not required (though at this stage cells and growth mediums are sourced from slaughterhouses), I show that arguments about the realness of IVM recall and reproduce farmed animals as deaded life.

Biotech meat researchers and supporters position IVM and synthetic meats as structural equivalents to agriculturally-produced flesh. I argue that this appeal casts animal flesh as an acceptable food that we politically, economically, culturally, and individually ought not and cannot give up. As a result, the disruptive potential of these foods is lost. The chapter then moves to a consideration of how new meat technologies might be regulated using existing legal

frameworks. As a result, I suggest that animals and their cells will likely remain the private and intellectual property of human owners. Given these concerns, I suggest that IVM, while edible, ought not be considered food within a framework of contextual ontological veganism.

Chapter 1:

The Colonial Deployment of Agricultural Power

"What I mean by political ontology is a *politicized* conception of reality." (Oksala 2010, 447)

"Derrida does not let us forget that sovereign power is erected on death, particularly the death of animals, both the animals with whom we share the planet and the animals within us." (Oliver 2013, 139)

Introduction

Prevailing settler colonial narratives of Canadian nation-making imagine the country as a previously uninhabited space rich with untapped natural resources. For example, in the 2013 Speech from the Throne delivered by former Prime Minister Stephen Harper, he urged the nation to consider its *history* to garner strength to recover from a global recession. Specifically, he said that his government would:

> Draw inspiration from our founders, leaders of courage and audacity. Nearly 150 years ago, they looked beyond narrow self-interest. They faced down incredible challenges - geographic, military, and economic. They were undaunted. They dared to seize the moment that history offered. Pioneers, then few in number, reached across a vast continent. They forged an independent country where none would have otherwise existed. (Canada 2013)

Contemporary discourses of Canada as an international leader in human rights, as a peacekeeper, in addition to stories of brave pioneers who arrived at an unoccupied territory, allow citizens to have an "innocent sense of self, history, and place" (Dryden and Lenon 2015, 10). Inasmuch as the fur-trade was integral to nation-making in Canada, fur-bearing animals are familiar characters (or objects of exchange) in Canadian origin stories. These animals remain

symbolically trafficked on Canadian coins and their death at the hands of the the fur trade is harkened back to by celebratory merchandise such as the Hudson Bay Company's "iconic heritage" (point-blanket) collection (Atwood 1972; Hudson's Bay Company n.d.). The role of animal agriculture, or a consideration for farmed animals, does not figure in nation-making stories as does the fur-trade (see further Shukin 2009). Animal agriculture, however, was a primary mode of settlement post-fur trade and post-confederation that continues to inform our current ontologies of the human, the animal, and food.

For colonists, animal agriculture represented civilized modes of human-animal relationships in which animals were the private property of humans, and who existed to serve human ends. Animal agriculture both relies on and produces an ontology of farmed animals as deadened life (J. Stanescu 2013). This causes the deanimalization of farmed animals who are not considered subjects in their own right, but are transformed into input-output machines that are always already imagined in life as the "meat" they will become when slaughtered, processed, and consumed by humans. Because animal agriculture is structured and mediated by private property relationships to land and to animals, I focus exclusively on this institution in its specificity. While hunting and fishing are certainly other human-animal relationships that require sustained analytic and ethical consideration, and in certain instances function as expressions of western humanism, these should be understood as practices and phenomena in their own right. Such a project is outside of the scope of this chapter which is primarily focused on the institution of western ontologies via agricultural power.

Inasmuch as colonists were embedded in a framework that positioned animal agriculture as a hallmark of civility, it represented *the* proper mode of relating to land and animals—as natural resources to be owned and cultivated. Animal agriculture was also instrumental for

settlers asserting *terra nullius.* While colonists could not deny that indigenous persons existed in the new world, they relied on English and Roman law to state that because indigenous persons did not farm, they did not use land in such a way as to have a legal claim to it (Anderson 2006). Importantly, they did not "improve" territory by building dwellings, by clearing forests and planting crops, or by using land for animal agriculture. Instead, the colonial imagination claimed that they lived off the land as did animals, and animals similarly had no private property rights to land.

The notion of improvement would become integral to settler immigration policies that gave free or cheap land to immigrants who could prove that they had improved the land (transformed it into a commodity producing resource) for which they wished to receive a patent (land title) (Anderson 2006; Dominion Lands Act 1872a; The U.S. National Archives and Records Administration 2016). While animal agriculture is taken to be the inevitable result of historical process, I argue that it is a specific mode of settler territorialisation that sought to institute western ontologies of life while simultaneously allowing colonists to make a legal claim to land. The settler food cultures (western animal-based diets) sustained and made possible by animal agriculture are taken to be natural and inevitable, when instead they should be understood as a particular iteration of western humanism that institutes and makes possible our dominant ontologies of humans (exceptional), farmed animals (deadened life, i.e., input-output machines who exist to become food), and food (animal-based and agriculturally produced).

Critical animal studies (CAS) is often antithetical to a decolonial project. In their attempts to attend to intersecting axes of oppression, some CAS scholars have flattened important differences between indigeneity and other axes of identity with the result that the attempted and ongoing genocide of indigenous persons that has been mobilized on speciesist grounds is ignored

(Belcourt 2014). Furthermore, by attempting to extend human rights in order to secure protection for nonhuman animals, CAS scholars effectively reify the settler state as the singular mode of governance in a settler geopolitical space (see further Belcourt 2014). Yet this does not mean that CAS cannot engage with indigenous scholarship, or that there are not necessary and generative points of convergence and cross-collaboration. Given that the taxonomies of race and of species energize and sustain one another, Claire Jean Kim (2015) argues that we ought to attend to their co-constitutive relationality. This chapter therefore follows indigenous scholars Kim TallBear (Sisseton-Wahpeton Oyate, South Dakota) (2013, 2017) and Billy-Ray Belcourt (Driftpile Cree First Nation, Alberta) (2014) who urge us to attend to indigenous metaphysics and cosmologies as a means of resisting violent and oppressive settler ontologies of life. Kim TallBear argues that animal studies scholars working to contest human supremacy must grapple with indigenous ontologies that do not rely on stark differences between humans and other forms of life. These are the more than human life forms who, when indexed as nonlife, become "translated into 'resource[s]'" (2013, 7).

Animals and animality should not be secondary to an analysis of settler colonialism but instead focal to a decolonial ethic inasmuch as animals and purportedly animalistic traits were targeted by colonial projects in Canada and the United States:

> The animal body [is] *the* fleshy material(ity) against and through which settler colonialism is materialized insofar as the oppression of animals and…[inasmuch as] the (settler-colonial) politicization of animality progresses the settler state. (Belcourt 2014, 3)

Colonists categorized indigenous persons as closer to wild animals than to white men, which allowed them to justify their presence and their dominance. A denigrated animality is then integral to projects of white supremacy and racial capitalism that "require the simultaneous exploitation or destruction of animal and indigenous bodies" to acquire land (Belcourt 2014, 3).

It is therefore necessary to focus on the imposition of ontologies, and on animal subjects when analyzing settler colonial power. This is because the erasure of indigenous ways of life and their replacement by western norms is foundational to its exercise (Belcourt 2014). By providing an account of competing human-animal ontologies, such as an indigenous metaphysics of interrelatedness (TallBear 2013, 2017), the contingency of carnophallogocentrism (Derrida 2008), and its particular ontologies of humans, animals, and food become evident and are destabilized.

This chapter follows Johanna Oksala's (2010) framework for the politicization of ontology. To do so I analyze archival data as well as historical and contemporary material to show that a metaphysics of carnophallogocentrism is contingent and has been imposed to serve the political purposes of settler governments. The data and scholarship that I draw on to make this argument is that which addresses agriculture, land, and race in such a way that assumes a certain conception of humanity and animality that imperial governments and state representatives used to inform their settlement policies. I do not claim or intend to provide an exhaustive account of the settler Canadian or American archive, but instead I use this data to glean how ontologies about "the human" and "the animal" shaped and informed colonial efforts in these geopolitical contexts. I argue that not only did settler colonialism materially dispossess persons from their ancestral lands, but that settler colonialism, through the deployment of agricultural power, also presupposed and reproduced humanist ontologies of life. These are ontologies about humans, animals, and nature that have become solidified over time, and compete with an indigenous metaphysics of interrelatedness in settler colonial contexts of Canada and the U.S. (TallBear 2017).

Chapter 1

To explicate how an indigenous metaphysic of interrelatedness differs from carnophallogocentrism, I draw on historical documents and research, as well as indigenous scholarship that discusses indigenous human-animal relationships regarding food, land, interdependence, and accounts of subjectivity. In doing so, I do not claim (nor would I want to) that this is how *all* indigenous persons understood or understand themselves in relation to the more than human world. Instead, I do so to show how settler colonialism, via the exercise of agricultural power, worked at the level of ontologies to institute a hierarchical ordering of humans and animals as part of a territorializing project. I then analyze the power relations that produce, and are produced by a carnophallogocentric metaphysics. I do so by explicating how animal agriculture worked to impose private property relationships to land and to animals in settler colonial contexts. As private property, animals exist as deadened life, meaning that they are ontologized as input-output machines with no regard for their psychosocial and species-specific needs, desires, or ways of being (Guenther 2013; J. Stanescu 2013). They are legally designated and transformed into commodities that can be manipulated as per the needs of the humans who own them.

The chapter is organized in the following manner. I first discuss the historical contingency of the species barrier. I rely on indigenous scholars, historians, testimony from the Royal Commission on Aboriginal Peoples (1996), as well as the testimony submitted to the Truth and Reconciliation Commission of Canada (2015) relevant to human-animal relations in a context of settler colonialism. I discuss the competing ontologies held by native persons and settlers about humans, animals, and the more-than-human world. Based on this analysis, it is evident that during periods of settlement, a carnophallogocentric metaphysic competed with indigenous cosmologies of life to institute western modes of life as superior and supposedly

inevitable. The chapter then moves to an analysis of the power relations produced and sustained by these ontologies. I specifically focus on the relationship between animal agriculture and private property relations to land and to animals. I show that animal agriculture fundamentally ontologizes animals as deadened life, and that these ontologies relate to processes of settler territorialisation.

Critical Ontologies: Destabilizing Accounts of Life

Oksala (2010) writes that "ontology" commonly refers to the "fundamental nature of reality and to the systematic study of this nature" (2010, 463) with mainstream philosophers accepting that ontologies are objectively discovered, and are therefore natural and universal. Engaging with Foucault's critical project, Oksala however argues that the ontologies that we have are not inevitable, but are the historically contingent outcomes of power struggles. As such, objectivity, or concepts and social phenomena that we understand as objective accounts of reality, "can only be the fragile and temporary victory of an ongoing political struggle, and ontology is the sedimented effect of it" (Oksala 2010, 462). This does not mean, however, that the ontologies which have become sedimented over time do not have material effects, in fact we ought to interrogate these ontologies because they structure our practices and our understanding of reality. For Oksala, then, the task is to politicize ontology *because* ontology and politics are always already co-implicated. It then follows that we cannot attend to the contemporary realities of animal agriculture[1] without attending to the ontological claims (about humans, farmed animals, and food) that support these practices.

[1] Animal agriculture and its processes entail vast animal exploitation, and is the leading cause of anthropocentric climate change, loss of biodiversity, and water scarcity. Western animal agriculture is also facilitated by economic subsidises, foreign trade policies, and state-driven food imperialism. Animal agriculture also relies on the exploitation of slaughterhouse workers that entails spill-over effects including increased crime rates and violence in

Oksala (2010) shows that the politicization of ontology requires and relies upon two theoretical processes. First, ontology has to be denaturalized. This entails the "contestation and provocation of all given and necessary ontological foundations" (Oksala 2010, 447). Here, the task is to render our taken-for-granted ontologies as "arbitrary or at least historically contingent" (Oksala 2010, 445). This will allow us to attend to the possibility of competing ontologies that can inform alternative accounts of life, reality, and politics. Second, the power relations that support our ontologies have to be revealed and their "constitutive role in our conception of reality" analyzed (Oksala 2010, 445). In other words, the politicization of ontologies requires the denaturalization of ontology as a politically-neutral and objective metaphysical account of our world. In turn, this requires the exposure of the operation of power relations and how they shape our conceptions of reality. Inasmuch as genealogical projects are most effective when they are local and specific (McWhorter 2009), I focus on western ontologies of food, which rely on particular ontologies of humans and animals that were implemented as part of the colonial project in what is now known as Canada and the United States.

Humans and Animals in Western Philosophy

Jacques Derrida's (1995, 2008) analysis of the subjugation of nonhumans in western philosophy points to ideas that informed how European colonists settling Canada and the United States thought about humans, animals, and nature. Coming from contexts where animal agriculture was ubiquitous, and the human-animal relations entailed in domestication and farming of animals were largely unquestioned, settlers thought these to be both natural and superior to the modes of life they witnessed upon arrival in the "new world" (Anderson 2006;

communities where slaughterhouses operate (Fitzgerald, Kalof, and Dietz 2009; Oxfam America 2015; V. Stanescu 2016; Steinfeld et al. 2006; Twine 2010).

Robinson 2014). In *The Animal that Therefore I Am*, Derrida (2008) writes that western humanism is a *distinct* structure that renders animals, and in some instances, animalized humans, as noncriminally killable. He names this structure carnophallogocentrism.

Carnophallogocentrism refers to the subjugation of animals in the making of the human, as well as to the privileging of masculinity and rationality. For Derrida, carnophallogocentrism is an economy of animal sacrifice that renders nonhuman others non-criminally killable provided their death serves as "means for man: livestock, tool, meat, body, or experimental life form" (2008, 102). This logic of sacrifice co-constitutes the human/animal dualism, and parses who counts as life or not life. Derrida cites Heidegger's assertion that "the stone is worthless [*weltlos*], the animal is poor in the world [*weltarm*], man is world-forming [*weltbildend*]" (qtd. in Derrida 1995, 151) as an example of how human subjectivity is formed via differentiation from the animal and the more-than-human world. "Man" is attributed agency to determine and shape the world, whereas nonhumans are the passive recipients of the world-forming man. The stone, and by extension, "nature" are of no value. It thus follows that man is positioned as the rational master of a more-than-human world, for whom everyone and everything else are resources contributing to his advancement.

Animals, whose myriad differences are flattened under the label of "the animal" become homogenized others whose unifying feature is that they are not human. In tracing the logic of the subjugation of animals in western philosophy over the past two centuries, Derrida shows that it is through the opposition of the human to the animal, and through the disavowal of the animal and animalistic characteristics, that the human positions himself as having evolved from being *just* an animal, to a superior "animal, but a speaking one" (2008, 120). As such, Derrida demonstrates how a Cartesian ontology of the human (as a rational atomistic actor) is contrasted to an ontology

"of the animal-machine that exists without language and without the ability to respond" (2008, 121). This line of reasoning allows only the human to be a proper subject.

According to a Cartesian ontology of animality, communication is divorced from intent and cannot be an expression of an animal's subjectivity. Instead, it is understood as a mechanistic response to stimulus that is "fixed in its programmation" (2008, 122). Animals are also denied the capacity for

> Speech, reason, experience of death, mourning, culture, institution, technics, clothing, lie, pretense of pretense, covering of tracks, gift, laughter, tears, respect and so on—the list is necessarily without limit, and the most powerful philosophical tradition within which we live has refused the "animal" all those things. (Derrida 2008, 137)

Animals are therefore denied consciousness and subjectivity in Derrida's account. I would add that even when nonhumans are recognized as sentient (as in the case of companion animals), they still remain putatively inferior to humans to the extent that they remain the property of humans and thus are meaningfully excluded from legal, ethical, and political registers. It is these ontological accounts—of the human as a rational master, and therefore as *the subject,* and of the animal as an input-output machine who cannot be a subject—that support and authorize carnophallogocentrism. To be animalized entails the simultaneous processes of being rendered noncriminally killable, and of existing solely as a resource for humans; the result of this is also to be de-animalized.

Lisa Guenther refers to *de-animalization* as "the reduction of a living, relational animal to a nonrelational thing to be stored, exchanged, or even destroyed without regard for its particular ways of being in the world" (2013, 157). To be animalized is in effect to be de-animalized. It is to have one's ontology denied as a feeling, intersubjective being, who develops a sense of themselves in relation to others in a shared world. In intensive confinement practices such as

factory farming and the prison's solitary confinement cell, beings are de-animalized through the denial of intercorporeal relations, "reduced to input-output machines, mechanisms of stimulus and response, separable units of behaviour that can be disorganized and reorganized according to the requirements of the animal industrial complex" (Guenther 2013, 157). This account of de-animalization in the setting of the factory-farm can be put in conversation with James Stanescu's (2013) theoretical intervention of the deading of life within the location of the factory-farm to argue that the deading of life is the effect of this de-animalization.

Stanescu (2013) argues that the purpose of the factory farm is to produce corpses (meat) for human consumption. In this way, Stanescu provides a clear example of Derrida's logic of sacrifice as the non-criminal killing of animals. While a murderer tries to evade detection and/or hide the victim's body, the fact that the victim is nonhuman negates the possibility that a murder has been committed. He writes: "no one hides themselves in the slaughter of animals. But at the same time, the animals themselves are not hidden. Rather, *the productions of their remnants are the very point of the practices"* (2013, 152 emphasis in original). Because the production of corpses is the objective of the factory farm, Stanescu argues that we should understand the factory-farm as a means of "deading life," of producing "beings who should be alive, but are already somehow dead" (2013, 155). Reduced to input-output machines, living farmed animals exist as the products they produce or will become upon their deaths. While both Guenther and Stanescu consider contemporary operations of deanimalization and deading life to explain human-animal relations in factory farms, these logics are not constrained to industrial agricultural operations. It was the case that settler colonial projects in Canada and the U.S. relied on these co-implicated processes to impose humanist ontologies.

Chapter 1

Part I: Arbitrary Humanism, Competing Ontologies: Politicizing the Species-Barrier

If we take Oksala's (2010) claim that all ontologies are political, then the first task is to reveal the arbitrariness of the species-barrier, which is upheld through the opposition of the human to the animal. TallBear argues that western dualisms such as human/animal, subject/object, life/death are "stubborn binaries…that underlie violent hierarchies in our world" (2013, 4). The result of the hierarchical ordering of humans over animals are relations based on speciesism, which Peter Singer defines as "a prejudice or attitude of bias in favour of the interests of members of one's own species and against those of members of other species" (2009, 7). Yet, speciesism is not merely an organizing logic but:

> An institution that relies on the tacit agreement that the full transcendence of the "human" requires the sacrifice of the "animal" and the animalistic, which in turn makes possible a symbolic economy in which we can engage in what Derrida will call a "noncriminal putting to death" of other *humans* as well by marking *them* as animal. (Wolfe 2003, 6)

Here Wolfe indicates that the institution of speciesism is mobile in its application, it "can be used to mark any social other" (2003, 7) as animal or as more animal than human—thus allowing the creature in question to be treated as *just* an animal. The institution of speciesism therefore legitimates the political exclusion of animalized humans and animals from the status of "full" human, and from the legal, cultural, and material protections and privileges this entails.

For example, Claire Jean Kim (2015) notes that British colonizers constructed Native Americans as more like wolves than they were like white Europeans, who were taken to be the baseline from which an assessment of the humanity of another could be determined. The colonial imagination flattened a multitude of Indigenous nations and identities by constructing "the Indian…as someone located in a space of antecedent time and ahistoricity, a primitive as incapable of cultural development as the wolves and trees he lived among" (Kim 2015, 44).

Indigenous people's ways of relating to land and animals, specifically that they did not have private property relationships to either, was taken to be indicative of their savagery (Anderson 2006; Kim 2015). Depictions of indigenous persons as savage animals in part relied on their supposedly improper relationships to food (i.e., they were pathologized as Wendigo cannibals, they hunted, and putatively did not farm)—relationships that colonizers used as evidence of their inferiority.

This depiction of indigenous persons as sharing a kinship with animals was also the case in Canada (Francis 1997). Daniel Francis' analysis of Canadian educational materials for primary and secondary students shows that "until the 1960s, textbook Indians were sinister, vicious figures, without history or culture" (1997, 72). Inasmuch as these educational materials reflect the pedagogical priorities of the nation state, they also reveal prevailing settler discourses about indigenous-settler relations. Prior to the 1960s, children were taught that indigenous persons stood in the way of progress, and that the European project was that "of discovery and conquest, not contact" (Francis 1997, 73). Indigenous persons were not framed as belonging to sovereign nations, "but as part of the landscape which had to be explored and subdued" (Francis 1997, 72). In an attempt to categorize them according to western orderings of life, descriptions focused on the physical characteristics of indigenous persons:

> Early texts portrayed Indians as bright-eyed animals peering out from their hiding places in the dark woods; "wolf-eyed, wolf-sinewed, stiller than the trees," as the poet Marjorie Pickthall put it. Descriptions focused on their physical characteristics. The Indians were "a strange race," wrote Duncan McArthur. "They belonged to the country almost as the trees of the wild roaming animals." They were "human wolves," wrote W.L. Grant. Like animals, their senses were particularly keen. "They had bright, black eyes that could see ever so far, and ears that could hear clearly sounds that you would never notice." And their strength was notable. "The Indians...were tall athletic people with sinewy forms...They were capable of much endurance of cold, hunger, and fatigue; were haughty and taciturn in their manners; active, cunning, and stealthy in the chase and in war."

> Their lodges were crowded and filthy like animal dens, and their ferocity was like the wild beasts tearing at the heart of the European settlements. (Francis 1997, 73)

This excerpt provides a clear example of the ways in which the Indian-wolf trope was foundational to colonial logic. Evidence of indigenous savagery depended on a construction of their animality, coupled with humanist ontologies of life that indexed animals as inferior to civilized European men. These tropes were not isolated to literature, texts, or educational materials, but were foundational to government and policy approaches to indigenous persons.

Early Canadian federal governments relegated First Nations persons to the realm of the natural. In the 1882 Speech from the Throne, indigenous persons were described as nomadic and were infantilized as "children of the Prairie and of the Forest" (Canada 1882). In 1885, John A. Macdonald referred to "Indians" as "sons of the soil" (Brodie 2012, 103). The *Indian Act*, implemented in 1876 excluded indigenous persons from the category of legal personhood, with the 1927 revision of the *Indian Act* decreeing that "the expression 'person' means any individual other than an Indian"—a stipulation that remained in the Act until 1951 (Brodie 2012, 105). In this context, to be animalized, then, is to be excluded from the realm of the human, and subject to being noncriminally killed. In Foucauldian terms, to be noncriminally killed can also be understood as a biopolitical targeting of racialized groups by the state in such a way as to inhibit their survival, whereas racially-dominant groups are targeted for optimization (Foucault 2010).

Scholars such as Janine Brodie (2013) and Chloë Taylor (2016) have argued that settler assimilation projects that operate through legal, residential school, welfare, reserve, and prison systems are biopolitical in the sense that they "disallow indigenous lives to the point of death, whether this death is a literal, biological death or social, cultural or civil" (C. Taylor 2016, 137). Brodie (2013), for example, argues that federal legislation facilitated the letting die of indigenous ways of life and persons. The reserve system functioned to colonize indigenous alimentary habits

by blocking them from their traditional forms of subsistence which effectively imposed starvation. Indigenous persons, likened to animals and therefore subject to be treated as such, were targeted by settler colonists for genocide, and their deaths were not considered acts of murder, but as part of the colonial process of conquering so that settlers might live (see further Nichols 2014; Woolford 2015).

As a tactic of settler colonialism, animality continues to be a mobile and denigrated status that functions to subjugate animalized humans and animals. This label and categorization violently "re-locates racialized bodies to the margins of settler society as non-humans, but [it] also performs an epistemic violence that denies animality its own subjectivity and re-makes it into a mode of being that can be re-made *as* blackness and indigeneity" (Belcourt 2014, 5). This is not to say that animality, as deployed by settler colonialism resulted in identical or commensurable experiences for indigenous persons and nonhuman animals. However, a humanist ontology of the animal does work in concert with white supremacy, racial capitalism, and settler colonialism (Belcourt 2014; Dayan 2013; Sexton 2010). For animals targeted by the fur trade and agriculture, a western ontology of animality:

> Re-ma[de] animal bodies into colonial subjects to normalize settler modes of political life (i.e., territorial acquisition, anthropocentrism, capitalism, white supremacy, and neoliberal pluralism) that further displace and disappear indigenous bodies and epistemologies. (Belcourt 2014, 9)

In this sense, attempts to erase indigenous ontologies were fundamental to settler colonialism which pivoted upon the simultaneous "disappearance of indigeneity and the sedimentation of settler life-ways as normative" (Belcourt 2014, 2). The point here is not to engage in a critique of indigenous ontologies, but to argue that part of the colonial project targeted indigenous understandings of life and sought to replace these with western ontologies that colonists positioned as superior, innate, and true.

The species-barrier is a resource that settlers used to justify their claims of superiority vis-à-vis the indigenous persons they encountered, and through which they justified their subjugation of nonhuman others. Anderson's historical research on encounters between the Algonquin and English colonists during the 17th century shows that in this context, the species-barrier was unique to colonists:

> Although Europeans placed all nonhuman creatures into a generic category of animals, Indians may instead have conceived of animals only as distinct species. Colonists who compiled lists of native vocabulary recorded names for many kinds of animals, but no Indian word for "animal" itself…If this linguistic peculiarity represented a genuine conceptual difference, it suggests that Indians did not conceive of the natural world in terms of a strict human-animal dichotomy but rather as a place characterized by a diversity of living beings. (2006, 18)

This does not mean that the indigenous peoples described above did not understand themselves as different from nonhumans, but it does indicate that this difference did not translate into a world view wherein animals always already exist as resources for humans (Anderson 2006). Margaret Robinson's (2013, 2014) analysis of Mi'kmaq legends also shows that these legends do not include a strict species divide, nor the associated parsing of human and animal life.

In Mi'kmaq cosmologies, one's species (species itself being a western taxonomy) is not fixed: "Mi'kmaq legends view humanity and animal life as being on a continuum, spiritually and physically. Animals speak, are able to change into humans, and some humans marry these shapeshifting creatures and raise animal children" (Robinson 2013, 191). Unlike a metaphysics of carnophallogocentrism, this ontology does not index speech and rationality as exclusive to humans. Instead, this understanding of human-animal life is more appropriately understood as part of an indigenous metaphysics of interrelatedness (TallBear 2013, 2017). For example, testimony given by a Mi'kmaq representative to the Royal Commission on Aboriginal Peoples (RCAP) highlights the interconnectedness of humans, animals, and the more-than-human world:

"Just as a human being has intelligence, so too does a plant, a river or an animal. Therefore, the people were taught that everything they see, touch or are aware of must be respected" (1996, 50). Human beings are also not positioned as independent actors for whom the world exists in the form of unending resources. Chief Jacob Thomas from the Iroquois confederacy aptly highlights that "human beings were the last to emerge in the order of creation, and they are the most dependent of all creatures on the sacrifice of plant and animal life for their survival" (as cited in RCAP 1996, 602). Unlike a western ontology of the human as an atomistic and autonomous rational actor, within a metaphysic of interrelatededness humans are *dependent upon* animals and land for their survival (RCAP 1996; Robinson 2013, 2014). In this way, humans do not exist above or outside of nature, but are positioned within the realm of the natural.

Mi'kmaq ontologies also do not position humans as those who intervene upon and direct the more-than-human world: "No human being possessed all the forces, nor could human beings control the forces of the stars, sun or moon, wind, water, rocks, plants and animals" (RCAP 1996, 50). Animals therefore are not objects to be manipulated as per the needs of humans, but are ontologized as subjects in their own right: "they exist for their own purposes, as self-aware rational beings whose existence is *for themselves* rather than *for us*" (Robinson 2014, 674). This does not mean that Mi'kmaq persons did not consume animals, but that the ontologies underpinning their relations were premised on respect for one's siblings. Specifically, Robinson writes that animals "are not made for food, but willingly become food as a sacrifice for their friends" (2013, 192). Accordingly, animals had to give their consent to be consumed by humans. Robinson describes that according to the legends she analyzed, "the animals are willing to provide food and clothing, shelter and tools, but always they must be treated with the respect given to a brother and friend" (2013, 191). Their value lies not in the purposes they can serve to

humans, but in the fact that the creature itself is a living being (Robinson 2013). As such, the issue in this case is not whether indigenous persons consumed animals, but instead, the ontologies of humans and animals that informed and structured how people ate, who could be eaten, and in what manner. By focusing on ontologies as both contingent and politically motivated, we can better understand our current food ontologies and related norms of food production not as an inevitable historical development, but instead as a distinct result and expression of settler agricultural power.

In contrast to a western deanimalized ontology of "food" animals as being mere bodies from which meat is harvested, Mi'kmaq legend holds that animals are "independent people with rights, wills, and freedom" (Robinson 2013, 192). While they might consent to being killed to allow the survival of their human sibling, they can retract their consent if the terms of agreement are violated. For example, consent can be revoked if people kill animals needlessly, do not treat them with respect, or take more than they need. The notion that animals are self-determining is in stark contrast to a western structure of sacrifice in which animals are always already resources to be directed towards human ends. In Mi'kmaq legends, humans express regret over the death of an animal (Robinson 2013). In the Nishnaabeg language, the verb for hunting and the verb for mourning are the same (Simpson 2011). These examples indicate that animals are mournable subjects, an orientation to animals that is largely precluded by western ontologies of animality (C. Taylor 2013a).

Inasmuch as the indigenous cosmologies herein examined did not organize life according to a species-barrier, animals were not conceptualized as simply physical objects, but were subjects of the spiritual realm. Robinson writes that according to Mi'kmaq legends, "the animals have independent life, their own purpose and their own relationships with the creator" (2013,

193). The Algonquins of New England understood certain animals (as well as humans and objects) as possessing *manitou*, meaning that they possessed a form of spiritual power that was evident in their appearance, their behaviour, rarity, or ability to elude hunters. Animals were understood to have spiritual protection that resulted in specific human-animal relations. They "could not be treated lightly, as if they were merely commodities placed on earth for human benefit" (Anderson 2006, 21). Due to their potential to be spiritually powerful, animals had a special status within these nations. By likening myths about animal spirits to the deities present in a framework of Christianity, colonists failed to understand native spirituality on its own terrain.

The idea that animals were in spiritual relationships with the Creator competed with the humanist ontologies to which settlers were committed. Similar to the Mi'kmaq legends about animal consent (Robinson 2013), Anderson writes that animals were directed by their spiritual protectors to "offer themselves as gifts to humans in return for gratitude and respect" (2006, 29). Animals and animal spirits were thus understood as powerful subjects who controlled humans' access to hunted animals (Anderson 2006). The settlers and missionaries who arrived in the Mi'kma'ki region in the 17th century did not respect their ontologies of siblinghood. As Robinson writes: "French Roman Catholic missionaries, for example, viewed the Mi'kmaq cosmology in which animals, trees, and rocks had souls as primitive, idolatrous, and sinful" (2014, 677). Colonists positioned Mi'kmaq worldviews as naïve and as further evidence that they required civilization—a position that would serve as part of the justification for the institutionalization of indigenous persons in residential schools. In testimony given to the Truth and Reconciliation Commission of Canada (TRC), residential school survivor Mary Courchene:

> Recalled that in the 1940s at the Fort Alexander school in Manitoba, she was taught that "my people were no good. This is what we were told every day: You

> savage. Your ancestors are no good. What did they do when they, your, your, your people, your ancestors you know what they used to do? They used to go and they, they would worship trees and they would, they would worship the animals." (as cited in TRC 2015, 107)

Colonial institutions such as residential schools explicitly targeted and sought to stamp-out indigenous cosmologies that revered the more-than-human world. For European settlers, who understood the human as premised on the disavowal of animality, to neither see oneself as above animals, nor to have an instrumentalized relationship with animals, indicated that one was more like animals than to other humans.

In Canada, the fur trade not only consolidated imperial wealth but also worked as a pivot from which to institute western humanism. If it were the case that Mi'kmaq human-animal relations were those of siblinghood and that oral traditions warned against the overconsumption of animals, the colonial project required both an ontological and a relational shift. Robinson suggests that relationships with settlers, which were premised on the exchange of hunted animals, catalyzed a shift in human-animal relations:

> Newly arrived settlers—particularly the French, who made an effort to learn our language and culture—quickly came to hold greater significance to the Mi'kmaq than our relationship with our animal kin. Our relationship with settlers usurped the place that animals had held in our lives and animals *eventually came to be treated as objects for exchange rather than as persons in their own right*. The view of animals as objects is reflected in our treaties with settler governments, and has codified an instrumental view of animals as if it were an inherent aspect of Mi'kmaq culture. (2014, 676 emphasis added)

Here, Robinson shows that practices relying on the subjugation of nonhuman animals worked to institute western ontologies of life, and that this was not confined to the fur trade. The institution of animal agriculture functioned both as a primary mode of territorialisation and manner in which settlers interacted with animals (as resources who are always already food).

Chapter 1

Animal agriculture relies on populations of domesticated animals that were not present prior to colonization efforts. Anderson (2006) suggests that the Algonquin lacked native animals who were suitable for domestication. Moreover, they practiced subsistence hunting and so had no need to domesticate animals. Colonists brought farmed animals such as pigs and cattle to settle the "new world" in the image of their European homelands (Anderson 2006). For the Algonquins, the domesticated animals who arrived with settlers in New England were unusual animals with an unusual status who posed practical and conceptual problems. While some animals, such as dogs, might have lived in proximity to native Americans, the presence of tame individual animals would not have provided an adequate conceptual framework that rendered domestication intelligible (Anderson 2006). Because domestication entails the selection of specific traits (i.e., docility, quick weight gain, high milk production), confinement, and animal husbandry, with a goal of altering an entire species over multiple generations, it was both an orientation and relationship to animals that did not resonate with an Algonquin worldview. The colonial understanding of domesticated animals as inherently subservient to humans was unfamiliar and inconsistent with the cosmologies of Algonquin-speaking Native Americans for whom animals belonged to the spiritual realm and required respect. Yet, the European dualism that categorizes animals as wild or domesticated mapped onto colonists' notions of indigenous inferiority and worked to justify their project of colonization. For colonists, the "absence" of domesticated animals (and consequently animal agriculture) signaled missed economic opportunities and uncivilized human-animal relations.

Upon arriving in the new world, colonists repeatedly noted the lack of animal agriculture. For example, "Rev. William Hubbard reminded the readers of his history of New England that the keeping of domestic animals was 'the custom of more civil nations,' and thus would not be

found among uncivilized Indians" (as cited in Anderson 2006, 32). Private property relationships to land and to animals were also bound up in the domestication of animals and animal agriculture:

> At the turn of the eighteenth century, Virginia's Robert Beverly reiterated what had by then become a commonplace observation: that before the colonists' arrival, the Indians 'were without Boundaries to their Land; and without Property in Cattle,' two characteristics that testified to their lack of civility. (as cited in Anderson 2006, 33)

According to English law of the time, processes of domestication—specifically taming—was the pivot from which a human transformed a wild animal into their personal property:

> Livestock differed from wild animals precisely because they were property, a status intrinsic to their identity as domesticated creatures. The Indians could not have known that a distinction that had little to no meaning in their culture would loom so large in the colonists' minds. Yet for the English settlers, this was a distinction that made all the difference (Anderson 2006, 42).

The humanist notion that domesticated animals (and wild animals to some extent) were property clashed with native cosmologies and points to an ontological difference. For the Native Americans examined by Anderson, living animals were not property, and they "did not have an equivalent conceptual category for living chattel. Instead, native peoples granted individuals property rights only to animals they had killed" (Anderson 2006, 38). As such, the western ontologization of farmed animals as always already the commodities they will become upon death is a distinct categorization of life that is supported by ontologies of human exceptionalism. The ontological status of farmed animals as deaded life is not just a condition of modern factory farming but, in this instance, is inherent to practices of animal agriculture which reproduce and require that animals be defined *during life* as property. This ontological difference denaturalizes a western ontological ordering of life where humans are subjects, animals are objects, and nature is an abundant resource for humans to access. Instead, this ordering is the outcome of historical,

imperial, and political struggles. Animal agriculture, I will show, is an institution that has been deployed as a distinct mode of colonial conquest that continues to shape our perception of reality in terms of our ontologies, alimentary norms, human-animal relationships, and ideas about private property.

Part II: Animal Agriculture: Civility, Property, Territory

Establishing civility. In Canada and the United States, animal agriculture was not the inevitable result of historical progress, but was a focused and targeted strategy of colonial governments. Colonists understood the practice of animal agriculture to be an important marker of civility as it entailed "proper" relationships to animals and to land (as productive property), as well as to labour (as diligent and contributing to the wealth of the nation) (Anderson 2006). Because of its link to civilized norms, agriculture became a means for colonists to assert difference and superiority between white settlers and indigenous persons. For example, the Commissioner of Indian Affairs, proclaimed in 1891 that "there are three tests which mark the advance of the Indians towards civilization, viz., the adoption of the dress of the white man, engaging in agriculture, and the education of their children" (Dewdney in Canada 1891, xxvi). While some indigenous nations in New England and Canada did farm, and settlers relied on their harvests when facing starvation, indigenous persons "did so without domestic animals—a difference that turned out to be far more significant than anyone could have imagined" (Anderson 2006, 6). Without these specific relationships to land and animals materialized in animal agriculture, colonists determined that indigenous persons did not make proper use of land, and therefore were more like wolves than they were like white European men.

Over time government officials began to express frustration that indigenous persons were incapable of cultural development or improvement (measured as the uptake of European norms).

For example, in 1830 Lewis Cass stated that their efforts to civilize Native Americans were futile:

> …An Indian lives as his father lived, and dies as his father died…His life passes away in a succession of listless indolence, and of vigorous exertion to provide for his animal wants, or to gratify his baleful passions…he is perhaps destined to disappear with the forests. (Lewis Cass 1830 as cited in Kim 2015, 48)

The space of the forest, which colonists sought to clear for agriculture, came to represent an anachronistic space which contained similar persons, "like the wolves in the forests and the buffalo on the plains, they had to give way in the face of advancing white civilization" (Kim 2015, 48). Pragmatically, colonists wanted to clear the forests of wolves (who threatened their livestock) so that they could use the land for farming and then levy a legal claim of ownership.

In Virginia during the mid-17th century, colonists devised a plan whereby native Americans were encouraged to kill wolves in exchange for cows. For every eight wolf-heads they brought to the House of Burgess, they were given one cow. This was a system that "use[d] domestic beasts to reward beast-like men for subduing and killing wild beasts" (Kim 2015, 45). This policy shows that wolves and farmed animals were not considered subjects with their own interests. Instead, they were deanimalized and considered "separable units of behaviour" who could be targeted and exterminated as per the needs of colonialism (Guenther 2013, 151). Humanist ontologies provided the conceptual framework that situated not only wolves, and farmed animals, but also indigenous peoples as populations suitable for state intervention, and who could be put to death in the advancement of the colonial project.

It was the supposed savagery of indigenous peoples that hitched them to wilderness and animality, and it was this construction of them as *wild* that allowed European colonists to justify their appropriation of native lands from "beasts who were occupying land to which they had no claim" (Kim 2015, 45). The indexing of a space as "wild" and consequently "uninhabited" via

the animalization of its inhabitants has been a longstanding colonial tactic of territorialisation. Frontiers have historically been conceptualized as wild spaces, occupied by wild animals and wild humans that could be "tamed" (and owned) through civilizing efforts (Deckha and Pritchard 2016). Within a humanist frame, the likening of indigenous peoples to wild animals had symbolic and legal effects. Just as wild animals had no legal rights to the land they traversed, neither did the indigenous persons who, according to colonists, failed to use land in an appropriate manner (Anderson 2006; Kim 2015).

Settlement through Agriculture: Land and Animals as Tools of Colonization

Competing ontologies of land. Like other Anglo-settler societies, colonization in Canada and the U.S. relied on the interrelated processes of territorial acquisition and capital accumulation (Nichols 2017). It is my contention that (animal) agriculture is a location where territory and capital accumulation coalesce. Within a liberal-capitalist model where land can be parceled and owned, agriculture both provided a means for settlers to make a title claim to land, and then through the proper use of this land (which was required for ownership), produce commodities (animals, animal products, and grains) for exchange on the market. These were economic practices that state governments understood as essential to their prosperity. In this sense, colonialism in part entailed the "conver[sion] [of] frontier land from a threatening external wilderness to a fiscal resource and national asset" (Nichols 2017, 19). Not only has settler colonialism in Anglo-settler societies entailed the subjugation, and attempted destruction of indigenous persons by imperialists, but as Nichols writes, "they have also been divested of their *lands,* that is, the territorial foundation of their societies, which in turn have become the territorial foundations for the creation of new, European-style, settler-colonial societies" (2017,

8–9 emphasis in original). Within a logic of territorial acquisition, settler colonialism required a shift in both the ontological conception of and material relationships to land.

Indigenous scholar Glen Coulthard (Yellowknives Dene) writes that for his peoples, land was not an entity to be owned, nor was its importance related to its potential as a resource. Instead:

> Land occupies an ontological framework for understanding *relationships.* In Weledeh dialect of Dogrib—Dene First Nation, "land" or (dè) is translated in relational terms as that which encompasses not only the land (understood here as material) but also people and animals, rocks and trees, lakes and rivers, and so on. Seen in this light, we are as much a part of the land as any other element. Furthermore, within this system of relations human beings are not the only constituent believed to embody spirit or agency. (Coulthard 2014, 61)

As such, according to an indigenous metaphysics of interrelatedness, land structures relationships that are premised on "reciprocity, nonexploitation and respectful coexistence" (Coulthard 2014, 12). Testimony given to the Royal Commission on Aboriginal Peoples by members of the Blackfoot First Nation also situate land as a living being that one is in relation with:

> The land was considered a mother, a giver of life, and the provider of all things necessary to sustain life. A deep reverence and respect for Mother Earth infused and permeated Indian spirituality, as reflected in the Blackfoot practice of referring to the land, water, plants, animals and their fellow human beings as "all my relations." Relations meant that all things given life by the Creator—rocks, birds, sun, wind and waters—possessed spirits. (as quoted in RCAP 1996, 64)

Within these cosmologies land is part of the spiritual and physical realms. For the Blackfoot peoples, the Creator entrusted them as stewards over their land and as responsible for the well-being of all their relations.

Notions of stewardship and responsibility therefore do not inevitably translate into a worldview where land can be owned, or as a resource to be dominated (RCAP 1996). Mohawk

legal scholar Patricia Monture-Angus (1999) has instead framed this as a duty-based relationship where one is responsible to someone or something other than oneself, in this case, to territory. This duty-based responsibility is not premised on the control of territory (Monture-Angus 1999; Nichols 2017), but instead is consistent with a metaphysical framework based on interdependency. For this reason, it contrasts with anthropocentric ontologies of land underpinned by the nature/culture dualism. Within a frame of anthropocentric capitalism, nature exists as a raw material, as "passive and uncultivated—a wilderness to be tamed—while culture is the active set of practices by which humans 'dominate' nature" (Deckha and Pritchard 2016, 163). The framing of nature as passive is ideologically consistent with western relationships to land that are mediated through legal property statutes where land can be owned.

For colonial governments, private property relationships indexed civility and dovetailed with traits valued by the colonial government:

> The long-term goal of indoctrinating the indigenous population to the principles of private property, possessive individualism, and menial wage work constitute[d] an important feature of Canadian Indian policy. As the commissioner of Indian Affairs in 1890 wrote: "the work of sub-dividing reserves has begun in earnest. The policy of destroying the tribal or communist system is assailed in every possible way and every effort [has been] made to implant a spirit of individual responsibility instead." (as cited in Coulthard 2014, 13)

This passage evinces that the transformation of land into something that could be owned related to the destruction of communal ways of living (i.e., modes of living that were unmediated by individual property relations). For example, in the 1891 Annual Report of the Department of Indian Affairs, Commissioner Dewdney informed the House of Commons that the indigenous persons of Manitoba and Keewatin were making "satisfactory progress":

> The personal property of these Indians, in *cattle* especially, is increasing; and the more general substitution of substantially built homes for the temporary wigwam, evinces the growth among them of an inclination for domestic life of permanent

> character, with its attendant comforts. (Dewdney in Canada 1891, xxvi emphasis added)

For the Dominion government, the institution of private property relations was a means of "transforming an Indian into a white-man in sentiment" (Dewdney in Canada 1891, xxvi). This perceived *lack* of property relations also provided the conceptual terrain from which settlers made a legal claim to "unoccupied" land.

Inasmuch as agriculture was bound-up with European norms of civility, it was seen as *the* proper and productive way of using and relating to land:

> The insistence that Indians only lightly touched the land where they dwelled became the mainstay of England's justification for colonization. Without it, colonists could hardly invoke the idea of *res nullius* and defend their appropriation of "empty" territory. (Anderson 2006, 79)

The likening of indigenous persons and their ways of life to wolves provided a way for colonists to acknowledge the presence of indigenous persons while simultaneously claiming that land, because it remained *unused*, was without legal occupants. Because animal agriculture requires vast amounts of land, and increased amounts of settlers required a larger food supply, colonists "encouraged livestock to initiate the process by letting them move onto Indian property prior to formal English acquisition" (Anderson 2006, 10).

By enclosing land, marking property lines, and having farmed animals graze on land, colonists met the legal requirements (under English law) necessary for them to make a claim to the territory in question. Ideas about proper land use came down to whether persons farmed with animals. Indigenous persons did in fact grow crops of corn, yet colonists failed to recognize this as a legitimate use of land. Instead they deployed their livestock to enter and occupy indigenous cornfields. The animals themselves were the targets of land disputes and tensions. Native Americans often killed the invading livestock, and colonists in turn harshly responded to the

destruction of their "private property" (Anderson 2006; Kim 2015). The notion that land was properly improved via agriculture, and was thus subject to private ownership, figured prominently in Government initiatives to encourage immigrant farmers.

Attracting immigrants, settling land. After confederation, the government of the Dominion of Canada was eager to transform the Northwest from an unsettled frontier into privately owned and profitable farms. In an undated and confidential memorandum between Sir John A. Macdonald and the British Department of Agriculture, he asks for £1, 000 000 in order to bring ten thousand Irish farmers and their families (in total 50 000 persons) to the:

> New Canadian North-West [where] each family [would be] provided with 160 acres of the finest wheat growing lands, a comfortable wooden house, a cow, and the implements necessary to enable them to begin the cultivation of their land, including the cost of ploughing and seeding a few acres for their first year's crop. (MacDonald, n.d., 82)

Under the supervision of the Government, the North-West Land Company would facilitate the immigration and settlement of the Northwest. Irish immigrants would be able to purchase the land for 100 pounds sterling, which could be paid in full at any time, and would operate as an interest-free loan for the first two years. However, the suitability of the immigrant for agriculture was required: "this scheme is based on the assumption that the emigrants sent out are fit for agricultural work, and have the energy and ability to take care of themselves, after getting the fair start thus provided for them" (MacDonald, n.d., 83). This stipulation points to the values that the settler colonial governments sought to impose and expected of its citizens, those of private property relations, individual responsibility, and industriousness.

In the colonial imagination, nature and land were figured as feminine, passive, uncultivated, "fertile and salubrious" (Canada 1883, 27), with the intercolonial railway required to "open up and settle the fertile Territories of the North West" (Canada 1872b, 16). In a Speech

from the Throne, the Honorable Joseph Edward Cauchon stated that "the acquisition of the North-West Territories throws upon the Government and Parliament of the Dominion *the duty of promoting their early settlement by the encouragement of immigration*" (Canada 1871, 14 emphasis added). The settlement of the Northwest figured prominently for Canadian government officials in the 1870s who passed legislation that would facilitate the ownership of land by settlers who had sufficiently improved it by erecting an abode and cultivating it for agriculture.

House of Commons debates over land-grant legislation (meant to encourage immigration) reveal colonial anxiety about the possibility of individuals, whom politicians referred to as "half-breeds," making ownerships claim to land. In their discussion about how to legislate the transformation of unsettled land into privately-owned property, McDougall states:

> The provisions of the Bill, that he had prepared, had a clause that every man going in and settling should have the right of ownership of land, and that would meet the claims of the half-breeds. If there were any young half-breeds wanting land, they could obtain it by a free grant. But agriculture was not the natural pursuit of those men. They were hunters and trappers, and the only effect of those reserves would be to retard the settlement of the country, but not to settle the half-breeds. If free grants were given and a homestead provision made, the Government would have done their duty and acted as justly and liberally as could be expected of them. (in Canada 1870, 1447)

Because agriculture was bound-up with norms of civility, and because it would become a means by which an individual improved the land, the anxiety of government officials was assuaged by their beliefs that "half-breeds" would be unable to meet the stipulations required under their proposed Bill.

In 1872, the *Dominion Lands Act* received Royal Assent and was modeled after the *United States Homestead Act of 1862*. Both acts provided that territory acquired by governments could be granted to individuals for either a small registration fee (to file the land title) or a nominal amount pending they lived on the land for a minimum amount of time, erected a

dwelling, and cultivated the land. The *U.S. Homestead Act* stipulated that the applicant could lay claim to 160 acres of surveyed government land if, for the five years following the application, they lived on the land, improved it via the construction of a 12 by 14 domicile (however the law neglected to stipulate whether this was in inches or feet, creating a legal loophole), and the growing of crops. Following these five years, the applicant could file for their land title by submitting their proof of residency and an account of the improvements made to the land office.

In Canada, the *Dominion Lands Act* applied to Manitoba and the North-West Territories. It was the position of the Governor General that “the prosperity of the Dominion depends on the rapid settlement of the fertile lands in these Territories” (Canada 1878, 20). Under the “Homestead Rights or Free Land Grants” section of the Act, any head of family, or individual aged 21 years or older could be granted a “quarter section” of territory if they submitted evidence of improvement after three years of settlement on the land. For the stipulation of improvement to be met, “proof of actual settlement and cultivation” had to be made via affidavit, approved by the Local Agent, and confirmed by two witnesses. These homesteading provisions applied only to land used for agriculture. That animal agriculture was a primary mode of settlement and improvement figures implicitly in this act. Sections 34 and 35 of the Act stipulate the leasing of unoccupied and neighbouring territories as grazing or hay lands. In other words, policy makers assumed that settlers would have farmed animals, and that these settlers would require additional grazing and hay lands to sustain their animals.

In the years following the enactment of the *Dominion Lands Act*, the Government believed their efforts to attract settlers who would transform uncultivated land into economic resources to be successful. For example, an 1877 Speech from the Throne opined that the country’s exhibit at the United States National Exposition held in Philadelphia had “proclaimed

to the world that Canada has already taken a high place as a farming, manufacturing and mining country" (Canada 1877, 17). The 1883 Speech from the Throne both remarked on the "healthy and improving condition" of "all her [Canada's] industries, agricultural, manufacturing and commercial" (Canada 1883, 26). Further in the same speech, the Speaker lauded the "steady flow of settlers into Manitoba and the North-West Territories last year, and the assurances received of an increased immigration during the coming season" (Canada 1883, 27). In 1900, the West was figured as an important area whose natural commodities, facilitated by a successful immigration policy, "would henceforth add materially to the growth of the trade of the whole Dominion" (Canada 1900, 18).

The Government was also of the opinion that they had attracted the *proper* kind of immigrants. In a Speech from the Throne made in 1901, the Speaker stated that:

> During my journey [through Canada], I was, from personal observation, much impressed with the great activity displayed in the development of the mining and agricultural industries of the country, and with the substantial increase in its population. The thrift, energy, and law-abiding character of the immigrants are a subject of much congratulation and afford ample proof of their *usefulness as citizens of the Dominion.* (Canada 1901, 23 emphasis added)

As such, the individuals invited into the folds of citizenship were those who embodied the norms of civility valued by the settler state. These were persons who displayed "civilized" relationships to labour, land, and animals. Ideas about land and property tied into a larger set of beliefs where indigenous and Western ontologies differed. As such, dominant ontologies of nature and of land—as passive resources awaiting cultivation—are not inevitable but serve political purposes. In this case, a western understanding of land as private property served as a conceptual foundation from which settler states acquired territory and amassed wealth. Settlers used

domesticated animals to not only claim territory, but to territorialize land in such a way that it was transformed into their private property.

Animal Agriculture: Living Property, Deadened life

Farmed animals served as the material bodies that occupied land in such a way that under English law, colonists were able to make a legal claim of ownership. This was possible because of their legal status as *living property*. This legal status that is consistent with and produced by a carnophallogocentric metaphysic of human-animal difference on which law and other western social institutions are formed. For example, natural legal theory emphasized language and rationality as unique to humans in order to exclude non-human animals from moral and legal obligations (Freeman and Hampstead 2001). In *The Beast and the Sovereign, volume 1,* Derrida (2011) argues that the exclusion of the animal is foundational to western legal traditions. Specifically, animals are denied the capacity for traits upon which the law is premised—namely that of responsibility and autonomy, "because, without free will, they cannot be held to be either cruel or responsible" (Wolfe 2013, 65). As a result, law parses life as either human or non-human.

Because animals are categorized as not human, they are legally designated as objects who "can be owned and are subject to the property rights of their owners" (Blosh 2012, 2). The legal designation of animals as property "relegates them to the status of an instrumentality" (W. A. Adams 2010, 29) and subjugates them to treatment, exploitation, and killing that would be morally and legally impermissible if not for their species categorization. Adams argues that it is not because animals are classified as property that humans treat animals as objects to be manipulated for their benefit, but that "animals are classified as property so that human beings can legally treat them harshly" (2010, 29). The "otherness" of animals both informs and is reproduced via the legal status of property with the result that human moral culpability and

responsibility to animal others is negated. It therefore follows that the legal classification of property informs a politics of edibility that allows animals to be designated as food in the first place. As such, the legal designation of farmed animals as the private property of their human owners is essential to the operation of sacrifice that relies on their non-criminal killing.

Inasmuch as colonists sought to remake the new world in the image of their homeland, they imagined "meadows filled with cattle…[with] peacefully grazing herds serv[ing] as familiar emblems of civilized life" (Anderson 2006, 77). Along with the animals themselves, the legal status of farmed animals as chattel property was imported from the old world to the colonies. This functioned to "reinforce their subordination to human needs" (Anderson 2006, 77) and in the case of animal agriculture, participated in their ontologization as deadened life. Colonists imagined livestock "as tools or as meat on the hoof" who were "subject to human control and efficiently marshaled to serve their owners' interests" (Anderson 2006, 89). While Anderson characterizes farmed animals as agential inasmuch as they proved difficult to corral (they often escaped their enclosures), and their wandering often determined the location of the next settlement, they were not so much "partners in colonization," as Anderson (2006, 97) puts it, but targeted, produced, and deployed as *things* within a colonial project that relied on their subjugation.

Settler colonialism thus required an anthropocentric ordering of life wherein the non-criminal killing of animals for human ends is normalized:

> Settler colonialism *wants* to produce animal bodies as commodities embedded in a global economy of reiterated deathliness. Said different[ly], animal bodies that are inserted into capitalist spaces of commodity production are always already scheduled for death to be consumed as meat, clothing, scientific data, and so forth. (Belcourt 2014, 9 emphasis in original)

In the geopolitical spaces targeted by European colonists, the legal designation of animals as private property worked to translate animals from siblings, for example, into resources. For Robinson, this is an outcome of colonialism that affected a fundamental shift in human-animal relations: "meat, as a symbol of patriarchy shared with colonizing forces, arguably binds us with white colonial culture" (2013, 191).

While Mi'kmaq food cultures are traditionally animal-based, settler colonialism effected changes in how food is produced and obtained (animal agriculture instead of subsistence hunting) and at the level of ontologies. Using the example of fishing, Robinson argues:

> The modern commercial fishery, often touted as offering economic security for Aboriginal communities, is actually further removed from our Mi'kmaq values than modern-day vegan practices are. The former views fish as *objects to be collected for exchange*, with economic power taking the place of sustenance, while the latter is rooted in a relationship with the animals based upon respect and responsibility. (2013, 193 emphasis added)

Dominant western food cultures, and the modes of production that sustain them, rely on a humanist and colonial ontology of animals as deadened life who are always already edible. Animal agriculture requires the erasure of indigenous cosmologies in order to assert humanist modes of human-animal relations as stable, apolitical, and universal.

Within a carnophallogocentric ordering of life, "settlers (as reifications of whiteness) are always already entitled to domesticated animal bodies as sites of commodity/food production, eroticism, violence, and/or companionship" (Belcourt 2014, 4). With this politicized understanding of ontologies, "anthropocentrism is then a politics of space whereby land is commodified and privatized for animal agriculture" (Belcourt 2014, 5). As such, animal agriculture, heralded as a marker of civility and understood as representing proper relationships

to animals, land, and labour was not an inevitable result of historical process, but was intentionally instituted as a means of settler colonial nation-making.

Conclusion

Derrida's deconstruction of the human and the animal reveals both the contingency of carnophallogocentrism and its ubiquity. This chapter argues that settler colonialism continues to rely on the institution of speciesism and its related ontologies of humans, animals, and food. I provide an analysis of the exercise of agricultural power, as well as the institution and functioning of carnophallogocentrism, in geopolitical spaces previously structured by a multitude of indigenous ontologies. I show that the imposition of agriculture did not merely function as a method of territorialization or food colonialism, but worked to instill humanist orderings of life. While the human/animal dualism was implemented to mark indigenous persons as closer to wild animals than to white Europeans, it also functioned to ontologize nonhuman animals as resources and commodities for exchange. An indigenous metaphysics of interrelatedness, which includes animals as subjects was not only incompatible with the humanist ontologies in which settlers were embedded, but was also incompatible with larger projects of settler colonialism that relied on strict hierarchical divisions between humans and animals, as well as between colonizers and indigenous persons. As such, western humanism, which requires and authorizes the symbolic and literal sacrifice of nonhumans for human ends, was integral to processes of nation-making in North America, not only through the subjection of nonhuman animals in the fur trade, but through the imposition of animal agriculture.

The functioning of animal agriculture relies on the legal status of land and of animals as private property and effects the transformation of both. Within a humanist frame, land and animals are relegated to the realm of the natural—understood as that which awaits cultivation

and transformation by culture (and culture is exclusively "human"). The deontologization of nonhuman animals in law works to produce these specific and particular humanist ontologies as inevitable, when instead these relations are contingent and can be otherwise. As such, our prevailing animal-based alimentary norms in Canada and the United States, which co-constitute our dominant food ontologies, are not natural or innate, but are historically rooted in settler-colonial projects of territory, empire, and humanism. As such, animal studies work being done in contexts of settler colonialism should address both the political function of animalization as a tactic of colonialism, and the institution of animal agriculture as a method of territorialization.

Those working toward animal liberation must attend to the subjugation of animality as a distinct component of colonialism. Advocating for the inclusion of nonhuman animals as rights-bearing subjects *because* they are like humans both reinforces humanist ontologies of life and the settler state as the only form of political governance. Such an approach is therefore antithetical to decolonial efforts. This chapter provides the foundation from which to begin to work toward a critical food politics that resists imperial ontologies of life and the commensurate property statuses that mediate who becomes our food and how we relate to the land on which this food is produced. In an effort to divorce private property relations from alimentary norms, the next chapter develops a framework for a contextual ontological veganism premised on a separation between food and edibility. I propose this framework in order to avow the subjectivity of nonhuman others while concomitantly resisting their ontologization as deadened life.

Chapter 2:

Food, Edibility, Property: Toward a Contextual Ontological Veganism

Introduction

In this chapter, I engage the work of Val Plumwood (2000) and Lisa Heldke (2012), both feminist philosophers who take up food politics and argue for alternative food practices that are not limited by vegetarianism or veganism. Both authors, in their development of alternative approaches to eating, ask readers to reckon with their complicity, their positions as predators and prey, and to make decisions about what is edible based on context, not only prior-established boundaries that delimit what is and is not food.

Contra Plumwood and Heldke, I propose a contextual ontological veganism underpinned by a legal subjectivity of "beingness" for animals where they are categorized neither as property nor as persons under the law (Deckha forthcoming), but whose animality is avowed in politically meaningful ways. The potential of this legal subjectivity would render it inappropriate to farm nonhuman animals, or to commodify them as profit machines. A contextual ontological veganism in this sense acknowledges that while many things are technically edible, not everything that is edible should be made into food. By attending to the relations inherent in food production and consumption, a contextual ontological veganism is inescapably political and takes human, animal, and environmental impacts as its starting point for evaluating whether the food item in question promotes values that are ethically desirable. This food ontology, centered on animal subjectivity and interconnectedness between humans, animals, and the environment, resists settler colonial ontologies of life and, I argue, is more cogent with indigenous worldviews than is the consumption of products produced using animal agriculture.

Chapter 2

Plumwood's (2000) article, "Integrating Ethical Frameworks for Animals, Humans, and Nature: A Critical Feminist Eco-Socialist Analysis," rebukes the arguments made by leading vegan theorist, Carol Adams, as well as other ecofeminists, who purportedly advocate for a universal veganism as a component of other social justice movements,[2] such as feminism and environmentalism (see for example C. J. Adams 1993, 1995, 2010; Kheel 1995). In the mid-1990s, feminist academics were also debating whether feminists ought to be vegan (C. J. Adams 1993; George 1990, 1994, 1995; C. J. Adams 1993; Gaard and Gruen 1995; Gaard 2002; Donovan 1995; Dunayer, Birke, and Kheel 1995). In this context, Plumwood's article mounted a powerful defense against animal ethicists and theorists who argued that animals are always inedible, or who, by proving that animals share similar cognitive and emotional capacities as humans, deserve the same rights and protections afforded to humans (Singer 2009; Regan 2004). Plumwood specifically argued that because a vegan ontology negates predator/prey relationships and denies the fact that all life is edible, it is both counter to indigenous modes of being, as well as detached from ecological reality. For Plumwood, a food politics of this sort reproduces human exceptionalism. Despite her call for a contextual ethical vegetarianism, I show that Plumwood's analysis is not contextual enough. She does not attend to the historical imposition of animal agriculture as a colonial project, nor does she attend to the institution of property law that accompanies and perpetuates animal agriculture. By asking readers to accept their own edibility, Plumwood's analysis tasks individuals with remedying structural inequalities.

I then turn my analysis to Lisa Heldke's (2012) "Beyond Metaphysics: An Alternative Ontology of Food." In this piece, Heldke critiques food practices that are based on biological boundaries. For her, food is a site of pleasure and of suffering, and so a food ontology founded

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[2] See Twine (2014) for a refutation of the claim that ecofeminists prescribed ontological veganism in the manner outlined by Plumwood.

on biological boundaries is unable to deal with complicated cases where one's hands can never be clean. Heldke claims that veganism is an insufficient food ethics because it compartmentalizes issues. In particular, she argues that veganism treats ethical issues separately when deciding whether to consume a product. For instance, a vegan will first consider whether the product is derived from animals, whether the product is organic, and finally how the workers who made the product were treated. Based on these separate criteria, the vegan will decide whether the product in question is edible according to their ethics. For Heldke, however, food should not be ontologized as what is edible or available as a food product, but instead, as a locus of constitutive relations. These relations should then be evaluated as ethically desirable or not. However, I argue that in her consideration of food politics, Heldke continues to privilege (some) human interests over and above those of (other) humans, other animals, and the environment. Despite this shortcoming, Heldke's notion of food as a loci-of-relations is compelling and, as I show, can inform a non-speciesist relational and contextual ontology of food.

Unlike Plumwood and Heldke's attention to individual consumers, their actions, and their beliefs, I argue that our food practices ought to reflect and resist the political, social, and cultural inequalities that currently underpin its production. For this reason, I introduce a distinction between food and edibility that ultimately supports the ongoing ontologization of food. According to this distinction, our conception of food should attend to the political structures and processes by which something or someone became food. Only by considering these structures and processes in a contextual and ethical frame would we then ontologize some items as food. In contrast, our understanding of edibility would capture the fact that all life forms are edible, even though not all of them should or will be made into food.

Plumwood: Against Ontological Veganism

In her (2000) article, Val Plumwood problematizes the work of leading feminist vegan theorists, such as Carol Adams (1993, 1995, 2010) and Marti Kheel (1995), for purportedly prescribing "ontological veganism."[3] Ontological veganism is the universal position that animals should always be ontologized as inedible, for the reason that they are beings worthy of moral consideration. This position, according to Plumwood, denies that humans and animals alike are all food for someone. From this position, Plumwood offers a metaphysical account of human and animal edibility, while simultaneously urging us to attend to context-specific realities and traditions. While Plumwood's article raises and addresses many issues, her main criticisms of ontological veganism are that it puts forth an understanding of the human that is alienated from nature, vilifies predation, and concomitantly villainizes and fails to take seriously indigenous dietary traditions. For Plumwood, food practices such as ontological veganism and factory-farming that are alienated from nature are problematic and serve to reify and produce a (neo)Cartesian ontology of the human.

Within a western frame where life is categorized according to dualisms such as human/animal, culture/nature, mind/body, and male/female, food is commonly relegated to the realm of the natural and is subsequently considered an apolitical matter. For Plumwood, this results in food being "a hyper-separated and degraded category with which we are unable to experience any form of identification. This conviction is one source of our domination and reduction of those whom we would make our food" (294). Because, according to Plumwood, food production is both a structure and location of domination that is outside of ethical consideration, in western frameworks, "to be food is basically to be degraded" (302). Plumwood

[3] Again, see Twine (2014) who argues that Plumwood unfairly criticizes Plumwood and Kheel, who do acknowledge certain extreme conditions under which it would be ethical to eat animals.

argues that it is because of this attention to domination and degradation that philosophers and theorists have proposed ontological veganism as a solution to the harms perpetuated by food industries. Namely, that "nothing morally considerable should ever be ontologized as edible or as available for use. For those who subscribe to this position and for whom animals are morally considerable, animals can never be ethically ontologized as food" (287). For Plumwood, this position pre-emptively denies the possibility of relating ethically to those who will become our food and fails to recognize that we are all edible. Plumwood further argues that ontological veganism is imperialist in that it fails to account for indigenous food traditions that include subsistence hunting.

Plumwood argues that we should shift our conceptualization of "food" from that of a degraded status outside of ethical consideration to a practice of ecological embodiment that recognizes our position as food for others. For Plumwood, this is a contextual food politics informed by

> Principles of sacred eating, [which] hold that in a good human life we must gain our food in such a way as to acknowledge our kinship with those whom we make our food, which does not forget the more than food that every one of us is, and which position us as food for others. (303)

For Plumwood, it is possible to ethically consume non-human animals provided they are not instrumentalized in the process and are not reduced to meat. These are points that, for her, remain unaddressed by proponents of ontological veganism.

According to Plumwood, the production of meat represents the epitome of alienated relationships. While Plumwood argues that everything living is edible, for her there is an important distinction between use and instrumentalization as it relates to edibility. "Respectful use" is part of an ecological ontology focused on relations of reciprocity and interdependence between humans, animals, and nature (298). Instrumentalization, on the other hand, is "a

reductionist conception in which the other is defined as no more than a means to some set of ends" (297). Plumwood argues that animals who live and die in the factory farming system are instrumentalized because of their ontological positioning as meat. Plumwood's understanding of the lives of animals in factory farming as "living meat" (298) is one where animals exist as no more than the flesh they will become once killed, butchered, distributed, and consumed.

Plumwood further argues that the category of meat functions to separate humans from animality, as well as humans from nature. This category also removes animals from ethical consideration: "with our reduction of the other that is our food to the category of soullessnessness as 'meat' or even less, and our perception that to be in the category of food is to be beyond ethical consideration, [is] as far from kinship and acknowledgment as possible" (315). Plumwood's analysis of the factory farm as a location where instrumentalization and the status of "meat" co-articulate to reduce animals to commodified flesh in life and death is consistent with Guenther's (2013) and Stanescu's (2013) analysis of modern animal agriculture, as well as with Derrida's (2008) concept of the economy of sacrifice. However, unlike these authors, Plumwood also suggests a way forward, namely a food politics informed by an account of humans and of animals as subjects who are always more-than-meat. Plumwood's suggested food politics is oriented toward the respectful use (not instrumentalization) of the others who will become our food.

While meat is a degraded and instrumentalized category, Plumwood argues that the category of food need not be. An ecological understanding of food, for Plumwood, provides a possibility for recognizing humans within the realm of the natural, and thus as not only eaters but also as food for others. In short, we are all edible. It follows that, for Plumwood, "food" need not be a degraded category outside of ethical consideration as it is in westernized contexts, but can

be consonant with an ecological ontology that recognizes our shared embodiment. This categorization of food, for Plumwood, holds greater possibilities for ethically relating to that which we eat. Plumwood proposes that, “food, unlike the reductive category of meat that does not recognize that we are all always more than food, is not a hyper-separated category and does not have to be a disrespectful category” (298). The distinction between meat and food, Plumwood suggests, would then prohibit food production operations underpinned by instrumentalization, such as factory farming. Plumwood is not interested in removing animals from the category of food, but instead advocates against relations of production that ontologize animals as meat:

> Once we make this distinction it is possible to reconcile the critical position that no being, human or nonhuman, should be ontologized reductively as meat, with the framework of ecology and cultural diversity by maintaining that all embodied beings are edible (for something), that is, through an ecological ontology. (298)

Plumwood argues that this is a radical food politics since it resists human exceptionalism in its undermining of the human/animal and culture/nature dualisms. According to Plumwood, as an alternative to ontological veganism, sacred eating allows for relations of reciprocity, respectful use, and ecological embodiment. For her, this approach provides a better way to achieve ethical human-animal relations:

> So here is an alternative path to breaking down human/animal dualism and its dualization of food practices: instead of extending our illusory positioning of ourselves outside the food chain to other animals, we can reposition ourselves back in the food chain, acknowledge our own edibility, and start our project of recognizing kinship from there. (296)

It is Plumwood’s position that when we truly recognize our own edibility, and “acknowledge those who are our food as our kin, [that we would] be unable to carry out the alienated kinds of food practices Adams so rightly denounces” (296).

I am sympathetic to Plumwood's argument and I share her goal of abolishing the instrumentalization of animal life in food production and of resisting human exceptionalism. However, I disagree with her suggestion that eating meat in a reduced, situational, or occasional manner is a "useful intermediate position" that contributes to a sustained project of justice or resists humanism (292). By no means do I disagree with the idea that reduced meat consumption is better than current norms of meat consumption in terms of animal welfare and environmental ethics, but Plumwood's suggestions for how to put these into practice seem to me impractical and steeped in the "western human-supremacist worldviews" she seeks to resist (293).

Anthropocentric intermediate positions. Plumwood uses a footnote to quickly describe potential scenarios that would meet her standards for reduced, occasional, and situational meat-eating. According to Plumwood:

> Adventitious use (scavenging) might include cases where you find road-kill in still-edible condition, where someone is about to throw away a ham sandwich in perfectly good condition, or the waiter brings the wrong dish. (318, note 10)

While these scenarios posit an eater who is less complicit in perpetuating the instrumentalization of animals in that they have not purchased the animal-based food in question, human concerns are still leveraged over those of other animals. Road-kill, while edible to humans, is a food source for crows or others who might require access to this food more than humans who have other options. Furthermore, if we attend to the relationships entailed in the production of the "ham" sandwich that will be thrown out, little about this scenario resists human-exceptionalism or the instrumentalization of the pig who became "ham." The act of eating the other who has been raised and killed for meat asserts the sovereignty of the human and necessitates the destruction of the animal/the food in question:

> Such are the executions of ingestion, incorporation, or introjection of the corpse. An operation as real as it is symbolic when the corpse is "animal" (and who can be

> made to believe that our cultures are carnivorous because animal proteins are irreplaceable?). (Derrida 1995, 278)

The same can be said about the situation where the server brings the wrong dish. Within a framework of western humanism, to eat flesh is to directly assert one's superiority over the animal consumed. The logic of this relationship remains the same, regardless if the frequency is occasional. Despite Plumwood's call to think about ecological embodiment, again she only considers whether the individual human should or can eat the food in question. Instead, these scenarios require us to consider the animals who have become these foods, and the conditions of production that have rendered them as such. These situations also require that we consider other potential human and animal eaters whose needs might supersede ours, and whether diverting these foods to them would be a more ethical response. While Plumwood claims that proponents of ontological veganism such as Carol Adams would dismiss the scenarios she presents or only acquiesce to them "under the rather unlikely and self-defeating conditions of nutritional desperation and sufficient disgust" (318, note 10), this focus on the "self-righteousness" (318, note 10) of the vegan-under-duress is misplaced. More appropriate questions to ask of these scenarios do not focus on the individual purity of the eater, but instead ask whether the instrumentalization of animal life, their legal status as property, and the privileging of human interests continues to supersede those of other animals.

Other scenarios that Plumwood supports as "worthy middle positions" include for an individual whose diet is vegan, the occasional consumption of "fish (nonfarmed)…every third Friday to be on the safe side or for specific health reasons" and "noncommodity animals that are known to be the product of ethical farming or hunting which respects species life" (318, note 10). Again, I am unconvinced that these intermediate positions resist human exceptionalism or promote sacred eating as conceived by Plumwood. A fully vegan diet in these scenarios also

seems to be structurally accessible given that Plumwood positions the occasional animal eater as someone whose "normal diet excludes animal products" (318, note 10). By placing concerns over the potential but unsubstantiated health risks above the lives of the fish eaten occasionally, or above those of other animals who rely on fish as a principal source of sustenance, Plumwood reproduces human exceptionalism.[4]

Plumwood's suggestion to occasionally consume animals who are not commodified and who have lived lives on "ethical farms" fails to promote ecological and inter-species reciprocity. At the same time this recommendation to consume the "products of ethical farming" appears to be impractical if not conceptually impossible. Given that animal agriculture, as discussed in chapter 1, foundationally assumes and reproduces the property status of animals, it is unlikely to imagine farming operations that produce food while not commodifying animal life. Farm sanctuaries, as locations that provide sanctuary to animals who have survived animal agriculture might be a notable exception. However, these are typically non-profit, vegan establishments that exist as a reaction to animal agriculture and its many abuses; they are not "farms" in the traditional sense as they do not breed animals, or use animals to produce food products that are either consumed or sold on the market. Furthermore, animals living at farm sanctuaries are often considered residents who are not prematurely killed, and when they die, they are considered grievable subjects and are not served as food. Yet, animal residents at farm sanctuaries remain

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[4] Plumwood's denounces animal experimentation in science along similar lines. She argues that, it is because we deny that we are food that we subsequently make animals suffer in research experiments aimed at promoting our health and which are "designed to support our normative status as above bodily decay" (319, note 14). It is therefore unclear as to why Plumwood would advocate for only occasional consumption of fish as a strategy to mitigate against potential health problems (despite that consuming fish who live in contaminated waters is related to various health problems in humans), while at the same time arguing that animal experimentation (often justified on the basis of human health), is unethical and counter to a politics of ethical embodiment.

the legal property of the sanctuary owners. In this sense, even animal residents of farm sanctuaries, who are not ontologized as food, are unable to escape a legal status of being property.

As Plumwood argued earlier in her essay, the "property characteristic of the commodity form" represents a "ruthless, reductionistic, and hyper-separated treatment of animals as replaceable and tradeable items" (296). Given that property mediates human-farmed animal relationships, it is unlikely that animal agriculture could avoid commodifying animal life in order to produce flesh for occasional consumption under these conditions. Yet, in her endorsement of occasionally eating flesh from ethical farms, Plumwood offers no recommendations for countering these legally-mediated relationships of commodification that sustain the institution of animal agriculture. Given the ubiquity of human exceptionalism and carnophallogocentrism, individual responses to structural inequalities will fail to catalyze systemic changes. I therefore contend that the intermediate positions suggested by Plumwood do little to challenge human exceptionalism or the instrumentalized use of animal life.

Institutionalized Human Exceptionalism and the Impossibility of the Human as Food

Despite Plumwood's politics of reciprocity, which she describes as "the idea of the food chain as a cycle of sharing and exchange of life in which all ultimately participate as food for others" (319, note 21) as well as her insistence that we embrace our status as food for other animals, she does not provide tangible scenarios in which humans can be produced for food. In the scenarios presented by Plumwood, humans are not ever conceptualized as property, as appropriate beings to farm, as subject to premature death when they are an appropriate size to be food, or as unentitled to food for which other animals might have a more direct need. For example, nowhere in her article does Plumwood recommend that humans be ethically farmed as

food for obligate carnivores, or for threatened or endangered species.[5] These suggestions would however be consistent with her position that it is possible to ethically farm and that humans should explicitly insert themselves in the food chain.

In later work, Plumwood (2008) outlined a "food-based approach to death" that "challenges human exceptionalism and grasps human death in terms of reciprocity with the earth community" (1). This approach is compelling in that Plumwood interrogates western death-practices, such as coffin burial and cremation, that prevent human corpses from being food for the earth and for nonhuman creatures. However, in our current socio-political landscape, the interplay between law and the (in)edibility of human bodies, for example, can supersede the desire of individuals to be eaten even upon their natural death. In this sense, while I agree with Plumwood in principle, I question whether this is a pragmatic means to resist human exceptionalism. For instance, Kathy Rudy (2012) tried to bequeath her body as food to a big cat sanctuary upon her death, but was rejected as law prohibits such a practice when the body in question is that of a *human*. Similarly, Ingrid Newkirk, President and co-founder of People for the Ethical Treatment of Animals (PETA), has also willed her body to PETA upon her death to draw attention to the arbitrary use and consumption of non-human others. Amongst other directions for the use of her body, Newkirk requests that her flesh be used to host a human barbeque "to remind the world that the meat of a corpse is all flesh, regardless of whether it comes from a human being or another animal," and that "that my liver be vacuum-packed and shipped, in whole or in part, to France, to be used in a public appeal to persuade shoppers not to support the vile practice of force-feeding geese and ducks for foie gras" ("Ingrid Newkirk's Unique Will" n.d.). Despite the laudable intentions of these individuals, a difference between

[5] Plumwood does not deny that humans can at times be prey to some animals (for an extended analysis of her experience of being preyed on by a crocodile and her philosophical analysis of this, see Plumwood 1999).

them and the animals used in animal agriculture is that Rudy and Newkirk have made (or at least tried to make) specific choices as to how their bodies will be used upon their natural deaths. This is a condition and exercise of autonomy that is not available to farmed animals. Even in Plumwood's ideal world of reciprocal eating relations, animals are still unable to choose what ends their death would serve. Even though Rudy and Newkirk cannot attain a structural equality between animals and humans by positioning themselves as food, their positions do counter the practices of human exceptionalism that inform how corpses are treated:

> It is a tendency in the dominant Western worldview to believe that it is respectful to kill nonhuman animals if we instrumentalize their cadavers, but that animals (including other humans) should never instrumentalize human corpses, and certainly not for food. (C. Taylor 2013a, 94)

These dominant modes of treating human cadavers work to sustain our current ontologies of humans as the rational masters of the more-than-human world, as well as delineate who can be instrumentalized in life and in death, and in what ways.

Taylor's (2013a) work on grief also shows that the inedibility of humans is contingent. For example, the funereal cannibalism of the Wari' entailed the ritualized eating of the roasted (and decomposing) flesh of their in-laws as a measure of respect.[6] For the Wari' it was demeaning to be buried in the ground, and being eaten prevented this from occurring. They would eat their deceased in-laws because they wanted and expected the same to be done for them. The Wari's criteria for edibility was not based on species per se, for "whether the food was human flesh, nonhuman animal flesh, or plant, the Wari' believed that it wants to be eaten and will feel disrespected if it is not" (C. Taylor 2013a, 91). The inedibility of humans is then a western fiction that has become sedimented over time (Foucault 2003).

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[6] Christian colonizers put an end to Wari funereal cannibalism during the 1960s (Conklin 2001).

Chapter 2

Eating practices informed by non-western ontologies of life are often managed and dismissed through the labeling of these practices as "savage" "uncivilized" or "animalistic." Western colonists have historically claimed that the cannibalism practiced by indigenous populations evinced the requirement of civilizing measures (Conklin 2001; Kim 2015). Barbarity continues to be measured according to a group's deviance from western alimentary norms of which animals are edible and which are not. Non-western ontologies of food that include dogs, cats, and rodents as edible draw fierce criticism from western persons who charge them with cruelty and barbarism (e.g., the consumption of rats and dogs in China) (Kim 2015). At stake in our food ontologies are western ontologies of life that have underpinned European imperialism and settler colonialism.

In response to these examples, and as a means to resist human exceptionalism, a food politics must hold human and animal life as equally valuable, and its structural conditions and practices must reflect these values. It is not enough to hope that individuals change their death practices to make themselves available as food for other life forms, nor is it enough to think of oneself as edible while farmed animals continue to be subjected to agricultural power. For these reasons, I contend that a relational vegan food ontology remains an important political and structural position. That is, it is politically valuable to ontologize food as a set of relations that determine whether the item in question can properly be food. This is an ontological account of food that I will explain in detail below.

In the next section, I turn my analysis to Lisa Heldke who, in her recent work, argues for a food ontology based on relations that determine edibility. While Heldke's (2012) work is generative in its position that edibility is determined by a set of relations, I will extend her analysis by arguing that a concept of food focused on colonial relations of property and

consumption holds more potential for an anti-oppressive food politics. This conceptualization of food brings to the fore legal relationships of property in a way that a focus on edibility cannot because it does not attend to the animals' status as property. While Heldke uses the term "food" to signal a food politics beyond mere edibility, she does not address the fact that animal agriculture is constituted by legal property relationships. Because of this limitation, I argue that her argument remains grounded in human exceptionalism.

Beyond Edibility

In her (2012) article, "An alternative ontology of food: Beyond metaphysics," Lisa Heldke argues against metaphysical food ontologies. Like Plumwood, Heldke is critical of vegan or vegetarian food ontologies that use biological boundaries such as "animal" to eliminate flesh or animal products from the realm of edibility. Heldke's critique, in contrast to Plumwood's, is not based on the supposed cultural imperialism of ontological veganism or its alienation from nature, but instead on its failure to account for other modes of suffering, harm, and exploitation that are present in our food systems. For Heldke, food is not what we normatively take to be edible or inedible, but is a location where pleasure and violence come together. Edibility should then be determined by an ethical consideration of the relations of production of the food in question. While Heldke's account would seemingly lend itself to a consideration of animal ethics, I argue that her alternative ontology remains ardently invested in preserving humanist ontologies of life.

The crux of Heldke's (2012) argument is that we ought to shift from an understanding of food as edible substances to food as "loci of relations":

> Food, in particular, is deeply relational—by definition. To *be* food is to be (defined as) something that can be eaten by something else, and eating is, of course, a relationship. But the relational character of food extends far beyond the

> stage at which it is actually consumed. To *become* food—to be rendered edible, palatable, delicious—means that a living thing has been part of scores of relationships, both natural and cultural. (82)

For Heldke "food" as a concept entails a delineation of who can be food, and who is entitled to eat said food. However, contrary to Plumwood who posits a metaphysics of edibility (i.e., we are all technically edible), Heldke sees "food" as a process by which someone or something is made edible via intersecting relationships. Heldke, however, seems only concerned with how food is *made* for humans through vast scores of market-capital mediated relationships.[7] Despite her position that a relational food ontology would better address social justice and environmental concerns, the directionality of Heldke's statement about food production only attends to food workers, not those who become food, or the relationships produced by eating others.

The relational ontology that Heldke suggests would mean moving away from a substance ontology that uses biological boundaries to mark the edible from the inedible. For instance, vegans say "no" to all animal flesh and secretions, vegetarians say "no" to animal flesh, and carnists could technically say "yes" to all that is labeled "food." She gives the example of vegans who might have the baseline measures of their food ethics be: 1) that the food product is not from an animal; 2) that the working conditions of farm workers are not exploitative; and, 3) that the ramifications of the production of the food in question is not ecologically harmful. This is inadequate for Heldke because issues are "silo[ed]" (81). In other words, multiple ethical concerns are prioritized separately.

Heldke's (2012) alternative ontology instead considers the cluster of relations that has rendered something (or someone) edible. These relations, Heldke argues, should be considered

[7] While there certainly can be a relationship of predator-prey between animals who kill, and eat other animals or humans, these relationships are not mediated by institutionalized processes which render their food edible. Rather, their prey is immediately edible.

as inseparable and "intrinsic layers" (81) of food production. This is the "withness" of food for Heldke, and it is this being *with* that should inform our criteria for edibility:

> To *be* (some particular food) is to be *with* soil and insects and farm workers, semi trailers and over-the-road truckers, slaughterhouses and slaughterhouse workers, stoves and cooks and plates and waitresses. This steak, in its history, *is* with all of these others and is *with* all of these others. And all of these "withs" are at least potentially morally relevant. (85)

It is evident here that Heldke's ontology is constrained within the logic of deading life—the animal who has become steak is not considered as an animal, but only as flesh that will require the labour of various workers in order to be consumed. In other words, to be food, according to Heldke, is to always have been the property of someone else. She asks us to be with the workers involved in the raising, transportation, killing, processing, dismembering, cooking, and serving of the animal who will become steak, but she does not ask us to be with the animal. The food workers are the only beings whose subjectivity she recognizes, while animals are relegated to a state of always already food, even in life. While Plumwood (2000) suggests sacred eating as a way to honour cross-species reciprocal kin relationships with those whom we eat, and attributes subjectivity to these animals, Heldke's "withness" at most asks us to recognize the various labour relations and environmental resources that we used in the making of the steak. The animal whose flesh became this steak, is never attributed subjectivity or recognized as a subject of these relations, and certainly not as kin. Instead, this steak, despite Heldke's relational position, is merely subjected to (and is the product of) the instrumentalized relationships that Plumwood (2000) aptly refers to as alienating and soulless.

Heldke (2012) claims that an ontology of food-as-loci-of-relations forces us to recognize and grapple with the tough cases. Unlike a food ontology based on biological categories, Heldke claims that her alternative ontology could cause the eater to be "somewhat less concerned with

[her] own personal clean hands, and more concerned with larger ethical implications of our collective choices" (83). Heldke is gesturing to the notion that there is no pure way of consuming without participating in violence. However, I would point out that for farmed animals and the workers tasked with killing them, in addition to ecological violence required to sustain animal-based diets versus vegan diets being so disparate, that while there is no pure way for humans to exist in the world (Shotwell 2016), not all modes of consumption have commensurable impacts. Furthermore, a vegan diet does not symbolically and materially invest and sustain a humanist framework to the same degree as does the consumption of animals. To admit that all modes of existence cause harm and participate in violence should not preclude an ethical consideration of the nonhuman animals who will become food in a carnophallogocentric economy of sacrifice.

Heldke's admonition to be less concerned with our own "clean hands" and to be more concerned with the broader implications of our choices privileges concern for humans over and above those of animals and the environment. In so doing, she demonstrates the speciesism of her argument. As a result, her argument inevitably "siloes" ethical concerns about the relations of food production along the axis of species—the very thing her alternative food ontology aims to avoid. For example, she concludes her article by saying:

> Rather than rendering whole biological categories off limits or in bounds (no to mammals; yes to lettuce), this system would sort foods in terms of the relations that produced these particular foods. (No to lettuce grown in non-union farms by workers not properly protected from pesticides; yes to grass fed beef [sic] humanely slaughtered by union workers with good health care benefits, and eaten in small quantities). (Heldke 2012, 88)

In her determination of edibility, Heldke relies on the biological category of the human as those whose interests are parsed against nonhuman animals. Yet even in this regard, I am skeptical of whether a unionized slaughterhouse labour force would adequately attend to the needs of the

workers for whom Heldke expresses concern. The harms of slaughterhouse work exceed financial exploitation and physical strain as it is unavoidably violent and requires workers to rationalize harm while suppressing empathy and compassion for nonhuman others (Fitzgerald 2011).

While an ontology of food as a complex of relations is certainly promising, my concern is that Heldke's rejection of a food ethics based on biological categories (i.e., no to mammals) is always already constrained by a humanist framework that renders nonhuman animals as implicitly edible as a result of their biological categorization. For example, she asks: "Do ducks and geese actually suffer when they are gavaged? […] Does an animal quickly killed in familiar surroundings by someone it [sic] knows suffer?" (Heldke 2012, 80). Would Heldke pose similar questions about humans being gavaged or quickly killed? Her limited concern for animal suffering is quickly turned to support their designation as inherently edible. Animals are referred to as "it" and humans are positioned as implicitly entitled to the bodies of animal others as food, merely *because* of our biological taxonomization as human. Further, as discussed above, the designation of "human" almost always renders us, at least legally, exceptional and inedible—even when we die of natural causes.

Inasmuch as Heldke's (2012) alternative ontology of food problematizes the relations of food production, she does not question the western taxonomic ordering of life that renders nonhuman animals available to humans as food. As such, Heldke's alternative ontology of edibility fails to take seriously its own political potential to undermine species dualisms. Instead, humans remain inedible and animals remain food so long as the human workers who slaughter them are unionized and receive benefits. Next, I show that a truly alternative food ontology requires an alternative account of humans and animals. This food ontology is related to a non-

property based legal ontology of animals. The ontologies of food and animals that I will argue for below resist and offer an alternative to the ontologies that have been foundational to and sustain settler colonialism and empire.

Toward a Contextual Ontological Veganism

As discussed in the previous chapter, settlers imported property rights to animals and to land as part of their colonial project in what is now referred to as Canada and the United States. These legal statutes were not only used as a method of settler territorialization, but were crucial to the establishment of carnophallogocentric ontologies of life in geopolitical spaces where an indigenous metaphysics of interrelatedness had dominated. These historical processes continue to structure dominant modes of food production, realized through the instrumentalization and commodification of farmed animals. As I will argue next, a de-colonial and non-anthropocentric food ontology requires a new legal subjectivity for nonhuman animals. A non-anthropocentric food ontology also has the potential to challenge and resist modes of consumption that sustain, energize, and reproduce human supremacy.

Theorizing human-animal relationships as they are mediated via law, Maneesha Deckha (forthcoming) suggests a new legal subjectivity for animals premised on beingness. Beingness resists the human/animal divide that currently structures western law as it "is meant to be an alternative to both property and personhood" (1). Beingness is defined by the recognition of three central aspects of animal (including human) life: "embodiment, relationality, and vulnerability" (Deckha forthcoming, 1). This definition of beingness resists the notion that because animals are relegated to a status of property in law, and are caught in a loop where their treatment naturalizes this status, they can be subjected to an economy of sacrifice where they are (largely) non-criminally killable. In this sense, beingness is consonant with an ontology of

animality that avows that animals are intercorporeal subjects who engage in meaningful relationships with others of their choosing. It also avows that they are individual subjects with their own purposes and desires, who "live and grow by relying on the mutual support of other living, growing beings" (Guenther 2013, 157). Finally, in our current conditions of anthropocentrism where humans are in dominant relationships to animals, their vulnerability should not render them appropriate beings to be exploited. Instead, it compels us to respond appropriately. Vulnerability allows us to relate to animals as more than subjects who suffer, but who are "agents with their own social lives, social codes, and histories" (Deckha forthcoming, 46).

This suggested "post-anthroprocentric legal ontology" provides a beginning point for law to "recognize the shared somaticity we have with animals, lament the vulnerabilities they face, and seek to remove the causes of their suffering. The law should also normalize human responsibility toward animals because of our dominating power" (Deckha forthcoming, 47). If taken up in law, beingness also offers a powerful critique of the human subject as it is currently codified in law, as well as in dominant threads of animal rights theory. By this, Deckha is referring to a rights-based approach to animal liberation that is based on claims of similarity between animals and humans. Because of this likeness, philosophers such as Peter Singer (2009) have argued that animals are deserving of the same rights as humans (Deckha forthcoming). While this would surely improve the lives of animals, this line of argumentation does not challenge the traits that are taken as constitutive of the human. Instead it merely expands the circle of consideration outwards to those who share these traits, while never challenging the centricity of humans as the kinds of beings whose traits are valuable. As a result, the human subject of common law remains detached from their bodies, their relationships of

interdependence, and is instead ontologized as a self-determining subject. Many scholars have tracked how this subject is associated with white able-bodied men, while persons who are racialized, persons with disabilities, women, and animals are excluded, to varying degrees, from this subject position and the protections it affords (Adams and Gruen 2014; Deckha forthcoming; Derrida 2008; Kim 2015; Tuvel 2011; Wolfe 2003).

Not only does our prevailing ontology of the human parse life along axes of race, ethnicity, ability, gender, and species, it has also been marshaled to "structure the concept of property and otherwise" (Deckha forthcoming, 1). This legal ontology of the human, of course, has been foundational to projects of empire-building and settler colonialism. Deckha posits that this subject as both contingent and continually reproduced to the point that its modes of life are taken as inevitable: "the possessive and colonial individualism that the common law, colonialism, and capitalism have entrenched in our social order is not easily undone" (Deckha forthcoming, 2). Deckha rightly points to the challenges inherent in challenging carnophallogocentrism, which as Derrida (1995, 2008) argues, structures our social, political and cultural institutions, as well as our prevailing ideas about ourselves and nonhuman others. Yet, despite their ubiquity, we should not accept these forms of oppression as inexorable. While the property status of animals is a powerful symbol of colonialism, I propose that for farmed animals, a contextual ontological veganism can be a mode of undoing private property relationships, and holds the potential for ontologizing humans, animals, and food differently.

As discussed in the previous chapter, Oksala (2010) has argued that ontologies are not universal, objective metaphysical accounts of the natural order, but are always political. I argue that vegan food ontologies can then be a means to honour animality, to be open to the needs of others, and to recognize their vulnerability. As Jessica Carey writes, we need a concept of

veganism that is "more resolutely about continually striving to realize a form of justice in the human-animal relationship" (2008, 9). A distinction between food and edibility can help us develop a contextual veganism ontology that attends to the relationships that produce food and the relationships that are perpetuated through the consumption of the food in question.

While Plumwood's notion of edibility recognizes our shared vulnerability as prey and leaves open the potential for equitable relationships in the future, it is insufficient to address the inequalities that currently structure our food system. A food ontology that considers the constitutive relationships of food, however, attends to the systemic and political subjugation of farmed animals in current modes of animal-based food production. What distinguishes food from edibility is the mediation of that product via the property status of nonhuman life and via market forces. Put another way, relationships of commodification and instrumentalization that are made possible by law currently preclude humans from being positioned in such a way that they can be in truly reciprocal relationships with nonhuman others. For that reason, we should ontologize food rather than offer ethical prescriptions around edibility.

Heldke writes that we should "make decisions about whether or not to eat [foods] according to the degree to which those relationships [of production] promoted qualities defined as ethically desirable" (2012, 84). In this sense, whether someone or something *should be food*, regardless of their edibility, would take into account labour relations, the ecological effects of producing the product, whether or not the food item exploits the vulnerability of, or relies on the sacrifice of a subject of a life, the larger context of food availability and accessibility, and whether the consequences of eating the food in question would reproduce racialized, gendered, and specied inequalities. Not only does this contextual ontological veganism account for animal vulnerability but it also attends to the vulnerability of migrant and foreign temporary workers

who constitute the majority of workers in factory farming, ranching, crop work, and animal slaughter and processing (Food Empowerment Project n.d., 2017b, 2017c; Fitzgerald, Kalof, and Dietz 2009; Fitzgerald 2011; Oxfam America 2015; Pachirat 2013; "Rape in the Fields" 2013). This is a group of workers who, because of their precarious immigration statuses in the U.S. and Canada are not paid a living wage, do not receive benefits, do not enjoy worker protections like paid vacation or legally-entitled breaks, and are often threatened with deportation should they speak out against their working conditions (Food Empowerment Project 2017b, 2017c; Oxfam America 2015; "Rape in the Fields" 2013; Wingrove 2012). Women labourers in these fields are often sexually assaulted by their employers, but are unable to report this to authorities because of their illegal immigration status ("Rape in the Fields" 2013). A contextual ontological veganism that allows us to consider whether the relations of production that make something edible should allow or disallow it from being considered food, attends to animal, worker, and ecological vulnerability.

Such an approach would allow us to question and resist the violence of animal agriculture. This is an institution that causes the exploitation and death of approximately 56 billion land animals and between 0.97 and 2.7 trillion sea animals per year, entails the spillover effect of increased rates of (human) violence in communities where slaughterhouses exist, and in both small-scale and industrial forms is a leading cause of climate change, deforestation, water scarcity, loss of biodiversity, as well as results animal and plant species extinctions (see further Fitzgerald, Kalof, and Dietz 2009; V. Stanescu 2010, 2013; Steinfeld et al. 2006; Wadiwel 2016). A contextual ontological veganism that is responsive to the anthropogenic effects of animal agriculture is a means of expressing embodiment, connectedness, and vulnerability in ways that would necessitate political and legal changes. In other words, anthropogenic climate

change demonstrates that we are subject to the ecological effects that we as a species have caused, and that will very likely cause our extinction (Kolbert 2014; Scranton 2015) . Despite our ontologies of ourselves as the rational masters of the natural world, it appears that no amount of scientific intervention aimed at manipulating nature to contain or reverse climate change will prevent the (unequally distributed) effects that we are experiencing. An approach of contextual ontological veganism as a mitigation strategy to slow climate change, in fact, might be more immediately necessary as a form of ecological practice of embodiment and non-alienation than offering ourselves to other creatures upon our natural deaths.

Plumwood (2000) does not attend to the colonial legacies that structure our food production, human-animal relations, or relations to territory. Yet, this does not prevent her from dismissing ontological veganism as imperialist. While it is the case that flesh-factories and other industrialized forms of animal agriculture are far from the traditional subsistence hunting and gathering eating practices of various indigenous nations, I disagree that veganism is equally imperialist. As was discussed in the previous chapter, such claims have been dismissed by Mi'kmaq scholar Margaret Robinson (2013) who argues that while veganism might be practiced largely by white persons in Canada and the U.S., it is not hegemonic nor bound to whiteness as are animal-based diets produced via animal agriculture. Critical race scholar, A. Breeze Harper (2011) positions black veganism as a decolonial mode of resisting black genocide—a genocide that she writes is facilitated through very limited food options in food deserts, the consumption of which disproportionately causes infertility amongst black women. Furthermore, a contextual ontological veganism that avows animal subjectivity, interdependence, and vulnerability is perhaps more cogent with indigenous teachings on interrelatedness (TallBear 2013, 2017) than are food ontologies that leverage human interests above others and uphold an (untenable) goal of

ethical farming. In geopolitical contexts of settler colonialism, this ontology would resist the de-animalization and property status of farmed animals upon which our food production turns. In this sense, it is also a way to resist colonial anthropocentric orderings of life and the legal ontologies on which they pivot.

Conclusion

The contextual ontological veganism proposed here is a beginning point for a food politics that recognizes nonhuman beingness in legal, ethical, and political registers. The ontology proposed here is a means to challenge the property status of animals, a status that, in the context of settler societies, is tied to processes of territorialization, as well as to the institution of "civilized" modes of living. While Plumwood and Heldke have criticized ontological veganism (and vegans themselves) for being preoccupied with a politics of purity and "their own clean hands," their analyses remain too focused on the intent of individual vegans and not on the structures that position "animals [as] still more dispensable than humans" (Deckha forthcoming, 41). In this sense, Plumwood and Heldke also take veganism as an end, whereas the veganism outlined here is an ongoing and contextual process that strives toward less harm and more equitable interspecies, intra-human, and ecological relationships. A contextual ontological veganism that is premised on an analysis of power and its operation, for example in cases of settler colonial power and industrial agricultural, focuses on the legal and political processes that divide life along lines of personhood and property. It is also contextually specific in its attention to historical processes by which land was transformed into private property and then into resources in ways that continue to be beneficial to settler states. This attention to structural processes and the mediation of food via property status introduces an important distinction between food and edibility that is absent in other analyses.

While everyone is technically edible, whether something (or someone) can be ontologized as food should be determined by an assessment of whether the relationships through which it is produced are ethically desirable. In this sense, this food ontology is inescapably political and is connected to social justice concerns for migrant and vulnerable workers, farmed animals, animals that are eliminated because of their categorization as pests or threats to "livestock," residents harmed by air, water, and land pollution because of animal agriculture where they live, as well as to wider ecological concerns related to climate change and food production. Because animal agriculture is a leading cause of climate change, deforestation, species extinction, loss of biological diversity, and water insecurity, a contextual ontological veganism that does not include farmed animals as "food" could well be a necessary beginning point to cultivate ethically desirable relationships through food production and consumption.

A food politics centered on the beingness of animals, interdependence, and ecological harm reduction also resists the fixity of settlers' modes of life and the concomitant ontologies of life that underpin industrial animal agriculture. The exceptional human and the de-animalized animal are neither natural nor inherent categories, but are contingent accounts of life reproduced through property law, animal agriculture, dominant food ontologies and alimentary norms. The contextual ontological veganism proposed here is a means of recognizing our shared vulnerability with the more-than-human world and our place within ecological worlds, processes, and realities in the era of the Anthropocene (Bonneuil and Fressoz 2016; Moore 2016). Ontological veganism is an opening and a step towards a politics of interconnectedness. The ontology developed in this chapter provides possibilities for relating otherwise to ourselves, to others, and to territory. The next chapter examines instances where law has been used to foreclose ethical possibilities for relating otherwise to ourselves and to others through food and

eating. Through an analysis of recent legal cases and proposed legislation, I show that agricultural power is deployed to maintain dominant ontologies of food, animals, and the human that *apriori* assumes and reproduces the property status foundational to its exercise.

Chapter 3:

Agricultural Power and 'Imitation Foods': Critiquing the Legal and Ontological Construction of Plant-Foods as "Fake"

Introduction

Recently, milk consumption in America has emerged as an explicit means to pronounce one's affiliation with the alt-right movement. For this movement, drinking milk represents white racial purity. White supremacists use the terms "milk" and "the vegan agenda" as code to mask the hate-speech contained in their social media posts. At the same time, this code allows white supremacists to claim that their actions are not premised on racial hatred but are merely anti-vegan or counter-liberal. White male supremacists have posted videos of themselves chugging milk and dancing with their shirts off—their swastika and runic tattoos visible (Divenuta 2017; Nagesh 2017). News outlets report that this recent pro-milk/pro-whiteness rhetoric is linked to a map that links areas such as the United Kingdom and Northern Europe with the highest percentages of lactose tolerance. This map has prompted white supremacists to link lactose tolerance to areas that are historically and predominantly white. They fail to consider parts of the Middle-East, West Africa, and South Asia that were also shown on this map as having populations that are in fact, lactose tolerant (Nagesh 2017). They express their white supremacy through statements about milk, such as "heil milk" and "gas the lactose intolerants, milk war now" and have ordered those who cannot digest milk to "go back" (as cited in Nagesh 2017). While for neo-Nazis the link between milk and white supremacy appears to be a new propaganda tactic, nutritionists and dairy councils have historically promoted milk on the basis that its consumption was responsible for the superior intellectual and physical development of "aryans" (DuPuis 2002; Hendrick 1933).

Chapter 3

Even as milk is being used as a marker of racial purity in popular and alternative media discourses, politicians have called upon governmental regulatory bodies to enforce dominant ontologies of milk as well as to pass laws in the House of Congress and the Senate with titles such as the *Dairy Pride Act* (2017), according to which milk can only be the substance that has come from "'healthy cows'" (4) or "one or more hooved animals" (5). This act seeks to impedes the growing plant-based food sector, which in the U.S. represents $5 billion in annual sales (Simon 2017). Dairy is not the only animal-based industry to use legal regulations to try to slow or halt the sale of plant-based foods. Politicians, with the backing of animal-based food companies, their constituents (often farmers), industry groups, councils, and lobbyists, in addition to large food companies and some consumers, have both proposed new legislation and relied on existing regulatory measures to challenge the labelling of plant-based milk, egg, and meat products ("Ang et Al v. Whitewave Foods Company et Al" n.d.; CBC News 2015; Conopco, Inc. v. Hampton Creek, Inc. 2014, *Dairy Pride Act* 2017, Gitson et al. v. Trader Joe's Company 2015; Godoy 2015; "Lawmakers Make Push On Milk Labeling" 2017; National Milk Producers Federation 2010; Ryan 2013; J. Sinclair 2014; Thielman and Rushe 2015; U.S. Food & Drug Administration 2015; "Welch Leads Bipartisan Effort to Stop the Illegal Branding of 'Fake Milk' as Real Milk" 2016; Van Gundy 2014). As plaintiffs, their legal claims rely upon and mobilize a food ontology of real-versus-fake, according to which real foods are animal-based, and fake foods are "pretending to be something they are not," to use Pollan's (2009, 23) categorization. The plaintiffs argue that the labelling of plant-based milks, egg products, and meats as such, violates existing legal standards of material identity. By analysing recent legal cases, proposed bills, and public discourse surrounding "imposter" milk, eggs, and meats, I argue that the deployment of law in these cases effectively supports dominant ontologies of food,

animals, and the human. Beyond semantics or the protection of financial interests, I argue that lawsuits seeking to secure animal-based foods as the norm from which all other options deviate represent the material operation of agricultural power exercised to maintain social relationships to food that are historically embedded in projects of white supremacy, nationalism, and able-bodiedness. Law is an historically contingent institution that defines the parameters of "food" and has historically organized animal life as property (Anderson 2006; Atkins 2010; Johnson 2012; Kim 2015). For these reasons, legal struggles over food ontologies are instances where power relations specific to identity, the body, and consumption intersect and unfold.

I approach this chapter through three case studies related to the industrial production of milk, eggs, and meat. Because the first and second chapters broadly focused on the contingent ontologies of humans, animals, and food that are bound-up within animal agriculture, in this chapter I return to Derrida's (1995, 2008) notion of carnophallogocentricism as it relates to milk and eggs. While Derrida (2008) cites concern about the industrialization of animal agriculture and the intensified subjugation of the animals therein, he focuses only on the production of the human subject in relation to meat-eating (1995). Despite this omission, I argue that the sexed relations of domination upon which dairy relies are inherently tied to a patriarchal humanist politics that are bound-up in projects of whiteness, nationalism, and ableism. In Derridean terms, being a vegetarian who consumes milk and eggs does not equate with the sovereignty of the carnist subject who "accepts sacrifice and eats flesh" (Derrida 1995, 281). However, I argue that the logic and material conditions of dairy and egg *production* necessitate that we consider these animals as subjugated within a carnophallogocentric economy of sacrifice, regardless of whether the consumption of these products marks the eater as sovereign in the same manner as the consumption of flesh. The chapter then moves to an analysis of proposed class-actions, recent

legal cases, and the *Dairy Pride Act* that claim that the terms "milk", "cream", and "dairy" can only properly refer to animal-based substances. I argue that these ontological struggles over milk are tied to its historical legacy as a putatively perfect and nutritionally complete liquid that has been conceptually and legally divorced from its purpose as a food for calves.

The chapter then turns to an analysis of egg politics. Like dairy, egg production relies on the manipulation and control of female reproduction toward humanist ends. So, while the consumption of eggs does not entail the "carnivorous sacrifice" that, for Derrida, marks the economy of sacrifice, I argue that this industry is consistent with the subjugation, denial of subjectivity, and instrumentalization of nonhuman others that constitutes carnophallogocentrism. I examine current legal issues surrounding the plant-based foods company Hampton Creek that manufactures products such as mayonnaise, dressings, cookies, and cookie dough using pea proteins instead of eggs. I focus on Hampton Creek as this company was the target of a multifaceted strategy (legal and otherwise) by Unilever (owner of Hellman's mayonnaise), members of the American Egg Board, the United States Department of Agriculture, as well as others, who tried to prevent the sale of Hampton Creek mayonnaise by leveraging existing legal (animal-based) definitions of the term (Conopco, Inc. v. Hampton Creek, Inc. 2014; Gajanan 2015; Kowitt 2014; Thielman and Rushe 2015; U.S. Food & Drug Administration 2015; Van Gundy 2014).

The chapter concludes with an analysis of Canadian legal regulations regarding the sale of plant-based meat products. Not only do existing regulations index plant-based meats as "simulated" flesh-based products that must nutritionally perform identical to flesh, they also require testing on rats (wherein milk protein is used as the norm) to establish their protein efficiency rating (Health Protection Branch 1981). As such, existing food regulations in Canada

ontologize animals as "separable units of behaviour" who can be reorganized as per the needs of the industries in question; in this instance, animal agriculture, biomedical research testing, and nutritional sciences (Guenther 2013, 157). The arguments in these legal cases attempt to maintain food groups and food items as only animal-based. By indexing counter-normative alimentary options as fake food or food imposters, I read these as efforts to depoliticize the disruptive potential that the consumption of vegan foods poses not only to dominant economic structures, but to our dominant ontologies of ourselves, animals, and food.

Part I: Milk, Sacrifice, and Humanism

Producing milk, producing the human. The dairy industry not only relies on the total commodification of animal life, but does so via a sexual politics of reproductive control (C. J. Adams 2010; Gaard 2013; Gillespie 2014). Agricultural power targets female farmed animals and maintains them in a cycle of reproductive intervention and commodification. In this deployment, agricultural power co-articulates with humanist ontologies of nature and animals as feminized and fertile resources awaiting scientific domination, and entails the death and consumption of spent cows and calves slaughtered for veal (C. J. Adams 2010; Gaard 2013; Gillespie 2014). The veal industry is tied to and reliant upon the dairy industry. Because cows must have been pregnant to produce milk, their calves are taken away at birth so that their milk can be diverted to the market for human consumption. Bulls are subjected to manual or electric ejaculation so that humans can use their semen (Gillespie 2014), while female cows are treated as objects to be manipulated to human ends:

> Artificially inseminated at fifteen months of age [usually while in a device referred to by the industry as a 'rape rack'], a dairy cow suffers an endless cycle of pregnancy and lactation, milked two to three times daily by electronic milking machines, conditions that cause mastitis and other infections that must be treated with antibiotics. Fed an energy-dense food, she may spend her whole life confined

> in a concrete stall or standing on a slatted metal floor. Her calves are taken from her within hours after birth, with females kept to replace their mothers in the dairy and males sent to veal farms, where they are confined in crates so tight they cannot move, and fed an iron-deficient diet until they are slaughtered at fourteen to seventeen weeks of age. (Gaard 2013, 603)

Dairy cows are milked to the extent their fat, muscle, mineral, and vitamin stores are depleted (what the animal agriculture industry refers to as cows "milking off their back"); they suffer immense discomfort and poor health. As a result, the average lifespan of a cow subjected to the dairy industry is 5 years, whereas the natural lifespan of a cow is typically 25 years (Gaard 2013). Dairy cows are deemed "spent" when their milk production decreases and, because their hyper-exploitation renders their flesh of low quality, they are sold as "cheap"/processed meat that will be used in hamburgers and/or "pet" food (Gaard 2013; Gillespie 2014).

While bred not only for their flesh, animals in the dairy industry are ontologized as deaded life and are noncriminally killable provided they serve as means to human ends, in this case, as milk *and* as meat (Derrida 2008; J. Stanescu 2013). While alive, calves are purposely kept anemic so that their flesh will contain less blood (to result in a paler meat) and are confined to "veal crates" to prevent the development of their muscles so that their meat is more tender for the consumer. In this sense, the lives of veal calves are completely directed with a view to the specific inputs (low iron feed and near absolute confinement) that will result in the industry's desired output (veal meat). Mother-calf bonds are destroyed so that humans can consume milk, and cows and calves are imagined as the products they will produce and become when slaughtered (Gaard 2013). The logic of the dairy industry, then, relies on ontologies of farmed animals existing as food.

While the consumption of dairy might not be culturally linked to modes of domination in the same way as eating meat is, the logics of the industries are related and commensurable. It is

my contention that the logic of milk *production*, despite the lack of carnivorous capital attributed to its *consumption*, produces and energizes dominant ontologies of food, animals, and humans. It might be the case that the consumption of milk is not linked to the sovereignty of the individual subject, but that it is a substance that continues to be linked to larger projects of whiteness, nationalism, humanism, and colonialism in western settings (see DuPuis 2002; Gaard 2013; Nimmo 2010). While the erasure of dairy cows from milk products is historically tied to stories about milk as a "perfect food" for infants and children (DuPuis 2002; Nimmo 2010), their deanimalization as input-output machines (Guenther 2013; J. Stanescu 2013) is further reflected in food laws that position them as existing to serve the political, economic, and nutritional needs of the nation.

Securing Mammalian Ontologies of Milk: Agrarian Identities, Animal-Based Economies

Food ontologies of real versus fake are reflected in law and are used to reproduce normative orders of food consumption, as well as the inequitable relationships between humans and animals on which they rely. For example, in 2010, the National Milk Producers Federation (NMPF)—whose motto is: "Connecting Cows, Cooperatives, Capitol Hill, and Consumers"—petitioned the FDA to enforce existing legal standards of labeling identity (NMPF 2010). They asked the FDA to intervene to prevent non-dairy products from being labeled as "soymilk," "non-dairy ice cream," or "raw parmesan cheese," because to do so constituted illegal misbranding (NMPF 2010). Even if the words "soy" or "almond" preceded the word "milk" on the label, they still claimed that the product was "misbranded" because it "includes a standardized food name, e.g., 'milk', as part of a name for that product, e.g., 'soymilk'" (NMPF 2010, 3). They reasoned that the terminology on the labels of plant-based milks, cheeses, yogurts, and frozen desserts was "confusingly similar" (4) for consumers who would assume that

these were in fact animal-based products.

Importantly, the NMPF mobilized law to maintain animal-based products as the norm from which others deviate in terms of composition and nutritional content. They charged that non-dairy companies "illegally mislead the public by inappropriately employing names and terms *reserved by law* for standardized dairy products, thereby creating false impressions that these products provide comparable quality, taste, or nutritional benefits" (NMPF 2010, 2, emphasis added). By focusing on questions of substance and nutritional content, law is deployed to produce a food ontology that is both substance-based and animal-based. This leaves ethical questions as to the relations that make something or someone food ignored and excluded. Following this petition in 2010, class action lawsuits making similar arguments have been levied against plant-based food producers.

In 2013, a proposed class action, Ang et al v. Whitewave Foods Company et al was brought against three producers of plant-based milks on the basis that products labeled as "almond milk" and "soymilk" duped consumers into buying these products when they believed that they were buying animal-based products. The plaintiffs' proposed class action was unsuccessful with U.S. District Judge Samuel Conti stating that it "stretche[d] the bounds of credulity" (Ang et al v. Whitewave Foods Company et al 2013, 11). Judge Conti further ruled that no reasonable consumer would mistake the plant-based products in question for dairy-based products because their labeling clearly stated "almond" or "soy."

A similar case, Gitson et al. v. Trader Joe's Company, was filed in California in 2013. The plaintiffs proposed a class action on the basis that the defendant's soymilk label violated existing standards of identity, and because the product failed to meet the legal definition of "milk." In December of 2015, U.S. District Judge Vince Chhabria dismissed the plaintiffs'

claims. Because the product was labeled as a soymilk, Judge Chhabria wrote that it did not violate legal standards because the label in fact discloses that the product is not from cows, and therefore the company does not try to sell the product as cow's milk. Instead, the Judge stated that soymilk is marketable because consumers know that it is a non-dairy product: "The reasonable consumer (indeed, even the least sophisticated consumer) does not think soy milk comes from a cow. To the contrary, people drink soy milk in lieu of cow's milk" (Gitson et al. v. Trader Joe's Company 2015, 3). These attempted class actions provide examples of attempts to mobilize law to not only protect the interests of dominant food producers, but also to secure normalized modes of eating.

More recently, pro-dairy parties have sought to strengthen the legal ontology of milk as *only* animal-based. Congresspersons and senators have both asked the FDA to enforce existing regulations and have proposed companion acts in the House of Congress and the Senate that would curtail the "mislabeling" of "imitation" milks in order to protect and defend dairy farmers ("Welch Leads Bipartisan Effort" 2016). On December 16th, 2016 Congressman Peter Welch, a Democrat representing Vermont, alongside 24 other congresspersons, wrote to the United States Food and Drugs Administration (FDA) urging them to use their legal authority to enforce labeling standards. Specifically, they asked the FDA "to investigate and take action against the manufacturers of products they falsely claim to be milk" ("Welch Leads Bipartisan Effort" 2016). Their reasons for writing to the FDA are based on declining sales of dairy and increasing sales of plant-based milks. They claim that, "since 2014, milk prices have plunged 40 percent. During that same time, there has been a surge in the mislabeling of imitation 'milk' products, including beverages produced from almond, soy, and rice" ("Welch Leads Bipartisan Effort" 2016).

Welch and others argue that the makers of these plant-based products should not be permitted to market them as milk. They write that because "real" milk is "produced by the mammary gland" it contains levels of vitamins, minerals, and protein that they claim plant-based milks are unable to "mimic" and for these reasons should be prevented from being labeled as such ("Welch Leads Bipartisan Effort" 2016). In their letter to the FDA they state while the legal framework to address this "problem" already exists, the FDA fails to enforce current labeling standards. Following this public statement regarding the FDA's inaction, Welch and others proposed legislation that would curtail the FDA's discretion and require enforcement on the matter ("Lawmakers Make Push On Milk Labeling" 2017).

On January 31st, 2017, Congressman Welch, and Senator Tammy Baldwin (Democrat for the State of Wisconsin) introduced companion bills to the House of Representatives of Congress, and to the Senate "to require enforcement against misbranded milk alternatives" (*Dairy Pride Act* 2017, 1). The long title of the Act is the *Defending Against Imitations and Replacements of Yogurt, Milk, and Cheese to Promote Regular Intake of Dairy Everyday Act*, while the short title is the *Dairy Pride Act*. The purpose of the *Dairy Pride Act (DPA)* is to prevent manufacturers of plant-based milks from using the word "milk" on the label of their products, a measure they claim will encourage the consumption of animal-based dairy products. To justify their demand, the lawmakers behind the Act cite the FDA definitions of milk and cream, and of dairy. They also claim that the health of adolescents, adult females, as well as the entire American population is in jeopardy due to low milk consumption. They further argue that "imitation dairy products" are nutritionally unequal to dairy milk (*Dairy Pride Act* 2017, 3). If passed, the *DPA* would *require* the FDA to enforce its existing legislation regarding the definition of milk. Under the *DPA*, the FDA would also be required to issue a national guide for the enforcement of

mislabeled products within 90 days, as well as to report to Congress within two years as to their progress on the matter.

Defining Dairy, Erasing Animals

The *DPA* differentiates between milk and dairy in such a way that dairy cows, goats, and sheep are de-animalized to the extent that their use to this industry is unquestioned and their relationships to other animals and their offspring are effaced. The politicians and lawmakers who authored the *DPA* seek to maintain existing legal definitions of *milk and cream* as that resulting from the "complete milking of one or more healthy cows" (*Dairy Pride Act* 2017, 4), whereas *dairy* products can be from other milk-producing animals and can be labeled as such provided it "contains as a primary ingredient, or is derived from, the lacteal secretion, practically free from colostrum, obtained by the complete milking of one or more hooved mammals" (*Dairy Pride Act* 2017, 5). These definitions specify that the only milk that can be labeled as such is animal-based, whereas the sale of human breast milk is prohibited. The directionality of feeding is also fixed, as per these regulations farmed animals produce milk to be consumed by humans, and not vice-versa. The commodification of animal milk also directs our attention away from situations where cross-species feedings occur outside of a consumer market, such as humans breast feeding orphaned animals and inter-species kinships where animals of differing species nurse others. The ubiquitous consumption of milk from nonhuman others potentially provides the basis to consider cross-species kinships, and could also destabilize the assumed fixity of the species-barrier. I contend however that these possibilities are foreclosed because of existing legal definitions and standards of food identity that rely on and produce humans as those who are foremost entitled to the "food" produced by farmed animals.

The legal stipulation that milk and dairy must be from the "complete milking" of the animal in question is another means by which animal relations are decided and denied through law. For instance, in the early 20th century, a court in the UK ruled that if milk sold on the market was not from a complete milking of a cow *because* the farmer chose to save some for the calf, then this would demonstrate the prioritization of the interests of the calf over that of human infants (see further Atkins 2010). Concerns about "complete milking" are also tied to historical tropes about adulteration that date to the early 20th century, when it was a common trope that farmers kept the "higher-quality" hind-milk for themselves (or for nursing calves) and sold the lower fat fore-milk to consumers (see further Atkins 2010). The first milk (fore-milk) was believed to be thinner and of lower quality, whereas the hind-milk was superior because of its higher fat concentrations. However, if a cow's entire milk supply must be directed to the dairy industry to meet the legal threshold for the sale of "milk," she is precluded from nourishing her calf. The diversion of calves to the veal industry makes "sense" according to the logic of the industry premised on the "'breaking' of the bio-psycho-social bonds that join mother and calf" (Gaard 2013, 612).

The breaking and erasure of cow-calf bonds is foundational to the dairy industry. In order to market milk as a food that is first and foremost for humans, the dairy industry must continually be engaged in a project of denying a bovine ontology of relational animality. The industry instead asserts a deanimalized ontology of cows as milk-machines who exist solely to nourish humans and to bolster and optimize human populations. Nutritional claims about milk come together with biopolitical concerns about healthy children and healthy future populations in such a way as to position this food as substance whose benefits outweigh ethical concerns related

to its production. In fact, the *DPA* justifies their legal ontology of milk and dairy based on its supposed nutritional irreplaceability and necessity for American well-being.

The Biopolitics of Milk and Nutritional Sciences

The lawmakers behind the *DPA* have leveraged broader anxieties about the nutritional state of the American population to justify a bill that explicitly uses law to "promote the regular intake of dairy everyday" (*Dairy Pride Act* 2017, 1).[8] According to the *DPA*, the entire American population, but in particular adolescent boys, adolescent girls and adult women, fail to meet the daily-recommended intake of dairy products as outlined by the American nutritional guidelines. The *DPA* states that not only do youth fail to consume the required 3 cups per day as set out in the guidelines, but dairy consumption tends to drop off during adulthood with the result that "more than 80 percent of the entire population of the United States does not meet the daily dairy intake recommendation" (*Dairy Pride Act* 2017, 3). The authors of the *DPA* take for granted milk's supposed health benefits and place in the diet of humans, although various studies have contested the necessity of dairy for human health. For example, studies have: linked high milk consumption to higher rates of mortality for cohorts of men and of women, and women also experienced an increased likelihood of hip fracture (Michaëlsson et al. 2014); shown that neither a high calcium diet nor one high in milk consumption decreases risk for hip fractures in women (Feskanich, Willett, and Colditz 2003); found that consumption of milk during childhood is related to an increased risk of colorectal cancer (van der Pols et al. 2007); and established that diets high in dairy are related to an increased likelihood of mortality for men diagnosed with

[8] As discussed in the introduction, various food commentators and experts warn of an impending American crisis catalyzed by bad food choices. Obesity, diabetes, and heart disease are some of the problems that are supposedly plaguing Americans to the point that the quality and length of individual lives will be diminished, the security of the nation is threatened, proper parenting is impeded, and healthcare costs will be unsustainable (see further Kirkland 2011; Pollan 2009; Welsh 2011).

nonmetastastic prostate cancer (Yang et al. 2015). Yet, the authors of the DPA claim that when eaten in the manner directed by the guidelines—guidelines that in their original form would not have included dairy—these products "contribute about 67 percent of calcium, 64 percent of vitamin D, and 17 percent of magnesium" (*Dairy Pride Act* 2017, 2) of an individual's daily required amounts. The nutritional profile of dairy contained in the *DPA* is essential to the politicians' ontology of milk that requires it to be simultaneously animal-based *and* nutritionally equivalent. However, they do not consider whether a plant-based product that was nutritionally identical to animal-milk could be considered as "milk."

According to the authors of the DPA, plant-based milks mislead consumers because these products do not have the same volume of vitamins and nutrients per serving as animal milks. Yet, because they are labeled as milk, DPA authors claim that consumers would purchase vegan milks under the assumption that all products labeled milk are nutritionally equivalent to animal milk. The authors, however, do not detail the nutritional differences between milks from cows, goats, or sheep. Here the authors advance their claim on the basis that animal milks are both the alimentary and nutritional norm from which all other products deviate. In so doing, the authors of the DPA narrowly delimit alimentary relationships according to a substance-based ontology (Heldke 2012), in which nutrition and health are the only objectives worthy of consideration.

The nutrition-based concerns of the DPA authors dovetail with a specific vision of national biopolitics in which the national food guide is a tool meant to direct the dietary options provided by state institutions, as well as to inform the consumption habits of individuals. By appealing to the current Dietary Guidelines for Americans, the *DPA* positions human health as the only matter worthy of consideration regarding the definition of food. As per the *DPA*:

> The Dietary Guidelines state that most Americans are not meeting recommended intake for the dairy food group. Consumption of dairy foods provides numerous

> health benefits, including lowering the risk of diabetes, metabolic syndrome, cardiovascular disease, and obesity…The Dietary Guidelines state that dairy foods are excellent sources of critical nutrients for human health, including vitamin D, calcium, and potassium, all of which are under consumed by people of the United States. (*Dairy Pride Act* 2017, 2)

This passage evinces the uncritical reliance on the Dietary Guidelines used in the DPA to bolster the lawmakers' position. Yet the DPA's stated aim of promoting the daily consumption of dairy because the Dietary Guidelines recommend these products directly contradicts the original version of the 2015-2020 Dietary Guidelines proposed to congress in 2015.

The development of the 2015-2020 Dietary Guidelines referenced throughout the DPA was a site of struggle that provides insight into the contingent and politicized nature of food ontologies. The Dietary Guidelines are updated every 5 years. For the 2015 revision, an expert panel of 15 academic researchers was assembled to make recommendations to the U.S. House Committee on Agriculture upon which the dietary guidelines would be based. After analyzing the findings of over 4000 peer-reviewed studies, the expert panel recommended that issues of environmental sustainability inform the guidelines. The expert panel thus explicitly recognized that "human nutrition cannot be divorced from the logistics of how this nutrition is procured" (Hamblin 2015). Given the resource consumption and emissions entailed in animal agriculture, the health impacts of meat, and the fact that grain used to feed farmed animals for their meat could be directly consumed by humans (thereby alleviating global food shortages), the expert panel said it would be inconsistent to recommend animal-based diets for the nation given the impact for both American and global populations. Moreover, the expert panel stated that in terms of human health, plant-based diets were preferable.

This was the first time that the relationships and effects of food production were acknowledged by an expert panel and brought to the attention of the House Committee on

Agriculture overseeing the dietary guidelines. The recommendations were met with fierce resistance, including backlash from the meat-industry that provides considerable financial support for the implementation of the guidelines. Meat-industry lobbyists threatened to withdraw their funding for the implementation of the nutrition guidelines, if the final version of the guidelines did not recommend meat.

Various congressmen condemned the expert committee for "exceeding their mandate" and for failing to recognize that U.S. Agriculture is, as congressman David Scott said, "the single most important industry in the world" (as cited in Hamblin 2015). For their part, pro-dairy politicians stated that the most pressing issues to be addressed by the dietary guidelines were not those of sustainability but about how to guarantee "that students have access to appealing and nutritious dairy products" (Vela, Democrat for South Texas, as cited in Hamblin 2015). Republican Congressman Glenn Thompson of Pennsylvania effectively foreshadowed the DPA by stating that efforts to facilitate milk consumption are a matter of state policy and asked the committee: "What can we do to remove policies that hinder milk consumption, and to promote policies that could enhance milk consumption?" (as cited in Hamblin 2015).

Because of the economic, cultural, and political position of animal-based industries, sustainability was not included in the 2015 guidelines, neither was an overall recommendation for plant-based diets (Hamblin 2015). The final 2015-2020 guidelines rely on a constrained understanding of nutrition, where nutrition is operationalized as being about the health of the individual eater and the national population. These guidelines reflect an ontology of food where the relations that rendered someone or something food are ignored in favour of a substance-based food ontology that supports dominant interests. The politics shaping the final Dietary Guidelines show how state nutrition programs are used to support and create markets for agricultural

industries. Guidelines such as these also shape how dietary habits are normalized in relation to state institutions. For example, the ubiquity of milk consumption is not a historical accident, but a deliberate strategy executed by the dairy industry and government whereby the development and delivery of national nutritional programs in schools created a guaranteed and expanding market for milk (DuPuis 2002, Nimmo 2010).

State institutions, biopolitics, and the child. The DPA positions milk as a nutritionally superior food product whose animal-based standard of identity must be protected. While their ontology of food positions dairy products as foods that should be uncritically consumed to benefit the health of the individual, these health claims are steeped in enduring legacies of milk as a perfect and complete food essential to children's development (DuPuis 2002; Nimmo 2010). From the mid-19th century milk has been referred to as a "perfect food" by early nutrition researchers who were surprised at its content, namely that it "contained in perfect measure, all the ingredients to sustain life" (DuPuis 2002, 19). The discourse about cow's milk-as-perfect in its nutritional completion prevailed despite it being extremely dangerous and linked to high rates of infant mortality due to its transmission of tuberculosis and typhoid at this time (DuPuis 2002). "Swill milk"—the milk produced by cows who lived at Manhattan distilleries and whose feed consisted of the grain remnants used in alcohol production—came under public scrutiny as a dirty and dangerous product linked to tropes about urban decay (DuPuis 2002).

As America's first consumer advocate, Robert Hartley focused on reforming and sanitizing milk production as a key component to social progress. By relying on passages from the Bible, Hartley, and others like him opined that milk was a natural food universally consumed across time and space. Milk reformers went to great lengths to "prove" the universality of milk

drinking. They reasoned that because milk was a perfect food, citizens were entitled to a safe and adequate supply in order to achieve social perfection (DuPuis 2002).

In his 1842, *Essay on Milk,* Hartley wrote, "the ox and his kind have followed man in all his migrations. There is scarcely a country in which they are not either indigenous or naturalized" (Hartley 1842, 27). This claim is striking given the explicit efforts made by colonial governments to introduce animal agriculture in the United States as a mode of assimilation and settlement prior to, and continuing into the time Hartley was writing (see further Anderson 2006; Kim 2015). Instead, as I argued in chapter 1, in the settler colonial contexts of what are now Canada and the United States, domesticated animals were ordered through a colonial grid of intelligibility.

The view to domesticate animals that were foreign or indigenous to the location in question, positioned them as natural resources that could be directed to drive territorialization. For example, in a 1919 memorandum from the Minister of the Interior Canada, the Honourable Arthur Meighen, to the Minister of Justice Canada, Charles Joseph Doherty, Meighen suggests that the indigenous muskox be domesticated in Northern Regions for their meat, milk, and wool. Specific to milk, Meighen states that "a muskox gives two to three times as much milk as a reindeer. The milk is considered by the white men of our parties to be better than cow's milk in taste. It differs from cow's milk hardly at all except in being richer in cream" (Meighen 1919, 2). As such, *which* animals were domesticated for their milk is the result of both struggle and contingency. The claims made by milk proponents of its universal consumption stood in opposition to the food habits of indigenous persons in Canada and the United States, of persons in east and southeast Asia, and of various African groups that did not milk domesticated animals

(DuPuis 2002). Despite these factual errors, DuPuis (2002) argues that ideas about milk's unmatched benefits and necessity for societal progress led to its ubiquitous consumption.

By the 1950s milk was broadly consumed and had become a "major American food habit" (DuPuis 2002, 37). While milk advertising continues to rely on claims of its naturalness, milk should instead be understood as historically contingent and contextually specific:

> The link between fresh milk drinking and the rise of an urban, industrial society is not accidental; the drinking of raw, fresh milk—a food seemingly so unprocessed, primal, and "natural"—is a modern practice made possible only through the development of an industrial food system. (DuPuis 2002, 30; see also Atkins 2010; Gaard 2013; Nimmo 2010)

Not only do cows and their milk require scientific intervention for milk to be widely consumed and available year-round, milk's ubiquity is also the result of dairy and nutrition programs that targeted schools as a primary location where dietary habits are normalized (see Gaard 2013; Nimmo 2010). This targeting of schools further displaced cows and calves as the producers and recipients of milk. Instead farmers were positioned as those who produce milk, while infants and children were marketed as the natural consumers of this substance.[9] This displacement was also related to urban-rural milk politics. While urban milk production was tied to notions of dirt and disease (e.g., swill milk production), notions of bucolic pastoralism were bound up with ideas of purity and morality: "from the agrarian viewpoint, the farmer was the citizen responsible for the good of the nation, of American society as a whole, by providing both the city's nutritional sustenance and its moral values" (DuPuis 2002, 94). These notions about animals, food, and nature also tracked onto gendered and specied modes of social organization with the "feminine countryside producing food to nourish the active, rational, and therefore masculine city" (DuPuis

[9] DuPuis' (2002) analysis of milk advertisements from the late 19th century shows that images of a nesting bird feeding their chicks worked to produce milk as the natural food that a mother should feed their infant. The fact that birds do not biologically produce milk does not appear to have mattered. Instead, this trope further contributed to the industry's erasure of cows and of cow-calf bonds.

2002, 95-97). Under this social ordering, dairy cows, as an extension of "mother" nature, are deanimalized and instead considered "mindless, patient, slow-moving, lactating" (Gaard 2013, 613). The widespread availability of milk came to index social progress, with the perfect child's body coming to represent the promise of milk consumption (DuPuis 2002; Nimmo 2010).

Beginning in the 1920s, dairy councils, with the U.S. Department of Agriculture, introduced pro-dairy primary school curricula to teach children the health benefits of milk. The influence of private industry in public schools was not a benevolent program aimed at the nutritional improvement of children, but rather a "farmer-income program" instituted to address the milk-surplus in the post-WWI era, and to create lasting consumer demand for their products (DuPuis 2002, 114). As a result, children have been taught from a young age that milk is a perfect food that will not only lead to health but also protect them from other ills in ways that other foods, such as vegetables, cannot (DuPuis 2002). State-led normalizing dietary regimes were not isolated to America; children in Canada and the UK have also historically been the targets of such state programs (Coveney 2000; Mosby 2013, 2014; Nimmo 2010).

Indeed, the state-led normalizing of milk in Canada used indigenous populations as experimental subjects. Expert nutrition scientists, with federal departments, used First Nations communities and indigenous children in residential schools as test populations for their studies. Ian Mosby's (2013) analysis of these experiments between 1942 and 1952 reveal that children at the Alberni School in Port Alberni, British Colombia were used to test both the effects of adding vitamins to powdered milk, and the implications of tripling their milk consumption. While the lead investigator, Lionel Bradley Pett, was aware that the milk consumption of these indigenous children (8 ounces a day) was less than half of the amount set out in Canada's Food Rules (the predecessor to the Canada Food Guide), he instructed the school to maintain the 8-ounce ration

for two years to establish a baseline to properly assess the effect of the tripled consumption upon the population. In other words, according to the nutritional guidelines set out by the federal government at the time, Pett purposely kept this population malnourished in order to test his hypothesis. Consent was obtained from neither parents nor from the children themselves (Mosby 2013). While captive indigenous children in Canada were used to measure the nutrition effects of milk consumption at various quantities, the health of white children was promoted as an end that could be achieved via milk.

By the 1950s, milk and formula advertisements in the U.S. featured images of healthy babies and perfect white children. Testimonials from mothers and doctors claimed that feeding children milk from an early age led to exceptional health benefits. One such advertisement included a mother stating that milk "has built him up a perfect boy, bright, healthy and never sick one day" (as cited in DuPuis 2002, 104). These advertisements were consistent with a larger social context exemplified by the "Better Babies" movement. Formula and condensed milk advertisements opined that breastfed children were often underweight and that proper health could be achieved through the consumption of their products. During this time, dairy and formula companies held "prize baby contests" with the winning babies typically resembling the children featured in dairy advertising: they were "plump," fair-skinned, and blue-eyed (DuPuis 2002, 105).

National dairy council advertisements also compared immigrant children, who followed "old-world" diets and dressed in the ways of their homelands, to assimilated American milk-consuming children. In these advertisements, the immigrant child was "undernourished," sullen, tired, and because they did not consume milk, had weak bones and were unable to study or play properly. In contrast, the milk-drinking American child was presented as smiling, strong in

posture, and the "way a school child *should* look, ready for work and play, and proving that *Health* is *Beauty"* (emphasis in the original, National Dairy Council 1921 as cited in DuPuis 2002, 119). Here, milk consumption targets the child's body *via* the institution of the family as the location where alimentary norms are implemented. The child—a subject tied to notions of social reproduction and futurity—is to eat in such a manner so as to become a proper subject-citizen who is assimilated and able-bodied (see for UK context Coveney 2000; Nimmo 2010). The child's body then is a target of dominant power relations that seek to establish cow's milk as a universal food designed for humans and not for calves.

To understand the body, and by extension diet, as a location from which power relations can be analyzed is consistent with Foucault's task of disrupting our taken-for-granted norms. For Foucault (1971), the body is "the surface of the inscription of events" (Foucault 2003, 356). The bodies of individuals are simultaneously disciplined and normalized, while biopolitical projects target populations to intervene, direct, and optimize them to ends suitable to the state (Foucault 1977, 2010). The dairy industry by way of state nutrition programs have targeted children, and later adults (see DuPuis 2002) to create a market for their products. This project has been justified on the basis that the consumption of dairy achieves an able body that allows the individual to be a productive citizen. Milk and dairy's supposed centrality to the health of the American (and Canadian) nation is not the inevitable result of historical progress, but is the result of various contingencies that are tied to notions of progress, enlightenment, racial superiority, able-bodiedness, and humanism (DuPuis 2002; Mosby 2013, 2014).

Milk, whiteness, and the human. The association between milk and whiteness is rooted in its history as a food of northern white Europeans. In the 1920s, the National Dairy Council of

America drew on renowned nutritionist E.V. McCollum to attribute the consumption of dairy products to cultural, physical, economic and social superiority of distinctively white populations:

> The people who have achieved, who have become large, strong, vigorous people, who have reduced their infant mortality, who have the best trades in the world, who have an appreciation for art, literature and music, who are progressive in science and every activity of the human intellect are the people who have used liberal amounts of milk and its products. (as cited in DuPuis 2002, 117)

Similarly, in his *A History of Agriculture in the State of New York* (1933), Ulysess Hendrick stated that "Of all races, the Aryans seem to have been the heaviest drinkers of milk and the greatest users of butter and cheese, a fact that may in part account for the quick and high development of this division of human beings" (118). Furthermore, the dairy industry assumes the universality of dairy consumption by mobilizing scientific language to label those who are lactose intolerant—the majority of the global population have not historically consumed milk and thus do not retain the genetic enzyme to digest lactose past the age of four—as having "lactase impersistence" and as being "lactose maldigesters" (Gaard 2013, 618). In this way, "objective science" is once again mobilized to re-secure imperialist and white supremacist projects.

Current legal efforts that aim to secure milk as only animal-based by appealing to its nutritional superiority vis-à-vis animal based milks are consistent with how milk has been used to further racist and biopolitical aims. It is unclear whether the supporters of the DPA are arguing that the FDA must enforce their regulations on the grounds that plant-based milks are fake *because* they are nutritionally unequal to cow's milk, or whether their fakeness is because plant-based milks are simply not the secretions of a lactating cow. Regardless, both claims defer to the force of law to position animal-based foods as the "real" food, from which fake imposters must be measured. While Congresspersons base their advocacy on nutritional equivalencies and the

legal standard of identity as defined by the Federal Regulations, the social position of dairy exceeds its nutritional value or its contribution to the economy, it is deeply tied to hetero-normative notions of rural whiteness. At stake in the dairy industry, and other rural agrarian industries, are the "traditional family values" associated with these modes of production (see also Blue 2008, 2009; Struthers Montford 2013).

The DPA was introduced by Wisconsin Senator Baldwin, whose dairy farmers brand themselves as "America's Dairyland." At $43.4 billion USD per year, dairy constitutes half of the agricultural economy of the state (Wisconsin Milk Marketing Board 2017). The Wisconsin Milk Marketing Board emphasizes that their dairy is natural and nutritious. A section of their website, "Farm Families" features profiles on Wisconsin dairy families. Each family profile includes a family photo, the name of their farm, how many milking cows each farm has, the number of generations supported by the farm, how many people they employ, and some profiles include a blurb on the (wholesome) values shaping their business. Apart from one photograph of a barn, all photographs feature farmers, all of whom are white and able-bodied. They are pictured with their heteronormative spouses and children, as well as brothers, or as fathers and sons working together (America's Dairyland 2017).

For his part, Congressman Peter Welch lists "agriculture" as one of his key political issues ("Helping Farmers Thrive" 2017). For Welch, agriculture is deeply related to regional identity and economy. Beneath a picture of himself and a farmer facing each other in the foreground, while a barn, hay pile, and small animal trailer are featured in the background, he writes:

> Vermont's agrarian way of life has been central to the state's identity since our founding. As *family* farmers face unprecedented challenges, it is vital to our economy, our landscape, and our culture that we help them succeed. I will continue to fight for struggling dairy farmers, nutrition programs that keep

> children healthy, local food production, and renewable energy innovations that bring new revenue to farms. (emphasis added "Helping Farmers Thrive" 2017)

Like dairy lobbyists and advocates before him, Congressman Welch invokes images of farming as a location that protects and reproduces "the family." As such, an economic threat to farming industries is perceived as a cultural threat to traditional family values (see Blue 2009 for a ranching-specific example). This focus shows that the family remains central to biopolitical strategies of alimentary normalization (Coveney 2000; Nimmo 2010). It is under the auspices of protecting "the family" (read white, heterosexual, monogamous, and nuclear) and the values associated with the family farm, that efforts to preserve animal-based food ontologies are mobilized and supported. While milk is a form of feminized protein that is tied to projects of whiteness, nationalism, and fitness, dairy animals continue to be de-animalized and positioned as existing for the purposes of supplying and bolstering human populations. Not dissimilar to the logic of the dairy industry, the egg industry—also predicated on the reproductive control of female animals—has also mobilized ontologically based legal challenges to protect their interests.

Part II: The Chicken or the Pea? "Egg-gate," Mayonnaise, and Law

In 2014, Unilever, a corporation whose subsidiaries include the popular mayonnaise producer Hellman's, sued Hampton Creek over the labels of their "Just Mayo" product (Van Gundy 2014). Hampton Creek is a plant-based food startup aiming to replace egg-based products with plant-based egg alternatives such as mayonnaise, dressings, cookie dough, and cookies. Hampton Creek includes financial investors such as Microsoft founder Bill Gates, Yahoo co-founder Jerry Lang, and Asia's richest individual, Li Ka-shing (Mac 2014). Unlike most vegan food producers, Hampton Creek has not targeted niche markets such as health-food consumers. Because their

products have low-retail prices and are sold through major retailers, they have successfully appealed to a broad consumer-market (Kowitt 2016). For this reason, Hampton Creek has directly challenged the market share of larger food producers. The mainstream mayonnaise market for example, is valued at more than $11.3 billion (Mac 2014). According to their website, Hampton Creek seeks to undermine the normative ordering of the dominant food system, and they state that their products represent “what it looks like to start over in our food system” (Hampton Creek 2016a). In so doing, Hampton Creek’s products not only undermine the egg-industry, but the logic of sacrifice coupled with the sexual politics of meat and protein upon which animal agriculture is premised (C. J. Adams 2010; Derrida 2008). The “Just Mayo” label, which features a sprout leaf superimposed over the outline of an egg contests the notion that chickens are required to make eggs, or at least products that typically include eggs (Hampton Creek 2016b).

While the consumption of chickens’ eggs does not necessarily entail the death of the producing animal in question, like the milk industry, the egg industry is directly premised on the control and manipulation of female reproductive capacities (C. J. Adams 2010), and requires that animals remain subjugated within an economy of sacrifice. In the United States, 95% of all laying hens are housed in facilities that confine them in battery-cages. When female chickens reach 18 weeks of age, they are placed in a cage with 4 to 9 other hens until they are slaughtered at the age of 18 to 24 months (Food Empowerment Project 2017a).

On average, each hen exists in 67 square inches of space (the size of a computer mouse pad), and battery-cages are stacked on top of one another. The cages are made of metal and wire, and because hens are unable to move, their feet grow often grow in such a way that they wrap around the cage, and their heads and wings become stuck. When housed with other hens, their

space is so limited that they are often trampled by their cage mates. Their excrement also falls through the cages onto the hens below. This form of intensive confinement prevents hens from nesting, dust bathing, rooting and foraging for food, extending their wings, or tending to their eggs and their eventual offspring. Instead, their beaks are cut (without anesthesia) so that they cannot pluck their own feathers or attack the other hens with whom they are caged; all behaviours related to their intensive and lifelong confinement. Egg facilities have been reported to house 100,000 hens per shed (Food Empowerment Project 2017a). For this industry, hens exist as “units of behavior that can be disorganized and reorganized according to the requirements of the animal industrial complex” (Guenther 2013, 157; J. Stanescu 2013). Based on a compilation of relevant research, the Food Empowerment Project describes the conditions of confinement for laying hens as follows:

> The air is filled with a haze of fecal dust from the massive amount of excrement that accumulates over the months, and the resulting smell of ammonia is overwhelming. To keep operating costs to a minimum, the facilities are designed to be low or no maintenance. Workers rarely need to enter the sheds, as food, water and egg collection are fully automated. The most time-consuming part of the process is removing the 14% of hens who die along the way. (Food Empowerment Project 2017a; see also Carter et al. 2007)

It is not only that eggs are the menses of hens, but their reproductive capacities are manipulated to the benefit of the industry.

Without human intervention, hens typically lay 20 to 30 eggs per year. The egg industry, however, uses a variety of tactics to increase their output to 275 eggs per year. Methods include the prolonged deprivation of light followed by long periods of uninterrupted light to “trick” their bodies into producing more eggs. They may also be subjected to “forced molting,” meaning that they are starved during their last 14 days as egg-laying hens, “the resulting stress causes the birds to lose nearly all their feathers, which stimulates a brief, prolific egg laying period” (Food

Empowerment Project 2017a). Because the production of eggs requires significant energy and nutrient stores from the hens, high volumes of egg production coupled with low-quality feed cause hens to be calcium-deprived, their bones brittle and prone to breakage. Given the extent to which hens are exploited and depleted, by the time they reach 18 to 24 months of age, their "productive capacities" typically decline and they are sent to slaughter and "processed" while alive. This occurs as birds are not included in laws that stipulate that animals must be unconscious prior to killing.[10] They are typically gassed on-site using carbon-dioxide and then composted (many are alive when thrown in compost piles), their necks are snapped (industry term: "cervical dislocation"), or they are ground alive (industry term: "maceration") (FEP 2017).

As such, while the production of eggs as food for human consumption does not *require* the death of the hen who has produced the egg, the vast majority of egg-laying hens die gruesome deaths. Stanescu argues that their conceptualization as input-output machines for the egg industry is tied to a specific necropolitics. For Stanescu (2013), a politics of deaded life is "a sense of life meant as pure production, pure use-value" (151). In other words, like animals raised for their flesh, layer-hens exist as deaded life because they are simultaneously deanimalized and commodified as machines requiring specific inputs to extract a desired output. They are de-animalized through the denial of their ability to perform species-specific behaviours, and to engage in meaningful inter-corporeal relationships with others of their choosing. The egg industry, like the milk and meat industry, therefore relies on and reproduces humanist ontologies in which humans are superior eaters who are themselves inedible, farmed animals *are* food, and food is animal-based. To maintain these humanist orderings of life through food consumption,

[10] Animals considered livestock are offered minimal protections. This is worse for birds who are excluded from any protections regarding the minimization of pain during slaughter—they also constitute the majority of animals used for food. Animals used for experiments and research also do not fall within the purview of anti-cruelty laws (Wolfe 2013).

legal definitions of food that position animals as mere ingredients are deployed in such a way as to negate the very contingency of these definitions. In lawsuits seeking to maintain a substance-based food ontology, current definitions are taken to be universal, objective, and unchanging.

Unilever claimed that Hampton Creek's "Just Mayo" violated legal standards of identity because it used pea protein in lieu of chicken eggs. Unilever claimed that because the term "mayo" is shorthand for "mayonnaise," Hampton Creek's label tricks consumers into buying fake mayonnaise when they believe they are purchasing real (i.e., egg-based) mayonnaise. Because of this supposed consumer deception, Unilever charged that they had suffered "serious irreparable harm" (as cited in Mac 2014). Unilever's lawsuit asked the court to issue an injunction preventing the sale of the product until the name of the product sold as "Just Mayo" was changed. The basis of this lawsuit was two-fold. First, Unilever leveraged a definition of mayonnaise as *a priori* egg-based. They further assumed that this definition is certain and unchanging for producers and consumers. Second, they argued that consumers purchasing Hampton Creek products had only done so assuming the product was egg-based, and because of this deception, had negatively impacted the reputation of mayonnaise and its producers. Unilever dropped its lawsuit in December 2014, six weeks after they initiated legal proceedings (Conopco, Inc. v. Hampton Creek, Inc. 2014).[11]

Unlike the proposed class-actions put forth by consumers regarding milk labelling, Unilever directly sued Hampton Creek to protect their financial interests. Unilever also explicitly acted in concert with the egg industry. Based on freedom of information requests, the *Guardian* obtained over 600 pages of emails that show collaboration between representatives of the United

[11] Unilever stated that it dropped its law suit to allow Hampton Creek to address labelling issues with regulatory bodies directly (Mac n.d.). Hellman's now makes an egg-free mayonnaise that includes coupons for discounts on meat products (Unilever n.d.).

States Department of Agriculture (USDA), the American Egg Board (AEB), as well as poultry and egg producers to ruin Hampton Creek. Unilever's lawsuit was but one instance of this multifaceted strategy, which the *Guardian* has dubbed "egg-gate" (Thielman and Rushe 2015).

According to the emails obtained by the *Guardian*, the American Egg Board (AEB)—a committee appointed by the Secretary of Agriculture—had determined that Hampton Creek represented a "'major threat' and 'crisis' for the $5.5bn-a-year egg industry" (Thielman and Rushe 2015). For example, emails written in November 2014 while Unilever's case was ongoing, show that Joanne Ivy, then head of the AEB, advised legal counsel for Unilever as to the standards of identity for mayonnaise. While Ivy stated that, as a federally appointed board, the AEB could not publically support Unilever's case, she did suggest that they go straight to the FDA with their concerns. This advice followed ten months after the USDA's then Head of Shell Eggs (an industry term for commercially sold eggs), Roger Glasshoff, told Ivy to directly approach the FDA about Hampton Creek's labels (Thielman and Rushe 2015). In August of 2015, the FDA issued a warning letter to Hampton Creek, stating that they were in violation of the Code of Federal Regulations stipulating the standard of identity for mayonnaise (U.S. Food & Drug Administration 2015). As a result, the FDA ordered Hampton Creek to change the name of their product.

The FDA's demand that Hampton Creek rename their mayo product pivoted on a real-versus-fake food ontology, where "real" food is that which is delineated by law. In their letter to Hampton Creek the FDA wrote that "the use of the term 'Just' together with 'Mayo' reinforces the impression that the products are *real* mayonnaise by suggesting that they are 'all mayonnaise' or 'nothing but' mayonnaise" (U.S. Food & Drug Administration 2015, para. 3). Hampton Creek reached an agreement with the FDA that allowed them to keep the name "Just

Mayo" by further clarifying how they used the term "just" on the side of their bottle (Townsend 2015).

The above exchange demonstrates how attempts to protect dominant economic interests deploy law and defer to existing legal definitions to preserve prevailing food ontologies, which are presented as natural and universal. Whereas the milk lawsuits and the *Dairy Pride Act* seek to preserve dairy as the only "real" milk based on its animal source and its nutritional components, and egg-gate centered on whether the ingredients in a mayonnaise product contained eggs, legal challenges about "fake" meat have attempted to prevent the sale of vegan meats on the basis of unequal protein *quality* when compared to animal-flesh (J. Sinclair 2014).

Part III: Determining "Real" Meat: Animal Testing and Equivalent analogues

In Canada, disputes over what counts as real food and imposter foods have relied on existing legal regulations that are enforced by the Canadian Food Inspection Agency (CFIA).[12] In September 2014, the CFIA responded to a complaint made by a competitor about Field Roast products. The CFIA advised the U.S.-based vegan food company that their product labels did not meet the requirements for "simulated meat" products (J. Sinclair 2014). At issue was the fact that the CFIA did not have an established protein rating for vital wheat gluten, the protein source of the Field Roast sausages. As a result, Field Roast had to cease distribution to Canada until they met CFIA requirements to establish this protein rating, with the standard method establishing this requiring live animal testing. Field Roast stated that this was against their ethics as a company founded on compassion for all animals. Field Roast was able to circumvent this requirement by adding pea protein, a vitamin mix, and by changing their label to include a statement that the

[12] The CFIA also ordered a small-scale cashew-based cheese company to change their labels as their non-dairy cheese was not "real" due to its lack of animal milk (CBC News 2015).

product is a "simulated sausage" and that it "contains no meat" (Field Roast 2015). Regardless of Field Roast's eventual circumvention of the animal testing requirement, the requirement that "simulated" meat products be tested on animals, and the fact that animal-based proteins are the norm against which they are measured, reveals the multiple ways in which animal-based food ontologies are continually reproduced through law.

For the CFIA, the protein efficiency rating (PER) of an ingredient is related to the *quality*, not the quantity, of the protein source contained in the product in question (Government of Canada 2016). According to Canadian federal regulations premised on "the standard of good nutrition," plant-based meats must have the same nutritional profile as flesh-based meats (Field Roast 2015). The official method for the "Determination of Protein Rating" currently in use was instituted by the Health Protection Branch of Ottawa in October of 1981 (Health Protection Branch 1981).[13] The method for determining a protein rating requires a population of 20 rats to test the food (or diet) in question. The experiment must "use weaning male rats of single strain 20-23 days of age, 10 for each diet" (Health Protection Branch 1981, 2). The animals are then ranked from lightest to heaviest with those thought to be outside the normal ranges "replaced" (Health Protection Branch 1981, B-2). The rats are divided into two groups, each with a similar distribution of individual weights. The control group is fed a diet that contains a protein content of 10%, where the source of the protein is casein (a protein from cow's milk). The experimental group is to be fed the same diet with the exception that casein is to be replaced by the protein source being tested. As per the study design, the rats are to be placed in "individual cages which

[13] It is worth noting that the only literature cited on which this method is based, is the *Pharmacopeia of the United States of America*, published in 1950. This has also been the leading method for evaluating the performance of a specific protein since 1919 (FAO/WHO 1991).

have screen bottoms and are provided feeders which will reduce food spillage to a minimum" (Health Protection Branch 1981, 2). For 4 weeks, the rats are to eat and drink freely.

Following this, the PER is calculated by dividing the weight gain of the rats in the test group by the weight of the protein they had eaten over the course of the experiment. The resulting PER of the protein being tested is then adjusted by calculating it with the standard PER of casein (Health Protection Branch 1981). As such, even when alternative protein sources are tested, casein remains the standard against which the performance of other sources is measured. Using the results of the experiment, the final "protein rating" of the food being tested is calculated using the *adjusted PER*, which is the percentage of protein contained in the food in relation to the total weight of "a reasonable daily intake" of the food in question (Health Protection Branch 1981, 4). The resulting calculation then serves as the protein rating of the food product in question. This process exemplifies how law co-articulates with the economy of sacrifice where animals are non-criminally killable provided they serve as means to human ends. Here rats are not only appropriate experimental bodies, but food regulations largely demand their subjugation.

Food labelling regulations assume and reproduce ontologies of farmed animals as edible protein sources, while at the same time ontologize other animals as "replaceable" test-subjects. Existing regulations secure animal-based meats as the norm from which "simulated" fake foods must be measured, and the resulting protein measures placed on products being tested using this method include casein-based measurements. These legal requirements presuppose and reproduce a speciesist and non-relational food ontology. For example, "meat" in this case is not considered a product resulting from a multitude of human-animal relationships, but is reduced to an edible substance that has a specific nutrient profile. This nutrient profile includes a standardized protein

quality that is established via *legally required* scientific tests that repeatedly assume and position animal-based proteins as normative.

While the PER study design is CFIA's official method for determining the protein rating of a food sold in Canada, it has been cited as unreliable in measuring vegetable based proteins (FAO/WHO 1991). Therefore, according to the CFIA, a company can use the protein digestibility-corrected amino acid score (PDCAAS) as an alternative method in determining a food's protein quality and score. In making this allowance, the CFIA relies on a joint report on "Protein Quality Evaluation" that was published in 1991 by the Food and Agriculture Organization of the United Nations, and the World Health Organization. This report is the outcome of a 1989 joint consultation that itself was a culmination of almost a decade of meetings and conferences held by the Codex Committee on Vegetable Proteins (CCVP).

The CCVP repeatedly suggested that the PDCASS method be adopted as a regulatory standard for evaluating protein quality. Specifically, the FAO/WHO report states:

> After decades of use, it is now known that PER over-estimates the value of some animal proteins for human growth while under-estimating the value of some vegetable proteins for that purpose. The rapid growth of rats (which increases the need for essential amino acids) in comparison to human growth rates is the reason for this discrepancy. (Food and Agriculture Organization of the United Nations and World Health Organization 1991, 4)

As such, those critical of the PER method suggested that the digestibility (bioavailability) of the protein source, as well as its amino acid score be considered when determining the quality of a protein. While the committee acknowledged that a human fecal analysis would show the bioavailability of different protein sources, the FAO/WHO recommended that an analysis of rat feces be the standard method of such assays.

The consultation concluded that a PDCASS method that used rats as test subjects was "the most suitable approach for routine evaluation of protein quality for humans, and

recommended the adoption of this method as an official method at the international level" (FAO/WHO 1991, 43). As such, while the CFIA cites the PDCAAS method as an alternative to the PER method, both require rat-based tests, and the CFIA can request a PER test if they are unsatisfied with data resulting from a PDCAAS test. Furthermore, the CFIA positions the PER of casein as the norm by which a PDCAAS result will be multiplied by in the calculation of the estimated protein rating of the vegetable protein in question.[14] As such, the PDCAAS method, developed in recognition of the need to test plant-based protein sources differently than animal-based sources, has been turned to sustain norms surrounding animal-based foods. Animals remain test subjects and protein sources in both official methods.

While the Field Roast case provides a means to analyze how law is used to secure and sustain meat as always animal-based, existing legal ontologies also prevent equivalent protein analogues, such as cooked soy, from being considered protein sources of equal value. For example, the CFIA's PER ratings list casein (the norm from which all other proteins are measured) as having a rating of 2.5, and heated soy beans as having a rating of 2.3 (Government of Canada 2016). Heated soy beans are then a close and legally approved protein of similar quality to the CFIA's norm. Yet, despite their nutritional equivalency, soy products continue to be positioned as effeminate counter-normative substitutes in such a way that our dominant ontologies of food as animal-based, and of farmed animals as food are continually re-secured (see for example Buerkle 2009; Twigg 1983). I therefore suggest that our ontologies of human, animal, and natural life are at the crux of legal cases seeking to reproduce vegan products as "simulated" foods. These lawsuits should then not be read as based in concerns over an

[14] As per the CFIA: "the PER may be estimated from the PDCAAS using the following formula: PDCAAS for food x 2.5 [casein PER] = estimated PER for food." Protein rating is calculated using the following formula: "((percent of protein) x (reasonable daily intake)) x PER= Protein Rating" (Government of Canada 2016).

impending protein crisis, or concerns about consumer health. In fact, meat consumption is linked to various ailments such as colorectal cancer, and stomach cancer (International Agency for Research on Cancer 2015). Instead, these legal cases represent the deliberate exercise of agricultural power to maintain animal-based food ontologies and the human supremacy on which these ontologies pivot. Perhaps it is the case that meat-analogues threaten not only the viability of animal-based markets, but our dominant ontology of the human as an autonomous, rational and sovereign subject whose subjectivity is reproduced through the consumption of women and animals (C. J. Adams 2010; Buerkle 2009; Derrida 1995, 2008; Wolfe 2013).

Conclusion

By analysing recent legal cases, proposed bills, and media reporting on "imposter" milk, eggs, and meats, it is evident that law is deployed to support dominant ontologies of food, animals, and the human. A common thread linking these lawsuits is a supposed universal (and animal-based) standard of identity for milk, meat, and eggs that plant-based analogues violate in claiming to be milk, meat, or mayonnaise. Those seeking to re-secure animal-based food ontologies through law appeal to nutritional sciences and state nutrition guidelines as objective truths to support their arguments, when in fact these too are matters of contingency and struggle that are used to create and maintain markets for animal-based food products. Like law itself, the standards of identity in question in these legal cases are social, contextual, and can therefore be otherwise.

The lawsuits analysed in this chapter extend beyond concern over semantics or economics, but are more fundamentally struggles meant to maintain relationships to food that are historically embedded in projects of humanism, white supremacy, nationalism, and able-bodiedness. These legal struggles are not only related to maintaining an economic market for

animal-based products, but are attempts to protect the values associated with bucolic agrarian modes of living, such as whiteness, heteronormativity, and patriarchal kinship relations that are underpinned and mediated by private property relationships to land and animals.

I have also argued in this chapter that Derrida's notion of carnophallogocentrism should be broadened to account for the material conditions of dairy and egg production, regardless of whether the animal producing the product *must* die for this product to be obtained. Animals used in dairy and egg production are subjugated, de-animalized, their reproductive capacities manipulated and exploited, and their lives are entirely commodified. When their production levels drop they are most often slaughtered and used as some form of cheap processed meat to be used in fast food, pot pies, and pet food. It is because of these conditions within the economy of sacrifice, not whether the human displays the same level of sovereignty when consuming these products as they do when consuming flesh, that makes these industries and their methods of production representative of carnophallogocentrism.

Because law is a contingent institution that organizes life as property, and categorizes and defines food products, it is both targeted and deployed by agricultural power. Food laws also shape our identities, have effects on our bodies, and influence our alimentary norms. As I have argued in this chapter, the food ontologies at issue in these lawsuits are substance-based, and take a micro-view of food that is merely concerned with nutrient breakdowns for human consumers. In so doing, the relationality of animals is negated. As well, human-animal relationships premised on interdependence and mutual recognition are foreclosed in discussions centred on enforcing existing standards of food identity as animals and their products are erased and referred to as ingredients. As such, I propose that a contextual ontological veganism, in which relationships between animals, humans, and those entailed in food production inform what

can and cannot be food, has the potential to reimagine both human and animal ontologies as relational, interdependent, and vulnerable. These ontological shifts would also necessitate changes in food regulations, standards of identity, and food testing procedures. The next chapter analyses the ontological claims underpinning emerging meat technologies, and considers how new meat technologies might be regulated.

Chapter 4:

Queen Pigs and Technological Promises: New Meat Technologies as a Response to the Over-Application of Agricultural Power

"Meat is not and cannot ever be a free-floating signifier, freeing chickens and other edibles from ontological bondage." (R. Sinclair 2016, 6)

Introduction

Meat-eating remains a recalcitrant practice despite overwhelming evidence that animal agriculture is a leading cause of climate change and species extinction; that it inefficiently uses natural resources, such as grain, water, and energy in the production of meat, milk, and eggs; entails exploitative and dangerous working conditions for factory-farm and slaughterhouse employees; involves the complete commodification and exploitation of the bodies of farmed animals for human ends; and is generally detrimental to human health (Fitzgerald, Kalof, and Dietz 2009; International Agency for Research on Cancer 2015; Oxfam America 2015; Pollan 2009; Steinfeld et al. 2006). The scale of death due to animal agriculture requires perspective. As Jeff Sebo writes: "the total number of nonhumans who die in this food system every 1-2 years is greater than the total number of humans who have ever lived throughout history" (forthcoming, 4).

As I argued in the previous chapters, the consumption of animals and the method in which farmed animals are "produced" in the geopolitical contexts now called Canada and the United States, is tied to settler colonial nation-making practices that require ongoing access to territory and resources. These colonial projects have necessitated access not only to resources, but have required and imposed dominant ontologies of life and of food that continue to be largely

taken for granted. While these ontologies of the human, the animal, and of animal-based food as "real food" are prevalent, they are not uncontested or intractable. For example, instances in which these ontologies are contested include moments of animal resistance and escape, arguments such as "meat is murder," "real food has mud not blood," and "it's not food its violence" contest both the ontologization of animals as food and the institution of animal agriculture that produces animals as meat. In this chapter I argue that non-agriculturally produced meats such as those produced in-vitro or synthetically, throw into question our ontologies of meat, and consequently, have the potential to disrupt our ontology of the human, produced as it is, in relation to "the animal." I will argue in this chapter that in-vitro meat (made using the cells of animals) and synthetic meat (made from plant sources) challenge our tidy orderings of food, life, and death.

Eating is politically charged in that it establishes ontologies of human superiority and animal edibility: "consumption participates in a symbolic network that invests bodies themselves with qualities of life and liveliness, or edibility and disposability" (R. Sinclair 2016, 12). As Chloë Taylor argues, our food choices work to not only index our political, gendered, racial, and ethnic identities, but are related "more fundamentally [to] our self-identifications as human" (2010, 75). Our consumption habits thus produce relationships of domination and subordination:

> It is not the case that we first determine that we are superior to non-human animals and then we conclude that we have the moral license to eat them. Rather, it is through our very eating of other animals that we constitute our superiority. According to this logic, we *must* be superior to other animals since we put them in cages and do horrible things to them. (C. Taylor 2010, 75)

Meat is therefore the materialization of human superiority and contributes to the fixity of the human-animal boundary. Taking seriously Derrida's (2008) point that the subjection of *the animal* is foundational to our understandings of the human, and because meat-eating invests and

sustains this version of the human, this seemingly intractable practice is more than a dietary habit; the human itself might be at stake.

This chapter evaluates the potential implications of IVM and synthetic meats for our food ontologies, and for our ontologies of meat. The chapter is organized as follows. First, I consider the role of meat consumption in the ontologization of the western human. Second, I analyze arguments in favour of IVM and its widespread adoption. In so doing, I show that these arguments rely on ontological claims about the authenticity of IVM. The authors of these arguments also produce ontological accounts about the "what is" of agriculturally-produced meat,[15] while simultaneously revealing meat to be a negotiated and contingent object. Next, I consider how arguments about IVM's realness recall and reproduce farmed animals as deaded life. Inasmuch as IVM researchers and supporters position IVM and synthetic meats as structural equivalents, I argue that the disruptive potential of these foods is lost through their appeal to animal flesh as an acceptable food that we politically, economically, culturally, and individually supposedly should not and cannot give up. I then explore the relationship between animal agriculture and IVM to argue that IVM is a contingent technology only articulable because of animal-based alimentary norms. IVM therefore represents a different iteration of agricultural power, cellular agriculture. I also consider how IVM might be regulated using existing legal frameworks. As a result, I suggest that animals and their cells will likely remain the private and intellectual property of human owners. The chapter closes by considering the possibilities according to which IVM ought or ought not to be considered food within a framework of contextual ontological veganism.

[15] I use "agriculturally-produced meat" in order to not naturalize nor normalize the "meat" produced in animal agriculture, in comparison to the tissue produced using in-vitro technologies. By using the term "agriculturally-produced meat" I intend to point to the artificiality of animal agriculture as well as to its contingency.

Chapter 4

Meat-eating, Humanism, and the Subject

For Derrida, the intensification of animal agriculture to its industrial form, and the intensified manipulation of animals it entails, represents an undeniable shift in human-animal relations that requires sustained analysis. It is not only that humans transform animals by means of various technological interventions, but that this subjugation produces and relates to a specific iteration of the human. Derrida writes:

> However one interprets it, whatever practical, technical, scientific, legal, ethical, or political consequence one draws from it, no one can deny this event—that is, the *unprecedented* proportions of this subjection of the animal. Such a subjection, whose history we are attempting to interpret, can be called violence in the most morally neutral sense of the term and even includes the interventionist violence that is practiced, as in some very minor and in no way dominant cases, let us never forget, in the service of or for the protection of the animal, but most often the human animal. Neither can one seriously deny the disavowal that this involves. (2008, 25 emphasis in original)

The explicit violence inherent in animal agriculture, for Derrida, is foundational to the western ontologization of the human. In other words, it is through our participation in the carnophallogocentric economy of animal sacrifice that we come to define ourselves as human. Pre-dating Derrida,[16] feminist scholars, largely within the field of ecofeminism, theorized common links between the subjugation of women and animals in patriarchal distributions of

[16] In "Pussy Panic" (2012) Susan Fraiman shows that despite various women, feminists, and researchers doing animal studies for decades preceding Derrida's interview, "'Eating Well,' or the calculation of the subject" (1995), and book *The Animal that Therefore I am* (2008), it is Derrida's work that is taken as emblematic of the field. Following the publication of Derrida's pieces, animal studies entered mainstream academic parlance and garnered credibility from scholars working in what Fraiman has called "the sexy subset" (92) of the field. As Fraiman (2012) highlights for example, Cary Wolfe (2003) takes-up Derrida's work and advocates for a philosophical confrontation of speciesism, regardless of whether one likes animals or not. In this chapter I use Derrida's substantive ideas about the figure of the human, the animal, and the human-animal relationship to get at the ontologies that structure our ideas about ourselves in relation to the social, cultural, and political importance of meat. I do so knowing that his work is not definitive of the field, and with keen attention to the fact that his work has been more articulable within academic circles as his work, unlike ecofeminist work which has been unfairly dismissed by scholars as overly caring or relational. This dismissal serves to reify the mind/body dualism emblematic of the western ontology of the human. It is perhaps the case that Derrida's work has been more articulable *because* he does not advocate for social change through praxis, which ecofeminists have also been criticized for. Derrida's concept of carnophallogocentrism, i.e., that the logic of animal sacrifice is so ubiquitous in western contexts that it is taken as a *metaphysical* phenomenon, is useful to my purposes of showing the contingency of agricultural power and the political nature of the ontologies that sustain this practice in the context of new meat technologies.

power (see for example C. J. Adams 2010; Fraiman 2012; Gaard 2002; Grimshaw 1986; Harding and Hintikka 1983; Lange and Clark 1979; Lloyd 1984; Okin 1979). Philosophers have also long argued that the human is conceptualized in the Western philosophical tradition as an autonomous male of European descent who is more sovereign than others (see also Cuomo 1998; Derrida 1995, 2008; Donovan and Adams 1996; Plumwood 1991, 1993, 2002; Warren 1990). This iteration of the human is of one who has developed farthest from the animal. He is a subject and not an object. He is not emotional, nor is he determined by his body. The human is not dependent on others for assistance nor is he disabled (see also C. J. Adams and Gruen 2014; Mallory 2013; Hall 2014; S. Taylor 2017).

Derrida also demonstrates that, throughout western philosophy, human subjectivity is epitomized by masculine traits and paradigmatically embodied by a male subject. He writes: "the virile strength of the adult male, the father, husband, or brother...belongs to the schema that dominates the concept of the subject" (1995, 281). For Carol Adams (2010) the male subject is constituted *via* the consumption of women and of animals; both groups are subject to violence and are edible either symbolically or materially. Derrida argues that the consumption of meat indexes a patriarchal subjectivity formed through the exercise sovereignty over human and animal others:

> The subject does not want just to master and possess nature actively. In our cultures, he accepts sacrifice and eats flesh…in our countries, who would stand any chance of becoming a *chef d'Etat* (a head of State), and of thereby acceding 'to the head,' by publicly, and therefore exemplarily, declaring him- or herself to be a vegetarian? The *chef* must be an eater of flesh…(Derrida 1995, 281)

Within a framework of western humanism, to eat flesh is to directly assert one's superiority over the animal consumed. The act of eating requires the material destruction of the animal/the food in question:

> Such are the executions of ingestion, incorporation, or introjection of the corpse. An operation as real as it is symbolic when the corpse is "animal" (and who can be made to believe that our cultures are carnivorous because animal proteins are irreplaceable?). (Derrida 1995, 278)

It is therefore not the case that the consumption of flesh is natural or necessary, but that it is deeply related to the intelligibility of the subject and recognition as properly human.

Rather, as prominent sociologist of food, Nick Fiddes (1991) argues, meat is accorded its social and symbolic value *because* of the domination over the nonhuman required for its consumption. Jovian Parry posits that "historically it is precisely this intentional infliction of suffering…which has in part made meat so desirable" (2009, 246). Not only does meat-eating fix the human-animal divide, but it indexes the subject's "sovereignty in several different registers—not just of the nation state but of the family, the familiar, the domestic, the 'proper' to man" (Wolfe 2013, 95). The human subject in western settings is only produced in relation to the consumption and disavowal of the animal. Given this, what then of non-agriculturally produced meat and the human? Is it properly meat? Can or should it be food? Would consuming these products undermine the political ontology of the human?

Cultured Meat and Pragmatism: Animal Advocates and Animal-Based Foods

In-vitro meat (IVM) refers to tissue that has been produced by culturing the cells of animals. For this reason, it is also referred to as "cultured meat." The IVM process places cells in a growth medium (typically bovine fetal serum, though plant-based alternatives such as blue-green algae and mushroom extract have also been used) (McHugh 2010; Stephens 2013). The

cells then grow in a bioreactor on scaffolds and can be grown into either soft or firm tissue, depending on the method used. When the flesh reaches an appropriate size, it is removed from the bioreactor, and can be seasoned and cooked as is (requires rigid tissues), or combined with other items such as bread and eggs and made into burgers (usually soft tissues) (Bhat, Kumar, and Bhat 2017; Datar, Kim, and d'Origny 2016; Hopkins and Dacey 2008; Jha 2013; McHugh 2010; Memphis Meats 2016; Stephens 2013; Wolfe 2013). While researchers in both the university and the private sector are working to get their specific IVM product (and unique process) to market,[17] what is relevant to the discussion here is that ultimately these technologies aim to produce meat in a lab and, in so doing, remove the animal body from the process. The flesh is produced without having been a body part of the animal whose host cells were used, and so does not require that animals be born and raised in animal agriculture, transported, or slaughtered for their flesh. The tissue also does not have veins, vessels, or contain blood (Datar, Kim, and d'Origny 2016; Jha 2013; Stephens 2013; Wolfe 2013). As sociologist and critical animal studies scholar Neil Stephens writes, "With IVM, there is no whole animal to subdivide in this traditional sense; instead, the tissue is grown from cells. Birth, growth, and death appear in quite different forms to any farming method that has hitherto been used" (2013, 161). IVM therefore troubles prevailing ontologies of meat, dominant modes of food production, and the politics of life related to alimentary norms.

Emancipatory promises. Animal ethicists, animal rights organizations, researchers, and private industry promote IVM as a pragmatic solution to: animal suffering; anthropogenic climate change; predicted food shortages related to the limits of our current agricultural systems; food safety concerns, such as E.coli, listeria; as well as to local and global zoonotic diseases,

[17] See Stephens (2013) for an overview of various IVM technologies and procedures.

such as bovine spongiform encephalopathy, swine flu (H1N1), and avian flu (H5N1) (Bhat, Kumar, and Bhat 2017; Memphis Meats 2016; Schaefer and Savulescu 2014; Sebo forthcoming).[18] Philosophers and bioethicists G. Owen Schafer and Julian Savulescu contend that, "the reduction in animal suffering is perhaps the most morally salient reason to support research into and production of IVM" (2014, 190). In so doing, they position IVM as a technology that should be supported by those advocating on behalf of animals.

Because IVM would be made in a controlled laboratory setting the chance of zoonotic disease transmission is less likely. The chance of E.coli and other bacterial contaminants is significantly lower than with agriculturally-produced meat. This is because IVM does away with the necessity of slaughtering where fecal matter from the bowels of slaughtered animals often comes in contact with the flesh that will be sold for meat (Memphis Meats 2016; Schaefer and Savulescu 2014). Furthermore, because cultured meat is never attached to an animal body, herds of animals would not need to be kept and fed until they were killed for their flesh. In this sense, land used for grazing (26% of the world's land), and feed crops (33% of the world's arable land), could be returned to a forested state—a state that would decrease Green House Gases in the atmosphere, as well as increase biodiversity and improve the well-being of wildlife whose habits have been destroyed for meat production (see Clare 2017; Schaefer and Savulescu 2014; Steinfeld et al. 2006). Estimates of resource consumption and emissions also position IVM as a

[18] It is important to note that the problems associated with animal agriculture are not a sign that the system is operating incorrectly. Instead, the externalization of these costs and damages (animal, human, public health, and environmental) are necessary for animal products to remain veiled as efficient and affordable. Without the externalization of these costs, the industry "could never survive in a free market, and it would be clear to everyone that an alternative is not only morally but practically necessary" (Sebo forthcoming, 5). However, the extent to which animal agriculture has wreaked havoc on the earth, public health, and animals is catalysing the development IVM and synthetic meat as alternative meats indicates that agricultural power has been over-applied (C. Taylor 2013b) to the extent that resistance in the form of anthropogenic climate change, and in the form of non-agriculturally produced meats. These instances of resistance to overpower might undermine not only the profitability of animal agriculture, but the viability of the human species to survive the effects of climate change.

superior mode of meat production compared to agriculture. For example, Memphis Meats, a cultured meat start-up dubbed by *Fortune Magazine* as "the hottest tech in Silicon Valley" (Zaleski 2016) claims that their IVM process results in 78-96% fewer greenhouse gas emissions than agriculturally-produced meat, as well as uses 99% less land used, and requires 82-96% less water than meat grown from animals (Memphis Meats 2016). These statistics are similar to those reported by others (Bhat, Kumar, and Bhat 2017).

IVM is being lauded as a "clean" (Valeti 2017) and practical solution to the fact that humans, for the most part, remain recalcitrant meat-eaters despite the industry's role in human and animal exploitation, ecological devastation, and increasing (and widely disseminated) evidence that meat consumption is linked to negative health effects such as stomach and colorectal cancers (Hopkins and Dacey 2008; International Agency for Research on Cancer 2015; Schaefer and Savulescu 2014; Sebo forthcoming). This recalcitrance is evident not only in the eating habits of individuals but within societies that remain economically and socially invested in ontologizing animals as food in the form of meat. This remains the case despite warnings from government-appointed scientists about animal agriculture causing ecological collapse, and subsequent recommendations that nation states should shift food production and the diets of their citizens from animal-based to plant-based (Hamblin 2015; Steinfeld et al. 2006). Those in favour of IVM take the position that if humans refuse to stop eating meat, the logical response is to make meat in a way to mitigate these harms while having an identical end product (Hopkins and Dacey 2008; Memphis Meats 2016; Schaefer and Savulescu 2014; Sebo forthcoming).

In his forthcoming work, philosopher and animal ethicist Jeff Sebo proposes strategies to support the implementation and adoption of IVM and plant-based meats. Given that meat

consumption continues to increase (due in part to the imperialist export of western dietary norms, farmed animals, and crops to developing nations), Sebo suggests that animal and food advocates focus not on whether IVM is technically an animal-based product, but instead on how the item was produced. He proposes that "plant-based meat and cultured meat seem to be exactly the kind of alternative that the world needs in order to move away from, rather than further towards, dependence on animal agriculture" (forthcoming, 11). For Sebo, the currently available plant-based meats, milks, eggs, mayos, and butters, for example, have been able to "play a similar functional role in certain social contexts, but everybody knew which was which for the most part" (forthcoming, 10). In this sense, while Sebo agrees that these products have a social and alimentary utility, he measures them against the norm of animal-based products. Put another way, according to this reading, these products do not challenge dominant food ontologies or habits, but merely play a substitute role for abnormal eaters. On his reading of plant-based meats that replicate the chemical structure of animal-based meats, Sebo argues that "the functional and structural gap between plant-based and conventional meats will continue to close" (forthcoming, 10) in such a way that these products might cease to be substitutes and become normative in lieu of agriculturally-produced flesh.

Indeed, given consumer opinion research on the meat-substitutes, meat-eaters reported that it was not because of a lack of ethical or health-related arguments that they did not consume plant-based meats, but because the products did not provide the same sensory experience in terms of looking, tasting, and feeling like animal-based meat that they did not include these products in their diets (Hoek et al. 2011). We might say that taste then, distinguishes "real" foods from "fake" foods. For these reasons, Schaefer and Savulescu (2014) argue that IVM will be a useful product for persons not motivated by ethics, but by taste, touch, and feel. It is therefore

unsurprising that IVM researchers and supporters (Datar, Kim, and d'Origny 2016; Hopkins and Dacey 2008; Schaefer and Savulescu 2014; Stephens 2013) argue that IVM is a structural replica of agriculturally-produced meat, and, because of this, is "real meat."

Relational Problems, Substance-Based Solutions: Authentic Replicas, Animal tissue, and Real Meats

Arguments in favour of IVM and its widespread adoption rely on ontological claims about IVM's authenticity. In so doing, these authors also produce ontological accounts about the "what is" of agriculturally-produced meat, while simultaneously revealing meat to be a negotiated and contingent object (Bhat, Kumar, and Bhat 2017; Datar, Kim, and d'Origny 2016; Hopkins and Dacey 2008; Jha 2013; McHugh 2010; Memphis Meats 2016; Stephens 2013; Wolfe 2013). Schafer and Savulescu (2014), for example, argue that IVM "can provide a rough cellular facsimile of real meat" (191). The producers of Memphis Meats argue that their products are "molecularly identical" to flesh taken from living animals (Memphis Meats 2016). In this sense, in terms of its properties, IVM is identical to agriculturally-produced meat, and therefore is meat. Detractors however, have characterized IVM as fake, unnatural, as having unknown effects and therefore as risky, as "franken" food, and as "phreaked" food (Bhat, Kumar, and Bhat 2017; Hopkins and Dacey 2008; McHugh 2010; Parry 2009; Stephens 2015). These sentiments raise ontological questions as to whether "meat" is merely a substance, or whether it is a substance that is produced in a specific way, in this case, via animal agriculture.

IVM is positioned as "real meat" against plant-based meats. Philosophers specializing in applied ethics, Patrick Hopkins and Austin Dacey, for example, argue that IVM must not be considered

> As meat substitutes, or "artificial" meat, or meat-like substances that are conglomerations of soy products and gelatins—not even meat substitutes that taste and have textures exactly like real meat. We are talking about the possibility of real, genuine meat—genuine animal tissue—that is animal-friendly in the sense that it requires no animal suffering and no animal death to produce. (2008, 582)

To position IVM as real, the authors put forth an ontology of meat as comprised of animal tissue. Similarly, Schaefer and Savulescu differentiate IVM as "more or less identical to regular meat at a cellular level, unlike meat-substitutes made from tofu, beans, mushrooms, etc" (2014, 188). Here, plant-based meats are positioned as fake substitutes whereas IVM is not only positioned as real, but reproduces animal-based products as normative and as the standard from which other products should be measured. Hopkins and Dacey position IVM as a way to "have the best of both worlds in reality—eat meat and not harm animals" (2008, 579). In so doing, these authors are not critical of animal-based meats, but of agriculturally-produced meats. Put another way, the issue for them is not meat itself, but how meat is produced in industrial agriculture.

Whereas vegetarians and vegans might be opposed to IVM because it is animal-based and therefore *too real*, carnists might index IVM as artificial (Hopkins and Dacey 2008). This tension raises questions as to whether "meat" is merely an animal-based substance alone, or a substance that is not only animal-based but premised on animal harm and death. Schaefer and Savulescu note that despite the potential for IVM to become "wildly popular…some consumers will prefer authentic, 'real' meat, raised in a traditional manner" (2014, 195). Cary Wolfe argues that since IVM (which he also calls synthetic meat) is not premised on relations of humanism, cultured tissue would not be ontologized as meat. He asks:

> Is synthetic meat "life?" Would many of us feel that "real" meat is "better," more authentic, than synthetic meat because it indexes the sovereignty and ipseity of a subject who engages in sacrifice? Does sacrifice make meat taste better? Indeed, is it what makes meat "meat"? (Wolfe 2013, 97)

Both Schaefer and Savulescu, and Wolfe levy an ontology of meat that is not substance-based but relational. Put another way, meat is only meat if an animal life has been taken as a means to human ends.

Hopkins and Dacey, however, argue that meat is merely animal flesh, and in this sense, how it was produced should make no difference to its authenticity. They assert that to position IVM as fake is a

> Conceptual mistake…What makes meat "real" is its constituent substance, not its mode of production. On every physical level, successfully cultured meat would be real meat—real muscle tissue, real protein, real flesh…a case of real meat that is produced in a medium other than a living animal. It is as real as it can be. (2008, 586)

In this regard, Hopkins and Dacey use the same substance-based logic as do the vegetarians above, but arrive at a different conclusion. For Hopkins and Dacey, animal tissue is meat, regardless of how it is produced, and consequently meat is food. For those who argue that animals are not meat, nor are they food, IVM, regardless of how it is produced, is animal flesh, and because of this, is not food.

Synthetic meats made to chemically and structurally resemble animal flesh, but made wholly from plants, further troubles substance and animal-based ontologies of meat. Ethan Brown, CEO of Beyond Meat,[19] argues that meat is merely a specific chemical chain that can be replicated using plants. Brown defines meat in two ways that are not mutually exclusive, as "something that comes from a chicken, cow, pig and other animals" and as "amino acids, lipids, water and a trace amount of minerals and carbohydrates organized in a particular architecture" (2016, 3). Meat derived from animals, for Brown, "presents you with an ever-worsening set of

[19] Beyond Meat is a U.S. based plant-based meat company that produces structurally equivalent plant-based chicken strips, burgers, and beef crumbles. Beyond Meat is marketed as real meat that is made from plants that allows customers to enjoy meat without any of the drawbacks associated with its production (Beyond Meat 2017).

problems (from human health to climate) that must be solved" (2016, 4). However, to ontologize meat as nothing more than a specific chemical architecture, for Brown, also allows humans to eat meat without any of the associated problems. According to this scheme, Brown "envisions a world where meat consumption—meat made directly from plants—increases and we are all the better for it" (2016, 4). Brown is not the first to argue that the association between meat and animal bodies is a contingent political choice.

As feminist theorist Carol Adams (2010) reminds us, historically the word "meat" used to refer to any food of substance, whereas now we take it to refer exclusively to animal flesh. Environmental and political philosopher Michael Marder also points to the fact that "etymologically, *meat* is related to *meal*" and does not refer to animals or their flesh as does *carne* in Spanish, Portuguese, and Italian, or as in the French *viande,* "the[ir] bygone life (*la vie)*" (2016, 101). In this way, Brown also positions plants as structurally equivalent to meat, and therefore as "meat" without positioning animals as food. In so doing, he unequivocally separates animals from the category of meat. By asking us to focus on "what it *is* versus where it has historically come from," he ontologizes meat as "core parts, architecture, chemistry" (Brown 2016, 4 emphasis in original). Despite his point that meat need not be animal-based, Brown still upholds animal flesh as the norm from which his plant-based meat is designed. For Brown however, human supremacy and its reproduction through the consumption of animals is not problematized. In fact, he credits animal flesh as responsible for the evolutionary development of the human. Brown then, like IVM proponents, problematizes *industrial* animal agriculture in its modern form, and consequently offers alternative modes of meat production as a solution. In so doing, they put forth substance-based ontologies of meat as a remedy to relational problems they credit to large scale animal agriculture.

Feminist philosopher and critical animal studies scholar Rebekah Sinclair (2016) argues that synthetic meats continue to participate in a carnophallogocentric economy of sacrifice; these products only make sense as food in reference to animal domination and death. And so, for Sinclair, the question is not only whether these products "will reduce slaughter, we must also ask whether or not they will alter the intellectual, economic, and epistemological conditions that make slaughter and exclusion possible to begin with" (2016, 233). Sinclair then, engaging Derrida's work, argues that synthetic meats do not sacrifice sacrifice. Consequently, animals remain excluded from our communities and our ethical obligations in meaningful and significant ways. In other words, synthetic meats remain invested in a humanist ordering of life that is sustained in relation to the subjugation of animals, whether material or symbolic (R. Sinclair 2016, 242).

The promises of IVM pivot on claims about its authenticity and it being a solution to the problems associated with industrial animal agriculture. In some senses, proponents have taken a relational ontology of food to identify a need for IVM (harms to the environment, humans, and animals), and invoked a substance-based ontology (meat is just tissue and therefore IVM is real meat), as a means to have food practices that are more ethical. However, what remains consistent in these accounts is that animals are still normed as meat, and the institution of animal agriculture, while problematized, is not denounced. In fact, IVM research directly relies on animal agriculture, and on the institution of speciesism more broadly. Even if forms of direct animal exploitation can be designed out of IVM production, sociologists Matthew Cole and Karen Morgan argue that this technology will always have been made possible because of its "connection to the farm and slaughterhouse" (2013, 211). Most notably, the growth medium most commonly used to incubate the cells is bovine fetal serum.

Chapter 4

Bovine fetal serum (BFS) is produced by taking blood from a fetal calf when the cow is discovered to be pregnant during her slaughter. Both cow and fetus die, one for their flesh, the other for their blood. The fetal blood is then processed in a lab and sold as BFS. While researchers promise alternative plant-based growth mediums (i.e., blue-green algae) and some have been used successfully (i.e., mushroom-based mediums), BFS remains the predominant growth medium used by IVM developers (McHugh 2010; Stephens 2013). While methods vary, some include using eggs, semen, and tissue from commercially slaughtered animals. Drawing on his interviews with IVM researchers, Stephens describes a process used by a participant:

> The embryos used by this group to derive animal cell lines are attained by conducting an IVF procedure utilizing bull or boar semen stocks and unfertilized eggs extracted from the ovaries of cows or sows that have been commercially slaughtered. (2013, 169)

Another method by which scientists acquire cells for IVM is through biopsies from living animals. In this instance, the animals need not die, but nothing about this practice is counter to the logics of property and domination that structures animal agriculture. Animals cannot consent to this procedure either. The drawback to this way of getting source cells, according to a participant in Stephens' study, is that the cells can only be cultured for two months, and therefore require ongoing biopsies from living animals. Consequently, this participant stated his preference for culturing embryonic stem cells. While the embryo from a pig or cow would be killed in the process the participant understood this as "ethically preferable…because the destruction of one embryo can result in a cell line that can be cultured indefinitely, implying the potential production of infinite muscle tissue and infinite meat" (as cited in Stephens 2013, 168).

Other cell extraction methods are justified by other humanist practices such as pet keeping. For example a participant in Stephens' study stated their preference to use umbilical cords, and justified this as ethically acceptable given how humans keep companion animals. This

participant speculated that IVM production that used umbilical cords from ten female pigs per year could “feed the world” (169) and that these pigs could be treated “as queens…There’s no slaughtering…As long as they [animal welfare people] accept that we keep dogs, they will accept that we keep pigs and just take care of the umbilical cord, which you throw out anyway” (as cited in Stephens 2013, 169). While this scenario is certainly preferable to the other production methods that require the purchase of animal tissues, cells, and serums made available through animal agriculture, it is unclear as to whether these animals remain the legal property of someone else, whether these pigs would be forcefully impregnated, and whether they would be able to care for their piglets indefinitely. The fate of the piglets also remains unclear. So, while the *promises* of IVM are positioned as a solution to industrial animal agriculture, IVM, at least as it is currently practiced, is made possible by and relies on animal agriculture (Cole and Morgan 2013). IVM is agricultural power, expressed differently.

New Animal Subjects? Cellular Agriculture, Cellular Domestication

Those working in the field of cultured meat, eggs, and milk have referred to this technology as “cellular agriculture.” Those behind the cultured food research institute, New Harvest, have defined cellular agriculture as:

> The production of agricultural products from cell cultures. Cellular products are made of living or once-living cells. Products harvested from cell cultures are exactly the same as those harvested from an animal or a plant; the only difference is how they are made. (Datar, Kim, and d’Origny 2016, 128)

This concept represents both a continuity of product, and a departure from a mode of production. In this sense, the position of animal products and their ontologization as not only food, but as *real food* is rereinforced. Memphis Meats, who rely on stem cell methods to grow cultured meat in the form of meatballs, chicken breasts, and duck breasts, for example, refer to their work as

"the second domestication." Co-founder and CEO, Uma Valeti states that while the first domestication (of animals) began 10, 000 – 20, 000 years ago, cultured meat represents the domestication of animal cells "to farm meat directly" (as cited in Addady 2016). However, while companies position their approaches as progressive alternatives, they should instead be understood as existing on a continuum of carnophallogocentrism.

For example, Memphis Meats states that they are working toward removing the living animal from their production method: "we're developing a way to make the cells self-renewing, so we wouldn't need to return to the animals after the initial extraction. Our goal is to entirely remove the animal from the meat production process" (Kay personal communication). Despite this promissory narrative, IVM remains materially tied to animal agriculture in such a way that individual animals "will almost inevitably, continue to be instrumentalized in the process of making IVM a viable product" (Cole and Morgan 2013, 212). For example, taste tests will use agriculturally produced meat as the standard against which cultured meats are measured (Cole and Morgan 2013). In this way, animal meat remains the aspiration. Meat produced via IVM continues to position animal flesh as a product that we cannot and should not give up, while at the same time, proponents are adamant that this will be a marked improvement for farmed animals.

Stephens writes that inasmuch as IVM production is premised on harnessing the power of animal cells, a different animal subject emerges, "the *cell source animal*: a new, IVM-specific moral entity that IVM proponents seek to demonstrate care and responsibility toward" (2013, 167). If animal agriculture pivots on the deaded life of farmed animals, then cellular agriculture will itself produce an account of animality consistent to its ends. While animals in agriculture are positioned as living flesh, I would argue that animals used in cellular agriculture are positioned

as living cells. In both instances, they remain deanimalized life forms who are manipulated toward human ends. Hopkins and Dacey write that "in using in vitro meat one would not be instrumentalizing an animal but rather would be instrumentalizing cells and tissues" (2008, 593). They further state that the cell can be divorced from concerns over the treatment of animals provided the cells are extracted humanely and painlessly. They reject the claim that animals are ontologized as an amalgamation of cells under this production method:

> Extracting cells from an animal does not imply that one sees it only as a cell source—in fact the very motivation behind much of in vitro meat research is generated by seeing animals as worthy of much more regard than merely being food sources. (Hopkins and Dacey 2008, 594)

While this is possible, farmers employ similar narratives of respectful use and even of love toward farmed animals to explain the often-deplorable agricultural practices in which they participate (see V. Stanescu 2013). In this sense, while it is possible to see animals as more than cells, and while farmers might very well see their animals as more than meat, this has little meaning or political significance for the animals themselves who remain the legal property of these humans, and who remain subject to the whims of the industry in which they are incarcerated.

So while I am sympathetic to Hopkins and Dacey's (2008) argument, they continue to functionally abstract the animal from their cells, as well as the human-animal relations that position animals as property and as suitable cell donors in the first place. While they are critical of those who focus on the cells as deserving of ethical regard as "stretch[ing] the limits of respect to fetishistic standards" (Hopkins and Dacey 2008, 593) my point here is to remind the reader that the animal cell as a resource for IVM is made possible because of the ongoing domination of animals by humans. The cell used in this way cannot be divorced from the institution of animal agriculture, its legacy, and its role in the organization of contemporary social life. Because

Hopkins and Dacey abstract animal cells from animal bodies, they are further able to parse the tissue as “real meat but not a real animal part” (2008, 594). According to this logic, IVM becomes a substance divorced from the relations in which it was produced and thus requires no ethical evaluation. They write: “meat has no claim on moral regard for itself, and in vitro meat is not connected to any whole animal that does have a claim for moral regard in any morally prohibitive way” (Hopkins and Dacey 2008, 594). This narrow focus absents IVM’s historic and ongoing ties to animal agriculture, and fails to problematize the private property relationships that are foundational to both animal agriculture and to cellular agriculture as currently practiced.

IVM therefore makes sense from the perspective of utilitarian animal ethics; and ethical objections, if any, are either minimized or promised-away by hope in future technological developments. Based on the claims of researchers, institutes, and biotech start-ups, it would certainly require far fewer animals than the death rate of 60 billion per year characteristic of the current meat industry (Datar, Kim, and d’Origny 2016; Hopkins and Dacey 2008; Schaefer and Savulescu 2014; Sebo forthcoming; Stephens 2013; Valeti 2017). Cary Wolfe argues that IVM should be read through a biopolitical frame in which we can recognize “a more and more finely tuned control over life and ‘making live’ at the most capillary levels of social existence” (2013, 97). While Wolfe does not connect these ethical violations to the material use of farmed animals in IVM processes, his issue is with the logic and premise of the substance alone. In this sense, regardless of whether the growth mediums of cultured meat become exclusively plant-based or the animals are treated well according to humane standards, the practices represent the intensification of control over life at the level of the cell and of the tissue. Consequently, Wolfe does not position animal agriculture and cellular agriculture as opposed but as institutions structured by a similar logic. Animal studies scholar John Miller writes that the perspective that

widespread vegetarianism is impossible, and therefore IVM is our only viable solution is not an alternative to "the violent subjection of nonhuman animals within industrial capitalist cultures, but rather as a further symptom of the remarkable extent of this violence" (2012, 45). From this perspective, the promises of IVM are thrown into question, and ethical questions are raised: "it would seem continuous with the practices of domestication, manipulation, and control of life that characterize the factory farms to which, from an animal rights point of view, it seems opposed" (Wolfe 2013, 97). I would add that not only are these institutions structurally similar, but they are different expressions of the same human and food ontologies. Both expressions of agricultural power rely on the deanimalization of animals, and the sovereignty of the human subject to direct natural resources to specific ends.

Technological Promises, Human Actors

IVM is inextricably linked to technological promises that make sense when the identified problems are the excess and inefficiency of animal agriculture. In their support of IVM, Hopkins and Dacey state that "technology can allow us to change the physical constraints of the world so that we can better avoid the bad and pursue the good" (2008, 585). In this sense, the dualisms of culture/nature and human/animal are maintained with the human positioned as the rational master of the natural world. Animals remain in the realm of nature as cell donors, whose cellular power is harnessed by humans to sustain dominant alimentary norms. This is not to discount the material implications for animals and for those currently employed by the meat industry that a large-scale shift to IVM would entail. As Cole and Morgan argue:

> The IVM scientist potentially liberates not only non-human animals from the destiny of the factory farm or slaughterhouse, but also the factory farmer and the slaughterer from their violent occupations; the technician of the sterile IVM factory is a very different figure from the bloodied sticker of the killing floor. (2013, 210)

Here, it is possible that humans, but most notably scientists, are positioned as the saviours of animals, humans, and the natural world by very way of manufacturing IVF—a technology itself developed in response to the excesses of human domination brought about from animal agriculture. However, Cole and Morgan (2013) question why IVM is being heralded as the only pragmatic way to direct human consumption in a sustainable and ethical manner when plant-based diets are inexpensive, largely accessible, healthy, and have low ecological ramifications.

It is my position that IVM technology is taken to be a more realistic option in the sense that it is consistent with ontologies of the human as dominant over nature and its resources. Insofar as its proponents emphasize that it is a structural copy of agriculturally produced flesh, IVM "reproduces the cultural visibility of meat, and thereby reproduces the already existing hierarchy of food in Western diets" (Cole and Morgan 212). Animals therefore remain a means to human ends, regardless of whether they are targeted by agricultural power or cellular agricultural power. While it is the case that animals and meat remain ontologized as food in IVM processes, what remains less clear is the potential of IVM to change our dominant ontology of the human.

Cellular Agriculture and the Potentiality of Humans as Food

The technological promises of IVM meat, while consistent with prevailing animal and food ontologies, render human-animal difference—expressed via decisions about who does and does not becomes food—practically insignificant. For anthropologists Simone Dennis and Alison Witchard (2015), IVM opens possibilities for a cell source body to be *any body,* including that of humans. Because meat production relies on the specied difference of farmed animals, they claim that there is no barrier that would prohibit human tissue/meat from being produced using in vitro

technologies. The ramifications of humans-as-food on the ontology of the human are potentially wide-ranging. Dennis and Witchard argue that "the possibility of in-vitro meat that uses human cellular inputs means that human domination dissolves into a future that we cannot visualize, since that future is no longer premised on the domination of nature and animals" (2015, 152). In this way, these authors, like Plumwood (2000, 2008), position the status of humans as food as a powerful way to resist human exceptionalism through eating.

It is this potentiality—that IVM could also mass produce humans as food—that also sparks resistance to IVM (Dennis and Witchard 2015; Hopkins and Dacey 2008; Schaefer and Savulescu 2014). IVM in this sense, does not only trouble industrial animal agriculture, but in positioning our cells as *food*, meaningfully presents us with "an unthinkable world" (Dennis and Witchard 2015, 160) where our place above nature and above animals is blatantly rendered artificial. Arguments against IVM position it as unsafe, unnatural, and as providing a pragmatic way to practice cannibalism (see further Dennis and Witchard 2015; Hopkins and Dacey 2008; Schaefer and Savulescu 2014). Leaving aside the widespread colonialist and orientalist construction of cannibalism as barbaric and practiced by lesser (i.e., non-western) humans, the fact that detractors can imagine human tissue only as food for other humans, and not for other animals, shows how moments of anthropocentric uncertainty are turned to reproduce the very power relations in question. Furthermore, while IVM technology can theoretically produce human meat, I question how law will regulate IVM, and how this will contest and/or reproduce legal ontologies of animals and of cellular life as the private property of humans, researchers, and patent-holders.

Chapter 4

Speculative Regulations: Legal Ontologies, Food Technologies

In her work on food regulation in the context of the European Union, Ludivine Petetin (2014) writes that, despite representing a new food technology, IVM will likely be regulated using existing legal frameworks. She further speculates that regulations governing agricultural biotechnology such as genetically engineered animals and cloned products would be the most likely regulatory scheme for IVM. As such, IVM will "inherit the regulation of a previous innovation" (Petetin 2014, 179) rather than being governed by legislation specific to this technology. In this sense, cultured meat would fall under existing legislation as a "novel food." The principles governing novel foods were developed in cooperation with various nation states and as a result are similar across jurisdictions such as the European Union, the United States, and Canada (Health Canada 2015). It is likely that Petetin's predictions are largely applicable to the Canadian context. As per Division B.28.001 of the *Food and Drugs Act of Canada,* a novel food is defined as:

> **(a)** a substance, including a microorganism, that does not have a history of safe use as a food;
> **(b)** a food that has been manufactured, prepared, preserved or packaged by a process that
> > **(i)** has not been previously applied to that food, and
> > **(ii)** causes the food to undergo a major change; and
>
> **(c)** a food that is derived from a plant, animal or microorganism that has been genetically modified such that
> > **(i)** the plant, animal or microorganism exhibits characteristics that were not previously observed in that plant, animal or microorganism,
> > **(ii)** the plant, animal or microorganism no longer exhibits characteristics that were previously observed in that plant, animal or microorganism, or
> > **(iii)** one or more characteristics of the plant, animal or microorganism no longer fall within the anticipated range for that plant, animal or microorganism. (*aliment nouveau*). (Canada 2017)

It is therefore likely that cultured meat would be considered as a specific process of producing meat that "has not been previously applied to that food." Underpinning the safety assessment procedures of novel foods is the principle of "substantial equivalence." This principle means that

if the product is found to be "substantially equivalent to an existing food or food component, it can be treated in the same manner with respect to safety" (Schauzu 2000, 2). As such, not only are novel foods subsumed within existing regulations, these regulations use normative foods as the basis against which new foods are measured. To this effect, Schauzu argues:

> The concept of substantial equivalence can thus be considered no more but also no less than a reasonable tool to assess the nutritional composition and safety of a novel food in relation to the nutritional composition and safety of its *traditional* counterpart. (2000, 2 emphasis added)

Given that animals are not only absent as subjects but codified as mere ingredients in existing food safety laws (as explicated in chapter 3), and because the safety of novel foods takes existing food products as the norm, it is unlikely that cultured meat will resist or undermine the foundational relation of animal agriculture: property.

In their efforts to prove that cultured meat is substantially equivalent for regulatory purposes, it is likely that proponents of IVM will not only reify animals-as-property, but animal-based ontologies of meat. For example, they will need to prove that cultured meat represents merely a production change and is structurally, chemically, and nutritionally identical to meat taken from a once-living animal. In so doing, cultured meat producers will have to emphasize a substance-based ontology of meat that always already relies on an ontology of deaded animal life. That is, within the legal regulation of cultured meat a modified legal animal subject will emerge: the cell source animal or animal "donor." For example, in their 2015 policy case study on IVM, EU-based research initiative, EPINET (Epistemic Networks), assessed the impact of IVM from a variety of social, scientific and technological perspectives. In their recommendations, animals are mentioned in passing when referring to the politics of IVM. They are defined as "animal muscle tissue" or in relation to the standards of care that "donors" will be accorded. EPINET states that standards of care will have to be considered as a component of

"production oversight (hygiene standards, nutrition standards, donor categories, wellbeing of cell donors, etc" (Gunnarsdottir et al. 2015, 3). It is worth noting that animals are not even referred to as animals in this passage. By referring to animals as "donors," their consent is inferred. Indeed, they are "donors" who need to be kept sterile and healthy so as to remain productive components in a manufacturing process premised on the extraction and harnessing of their cells. The suggestion that minimum standards of treatment be codified in law highlights the potential of cellular agriculture to function like other institutions of animal confinement such as zoos, farms, and research laboratories. As such, I suggest that "donor" animals in IVM production will remain the legal property of individuals, and that they will remain subjected to human ends. In this sense, the liberatory potential of IVM for nonhuman others under law, seems weak at best. Instead, in geopolitical settings such as Canada and the United States, the relation of property that is foundational to both animal agriculture and territorialization remains not only unchallenged but reproduced.

"Clean Meat": Should it be Food?

While those in favour of IVM argue that tissue produced under these conditions is as real as any meat that comes from a once living animal, questions remain as to whether IVM is food as per the contextual ontological veganism described in chapter 2. Given that a contextual ontological veganism is not premised on purity and acknowledges that there are no clean hands in the Anthropocene, it is worth exploring the ways in which IVM could potentially be or not be ontologized as food. Using Plumwood's (2000) differentiation of instrumentalization (where the other is merely a means to someone else's ends) versus respectful use (premised on mutual reciprocity and interdependence) we can ask whether donor animals, who could in theory "be treated like queens," should play any part in the production of IVM. Schaefer and Savulescu

(2014) present ideal scenarios of animal treatment. They argue that respect for donor animals could be achieved provided cells were extracted: in a way that was “safe, painless and leaves minimal scarring” (Schaefer and Savulescu 2014, 194); from deceased animals who were donated for purposes of cellular donations; or, if the animals lived “in a free and open environment…[and were] appropriately compensated for its [sic] contribution to IVM, rewarded with food, toys or other resources favoured by the species” (Schaefer and Savulescu 2014, 194). Miller, on the other hand, states such “optimisms overlook the wider situation of in vitro meat as an aspect of a still prevalent instrumentalist approach to other species” (2012, 41). A relational and contextual ontology of food that includes a concern for animal beingness would have to evaluate whether conditions of confinement such as those described by Schaefer and Savulescu sufficiently respect creaturely beingness in such a way that the tissue from their cultured cells could be considered food, even when the animals themselves do not become food. The extent to which beingness, as outlined by Deckha (forthcoming), is compatible with the property status of animals used in cellular agriculture also requires consideration. For Decka, beingness offers a legal alternative to animals as property. And so, I propose that it might very well be the case that so long as animals are property, they are subject to instrumentalization. Put another way, human-animal relationships premised on respectful use might only exist when the beingness of animals is upheld in law, and enacted in practice (Deckha forthcoming). If IVM is only made possible because animals remain the legal property of humans, it is my contention that it ought not be ontologized as food (and neither should the animal flesh it replicates).

Furthermore, how IVM will be evaluated as suitable for sale on the consumer market should also play a role in determining its status as food. If, as shown in chapter 3, cultured meat makers will be pressured to prove the safety of their novel food, and the equivalency of their

product using animal experimentation, then it would not be appropriate to ontologize this product as food. It is likely that producers would take this route in order to have the widest market appeal. For example, Impossible Foods is a plant-based meat company that makes a vegan burger that bleeds. The vegan burger bleeds because it contains “soy leghemoglobin,” a protein derived from the root of soy plants that is “molecularly identical to the heme in meats and vegetables” (Duggan 2017). Because the root of soy plants is not typically eaten, Impossible Foods performed extra tests in an effort to have the United States Food and Drug Administration approve soy leghemoglobin as “Generally Recognized as Safe”—a status not required for approval on the market. CEO of Impossible Foods, Patrick Brown said the company did so in an effort to be transparent and to assure customers as to the safety of their products. As such, rats were used as experimental bodies to test the effects of plant-based heme in order to confirm that a synthetic burger, which bleeds in such a way as to simulate animal flesh, is safe for human consumption (Duggan 2017). Regardless of the fact that this product does not contain animal ingredients, a relational assessment of its production methods reveals that it relies on the instrumentalization of animals, and therefore should not be considered food.

Another question raised by Plumwood’s (2000) analysis is whether IVM might be a useful intermediate position. Animal ethicists such as Sebo (forthcoming) state that IVM is the most pressing issue of our time. As such, Sebo contends that it requires the support of animal ethicists, the public, and socio-cultural institutions more broadly:

> What we do over the next decade in terms of developing plant-based and cultured meat; labeling and marketing them; and introducing them to cultural, religious, business, and political interests; may well determine whether or not we are able to right this wrong before a global pandemic or global ecological collapse forces our hand. Aside from perhaps reduction of existential risk, there is arguably nothing more important that we could be working on right now. (forthcoming, 30-31)

Others state that the impact for farmed animals would be equivalent to a global shift to vegetarianism: "If the standard factory farm were replaced by IVM laboratories, this would have more or less the same effect of reducing animal suffering and/or slaughter as converting everyone to vegetarianism" (Schaefer and Savulescu 2014, 189). These authors take the position that the overall reduction in animal suffering, ecological damage, and harms to human health justifies the use of a lesser amount of well-treated animals. For them this suffices to establish the edibility of IVM.

However, whether or not IVM is food should be determined with a view to the relationships that are produced through its consumption. Would the human maintain its exclusive position as subject while animals remain desubjectified means to human ends? Would the consumption of cultured animal tissue transmit animalistic traits such as virility and prowess in the same way that meat supposedly does? (Fiddes 1991; Twigg 1983). Or, conversely, would the consumption of IVM produced in ideal conditions (plant-based growth mediums and animals treated well) work to unsettle the iteration of the human who is produced through the sacrifice of the animal? How the consumption of IVM will operate as a product that will further entrench existing human-animal relations and/or unsettle our dominant ontologies of humans, animals, and food should also be weighed when considering whether this product reflects ethically desirable relations to ourselves and with the more-than-human world.

Finally, assessing whether IVM is food requires a consideration of its role in the alienation of humans from an ecological embodiment. Cole and Morgan warn that "the consumption of IVM may amplify the self-construction of the human as manipulator of the natural world, to the point of abstraction from the natural world altogether" (2013, 213). If they are correct, then the production and consumption of IVM could amplify the violent dualisms of

nature/culture and human/animal that Plumwood (2000) argues should be resisted through our food practices. Conversely, however, I question whether IVM could be a means of recognizing the vulnerability of animal others as well as the vulnerability of ourselves to ecological catastrophe caused in part by the imperial exercise of agricultural power. As such, questions surrounding IVM exceed ontological concerns over its authenticity as meat. I argue instead, that animal ethicists and those working in the field of IVM should concern themselves with questions surrounding whether IVM can be considered food within a contextual ontological veganism. If so, we will be better able to assess whether those advocating for sustainable, animal-friendly food systems should lend their support to this technology.

Conclusion

This chapter has analysed cultured and synthetic meat technologies with a view to the ontologies of meat, animals, humans, and food that are parsed and reified in discourses surrounding in vitro and synthetic meats. In so doing, I have attempted to reorient discussions about IVM by repositioning animals as stakeholders in this process—stakeholders who are largely absented in the literature I have analysed. Those advocating for IVM argue that concerns over the use of fetal bovine serum as a growth medium, and the treatment of animals as donors will be alleviated through evermore technological development. However, the legal ontology of animals as property remains unaddressed in these future promises. As such, it is my position that IVM has little potential to disrupt the property relationships that are foundational to animal agriculture. In this sense, cellular agriculture is agricultural power, expressed differently. Those arguing against IVM remind us that IVM is a contingent technology that emerged as a result of animal agriculture and our obsession with meat not only as a food, but as a marker of our domination of and connection with nature. It is only because of meat's normative position that

IVM and synthetic meats have emerged as both an epistemic object of biotechnology and as products positioned as the only means to avoid the impending effects of climate change, widespread zoonotic disease, and food shortages. We then ought to read IVM and synthetic meat as the simultaneous response to the exercise of imperialist agricultural power and, at the same time, an attempt to prevent the sacrifice of sacrifice. I would argue that this is what IVM proponents mean when they write that IVM is the best of both worlds.

Those in favour of IVM fail to adequately consider its risks, not in terms of the unknown effects of novel food, but in the possibility that this "franken" food could amplify nostalgia for agriculturally produced meat "as an integral component of a 'natural' diet" (Miller 2012, 41). Miller is not the only author to share this concern. This potentiality is also explored by Jovian Parry (2009) who analyses Atwood's speculative fiction novel, *Oryx and Crake* (2004). In Atwood's novel, IVM is a reality. However, the status of meat as a marker of social capital is not a relic of a bygone era but further amplified. In this work, meat from once living animals is positioned as a luxury item that characters consume in protest of their alienation from nature, which they see manifested in their consumption of "ChickieNobs" and "SoyOBoy Burgers" (Parry 2009, 245). Thus, despite the insistence by IVM researchers and supporters that IVM is real meat because meat is merely a chemical substance organized in a specific way, it is not clear that consumers will agree with this substance-based ontology of meat. Meat is more than a substance, and meat-eating is more than a nutritional decision equal to other options. Meat-eating invests and sustains the dominant human in ways that raise questions as to whether IVM and synthetic meat can ever be ontologized as food in such a way that honours the beingness of animals and considers them as ethical members of our communities.

To truly have a food politics that is open to human and nonhuman others requires a revision of our humanist ontologies. Sinclair reminds us that even in the colloquial description of food as “vegan friendly,” the animal is displaced. Instead, we ought to begin eating and acting in ways that are “animal friendly” (2016, 232). For Sinclair this requires us to “detach so-called animals from their association with *edibility* altogether” (2016, 233 emphasis in original). I would nuance this position to argue that farmed animals ought to be divorced from their ontologization as food, regardless of the fact that they are technically edible, as are humans and much other ecological matter. In so doing, we can begin to “imagine new futures where their lives exist without reference to our tables” (R. Sinclair 2016, 233). A project in this vein is then critical of technologies that exist by way of the ontologization of farmed animals as meat. IVM and synthetic meat are by design *carnophallogocentrism* produced by other means.

Conclusion

This dissertation has examined the political function and interconnectedness of human, animal, and food ontologies in the settler colonial contexts of what are now called Canada and the United States. By analyzing archival data, historical materials, legal cases, as well as food law and policy, I have argued that how we eat, how we interact with the animals we eat, and how we understand ourselves as human through the consumption of animals used in agriculture, are informed by, shaped by, and inextricably rooted in a colonial project of territorialisation. Far from a historical event that we have moved beyond, these ontologies continue to inform our alimentary norms, food laws, and legal ontologies of animals. These ontologies also deeply shape our social contexts, not only in terms of individual human-animal relations through eating, but our political, economic, legal, cultural, and social institutions and practices. As I have shown throughout the dissertation, these ontologies *present* themselves as stable, but are thoroughly political, and strategically deployed via agricultural power. I provide evidence and a framework of contextual ontological veganism for thinking, relating, eating, and being otherwise.

Theoretical Contributions

This work takes seriously Taylor's (2013b) and Stanescu's (2013) suggestion that we ought to begin thinking about animal agriculture in terms of agricultural power. In so doing, this work provides a contextual account of how agricultural power operates in concert with colonialism, humanism, and law to mediate relationships between humans, animals, and land. Because local analyses can better attend to the specificities of how power is deployed and operates (McWhorter 2009), I have analysed the institution of animal agriculture in the settler colonial contexts of Canada and the United States from a position of political ontologies. I have argued that property is the foundational relation of animal agriculture, and that this relation

continues to be expressed and remade through various tenets of food law and food ontologies. By focusing on the politicization of ontology, I have destabilized the concepts that present themselves as fundamental truths about the nature of humans, animals, and food, and I have shown how these ontologies continue to be deployed in projects of settler territorialisation, humanism, whiteness, and nationalism. In so doing, this study is the first of its kind to develop a context specific account of agricultural power, food law, and colonialism.

This work also treats animality as precisely deployed by colonial power, and argues that animals themselves are *subjects* of empire who are used toward the ends of territorialisation. This is distinct from other authors who treat animals as partners in colonialism, or as agentical in that their movement decided the next location for settlement, or that their presence changed the ecological landscape of the area in question (see Anderson 2006; Fischer 2015).

In my development of a concept of contextual ontological veganism, I have followed feminist philosopher Johanna Oksala in defending the political function of ontology, while showing its contingency and malleability. It is my position that it is useful to ontologize animals as not food, because it makes not eating them easier. However, this understanding of food is distinctly oriented to resisting the property status of animals, and the production processes entailed in animal agriculture. The contextual ontological veganism proposed in this dissertation also extends and applies the work of legal scholar Maneesha Deckha (forthcoming). By orienting this food ontology toward the beingness of animals—a legal subjectivity proposed by Deckha—animals are not categorized as property or valued for their similarities to humans as persons under the law. Instead, they are recognized as vulnerable, embodied, and relational. A food ontology such as this has the potential to not only lessen the exploitation of farmed animals, but to alter our ontologies of ourselves, nonhuman others, and food. As a result, this food ontology

seeks to provide a framework and a beginning to resist the forms of colonial and agricultural power that meet in the location of the animal farm, shape our land and food laws, and continue to structure how and whom we eat. For these reasons, this dissertation contributes to the fields of critical animal studies, the sociology of food, socio-legal studies, and critical theory.

Directions for Future Research

Decolonial food politics, questions of territory. To consider our food ontologies as distinctly political and strategically deployed opens avenues for future research. Namely, it is imperative to develop a decolonial food politics oriented to questions of territory and animal subjectivity. I suggest that such a food politics not be underpinned by legal relationships of private property, nor by the instrumentalization of animals or land. How to reimagine land with a view to its indigenous form (Clare 2017)—before its parceling into privately owned sections, and prior to its overwhelming coverage by animal agriculture and monocrops used to feed farmed animals—will be integral to imaging ourselves, our relations, and our alimentary norms differently.

Theorizing nonhuman resistance. Treating animal agriculture as traversed and structured by agricultural power also has implications for future theorizing. Following Foucault's work on power and resistance as the over or mis-application of power that can be read on bodies, an account of nonhuman resistance to agricultural power is necessary. In this vein, anthropogenic climate change and "crises" of food production, such as the transmission of zoonotic diseases and foodborne illnesses should be understood as instances of resistance to agricultural power. These moments reveal that nonhuman bodies and lifeforms undermine agricultural power's drive to master and direct them to specific ends. While, these instances reveal the similarities between humans and animals (in their ability to share pathogens) and therefore undermine the supposed

difference on which this dualism is constructed, these crises are also mobilized to intensify and refine the application of agricultural power. Biosecurity measures for farms, the tracing of farmed animals, and the genome sequencing of listeria are examples of ongoing attempts to secure food. These are further attempts by humans to master the nonhuman—animals, environment, bacteria, pathogens—in order to sustain the animal products as commodities in economic circulation. These "crises" are also events that structure the emergence of new meat technologies such as IVM and synthetic meat. Analyses centered on agricultural power and its resistance have the potential to destabilize humanist approaches to such crises, reveal the limits and impossibility of truly dominating nonhuman life, and allow us to take seriously the political implications of nonhuman resistance.

A new animal subject of agricultural power. As IVM technology continues to develop, critical animal studies and socio-legal studies will have to grapple with a new animal subject, that of the cell source animal (Stephens 2013). This engagement is urgent as legal regulations specific to this animal subject have yet to be codified. Questions as to what practices will be or *should* be allowed, the method of cell extraction, and whether animals will remain the property of researchers and companies should be addressed. It would be strategic for those advocating on behalf of nonhuman animals to develop guidelines and rules specific for this industry, rather than having existing regulatory frameworks applied by researchers and industry representatives who have a financial, professional, and intellectual interest in sustaining our current economy of sacrifice.

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