

Biopower, food and space

Hilda E. Kurtz

University of Georgia, USA

ABSTRACT

This paper schematically considers the exercise of biopower in the regulation of food and drink, tracing the spatiality of biopower and biopolitics as they play out in the trajectory of regulation of two key types of beverage: alcoholic beverages and fluid milk. Empirically, the paper considers 19th century temperance laws and 20th century mandatory milk pasteurization in the United States, highlighting the spatial strategies by which biopower's reach into digestive tracts was extended across political territories. The account suggest that biopolitical resistance enacts spatial strategies as well.

KEY WORDS: Biopower, biopolitics, milk, pasteurization, temperanzace

INTRODUCTION

Michel Foucault's catalytic influence on social theory enjoyed a resurgence with the translation into English of his University of Paris lectures in the early 2000s (Foucault 2003 & 2008). Among the concepts he discussed in those lectures, perhaps none has percolated as widely (at least in Anglo-American scholarship) as biopower –power that takes human biology as their object. Geographers and other social scientists have drawn on Foucault's insights about biopower to(re)theorize such concerns as immigration policy (Braun 2007), territory (Elden 2007), left politics (Hannah 2011; see also Schlosser 2008), as well as the more obviously biological issues of biotechnology (Brooks 2005), and the role of

genetic science in contemporary and future life (Rose 2001 & 2006). Foucault's positive formulation of biopower and biopolitics has been considered in tension with Agamben's more negative view of biopower, leading to some heady and heavily theoretical reflections on the nature of power.

In this essay, I take Foucault's ideas of biopower and biopolitics in a more corporeal direction, by considering the exercise of biopower and biopolitics in the regulation of food and drink. In doing so, I am working from Agamben's observation that one strength of Foucault's work is the attention to "the concrete ways in which power penetrates subjects' very bodies and forms of life" (1998:5). The industrial food system, predicated on overcoming the limits of natural processes (Whatmore 1995), exercises ever more pervasive control over the biologies of humans and other animals as well as over the botany of countless agricultural crops. Interdisciplinary agrifood scholars have examined the play of biopower through such domains as rules concerning mandatory dairy pasteurization (Paxson 2008; Speake 2010; Kurtz Trauger and Passidomo 2013), advances in agricultural biotechnology (Brooks 2005; Herring 2007; Schlosser 2008; Nally 2011), and the role of genetic science in livestock breeding (Holloway et al. 2009). While a burgeoning literature on alternative food movements and initiatives critiques the extensive influence of the industrialized food system on many domains of life, little of this work conceptualizes alternative food activism as resistance to biopower, e.g. as biopolitics.

In a recent paper, however, Kurtz (2015) demonstrates that food politics can be productively understood as biopolitics, and that doing so opens attention to where and how biopower and biopolitics play out. Kurtz uses the case of a local "food sovereignty" ordinance to highlight the importance of tracing biopolitical debate through spaces and scales of regulation and government. The analysis highlights, first, that the expression of biopower is constrained by the norms of the arenas in which it is exercised, and second, that biopolitical resistance to biopower is shaped in part by existing arenas for the exercise of power. Paradoxically, even political strategies like the local food sovereignty ordinance in question, which many would consider radical and "outside the box", nonetheless works within an existing distribution of political power, at the same time that it challenges that distribution of power.

Significantly, biopolitics are enacted in particular settings, organized for particular purposes (profit, governance) and shaped by different modalities of power. The spaces in which food safety regulations are written, for instance, are riven with tensions between scientific and lay knowledge, as well as between

different positions on political spectra. The effects of food safety regulations likewise play out in myriad spaces, shaped by farming conventions, agricultural resources, community norms, food shopping practices, and of course food preparation and consumption.

In this paper, I simplify and extend Kurtz's (2015) argument, tracing the spatiality of biopower and biopolitics as they play out in the trajectory of regulation of two key types of beverage: alcoholic beverages and fluid milk. This paper traces schematic histories to consider the spatial spread of temperance laws culminating in national Prohibition (and its subsequent repeal), and the spread of mandatory milk pasteurization across different jurisdictions in the United States. Discussion of each of these storylines is necessarily truncated; I focus rather schematically on the spatial expression of biopower, and the spaces of resistance to it in each of these instances. My aim is to highlight the utility of thinking spatially about biopolitics, and to suggest future avenues of inquiry into the biopolitics of food systems. As food and agricultural regulations proliferate, it is important to bring critical perspectives to bear on the kinds of power being exercised, to what ends and with what effects.

In the following sections, I offer a brief overview of biopower and biopolitics as understood from the work of Michel Foucault, and then consider the play of biopower and biopolitics in the regulation of food and drink. While the relevance of biopower to food systems extends beyond the sphere of food and agricultural regulation, this paper focuses on regulatory regimes in order to highlight the spatiality of biopower and biopolitics.

BIOWPOWER AND BIOWPOLITICS

Foucault used the term biopower to refer to various expressions of power which take population dynamics and population health as their focus. In Foucault's analysis, beginning in the late 18th century, the vital processes of human existence came into focus as objects of political power, motivated in large part by states' concern with the economic productivity of their citizens. Such power – biopower – itself derives in part from vital statistics which made populations legible; once rates of birth, death and disease were knowable, they could be manipulated through various institutions, innovations and regulations. The development and deployment of vital statistics intersected, of course, with developments in the life sciences and clinical medicine that offered techniques and technologies with which to better understand and improve human health.

While biopower is often located in state apparatuses, its reach extends into myriad organizations and institutions. Biopower's focus on human life gave rise to "techniques, technologies, experts and apparatuses" (Rose 2001: 1) that "coordinate medical care, centralize information, normalize knowledge... teach hygiene and...medicalize the population" (Foucault 2003: 241). From a geographic perspective, it is worth noting that efforts to coordinate medical care, to centralize information, to teach hygiene and the like all occur in particular settings which are shaped by various norms of professional practice. Thus to fully understand the play of biopower, then, it seems essential to examine the intersections of biopower with other modalities of hierarchy and order (e.g. power) which shape the work done in such institutions.

Significantly, the exercise of biopower is often contested. Many scholars use the term biopolitics to refer to various forms of political struggle over both state and non-state actors' exercise of biopower. Foucault's formulation of biopower and biopolitics has drawn many scholars' attention to "the concrete ways in which power penetrates subjects' very bodies and forms of life" (Agamben 1998: 5). Likewise, biopolitics – understood here as various forms of struggle against the imposition of biopower – is enacted in particular settings and arenas which are shaped by power inequalities. Geographers have long studied social movements and activism with an eye to the role of space, place and geographic scales in shaping political struggle (Nichols, Miller and Beaumont 2010) and hence it is not much of a leap to recognize that biopolitics as a mode of struggle are shaped in some way in relation to the spaces, places and scales at which biopower is exerted and resisted.

DISCOURSES AND SPACES OF PRACTICE

Rabinow and Rose (2006) and Holloway et al. (2009) each offer different dimensions of a useful framework for investigating the exercise of biopower, and the ensuing biopolitical contestation over "the concrete ways in which power penetrates subjects' very bodies and forms of life" (Agamben 1998: 5). Rabinow and Rose (2006) point to key dimensions of the discourses through which biopower and biopolitics are constituted. Holloway et al. (2009) focus on the nested geographic scales of practice within which controls over biological life are exercised. Taken together, they highlight the utility of keeping discourses and their effects in view while also examining spaces of practice organized at different geographic scales.

Rabinow and Rose (2006: 196) highlight that intersecting discourses inform the exercise of biopower, and schematize the study of biopower with attention to “the forms of knowledge, regimes of authority and practices of intervention that are desirable, legitimate and efficacious”. Much of their schema relies on recognizing the “truth discourses” which validate and normalize forms of knowledge, regimes of authority and practices of intervention which constitute biopower. Biopolitics is then understood as “all the specific strategies and contestations” (ibid.) over these intersecting dimensions of biopower. That is, the work focuses on the effects of discourses, and traces some of these effects into specific institutions, technologies and strategies of intervention in population health.

The linkages between truth discourses, knowledge, authority and interventions can be subtle. Truth discourses which are relevant to biopower and biopolitics may not be biological in nature; they may concern demographics, vulnerability, risk, and even ethics. Both truth discourses and authority must be coupled with administrative and technological interventions which are politically and technically feasible in order to serve as the basis for policies (Speake, 2011), but the factors which shape feasibility can lie elsewhere in uneven power relations.

Holloway et al. (2009) build on Rabinow and Rose’s (2006) insights with a geographical framework locating biopower in agricultural practices organized at different scales. Their specific case concerns the use of genetic interventions in livestock breeding, and the knowledge practices, truth discourses and interventions through which genetic interventions in the physical make-up of livestock are made. Specific to livestock breeding, they demonstrate the exercise of biopower and biopolitics in the ways that farmers manage livestock, amongst farmers and within rural communities, and across national and international knowledge networks concerned with livestock breeding. Their analysis highlights that truth discourses “are shaped and privileged in relation to particular communities of practice, forms of authority, and apparatuses for intervention, which themselves reach unevenly across populations” (Kurtz 2015: 8).

Extrapolating from Holloway et al.’s specific case, we can see that their schema highlights that biopower is effected and resisted at different scales of interaction and practice. Truth discourses and attributions of authority resonate differently in different settings, are organized at different scales, and enable and authorize different forms of intervention. In other words, Holloway et al. offer a useful approach to grounding the truth discourses, authorities and interventions

highlighted in Rabinow and Rose's (2006) schema for investigating the play of biopower and biopolitics. In order to demonstrate the utility of this approach, in the following sections, I interpret two expressions of biopower in the United States through this lens: The spatial spread of temperance reform and mandatory milk pasteurization in the late 19th and early 20th centuries. The nested geographical reach of regulations imposed at different levels of government provide a schematic set of geographies through which to explore the differentiated spaces of biopower and biopolitics.

TEMPERANCE

The temperance movement – that is, the prohibition of alcohol consumption – is an early and obvious expression of biopower in the United States. Temperance reforms were part and parcel of the early 19th century reform movements that aimed to improve the moral fiber and economic performance of the citizenry. As the national economy industrialized and urbanized, the effects of drinking alcohol, specifically drinking to excess, became more and more evident in workplaces, in public spaces, and in increasing rates of domestic and other forms of violence. As public drunkenness came to interfere more noticeably with social and especially economic interactions, alcohol consumption became a point of broad public concern and debate. The temperance movement gained a toehold in 19th century configurations of law and order with municipal ordinances against public drunkenness, and then against alcohol consumption in any measure. Temperance laws were motivated by moral concerns, but instantiated moral redirection by intervening in subjects' very corporeal habits of ingestion, and thus their forms of social life. In short, moral reform, driven in part by economic concerns, was directed at corporeal habits, and enacted politically in locally scaled temperance laws and ordinances.

As the temperance movement gained momentum, municipal ordinances across New England created a mosaic of “dry” and “wet” towns, where alcohol consumption was and was not banned. That is, biopower that constrained the act of alcohol consumption was expressed unevenly across political territories, shaping now not only conduct within places, but patterns of movement between places. The biopower of temperance reform intersected with existing patterns of transport and economic interaction to create a textured and only partially legible landscape of uneven constraints on personal conduct.

Temperance advocates, aware of the uneven reach of temperance reform, and concerned with the proliferation of bars, pubs, and so forth in so-called “wet” towns, pushed for change at the state level. In 1851, the New England state of Maine became the first state to pass a statewide law banning alcohol consumption. An anonymous letter published in the *United States Magazine and Democratic Review* in May 1852 expressed umbrage at the simultaneously extensive and intimate reach of what we would now call biopower. The author wrote that:

The sphere of individual liberty must be shrunken, indeed, if it cannot enclose all that lies within a man's skin, and the powers of the ruler, extensive indeed, if they can reach down the citizen's throat and explore his digestive organs. It is not mere bombast to declare that the esophagus, the duodenum, lacticals, and capillary ducts of free-born Americans are, and of right should be, forever inviolable; and that if the Declaration of Independence does not avail to save the contents of our stomachs and bladders from chemical analysis and legislative discussion, it is full time to make another declaration that shall mean something.

I want to draw attention to the lines drawn here between the control of the very organs of human bodies at the sub-corporeal scale and the soaring political reach of the American Declaration of Independence, a document that articulated conditions of life in the (future) United States to a global public. The argument from 1852 refers to spaces and scales that traverse the vast physical and conceptual distance(s) between biological/digestive scales and (geo)-political scales of activity.

These distances were politically traversed in the spatial strategy of encompassing ever larger swaths of political territory in temperance reform that would be pursued over the next several decades. That which “lies within a man's skin... down the citizen's throat and ...digestive organs” may remain technically out of reach of the state, but the biopolitical spatial strategies of temperance reform sought to impose barriers between digestive organs and offending beverages. In disrupting access to alcoholic beverages over wider and wider swaths of territory, temperance laws sought to intervene in individuals’ management of their corporeal selves. Twelve states followed Maine’s lead over the next five years, but the Maine law was repealed in 1856, and again, other states followed suit.

The temperance movement did not pick up political steam again until after the Civil War. Post-war temperance reform followed a similar spatial strategy as before the war, spreading from municipal to countywide to statewide bans on alcohol production and consumption. Temperance reform was hotly contested in multiple political arenas, so-called 'wet' and 'dry' factions continued to argue over, among other things, the legitimacy of legislation and constitutional amendments that attempted to govern at the level of the digestive tract.

It is important to remember that government statistics – about population dynamics, crime, incarceration, and poverty rates, for example – all figured as key technologies for making the abuse of alcohol legible and actionable to decision-makers. An 1887 Supreme Court decision upholding a statewide ban in Kansas on manufacture of intoxicating liquor signals the importance of such statistics to the exercise of biopower in the form of temperance reform. Justice Harlan wrote *Mugler v. Kansas* that:

We cannot shut out of view the fact, within the knowledge of all, that the public health, the public morals, and the public safety, may be endangered by the general use of intoxicating drinks; nor the fact established by *statistics accessible to everyone*, that the idleness, disorder, pauperism and crime existing in the country, are, in some degree...traceable to this evil." (emphasis added)

The details of political contestation over temperance reform are well beyond the scope of this paper. Here I would just note that the spatial strategy of linking human digestion to constraints relied in part on population statistics and imposed across ever larger swaths of territory culminated in the United States' 18th Constitutional Amendment that banned the production, sale, transportation and importation of alcoholic beverages. The 18th Amendment took effect in 1920, and was repealed in 1933. With Prohibition, biopower's reach was extended spatially through political tiers of government so as to be totalizing over the political territory of the United States.

The history of the temperance movement in the United States is instructive both as to how biopower penetrates subjects' very bodies, and to how it is enacted and contested through spatialized political practice. While temperance was enacted at the municipal level, individuals could avoid "the reach [of the state] down the citizen's throat" (op cit.) with the spatial strategy of avoiding drinking alcoholic

beverages in dry towns. The expansion of spaces targeted by temperance activists – from municipalities, to states, and finally the entire country – undermined mobility-based spatial strategies for evading the reach of biopower. As the spatial reach of biopower as temperance laws expanded, the spatiality of strategies of resistance changed as well, pushing spaces of illicit alcohol production and consumption to the socio-spatial margins – to the so-called backwoods, to urban warehouse districts, hidden back rooms and basement speakeasies.

National prohibition was a political failure and relatively short-lived, however. People as biological subjects proved too unruly in this regard, their digestive tracts inviolable, as the anonymous letter writer of 1852 as asserted. Thousands of speakeasies had proliferated during Prohibition, as had organized crime networks dealing in illicit alcohol.

PASTEURIZATION

As it happens, the causes of milk reform and the temperance movement overlapped, both during the religiously inflected reform movements of the early 19th century, and in the Progressive Era politics which form the basis for United States milk regulation today. In each of these reform movements we can see the expression of biopower – power taking biological life as its object, and giving rise to techniques, technologies, experts and apparatuses (Rose, 2001) that “medicalize the population” (Foucault, 2003).

The Progressive Era (1890-1920) was a confluence of initiatives for modernization and progress in domains such as industry, education, the home, and public health. Just as temperance was regaining political purchase in this era, so did milk reform come to occupy the attention of many health professionals, milk producers and distributors, and government officials. Many Progressive Era reforms were fueled by a belief in what science could contribute to human progress; developments in life sciences paralleled the increasing scope of the field of vital statistics to suggest new techniques and apparatuses for managing population health. Calls for state oversight of the milk system dovetailed with broader calls for consumer protection (Smith-Howard 2014) that were enabled by the knowledge technologies which drew attention to the need for such protection.

Milk plays a paradoxical role in modern systems of human nutrition. It has long been linked to ideas of purity and perfection, but also can host an array of pathogens, some of them deadly. In the late 19th and early 20th centuries, vital statistics in American cities recorded abominably high rates of infant mortality for infants fed cow's milk, especially during summer months when milk spoiled within a day or two. These vital statistics fueled concern about the dangers of milk (Wright and Huck 2002; DuPuis 2002). These were decades of rapid urbanization fueled by high immigration. Fewer people every year had access to 'country milk' fresh from the cow, and growing numbers of urban residents consumed milk produced in often squalid conditions for the cows, milk that poorly contained and unrefrigerated, much of which was transported long distances by rail, and milk that had been adulterated with sawdust, flour, and water. Cow's milk is an excellent medium for the growth of pathogens, and thus the widespread consumption of unsanitary milk led to sickness and death for many milk drinkers, most of them children (DuPuis 2002; Wright and Huck 2002; Smith-Howard 2014).

As part of a broader effort to improve population health, Progressive Era reformers were discouraging women from nursing their babies, and encouraging them to feed their infants with cow's milk instead; this view was fueled by the belief that nursing sapped women's strength and diminished their ability to properly run their household (Smith-Howard 2014). As a result, Smith-Howard (2014: 12) notes, "[b]etween 1900 and 1920, the *alimentary pathway* that once constituted a private link between mother and child became a matter of intense public concern". Public concern was expressed in the press, in conferences of health experts, in various milk regulations, and in court cases debating the merits and legality of ordinances and legislation aimed at improving the milk supply. The 'milk question' was the major public health issue of the day; as the court noted in *Rigbers v. City of Atlanta*, "Milk is not a luxury, it is a necessity... Babies, the *tender seed corn of the race*, are virtually dependent on it (cited in Wright and Huck 2002: 59, emphasis added).

In substantive parallel to the juxtaposition of digestive organs and the Declaration of Independence that framed the anonymous letter-writers' opposition to the Maine Temperance Act of 1851, public debate over the milk question linked the governance of human digestion and immunities at the corporeal scale to the imagined community of the race (nation).

Human biology had taken center stage in a protracted debate between milk producers and distributors, physicians, social reformers, public health experts, and urban, county and state-level power structures. The question was not whether power would be deployed upon subjects' very bodies, but how. The health of the populace, of the labor force, of the very nation, was at stake. Put more baldly, economic productivity was at stake.

Regarding the question of how the milk question would be resolved, and how biopower would be exerted, pasteurization as a technology for making milk safer to drink had been introduced in the 1880s, and hotly debated for decades to follow. Many prominent physicians spoke out against pasteurization, arguing that cooking the milk destroyed the nutrients for which it was so prized. Elaborate and expensive systems of milk certification were developed in urban dairy hinterlands that required small armies of inspectors to certify the cleanliness and safety of milk. Certification was so expensive that it priced milk out of reach for the vast numbers of milk drinkers in the urban working class, and so did little more than create an elite niche market in high-quality milk. Such an outcome ran counter to the intent of Progressive reformers who sought to improve conditions of life for everyone, and for the urban poor in particular. Pasteurization came to be appreciated, reluctantly in many quarters, for its cost-effectiveness and logistical feasibility.

As pasteurization moved from the margins to the center of political consensus, the spatial trajectory of mandatory pasteurization laws mirrored that of temperance reform, spreading outward from municipal ordinances to regional and statewide laws. Urban areas were the first to pass ordinances requiring milk to be pasteurized (Wright and Huck, 2002). Significantly for the spatiality of biopower focused on the milk question, dairy farms tended to be located between 100 and 200 miles from their primary urban markets, and so regulating the consumption of milk in a given city – requiring that it be pasteurized – meant regulating its production at some distance from that city. The focus on intervening in alimentary pathways of urban residents, then, resulted in new requirements for farm practices and industry organization at distances of several hundred miles away.

Milwaukee, Wisconsin adopted a municipal pasteurization ordinance in 1914 that required that all milk sold in the city must be either certified, inspected or pasteurized. The ordinance, which was challenged in court more than once (Wright and Huck 2002), was part of a broader pattern of challenges to milk regulations in various courts. In 1913 Wisconsin's Supreme Court ruled in

Adams v Milwaukee that municipalities had the right to control milk production outside city limits (Smith-Howard 2014). In a case brought against the city of Milwaukee seven years later in 1920, Pfeffer v. Milwaukee, milk dealers challenged the ordinance on the grounds that it hurt their business and did not in fact promote public health. As plaintiffs, they argued that:

the prescribed pasteurization does not promote the public health, because the milk subjected to it is deteriorated as a food product, that it does not destroy pathogenic bacteria in the milk, that it in no way tends to make or preserve the milk as a more healthful article of food, and the milk subjected to this process of pasteurization is not as wholesome, healthful and as good an article of food as milk in the natural state drawn from cows (Arthur, 1920: 516).

Smith-Howard (2014) notes that milk production of any scale requires extraordinary human intervention, even while touted as “nature’s perfect food”. Viewing the history of milk production through the lens of biopower highlights that these interventions in human alimentation, nutrition and health focus to a large extent on managing the life conditions of dairy cattle and milk-borne pathogens. Such interventions strike a “balance between harnessing raw materials of nature and allowing biological processes to thrive”, (Smith-Howard 2014: 11). Pfeffer et al. were questioning both the efficacy and the legitimacy of intervening through pasteurization, suggesting that human biology should better rely on milk in its natural state drawn from cows. As Rabinow and Rose (2006) observe, truth discourses often revolve around matters other than biology. Questions about what is “natural” have figured among truth discourses about the merits of pasteurization since its introduction to milk production.

Even while Pfeffer et al. questioned the efficacy of pasteurization, the Wisconsin Supreme Court viewed the merits of pasteurization as commonsense. In a decision that supported the ordinance’s reach into the urban hinterland, the Court noted that:

Public health demands that milk and all milk products should be pure and wholesome. It is also common knowledge that milk containing deleterious organisms is an unsuitable article of food. Milk is known to be a product easily infected with germ life and to require special attention and treatment

in its production and distribution for consumption as an article of food. Scientific knowledge concerning these facts and the best method of pasteurizing milk for human use in course of production and distribution as a pure and wholesome food is so generally understood and known that courts take judicial notice of these facts (Arthur, 1920: 517).

The tension between competing interpretations of both science and common knowledge evident in the Pfeffer case highlight that truth discourses are not universal. As Rabinow and Rose (2006) highlight, truth discourses authorize various interventions, but as these biopolitical accounts of temperance and pasteurization demonstrate, they do so from within particular institutional configurations for knowledge production. Weisbecker (2007: 69) notes that milk regulation was “spotty” at local, county and state levels, concluding that “[t]he ability to sell and purchase raw milk was thus determined more by the social and political nature of the individual jurisdiction than by scientific knowledge.”

While the repeal of Prohibition moved the regulation of alcohol consumption back to the very local level, as well as to the sidelines of broader public debate, mandatory milk pasteurization has remained contested for decades. Milk remains regulated at the state level, in a patchwork of regulations which take different stances toward un-pasteurized (raw, or fresh) milk. Currently, raw milk can be purchased legally for human consumption in eleven states; access to raw milk is restricted to different degrees in the remaining 39 states (National Association of State Departments of Agriculture 2011). The only federal regulation of fluid milk prohibits the transport of raw milk in its final form across state boundaries, meaning that all raw milk produced must be purchased and consumed in the same state in which it was produced. Given the sparse mosaic of raw milk producers, legal and otherwise, avid raw milk producers have developed networks and buying clubs that do transport raw milk across state boundaries. Lawsuits involving the U.S. Food and Drug Administration both as plaintiff and defendant have been filed in recent years, seeking to either open up or constrain access to unpasteurized milk.

BIOPOLITICS OF RESISTANCE

Significantly, resistance to mandatory milk pasteurization is on the rise in the United States. A detailed account of political struggle over access to raw milk is beyond the scope of this paper (but see Gumpert 2014; Leving 2009; Kurtz,

Trauger and Passidomo 2013). But I would highlight here that dozens of raids by state and federal officials on raw milk dairies, and the rather aggressive performance of police authority in these raids and related proceedings, have generated increasing backlash, and resistance. Raw milk buying clubs and other points of sale operate in states where they are legal as well as in states where they are not. Numerous court cases have been brought over the distribution of raw milk. The merits of raw and pasteurized milk are ardently debated alternative food blogosphere, as are the merits and outcomes of court cases and other proceedings. A detailed account of the spatiality of these machinations is beyond the scope of this paper, but two related strategies of political resistance dovetail tidily with the spatial spread of regulatory biopower described above. Each originate in New England, and each follows a spatial strategy of enacting regulations at smaller levels of government and creating momentum for the spread of these to higher levels of government, and/or larger extents of territory.

In Maine, farmer activists have devised a deeply grassroots and populist strategy of spreading support for freer access to foods the state considers questionable, including but not limited to raw milk, through the town meeting process. New England states retain the town meeting tradition in various forms, and in Maine, local ordinances passed by hand or voice vote or ballot can become local law. Preemption rules limit the scope of local ordinances, but for matters that are expressly local in nature, laws can be passed by direct vote. Over the last 4 years, 16 towns in Maine (of 470) have passed a local ordinance that protects direct sale of farm goods between farmer and consumer from the regulatory requirements that govern the more industrial-scaled food system. Such ordinances effectively carve out spaces of resistance to the biopower which mandates milk pasteurization and a suite of other agricultural practices. Supporters of the ordinance reject the state's effective intrusion into their digestive tracts, and argue that their own lifeways, knowledge, and farm and food practices should take precedence over state regulations in their management of their own health and biological well-being.

Biopower is linked to state's interest in a health working population, and economic rationales for different expressions of biopower in food systems have been noted (Brooks 2005; Nally 2010; Speake 2011). Many ordinance activists articulate an anti-corporate political stance, rejecting state food and agricultural regulations in part because they privilege large scale industrialized agriculture, and deeply disadvantage small-scale mixed output farming.

The ordinance activism has proven catalytic in alternative food politics across the country, and in the Maine state legislature as well. While supportive legislators continue to try to introduce bills at the state level that approximate some of the protections expressed in the ordinance, the political strategy intended to protect “the sphere of individual liberty...that lies within a [person’s] skin” (op cit.) remains as yet a grassroots strategy aiming for spatial spread across local jurisdictions. The hope of the activists is that once a critical threshold of ordinance towns is reached, the matter of biopolitical resistance to food and agricultural regulations which trump personal judgment will gain more political traction in the State House.

In a conceptually parallel development, a strategy is in motion to introduce bills in the state houses of six New England States to require that foods sold in each state that have genetically modified organisms (GMOs) among their ingredients be labeled as such. Each bill will require that all the adjacent states pass the same bill in order for it to take effect. Debates over the merits of genetically modified organism in foodstuffs, as well as over labelling requirements are deeply biopolitical, and revolve around competing truth discourses, quite different interventions authorized by competing discourses, and a suite of knowledge technologies that make different dimensions of the GMO problem legible to different publics.

A major strategy of GMO advocates has been to obscure information about the use of GMOs in food products. Just as the Wisconsin Supreme Court Justice acknowledged the diffusion of scientific knowledge about pasteurization as part of common knowledge, so do GMO advocates recognize that importance of the spread of knowledge about genetic modification. Whereas the justice recognized that such knowledge had already spread widely and thus could inform jurisprudence, GMO advocates seek to limit the spread of knowledge about GMOs in food so as to limit the potential for adverse legislation. The spatial spread built into the political initiative to require GMO labelling on food sold in New England responds in part to the power of market conditions, but also seems designed to catalyze the spread of knowledge and debate about the use of GMOs in food production. The spread of labelling requirements enables more and more people to participate knowledgeable in the management of their own biology.

In the cases of multiplying local ordinances to protect local foodways and biological practices and state legislation designed to aggregate demands for information with which to manage biological health highlight the spatiality of strategies of biopolitics. Biopolitics resist the effects of biopower, and do so in

particular arenas for decision-making shaped by uneven power relations. Truth discourses – about the merits or dangers of raw milk, about the judgement of farmers and consumers about healthful food, about the merits or dangers of genetically modified foodstuffs – flow unevenly through society. Truth discourses pool in certain settings, where they authorize some interventions and rule out others. Some institutions, such as the town meeting traditions, enable direct participation in biopolitics, whereas others filter such participation through indirect political representation or the judiciary. This overview is necessarily schematic, but is intended to highlight the persistent spatiality and unevenness of the exercise of biopower as well as biopolitics of resistance.

CONCLUSION

As the scale of food and agricultural regulations grows both more extensive, and potentially more invasive, under the auspices of the federal Food Safety and Modernization Act of 2010, it will be important to examine critically the exercise of contemporary biopower in the food system. This paper has sought to highlight the utility of examining the spatial expression of biopower, as well as the ways in which truth discourses which fuel biopower and biopolitical resistance percolate through arenas that are themselves shaped by agendas and hierarchies. Thinking spatially about biopolitics dovetails with Foucault's attention to "the concrete ways in which power penetrates subjects' very bodies and forms of life" (Agamben 1998: 5). The lenses of biopower and biopolitics offer tremendous insight into food and agricultural regulation, as well as myriad other forms of food politics. Studies of food politics can in turn be used to further elucidate the dynamics of biopower and biopolitics themselves.

REFERENCES

- AGAMBEN, G. (1998): *Homo Sacer: Sovereign Power and Bare Life*, New York, Meridien.
- ARTHUR, F.W. (1920): *Wisconsin Reports: Cases Determined in the Supreme Court of Wisconsin*, February 10-June 1, 1920, Volume 171, Banta Publishing, Menasha, Wisconsin.
- BRAUN, B (2007): "Biopolitics and the molecularization of life", *Cultural Geographies*, 14: 6-28.

- BROOKS, S. (2005): "Biotechnology and the politics of truth: from the green revolution of the evergreen revolution", *Sociologia Ruralis*, 45(4): 360-379.
- DUPUIS, E. (2002): *Nature's Perfect Food*, New York, New York University Press.
- ELDEN, S. (2007): "Governmentality, Calculation, Territory", *Environment and Planning D: Society and Space*, 25(3): 562-80.
- FOUCAULT, M. (2003): *Society Must be Defended: Lectures at the College de France, 1975-76*, ed. M. BERTANI and A. FONTANA, English series ed. A. Davidson, trans. D. Macey. Picador, New York.
- FOUCAULT, M. (2008): *The Birth of Biopolitics: Lectures at the College de France, 1978-79*, ed. M. Senellart, F. Ewald and A. Fontana, English series ed. A. Davidson, trans. G. Burchell. Basingstoke, Palgrave MacMillan.
- GUMPERT, D. (2009): *The Raw Milk Revolution: Behind America's Emerging Battle Over Food Rights. White River Junction, VT*, Chelsea Green Publishing.
- HANNAH, M. (2011): "Biopower, life and left politics", *Antipode*, 43(4): 1034-1055.
- HOLLOWAY, L., MORRIS, C., GILNA, B., and GIBBS, D. (2009): "Biopower, genetics and livestock breeding: (re)constituting animal populations and heterogeneous biosocial collectivities", *Transactions of the Institute of British Geographers*, 34(3): 394-407.
- HOPKINS, R. (1925): "The Prohibition and Crime", *The North American Review*, 22(28): 40-44.
- KURTZ, H. (2015): "Scaling Food Sovereignty: Biopolitics and the struggle for local control of farm food in rural Maine", *Annals of the Association of American Geographers*, 105(4): 1-19.
- KURTZ, H., TRAUGER, A. and PASSIDOMO, C. (2013): "The contested terrain of biological citizenship in the seizure of raw milk in Athens, Georgia", *Geoforum*, 48: 136-144.
- LATOUR, B. (1988): *The Pasteurization of France. Trans. A. Sheridan and J. Law*. Cambridge, MA, Harvard University Press.
- LEVING, J. (2009): *New culture war: Raw milk fans vs. FDA, CDC, USA Today* (October 16) p. 3A.
- NALLY, D. (2011): "The biopolitics of food provisioning", *Transactions of the Institute of British Geographers*, 36: 37-53.
- National Association of State Departments of Agriculture. (2011): *Regulation of Raw Milk 50-State Survey*. [Internet] <http://nasda.org>.

- NICHOLS, W., MILLER, B. and BEAUMONT, J., eds. (2010): *Spaces of Contention: Spatialities and Social Movements*, New York, Ashgate.
- PAXSON, H. (2008): "Post-Pasteurian culture: The microbiopolitics of raw-milk cheese in the United States", *Cultural Anthropology*, 23(1): 15-47.
- PFEFFER, v. MILWAUKEE, 171 Wis. 514 (1920).
- RABINOW, P. and ROSE, N. (2006): "Biopower today", *BioSocieties*, 1: 195-217.
- ROSE, N. (2001): "The politics of life itself", *Theory, Culture and Society*, 18(6): 1-30.
- SCHLOSSER, K (2008): "Biopolitical geographies", *Geography Compass*, 2: 1621-1634.
- SMITH-HOWARD, K. (2012): *Pure and Modern Milk: An Environmental History Since 1900*, Oxford, Oxford University Press.
- SPEAKE, M. (2011): "Infectious milk: issues of pathogenic certainty within ideational regimes and their biopolitical implications", *Studies in History and Philosophy of Biological and Biomedical Sciences*. doi:10.1016/j.shpsc.2011.06.002.
- WEISBECKER, A. (2007): "A legal history of raw milk in the United States", *Journal of Environmental Health*, 69(8): 62-63.
- WHATMORE, S. (1995): "From farming to agribusiness: The global agro-food system. In Geographies of Global Change: Remapping the World in the Late 20th Century," in R.J. Johnston, Peter Taylor and Michael Watts, eds. Oxford: Blackwell, pp. 36-49.
- WRIGHT, and HUCK, (2002): "Counting cases about milk, our 'most nearly perfect' food, 1860-1940", *Law and Society Review*, 36(1): 51-111.

Recibido: 9 de julio de 2015

Aceptado: 20 de agosto de 2015

Hilda Kurtz is an Associate Professor in the Department of Geography at the University of Georgia in Athens, Georgia (US). Her current research focuses on the biopolitical stakes in controversy over access to controversial foodstuffs such as raw milk and un-licensed and -inspected locally produced food-. She has published primarily in geography journals such as *Geoforum*, *Antipode*, *Urban Geography*, *Space and Polity*, *Gender, Place and Culture* and the *Geographical Review*. She is currently working on a book about the local food and community self-governance.

hkurtz@uga.edu