FOOD REGIMES AND AGRARIAN QUESTIONS

Agrarian Change and Peasant Studies

PHILIP MCMICHAEL

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Preface to the 2021 ebook edition

The year *Food Regimes and Agrarian Questions* (2013) appeared coincided with China's enhanced engagement with the global food regime via corporate and state investments along its Belt and Road Initiative, diversifying access to offshore foodstuffs. So regime multi-polarity intensified alongside new patterning of infrastructural investment in food commodity chains. The ensuing years have seen a deepening of corporate power in the food regime with states and firms competing for world market positioning. Global supply chain proliferation, formed through complex articulations of corporate and financial deals *with, within, and across* states, encircles the world with compounding flows of foods, feed and ingredients.

Such power accumulation comes at the expense of territorial food sovereignties – reproducing the central tension in the current food regime. This is glaringly evident in India's BJP governing party's recent farm law ordinances: to power a global agribusiness agenda eroding protections for millions of landless and small farmers, and citizen food security rights. The related threat to forest-land rights of *Adivasi* communities replicates the original extinction of indigenous life-worlds on New World white settler 'frontiers,' as the initial international food regime formed.

With these developments, the corporate food regime appears to be reaching its climax. Such state-assisted market entitling of large-scale financial and corporate interests in India culminates a quarter-century of WTO-style liberalization of food trade and investments, precipitating large-scale land (and habitat) confiscations and labor migrations. The global expression of this climactic process has been the United Nations' capitulation to the World Economic Forum's orchestration of a Food System Summit in 2021, promoting corporate capture of global food system governance. This power grab, in the guise of 'stakeholderism' (versus multilateralism), marginalizes the inclusive practice of the UN's Committee on World Food Security (CFS) and its obligatory responsibilities for global governance and protection of citizens' food rights.

La Vía Campesina, a food sovereignty movement leader,

characterizes industrial (and now digital) agriculture as 'agriculture without farmers.' While this refers to the substitution of shared farmer knowledges and seeds by commodified external inputs and technologies, it also references the expulsion of small-scale producers, as well as factory farming of animals. One 'agri/business as usual' techno-response to the latter danger to public and environmental health is the emerging lab-grown nutritionism, deployed by corporate 'protein producers.' Meanwhile, with deteriorating environmental conditions, declining monocultural yields, rising farm debt, intersectional exploitation of farm- and food-workers, and rising hunger with pandemic disruptions of food supplies, food sovereignty politics and agroecological practices are gaining grassroots recognition and public support – notably in southern India's mushrooming Zero Budget Natural Farming, and the 2019 CFS High Level Report on Agroecology. These developments register the corporate food regime's countermovement, anchored in grassroots collective advocacy and ecological experimentation, extending now to mid-sized 'conventional' farms. They are born of necessity and activism to protect and rebuild soils and nested territorial agri-food markets. Revaluing of food system diversity, and public and planetary health, reformulates the current agrarian question, rejecting food regime capital-centrism.

Philip McMichael, Ithaca, New York, May, 2021.

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Contents

ICAS Agrarian Change and Peasant Studies Series

The Agrarian Change and Peasant Studies Series by the Initiatives in Critical Agrarian Studies (ICAS) contains 'state of the art small books on big issues' that each explain a specific development issue based on key questions. The questions include: What are the current issues and debates in the particular topic? Who are the key scholars/thinkers and policy practitioners? How have the positions emerged and developed over time? What are the possible future trajectories? What are the key reference materials? Why and how it is important for NGO professionals, social movement activitists, official development aid and nongovernmental donor agencies, students, academics, researchers and policy experts to critically engage with the key points explained in the book? Each book combines theoretical and policy-oriented discussion with empirical examples from different national and local settings.

In the book series initiative, the overarching theme, 'agrarian change,' binds scholars, activists and development practitioners from diverse disciplines and from all parts of the world. 'Agrarian change' is meant in its broadest sense, referring to an agrarian-rural-agricultural world that is not de-linked from, but rather taken in the context of, other sectors and geographies: industrial and urban, among others. The focus is on contributing to our understanding of the dynamics of 'change'; meaning playing a role not only in (re)interpreting the agrarian world in various ways but also in changing it — with a clear bias for the working classes, for the poor. The agrarian world has been profoundly transformed by the contemporary process of neoliberal globalization, demanding new ways of understanding structural and institutional conditions, as well as new visions of how to change these.

The Initiatives in Critical Agrarian Studies is a worldwide *community* of like-minded scholars, development practitioners and activists who are working on agrarian issues. The ICAS is a *common ground*, a common space for critical scholars, development practitioners and movement activists. It is a pluralist initiative, allowing vibrant exchanges of views from different progressive ideological perspec-

tives. The ICAS responds to the need for an initiative that builds and focuses on *linkages* — between academics, development policy practitioners and social movement activists; between the world's North and South, and South and South; between rural-agricultural and urban-industrial sectors; between experts and non-experts. The ICAS advocates for a *mutually reinforcing* co-production and *mutually beneficial* sharing of knowledge. The ICAS promotes *critical thinking*, which means that conventional assumptions are interrogated, popular propositions critically examined and new ways of questioning composed, proposed and pursued. The ICAS promotes *engaged research and scholarship*; this emphasizes research and scholarship that are both academically interesting and socially relevant, and further, implies taking the side of the poor.

The book series is financially supported by the Inter-Church Organization for Development Cooperation (ICCO), the Netherlands. The series editors are Saturnino M. Borras Jr., Max Spoor and Henry Veltmeyer. Titles in the series are available in multiple languages.

Acknowledgements

The late Terence K. Hopkins first introduced me to the agrarian question, with an inspired reading of Lenin's *Development of Capitalism in Russia* in my first graduate seminar. It became the lodestar for my dissertation on the agrarian question in colonial Australia, which the late Fred Buttel read. With his inimitable foresight Fred invited Harriet Friedmann and I to co-write a conference paper on food and capitalist history. Harriet's brilliant research on the world wheat market anticipated food regime analysis. I learned much from these three colleagues, as well as from Dale Tomich. We were preoccupied with questions inspired by the Binghamton school, formed around Hopkins and Immanuel Wallerstein, regarding the political world-history of capital, its agrarian social forms, and Marx's historical method. These big questions informed the food regime project, providing a precious career-long collaboration with Harriet, despite our living under somewhat different regimes. I have also learned much from my antipodean Agri-Food Research Network colleagues.

In the early 1990s, Fred Buttel and I eulogized the agrarian question, but Farshad Araghi soon revived it via his impressive research on depeasantization. He and Raj Patel have been marvelous intellectual *provocateurs* over the past decade and a half, with Dia DaCosta teaching me how to think outside of the capital box and realize the dialectic. My extraordinary graduate students and Harriet's work on the Toronto Food Policy Council showed me ways to connect research with the world of activism. In the early 2000s I was fortunate to meet Nettie Wiebe at a counter-movement organizing meeting in Mexico City anticipating the WTO's 2003 Ministerial. Nettie, a founding member of Vía Campesina, first inspired my interest in the food sovereignty movement, which then brought me to Jun Borras, to whom I am grateful for intellectual and moral leadership as a scholar-activist, and for constant support. Jun's energy is infectious – it's a sign of our times, and what he is accomplishing with editing this series and *The Journal of Peasant Studies* is an invaluable service to academic and movement people alike. Jun and Farshad and Jason Moore have offered their keen insights and encouragement in

the preparation of this book. Kate Kennedy has enhanced the text with her thoughtful copy-editing, and Beverley Rach has been a particularly benign managing editor.

Food Regimes and Agrarian Questions is an attempt to rewrite the food regime project, not in a comprehensive way, so much as an illustrative way, to open up new questions regarding the agri-food world in general, and the food regime approach in particular. The original work Harriet and I produced was a stylized outline of the political significance of world-scale agri-food relations, to be developed by fellow analysts in the academic as well as the activist world. It is my hope that future interpretations will improve and expand its promise as a politicizing lens on agri-food questions.

Preface

Food Regimes and Agrarian Questions by Philip McMichael is the third volume in the Agrarian Change and Peasant Studies Series by ICAS (Initiatives in Critical Agrarian Studies). The first is Henry Bernstein's *Class Dynamics of Agrarian Change* and the second is *Peasants and the Art of Farming* by Jan Douwe van der Ploeg. Phil's volume is the perfect follow up as it builds on and engages with the key themes addressed in the first two. Together, these three books reaffirm the strategic importance and relevance of agrarian political economy analytical lenses in agrarian studies today. They set a standard for the series as politically relevant and scientifically rigorous.

A brief explanation will help put into perspective this volume in relation to the ICAS intellectual and political project. Global poverty remains significantly a rural phenomenon, with three-fourths of the world's poor comprised of the rural poor. Thus the problematic of global poverty and the challenge of ending poverty, which is a multidimensional issue (economic, political, social, cultural, gender, environmental, and so on), are closely linked to the resistance of working people in the countryside against the system that generates and continues to reproduce the conditions of rural poverty and their struggles for sustainable livelihoods. A concern for and focus on rural development remains critical to development thinking. However, this concern and focus does not mean de-linking rural from urban issues. The challenge is to understand better the linkages between them, partly because the pathways out of rural poverty paved by neoliberal policies and the efforts by mainstream international financial and development institutions leading the war on global poverty to a large extent simply replace rural with urban forms of poverty.

The mainstream thinking on agrarian studies is generously financed, and so it has dominated the production and publication of research and studies in agrarian issues. Many of the institutions (such as the World Bank) that propagate this thinking also produce and propagate highly accessible and policy-oriented publications that are widely disseminated worldwide. Critical thinkers in leading academic institutions challenge this mainstream current in many

ways but such views are generally confined to academic circles, with limited popular reach and impact.

There remains a significant gap in addressing the need of academics (teachers, scholars and students), social movement activists and development practitioners in the global South and the North for scientifically rigorous yet accessible, politically relevant, policy-oriented and affordable books in critical agrarian studies. In response to this need ICAS has launched this book series. The aim is to publish "state of the art" small books that will explain a specific development issue based on key questions, including: what are the current issues and debates in this particular topic and who are the key scholars/thinkers and actual policy practitioners, how have such positions emerged and developed over time, what are the possible future trajectories, what are the key reference materials, why and how it is important for NGO professionals, social movement activities, official development aid circle and nongovernmental donor agencies, students, academics, researchers and policy experts to critically engage with the key points explained in the book. Each book combines theoretical and policy-oriented discussion with empirical examples from different national and local settings.

The series will be available in additional languages, at least initially in Chinese, Spanish and Portuguese. The Chinese edition is in partnership with the College of Humanities and Development of the China Agricultural University in Beijing coordinated by Ye Jingzhong, the Spanish edition is coordinated by the PhD Programme in Development Studies at the Autonomous University of Zacatecas in Mexico coordinated by Raúl Delgado Wise, and the Portuguese edition with the Universidade Estadual Paulista, Presidente Prudente (UNESP) in Brazil coordinated by Bernardo Mançano Fernandes.

We are very pleased and honored to have Henry Bernstein's book as the first, Jan Douwe van der Ploeg's as the second, and Phil McMichael's as the third in the series: together they are a perfect fit in terms of theme, accessibility, relevance and rigour. We are excited and optimistic about the bright future of the Series!

—Saturnino M. Borras Jr., Max Spoor and Henry Veltmeyer
ICAS Book Series Editors

Chapter 1

The Food Regime Project

The food regime project is an ongoing analysis by scholars and activists of the political geography of the global food system. At each end of extensive food supply chains producers and consumers are increasingly aware of the global reach of the twenty-first-century food system (Patel 2007). Producers, ranging from contract farmers through migrant and plantation workers to smallholders dispossessed in the name of global food system efficiencies, are keenly aware of how their labor, resources and habitats serve consumers elsewhere. Consumers, dining along the global food chain, from hamburger to beefsteak, are increasingly confronted with disparities between food from somewhere and food from nowhere (Bové and Dufour 2001). How the food chain binds and transforms the world's different cultures via commodification is the subject of the food regime project.

The "food regime" concept was a product of its time: of declining national regulation and rising "globalization." Food regime analysis combined Immanuel Wallerstein's concept of the world system (1974) and Michel Aglietta's concept of regulation of capital accumulation (1979), situating the rise and decline of national agricultures within the geopolitical history of capitalism. It was not simply about food, but about the politics of food relations. An initial definition of the food regime stated that it linked "international relations of food production and consumption to forms of accumulation broadly distinguishing periods of capitalist transformation since 1870" (Friedmann and McMichael 1989: 95). Capitalism was periodized in geopolitical terms and its periodization coincided with two different moments in the life of the nation-state. This analysis interpreted the historical conditions under which the nation-state emerged through the lens of the agri-food trade. It built on the insight that the integrated national economy, absent in Britain's "workshop of the world" strategy, came forth in the settler states of the New

World. Here, national agricultural and industrial *sectors* were mutually conditioning.

The food regime project arose in the late 1980s in a "de-nationalizing" context where states faced the prospect of transformation from within by agri-food restructuring on a world scale, and from without as new multilateral principles were under debate in the General Agreement on Tariffs and Trade (GATT) Uruguay Round (1986–1994). These principles appeared likely to subordinate states to international property relations attending agro-food restructuring. After a decade of neoliberalism this was a moment of significant transition in the organization of states and economies, political systems, empire and the world order. Global strategies of transnational corporations (TNCs) were superseding the managed trade of the post-war era of national regulation. The term "globalization" was migrating from the business press to academic and public discourse. Global commodity chains delivering year-round fruits and vegetables from seasonally differentiated world regions were increasingly organized by agribusinesses specializing in agro-inputs, plantation and farming contracts, and processing and distribution. Western diets followed a pervasive grain trade. Agro-food restructuring unleashed powerful integrating forces, standardizing processes across space or reconfiguring spatial relations as differentiated elements of a shared global process (McMichael 1994: 3). In this sense "globalization" was a formative, and contradictory, process — a *mechanism of restructuring* rather than an inevitable outcome (as often assumed in social scientific and popular discourse).

The food regime project, then, emerged as a methodological initiative to specify relations between world ordering and agro-food trade. It claimed that episodes of restructuring and transition are bounded by periods of stable patterns of accumulation. It is an intrinsically *comparative* approach to recent world history, insofar as food regimes come and go with political re-ordering, in a mutually conditioning dynamic.[1] The distinctiveness of the first two food regimes lay in the instrumental role of food in securing global hegemony — in the first, Britain's "workshop of the world" project linked the fortunes of an emergent industrial capitalism to expanding cheap food supply zones across the world; in the second, the United States

deployed food aid to create alliances, markets and opportunities for its intensive agro-industrial model. Market hegemony defines the third food regime and its role in a broad neoliberal project dedicated to securing transnational circuits of money and commodities (including food) — displacing smallholders into a casual global labor force for capital. The cyclical incidence and transitional footprints of food regimes signal an underlying truth, namely, that the state system is deeply rooted in agro-food relations. As we know now, in the twenty-first century, human civilization has no more important foundation than its ecosystems and food supplies, and contemporary political ordering ignores this at its (and our) peril.

Food Regime Analysis

The concept of the "food regime" emerged in an initial formulation by Harriet Friedmann (1987) deriving from previous research on the post-World War II international food order. Here she charted the rise and demise of the U.S. food aid program as a geopolitical weapon in the Cold War (Friedmann 1982). Evidence of a relatively stable world price for grain during the course of this program (1954–1970s) echoed research on a similar episode of a governing world grain price in the late nineteenth century (Friedmann 1978), this time via the food-importing relationship Britain established with its "free trade empire," and especially those settler states exporting grains and meat. Research on the agrarian question and the rise of the settler state (McMichael 1984) suggested a sequential link between these two episodes, centered on the changing of the imperial guard: from Britain to the most powerful settler nation, the United States. Here the pivot of the capitalist world economy shifted from the former to the latter, as Britain's world empire subsided and the American national economy matured with the "taming" of the continent. The ongoing maturation of the nation-state system was evidently bound up with the transformation of agriculture and its role in the world food trade.

Accordingly, in 1989 an exploratory article entitled "Agricultural and the State System. The rise and decline of national agricultures, 1870 to the present" appeared in *Sociologia Ruralis*, claiming to

explore "the role of agriculture in the development of the capitalist world economy, and in the trajectory of the state system" (Friedmann and McMichael 1989: 93). The proximate reason for this focus was the long shadow cast by developmentalism in the post-World War II era, a shadow now receding in the face of critiques from dependency and world-systems analysis. Two key claims in these exchanges animated the food regime project. The conventional, developmentalist school emphasized the dynamic complementarity of agricultural and industrial sectors in the modern "national economy" as the source of development (Rostow 1960). The dependency school argued this complementarity was only evident in the "advanced capitalist" economies, as peripheral economies were shaped by export dependency during the colonial era (Amin 1974; de Janvry 1981). The economic dynamism of the United States certainly derived from such an "internal" dynamic during the period of crisis and transition of the British "outer-directed" model (early twentieth century). Nevertheless, the food regime concept underscored the export agricultural profile of the settler and colonial states, and therefore that national inter-sectoral articulation was an *ideal* representation of a more complicated historical reality. In fact the postwar U.S. development project proclaimed the "national economy" as the universal (ideal) goal for post-colonial states (McMichael 1996).

Food regime analysis, then, pivoted on the U.S. role in provisioning Europe, and then the Third World, from its extensive and then intensive commercial agriculture across periods of British and then U.S. world-economic hegemony. Food regime analysis was not simply about international agricultural relations of production and consumption, but also about the role of commercial agriculture in the process of state building in the modern age. Across these two periods, this role involved supplying rising urban-industrial complexes (whether domestic or overseas) with raw materials and food, thereby strengthening national industry. And during this time, New World agriculture was decisive in fueling industrialization, first in European states and subsequently in Third World states.

In this sense the food regime nurtures the state/market relationship. It has been associated with the international political-economic orders institutionalized during the periods of hegemony of the British

and American states, and, more recently, during the period of dominance of the World Trade Organization as a member state organization responsible for international trade rules. While the former two world orders were governed by the principles of freedom of trade, and development aid (alongside freedom of enterprise), respectively, the latter trading system has been governed by neoliberal principles espousing both freedoms. These principles have applied unevenly, where corporate farmers in the global North have retained significant subsidies at the expense (via world market dumping of surplus food) of farmers in the global South for whom import protections are removed, and where agribusiness (predominantly northern) has enjoyed global mobility.

Food Regime Contours

The first, British-centered food regime (1870–1930s) combined colonial tropical imports to Europe with basic grains and livestock imports from settler colonies, provisioning emerging European industrial classes in general, and underwriting the British "workshop of the world" in particular. Complementing monocultural agricultures imposed in colonies of occupation, Britain outsourced its staple food production in the mid-nineteenth century to colonies of settlement, exploiting virgin soil frontiers in the New World. The establishment of commercial agricultural sectors within the emerging settler states (notably U.S.A., Canada and Australia) modeled twentieth-century "development" as an articulated dynamic between national agricultural and industrial sectors.

The second, U.S.-centered food regime (1950s–1970s) rerouted flows of (surplus) food from the United States to its informal empire of strategic postcolonial states on the Cold War perimeter. Food surpluses stemmed from price-supported farm programs, driving a cheap food aid program that subsidized manufacturing wages for select Third World states, securing anti-communist loyalty and imperial markets. Development states internalized the U.S. model of national agro-industrialization, adopting Green Revolution technologies, and instituting land reform to dampen peasant unrest and extend market relations into the countryside. Meanwhile, agribusi-

ness elaborated transnational linkages between national farm sectors, which were subdivided into a series of specialized agricultures linked by global supply chains (e.g., the transnational animal protein complex linking grain/carbohydrate, soy/protein, and lot-feeding). In other words, while the national model of economic development framed the politics of decolonization, a "new international division of labor" in agriculture emerged around transnational commodity complexes (Raynolds et al. 1993).

A third, corporate food regime (1980s–2000s) has deepened this process, incorporating new regions into animal protein chains (e.g., Brazil/China), consolidating differentiated supply chains into a "supermarket revolution" (Reardon et al. 2003), and subdividing quality and standardized foods to provision bifurcated class diets. Dumping of northern-subsidized food surpluses (e.g., grains, milk powder, animal protein parts) intensified under WTO liberalization rules, displacing "inefficient" farmers, generating populations of displaced slum-dwellers, and fueling a global counter-movement of farmers, fisherfolk, pastoralists and landless workers. A unifying principle of food sovereignty advocates democratic policy regarding rights for farmer/peasants, local food security and ecological farming for soil and human health. Whether inspired by alternative social visions, or political (and ecological) exigencies of a food system dependent on fossil fuels, such counter-movements register the deepening crisis of industrial agriculture.

Each period, and the transitions between them, have reframed the politics of development and the scope and significance of agricultural and food technologies, including future implications (concerning environmental sustainability, food access and security, energy relations, intellectual property rights, population displacement, nutrition and public health). In this sense, the food regime concept offers a unique comparative-historical lens on the political and ecological relations of modern capitalism writ large.

While each regime has its own institutional profile, it is the case that elements of former regimes carry over into successor regimes, in reformulated fashion.[2] Thus, where the late nineteenth-century food regime was critical to world market development via British manipulation of the gold standard,[3] its early twentieth-century crisis

culminated in completion of the inter-state system (with decolonization) under U.S. hegemony — via a new food regime integrating an anti-communist bloc with aid and investment initiatives to secure post-colonial nation building. A successor, corporate food regime combined elements of each of the former regimes, restoring the world market principle via a contradictory nexus of northern farm protectionism and liberalization of southern farm sectors and food markets. The new, neoliberal organizing principle involved the explicit subordination of states to markets and a regime based on the commodification of food provisioning. It is this latter resolution that informs Araghi's concept of "capital's food regime" (2003), based in global value relations — first appearing in the British-centered food regime and then reappearing in the late twentieth century (cf. McMichael 1999). While food-exchange regulation, enabled through international currencies (sterling/gold and dollar/gold), may have been the initial focus of food regime analysis, it begs the question of the underlying value relations, or accumulation dynamic, that conditions the state/market nexus in each world food order, including technological, financial, labor and ecological relations.

Food Regime Method

To say the food regime is constituted through state/market relations is simply to underline the political dimensions of markets. But this is an abstraction unless we specify the state/market relation in time and space. So far food regime analysis has focused on time and space coordinates associated with Anglo-American temporal and spatial relations — arguably because these coordinates have shaped recent world orders and/or how we think about such ordering. These coordinates are losing their salience in today's multi-polar world, and, accordingly, the original food regime conception is undergoing a transformation as we experience transition and massive global uncertainty.

Whether food regime analysis is up to the task of interpreting current developments depends on how it is deployed. It has been largely deployed as a periodic marker of relatively stable agri-food orders. Bill Pritchard views it as a "tool of hindsight. It can help order and organize the messy reality of contemporary global food politics,

but its applications are necessarily contingent upon an unfolding and unknowable future" (2007: 8). Such contingency nevertheless is open to interpretation, particularly as transitional periods express an unraveling of a prior regime as a consequence of its structural (and discursive) tensions. Given the origins of food regime analysis in state/market relations, transitional periods will entail transformations in these relations as they condition the organization and uses of global agriculture. While social and political contention may be contingent, the food regime attention to unfolding political-economic relations and their tensions nonetheless helps to organize our understanding of the parameters and what is at stake. This is the point of historicization.

The food regime project historicizes by detailing the political construction of agri-food orders shaped by, and shaping, specific accumulation dynamics. In this sense, the food regime and the history of capital can be understood as mutually conditioning. *Formally*, the food regime concept defines a capitalist world order governed by rules structuring the production and consumption of food on a world scale (Friedmann 1993: 30–31). *Substantively*, the food regime concept concerns the projection of power via food circuits arising from historically specific relations of production and accumulation of capital. *Abstractly*, the food regime may be understood as "the political face of world historical value relations" (Araghi 2003: 51). This refers to the political structuring of world capitalism, and its organization of agricultures to provision labor and/or consumers in such a way as to reduce wage costs and enhance commercial profits. *Concretely*, a food regime represents a particular world-historical conjuncture in which governing rules define a world-price-governed relationship of food provisioning.

Such rules express historic forms of the exercise of power, via a legitimizing ideology, such as free trade, development aid, and free enterprise. Three such periods have been identified, corresponding to geopolitical-economic conjunctures dominated by the British state (1870s–1930s), the U.S. state (1950s–1970s), and corporate-financial power (1980s–2000s). The configuration of power in each period has been quite distinct, with the unifying feature being the organization of world food production and circulation to sustain that

power configuration, rooted in a particular accumulation dynamic. The two claims that follow from this are: (1) capitalism does not follow a linear path, rather it involves politically organized cycles of accumulation, and (2) agri-food relations are central to such political orders insofar as they sustain material and legitimacy requirements. An additional claim, to be developed below, is that, consistent with the history of capital, the food regime is premised on forms of enclosure across time and space. This dimension is critical because enclosure alters ecological relations: substituting world-extractive for local-extractive processes, thereby foreclosing local futures for a capitalist future driven by variable and unstable market, rather than enduring socio-ecological needs.

Food Regime Specifications

Designation as a "food regime project" emphasizes the versatility of food regime analysis. In particular it involves conceptual evolution by a number of analysts (as this book will also attempt) as well as application to particular processes or emergences in order to situate and clarify their broader historical or political implications. Richard LeHeron and Nick Lewis have argued, for example: "Conventionally, what regime theories do in their abstraction is to encourage understandings of the world that exclude subjects and subjectivities…. The early FR literature and some subsequent work have been typically characterised by the drive to specify distinctive regimes—with the attendant risk of obscuring diversity and fluidity of the relations, actors, metrics, translations and contexts" (2009: 346). This admonition is addressed in due course.

Meanwhile, Friedmann has defined the food regime as a "rule-governed structure of production and consumption of food on a world scale" (1993: 30–1). How the rules emerge in the process of shaping global relations of food production and consumption is detail left to the following chapter, suffice to say that they represent the outcome of social and institutional struggle and negotiation over the terms of food provisioning and the related exercise of power. Friedmann suggests that: "food regimes emerge out of contests among social movements and powerful institutions, and reflect a

negotiated frame for instituting new rules. The relationships and practices of a regime soon come to seem natural. When the regime works really well, the consequences of actions are predictable, and it appears to work without rules" (2005: 234).

Such a definition of implicit rules suggests the notion of a class compromise, or a hegemonic outcome of normalization, whereby global food relations come to structure world economy and its constituent elements for a time in such a way as to appear quite rational. Thus the first, British-centered food regime was framed within:

> a general rhetoric of free trade and the actual workings of the gold standard. The world wheat market that arose in the decades after 1870 was not really anyone's goal. However, vast international shipments of wheat made possible what actors really wanted to do.… Wheat was the substance that gave railways income from freight, expanding states a way to hold territory against the dispossessed, and diasporic Europeans a way to make an income. (Friedmann 2005: 231–2)

With wheat as the thread, this food regime clearly bound settler farmers to industrial consumers (firms and wage-workers) across the Atlantic. Through a state-building process, the organization of a wheat frontier conditioned the provisioning of growing factory labor forces requiring affordable food, and vice versa. Ultimately the construction of this frontier for cheap food served the interests of capital, in particular its requirements for reproducing an expanding wage-labor force at low cost. The implicit rules concerned the elaboration of international trade relations (beyond former direct-trade colonial systems), triggered by prior abolition of the Corn Laws (protecting English farmers from agricultural imports) and facilitated by the gold standard and the City of London's manipulation of sterling balances to maintain and expand trading relations (McMichael 1984). The international division of labor that defined the colonial system deepened and accelerated trade among nations as the ultimate implicit rule underpinning the food regime. That is, it affirmed the Ricardian principle of "comparative advantage," by which optimal economic growth depended on nations specializing

in producing and trading products determined by their relative resource endowments.

Friedmann's notion of implicit rules is a subtle method of establishing that a food regime involves a period of "relatively stable sets of relationships," with "unstable periods in between shaped by political contests over a new way forward" (2005: 228). This means that what works, under specific historical circumstances, is not the direct expression of interest, so much as the distillation of political struggles among contending social groups. Nonetheless, power in the capitalist era ultimately resides in property relations and the force of commodification, so while each episode reflects distinctive contention as social and ecological landscapes change, a politics of capital frames the resolution. As such, cheap food is the condition for the accumulation of power (cf. Moore 2012). Cheap food is not simply about lowering wage costs, but also building legitimacy for particular socio-political orders, whether provisioning classes in industrializing European states, aiding industrializing Third World states on the Cold War perimeter, or supplying the food processing and "supermarket revolution" in the neoliberal age of increasing obesity (Reardon et al. 2003). Each regime has particular conditions for cheap food, and each relatively stable set of relationships are expressed in a world price governing production, circulation and consumption of food.

Friedmann's refocusing on social contention and the elaboration of implicit rules softens the initial structuralist conception of food regimes, which blended an insight from regulation theory with one from the world system perspective. Regulation theory offered the idea of a "mode of regulation" expressing a policy environment conducive to an "accumulation regime" and its normalization (Aglietta 1979). In this formulation a food regime represented a stable regulatory arrangement of international food relations supporting a particular form of accumulation. Thus, the emphasis on reducing labor costs in late nineteenth-century European manufacturing with cheap food from the colonies and settler states signified a regime of "extensive accumulation." In the mid-twentieth century, a new regime of "intensive accumulation" included the industrialization of agriculture as part of a "Fordist" model of consumer capitalism, with accumulation depending on mass-produced processed/durable foods, rather than

on simply reducing wage costs. The world system strand focused on the construction and reconstruction of the international division of labor and the geopolitics of international food provisioning in each period. The food regime concept combined these strands, ultimately emphasizing how the relationship of agricultural developments to state building was fundamental to understanding the rise and fall of periodic world orders.

The regulationist strand drew critique from postmodern and neo-empiricist thinkers who dismissed food regime analysis as a homogenizing grand narrative[4] and as confusing agriculture with industry, and then retreated to the analysis of anomalous, local agri-food case studies (cf. Goodman and Watts 1994, 1997) — an "agrarian particularism" throwing the baby out with the bathwater (Araghi 2003: 51). What critics missed in their rush to characterize the food regime as abstract globalism was a historical theory outlining a nonlinear political history of capital through the lens of food commodification on a world scale. While postmodernism promotes abstract localism, the food regime concept concretizes historical relations between state-building, land/frontier colonization, food circuits, agro-industrialization, consumption patterning, transnational corporate strategy, food and agrarian counter-movements, and more (as below). Rejecting both abstract localism (e.g., postmodernism) and abstract globalism (e.g., world-systems analysis), the food regime is ultimately a comparative construct that has no meaning outside of its world-historical coordinates (Araghi and McMichael 2006). It is not about farming, or rural geographies, per se, rather it conceptualizes how particular food complexes (from seed technologies through cropping systems to food processing/manufacturing) and food circuits in each regime support the exercise of particular forms of power in expanding and sustaining fields of market and ideological dominance.

Power relations in the state system include social mobilization, and for our purposes farmers, workers and consumers join firms and states (and their multilateral institutions where relevant) in food regime making and remaking. To underline this, Friedmann has refocused on regime transitions, where social movements act as "engines of regime crisis and formation" (2005: 229). Thus she

signals the key role of workers and farmers in shaping "colonial-diasporic" and "mercantile-industrial" food regimes. In the former, working-class unrest and migration contribute, with settlers constituting a frontier of family farmers who "could exist only through international trade, and would suffer most from a collapse of the regime" (2005: 236). The unraveling of this regime in grain price collapse and the dust bowl of the 1930s produced a "new type and significance of farm politics" pressuring the U.S. state for stabilization measures, and symbolized in the "mercantile" epithet of the second food regime. This was built on the basis of agricultural support and protectionist programs fueling agro-industrialization behind tariff walls, generating surpluses for a public food aid program. In laying the foundations for a successor "corporate-environmental" regime, Friedmann identifies contradictions in an unfolding "green capitalism," where "a new round of accumulation appears to be emerging in the agrofood sector, based on selective appropriation of demands by environmental movements, and including issues pressed by fair trade, consumer health, and animal welfare activists" (2005: 229).

Friedmann's renaming of the regimes is notable for the role of pairs. In the first, while "colonial" has a *residual* connotation, "diasporic" signifies farmer migrants to a new frontier of the world economy and so suggests an *emergent* political dynamic informing the "mercantile" epithet of the succeeding regime. The "industrial" epithet anticipates the corporate food system that is yet a regime-in-formation appropriating symbols and some demands of a broad environmental movement. The pair performs the task of identifying the key tensions within each food regime: the colonial/settler distinction in the first referring to a new state-building project on Europe's periphery that would become hegemonic, the state-managed disposal of food as aid to be superseded eventually by transnational integration deriving from the agro-industrial dynamic, and the ongoing struggle over food quality and environmental standards. These pairs characterize the socio-political tensions of each regime.

For Friedmann, the "corporate-environmental" regime is unrealized as yet because of the absence of regime-like conditions as defined in the International Organizations literature (Krasner 1983) — that is, "a specific set of (often implicit) relationships, norms,

institutions, and rules around which the expectations of all relevant actors converge" (Friedmann 2009: 335). In particular, Friedmann's corporate-environmental regime lacks a stabilizing (hegemonic) international currency regulating trade in a multi-polar world (ibid: 399). Thus: "money is increasingly and dangerously unstable. It is most directly connected to interstate power, that is, hegemonic conflicts which remain unresolved" (ibid: 388). Friedmann's point is that this is only an emergent regime (with a questionable future) because of the absence of a financial regulatory mechanism managing trade relations among states and her deep "reservations of the ability of capital to regulate itself" (ibid: 340fn).

There are several issues here. First, across the food regime era capital has transformed both itself and the state system. At the same time, sterling and dollar currencies have played distinct roles in organizing the state system: the former incubating it with loans via the manipulation of sterling accounts in London, and the latter fixing the terms of exchange among national currencies via the Bretton Woods system (Block 1974). Second, the dollar has operated since the early 1970s as the default world currency, manipulated as such by a declining hegemon's financial policies to attract capital to the United States (Arrighi 1994). Third, food provisioning under the U.S.-centered food regime was managed by surplus-disposal policy (Public Law-480) in bilateral trade resulting in counterpart funds deposits in host banks that sidestepped the Bretton Woods monetary system. Fourth, the food trade during the era of the "corporate" food regime (1980s–2000s) has been shaped by structural adjustment policies and by bilateral (NAFTA) and multilateral (WTO) trade agreements in parallel with the dollar system. And fifth, a substantial volume of food movement now occurs within and among subsidiaries of transnational corporations made possible by de-regulated global financial flows, including their own financial services (e.g., Pritchard and Burch 2003). In fact Burch and Lawrence argue: "it is the process of financialisation which 'frames' other social processes" (2009: 277) — presaging the restructuring of the corporate food regime (chapter 6), evident already in retail diversification and equity investment by supermarkets and by land grabbing for purposes of financial speculation.

Given these variable relations across the modern era, food regimes express relationships specific to their time/space coordinates, with variable structuring modalities. Stability is a relative term across quite different historical periods, and "convergence" can be just as powerfully expressed in a governing world food price as the expression of an agri-food order that may or may not pivot on a dominant or hegemonic currency. In this sense, the "corporate food regime" (McMichael 2005) pivoted on the internalization of neoliberal market principles by states subject to privatization via mandated structural adjustment and free trade agreements — as an alternative to a stable, hegemonic international currency. The fact of grossly uneven internalization in the ability of the E.U. and the U.S. to retain farm subsidies (replacing guaranteed farm prices with a world price), underscores the power relations managing commodity markets for about a quarter of a century. Systemically, neoliberalism displaced currency-regulated trade by imposing "an extreme form of international free trade regime both in corporeal assets (i.e., goods as well as services) and in incorporeal or financial assets (such as debt instruments, stocks and bonds)," and intellectual property rights, with international financial governance shifting "from states to 'private' institutions such as the Bank of International Settlements" (Nesvetailova and Palan 2010: 7–8).

Ultimately, the question concerns what is the stabilizing condition of a regime: trade, currency, or agri-food production relations and their realization through trade? The U.S.-centered food-aid regime would surely meet the latter criteria — given that its managed trade in food at concessionary prices stabilized world food prices at large (Tubiana 1989). Similarly, the world wheat market of the late nineteenth century was marked by falling prices just as the 1990s saw world staple food prices fall to their lowest point in 150 years (*The Economist*).

The stabilization issue informs Pritchard's view that we have not yet seen a third food regime. For him, the key question for food regimes analysts is "how to theorise agriculture's incorporation into the WTO." Instead of an institutional mechanism for market governance of food-society relations, he views the WTO as a state-centered "carryover from the politics of the crisis of the second food regime,

rather than representing any putative successor," and regards the 2008 collapse of the Doha Round as indicative of the failure to institute "unfettered market rule" (2009: 297). That is, the World Trade Organization's Agreement on Agriculture carried over protection of northern farmers despite claims for liberalization of the world food system — an argument developed also by Winders' particular focus on U.S. interventionist farm policies as the hegemon (2009). Pritchard remarks:

> during the first 5 years following the Uruguay Round's conclusion, the main effect of bringing agriculture into the WTO was not to reform global agriculture in line with market rationalities, but to aggravate already-existing uneven opportunities in the world food system. The combination of forced regulatory restructuring within the agricultural sectors of developing countries, and the maintenance of subsidy programs in most of the OECD, entrenched world food power in the hands of elite Northern interests. (2009: 301)

This, of course, is the point, namely that the WTO was an additional instrument, beyond structural adjustment policies, of restructuring world agriculture and trade relations, encouraging "an inter-hemispheric 'switch' in global agri-food exchange" — with northern commercial producers exporting lower-value commodity crops, livestock and dairy, and southern states consolidating high-value agro-exports, introduced during the debt regime of the 1980s. Thus: "whereas citizens of the global South were increasingly fed on U.S.-grown maize, European wheat or Antipodean milk powder, consumers in the affluent North filled their shopping trolleys with an increasing array of air-freighted foods originating from the global South" (idem).

The corporate food regime, then, is represented by WTO-style structuring of the world food order — a regime that stemmed ultimately from influence on the U.S. and E.U. governments by agri-food corporations "pressing for a supranational institution that would both legally entrench their control and contain the authority to extend it further" (Weis 2007: 132). This regime was linked to a normative logic of liberalization (Ibid: 159), even though the norm

was unevenly applied by displacing northern farm subsidies to a box system within the WTO's Agreement on Agriculture. The result was a politically constructed international division of agricultural labor.

One hinge of this division (stemming from previous regimes) institutionalized northern granaries centered in the U.S. and the E.U. They exported food surpluses (grains, milk products, and processed meat and corn/soy products) via WTO rules of free trade, unevenly applied behind retention of farm subsidies and protections against processed and semi-processed food imports for the U.S. and the E.U. The other hinge, stemming from structural adjustment policies from the 1980s, centered in parts of the global South as non-traditional agro-exports were expanded to defray debt in the so-called "New Agricultural Countries" (Friedmann 1991).

In effect, political structuring in the name of market disciplines established global markets for cheap food — exploiting cheap land and labor for agro-exports from the global South and dumping artificially cheapened northern food exports. In either case, smallholders particularly in the South were confronted with policies and protocols favoring capital-intensive agro-exporting at the expense of their lands and farming operations, and deepening historical patterns of dispossession. It is no small irony of history that this regime — transnational agribusiness trading and processing of agricultural commodities on a global scale, converting peasants into a reserve army of labor for outsourced Northern manufacturing — was the mirror image of the imperial food regime based on the outsourcing of British agriculture. In either case, the configuration of the food trade was key to a particular structuring of the state system.

Conclusion: A Post-Food Regime World?

Just as the early food regime pivoted on the tension between the colonial system and the rise of the liberal nation-state, so the corporate food regime pivoted on the tension between the agri-food export model ("agriculture without farmers")[5] and the local market orientation of the majority of the world's farmers. In territorial terms, this tension is ultimately between forms of transnational integration of producing and consuming regions defined increasingly by standard-

ized foods (both monocultures and globally sourced inputs), and bioregional or local food systems reducing the distance between producers and consumers. The latter is the object of the food sovereignty movement and its call for scaling down food systems for democratic control, appropriate cuisines and ecological practice — where scaling down underscores the distinctiveness of agri-ecosystems. This central tension between "food from nowhere"[6] and "food from somewhere" (McMichael 2002) posits food regime redundancy — insofar as it envisions re-localization of food systems as the solution not simply to a food regime tension, but to the question of socio-ecological survival in a post-industrial-agricultural era.

Campbell reinforces this vision by claiming a food from nowhere regime has spawned a food from somewhere regime, premised on "ecological feedbacks and signals as a trigger for adaptive strategies" (2009: 317). Drawing from Friedmann's original environmental insights (2000), he underscores the current tension between abstraction and situation of food cultures. This is a tension between cultural framings that emphasize cheapness, convenience, attractive processing and obscuring of food origins, and the cultural status affluent consumers attach to foods that are socially attractive and embedded ecologically. Unlike the emergent character of Friedmann's corporate-environmental regime, Campbell's scenario is of an unequal binary where the food from somewhere regime is a "small but important new set of counter-logics" to the food from nowhere regime (ibid: 318). In a prescient way, Campbell notes that prior food regimes had the "ability to disguise what Marx had … described as an irreparable, yet invisible, metabolic rift that increasingly disrupted the interaction between human beings and nature" (Ibid: 312). It is this metabolic rift, the interruption of nutrient cycles replenishing soils (Foster 1999), that may well promote agri-food decentralization as humans are forced to recover and restore soil, biomass and biodiversity in order to survive in a post-fossil fuel age.

This conception pivots on the original notion of a food regime embodying a historical conjuncture comprising contradictory principles. Just as the dynamics of the previous regimes centered on tensions between opposing geo-political principles — colonial/national relations in the first, national/transnational relations in the second

— so the corporate food regime embodies a central contradiction between world agriculture and a place-based form of agro-ecology. In addition, this formulation focuses attention on the condition of the world's small farmers, fisherfolk and pastoralists, and a counter-mobilization in the name of food sovereignty against the modernist narrative that views smallholders as redundant (McMichael 2006). While the first food regime was rooted in the social movements of migrant farmers in the cyclical dynamics of the first food regime (Friedmann 2005), current food regime dynamics involve social movements of farmers resisting migration (McMichael 2005).

There is a relational symmetry of sorts in all this. The long century of capital's food regime is framed by a late nineteenth-century settler farmer drive to farm a prairie frontier to export cheap food. Through crop specialization and agribusiness centralization in intervening decades cheap food systematically undermined smallholders via its circulation on a global scale in the late twentieth century — precipitating a peasant counter-movement. Beyond the apparent symmetry, the larger point perhaps is that capital's food regime has generalized an agrarian crisis of massive proportions, registered now in a growing movement to stabilize the countryside, protect the planet, and advance food sovereignty against new assaults on farming cultures and diversity from "value chains" and land grabbing.

Notes

1. André Magnan notes that "food regime analysis proposes structured historical narratives — always subject to reinterpretation … [where] historical parts form the basis of comparison, but are also understood to construct the whole (food regimes) historically. In turn, food regimes analyses track successive periods of stability and change as lenses on the historical evolution of the whole … giving priority to heterogeneity and contingency" (2012: 375) — representing a form of "incorporated comparison" (McMichael 1990).
2. For this reason, some analysts claim that the mercantilism of the U.S. food-aid regime (alongside U.S.-led agro-industrial transnationalization) informs WTO trade rules (e.g., Pritchard 2009; Friedmann 2005).
3. Countries held sterling deposits in City of London banks, which provided credit bridges to redistribute liquidity to peripheral regions to extend markets (Saul 1960: 45–58).

4. Le Heron (1993) deployed a regulationist perspective on agricultural restructuring in the second half of the twentieth century, although with considerably more concrete details on the interplay between institutional settings and forms of regulation of agriculture, at all scales, within and beyond the GATT regime. Moran et al. (1996) argue for a "real regulation" based in farmer-organized policy mobilizations across regions and states.
5. This phrase comes from La Vía Campesina.
6. Bové and Dufour (2001) — this concept differentiates craft agriculture from industrial agriculture.

Chapter 2

Historical Forms of the Food Regime

Like capitalism, the food regime takes various historical forms. Indeed capitalism itself is a food regime, insofar as its reproduction depends on the provisioning of foodstuffs necessary to the (economical) reproduction of its labor force. This has involved the conversion of agriculture and food to commodity relations, which, in addition to cheapening food, also incorporate agricultures and foods into investment strategies. As of recently, these strategies include speculating in agri-food futures with inflationary effects.

In the unfolding of these trends the accumulation dynamics attending particular food regime episodes are essential thresholds. Regime breakdown coincides with transition to a new accumulation dynamic, shifting the coordinates and consequences of agricultural commodification in a new cycle of expansion with new limits, and so on. Here, the food regime as such contributes to a larger world-historical conjuncture of agricultural "modernization" — a conjuncture that is non-linear and contradictory. While episodic contradictions are contained and/or resolved through the expansive process, deferring "absolute exhaustion" of the global ecosystem (Moore 2012; Araghi 2009), there is at the same time a cumulative deterioration of ecosystem sustainability whose limits are now being recognized. Each food regime episode, then, is a successive part of an evolving historical conjuncture (the age of industrial agriculture). In other words, the particular regimes and the broader conjuncture are mutually conditioning. Each regime embodies an institutionalization of political and socio-ecological forces that structure international agri-food relations for that moment at the same time as they prefigure a further deepening of agri-food commodity relations.

The successive regimes represent the institutional relations that organize changing forms of food provisioning. How these relations are ordered, and represented (or legitimized), varies across historical time and space. A particular regime is defined by an *organizing*

principle that expresses a form of rule or hegemony. Thus the political-economic ordering of international food relations since the late nineteenth century has expressed three identifiable moments that have been institutionalized in forms of rule governed by the strategic goals of the dominant powers defining these moments, and legitimized by ruling ideologies, notably: British/free trade multilateralism; U.S./foreign aid, development and free enterprise; and WTO/free trade and market supremacy. In each instance, the world food trade has, through a governing world price, encompassed an ever-widening expanse of commodified agriculture and an associated deepening of consumption relations increasingly bifurcated by class diets.

As suggested, the food regime has both generic and episodic dimensions. While each episode represents a particular power configuration premised on particular food circuits, a generic perspective views these episodes as cyclical moments in a secular process of capital accumulation across time and space (cf Arrighi 1994). Two things follow: (1) what does it mean to imagine a pre-history of food regimes? (2) given the succession of episodes, what is the driving force that structures food regimes?

Food Regime Pre-History

It is tempting to extend the concept of the food regime backwards in time from the late nineteenth century to the colonial era. Initially, the fruits of empire (and slavery) included those well-known articles of pleasure — the stimulants, tobacco, coffee, tea and sugar, feeding "the desire to acquire new edible, pleasurable, and pharmaceutical substances, things that had direct and powerful effects on the bodies of those empowered to consume them" (Sheller 2003: 77). Sugar, originally a luxury for European aristocracies, became the object of intense imperial rivalry, and a household commodity in nineteenth-century Britain.

Chronicling the commitment of imperial resources to securing the sugar colonies in the Caribbean, Sidney Mintz anticipates the role of political-economic power today in managing the consumption relations of industrial capitalism, that is, the food regime. Sugar went from being a rarity in 1650, to a luxury in 1750, to a virtual neces-

sity by 1850. Sugar's changing role expressed the rise of industrial capital, which drove British policy in creating an imperialism of free trade, and hence a world market premised on an international gold standard. An eventual food regime emerged through "the provision of low-cost food substitutes, such as tobacco, tea, and sugar, for the metropolitan laboring classes. By positively affecting the worker's energy output and productivity, such substitutes figured importantly in balancing the accounts of capitalism" (Mintz 1985: 148–49). The power of this story is its ability to capture the changing geopolitical order as value relations mature.

Thus a world food such as sugar became integral to the value calculus of capitalism, whereby an uneven but combined global labor force was constructed and provisioned through an elaborate imperial relation. The empire not only secured the Caribbean and Brazilian sugar colonies as commodity supply zones for Europe, it also imported supplies of starch such as breadfruit from the South Pacific, and protein such as salted cod from the North Atlantic, to complement indigenous fruits sustaining the bodies of plantation workers. In addition, starches such as maize, manioc, potatoes and rice spread through the Atlantic, providing "sufficient nutrition to sustain impoverished working populations … . They lowered the costs of reproducing households and made available pools of cheap labor" (Tomich 2013). As Dale Tomich notes, these regions emerged as:

> perhaps the most radical and innovative kind of agriculture, the production of tropical commodities for the world market … concentration of land, labor and capital for production of export commodities meant that food and other supplies — manufactured goods, grains, livestock for work and consumption, lumber, fisheries — had to be imported from elsewhere around the Atlantic. (2013)

In this way, imperial transformation of the agrarian world was irrevocably embedded in complex dietary relations, which in turn served as the conditions for reproduction of the tropical and temperate commodities comprising the emerging food regime. Thus the food regime can be historically situated as a "complex of many

determinations" behind the phenomenal form of key commodity circuits (Marx 1973: 101). As such, the food regime may have a stylized form in marking a particular historical episode identified with a particular face of power, but its content depends on the elaboration of a historically intricate set of relations of production *and* reproduction — a complexity impossible to develop here beyond illustrative instances.

The earlier periods, when European colonialism converted parts of the non-European world to export monocultures provisioning metropolitan states with various tropical products, were at best antecedents of the food regime. Earlier temperate food trade from the U.S. supplemented the Atlantic regional economies, with Baltimore supplying flour directly to the Caribbean and Brazilian plantation regions, for example (Gilbert 1977: 250). But a world price for staple foods only emerged during the last quarter of the nineteenth century, with wheat as the principal (Woodruff 1967: 268; Friedmann 1978). Ultimately, a food regime involves the subjection of international circuits of foodstuffs to a governing market price. How that price is set is secondary to the process of integration of producing regions, exposing producers across the capitalist world to a single price. It is that price effect that expresses the central organizing principle of a particular regime, as it constitutes market power for political ends.

Food Regime Structuring, and Restructuring

The second question above, regarding the driving force structuring food regimes, requires historical specification. Here the food regime concept is a key to unlock not only structured moments and transitions in the history of capitalist food relations, but also the history of capitalism itself. Each regime establishes a world price to mediate trade among nations. While the history of capital depends on frontiers for foodstuffs to fuel accumulation (Moore 2000), the food regime of the late nineteenth century marks the consolidation of a world market governed, in principle, by value relations (Araghi 2003; McMichael 1999). That is, the food regime signals the process of commodification of food and the elaboration of trading relations premised on the progressive conversion of agriculture to a world

industry. Clearly this does not happen all at once, and while there has been a secular trend in this direction, the cyclical episodes by which this trend is strengthened work through contradictory relationships. Value relations come into the world through violent political means, with distinctive socio-ecological consequences — not the least being the imperial expansion (often via local intermediaries) into non-European regions at the material and cultural expense of native inhabitants and their habitats. The food regime, then, can represent such an exercise of global power in general at the same time as it can define the intervening episodes and their particular political and material conditions. If we theorize the food regime as "the political face of world historical value relations" (Araghi 2003: 51), then it is incumbent upon us to specify this "political face" in its historical forms.

Food regimes have been associated with political structuring of the world capitalist economy in the exercise of rule by the British and American states and neoliberal state administration. Rule is established by military, financial and institutional means, embodying specific geopolitical relations and modes of capital accumulation with accompanying development ideologies. British and American hegemonies, backed with military/financial force, were founded in political-economic principles (e.g., freedom of trade, freedom of enterprise, respectively) adopted by rival states as universal organizing principles (Arrighi 1994). Similarly, the WTO institutionalized a universally accepted organizing principle (liberalization of trade and enterprise), with legal (and economic) force standing behind adoption by member states, despite asymmetry of observance between North and South.

The forms of rule outline the structuring of food regimes, but what are they ultimately about? Food production and provisioning to sustain particular accumulation dynamics is the easy answer, but how that is executed is considerably more complex. Across the three regimes the common denominator has been cheap food, with a world price stimulating forms of accumulation across the state system. But cheap food has variable functions: including lowering wage costs, improving real wages, pacifying labor, appropriating food resources, creating dependency, defraying debt, undercutting producers, and

so on. Common to all these functions is the exercise of power, so what follows is an outlining of the role of food as a form of rule in each regime.

The British-Centered Imperial Food Regime

The exploitation of colonies by European empires served several purposes, the chief among them being to commandeer supplies of luxury foods and stimulants for upper class consumption, to enhance national wealth through mercantilist policies, and to open new frontiers of accumulation for profit and deferral of ecosystem exhaustion (Moore 2000; see Wallerstein 1974). The supply of tropical products was an early hinge of the first, British-centered food regime. As above, the sugar narrative represents the maturation of this hinge from a luxury good produced by plantation slavery to a universal input in lower class diets as a caloric fuel to sustain factory workers and their families in the emerging industrial age. Not only was the colonial land and labor grab essential to this provisioning, but also the materiality (use-value) of tropical food products enabled capital to cheapen wage-foods for its labor force. As Mintz (1985) and Sébastien Rioux (2012) have noted, both slave and proletarian (and their households) were combined in a general process of under-reproduction of laboring bodies.

The complementarity between temperate and tropical foods constituting the first food regime in the second half of the nineteenth century registered the rise of Britain's empire of free trade, designed to enhance accumulation and British trading power in the emerging world market. Bill Winders dates the first food regime from 1860, following the 1859 passage of Britain's treaty with France extending to all nations concessions given to France and thereby establishing the first multilateral free trade agreement (2009: 318; McMichael 1984: 21). But prior to that, as he notes, the 1846 repeal of the (agricultural protective) Corn Laws depended on changing class coalitions in British politics. In particular, it depended on the rise of an increasingly coherent and politically established industrial class, seeking to reduce labor costs, in alliance with cattle producers who also sought cheaper grain offshore (Winders 2009: 323–24). With growing industrial rivalry among emerging nation-states promoted

by Britain's "workshop of the world" activities, domestic coalitions elsewhere coalesced around free trade as the vehicle for importing technology and raw materials (including food). Agriculturists everywhere competed for markets, overproducing in relation to consumer demand and depressing agricultural prices (Winders 2009: 327). From 1859 to 1889, U.S. wheat and corn production almost trebled, as farms nearly trebled in number (2 to 5.7 million) between 1860 and 1900 (idem). And between 1875 and 1913, land prices tripled in the New World (O'Rourke 1997: 786), underwriting public infrastructure (including military force) and private railway investments that opened frontiers to European migrants to settle as grain and livestock farmers (Friedmann 1978; McMichael 1984). Eric Hobsbawm noted:

> As soon as the massive flows of cheap foodstuffs converged upon the urbanized areas of Europe — in the 1870s — the bottom fell out of the agricultural market, not only in the receiving areas, but in the competing regions of overseas producers. The flaring discontent of Populist farmers on the North American Continent, the more dangerous rumble of agrarian revolutionism in the Russia of the 1880s and 1890s, not to mention the spurt of agrarian and nationalist unrest in Ireland in the era of (the) Land League testify to its effect on regions of peasant agriculture or family farming, which were *at the direct or indirect mercy of world prices.* (1969: 128–29, emphasis added)

The free trade system consolidated despite rising protectionism among European agricultural classes, as tariffs did not directly regulate production or prices (Friedmann 1978). British grain producers, isolated in the Corn Law struggles, were unprotected from cheap imported grains (Winders 2009: 328). In London, the average price of the four-pound loaf of bread fell from 10.75*d*. in 1855 to 8*d*. in 1870 to 5.08*d*. in 1895 (Rioux 2012: 55). As Rioux (2012) has documented, it is not enough to attribute these falling bread prices to frontier conditions alone — rather, cheap food in Britain depended also on new methods of food distribution (and adulteration) among

the urbanizing populace. Here, hordes of impoverished street vendors and small shopkeepers (and their employees) compromised and cheapened food for working-class households. While cheap food suggests rising real wages during this period, the adulterated and austere diets of women and children and small vendors suggests otherwise. In global terms, then, the self-exploitation of producers on settler frontiers was combined with the self-exploitation of reproducers in urban centers provisioned by the new grain trade. This was an extensive form of capital accumulation dependent on simple exploitation of labor forces integrated via this new food circuit.

Thus value relations reorganized social life across the food regime landscape with substantial indigenous, racial, class and gender effects. Phenomenally, the free trade system enacted by Britain (supported with sterling as international currency) established a world wheat price with relative convergence among countries between 1870 and 1913, and absolute convergence between Britain and the United States — from a spread of 54 percent to -0.8 percent (O'Rourke 1997: 782).

As an instituted market, then, the food regime expressed a confluence of social forces and relations and geopolitics designed to enhance Britain's international and imperial power. Free trade was double-edged. First, offshoring agriculture enabled British specialization as "workshop of the world" for a time, drawing on the ecological capital and family labor of frontier settlers to lower the cost of provisioning its growing proletariat. And second, it provoked an industrial rivalry and protectionism that eventually unraveled the monetary order based in the sterling-gold standard and hence the free trade system (even as it encouraged a massive shift of British investment towards the settler/dominion states).

This cycle represented the first truly integrated world market embedded in the commodification of labor, money and food (cf. Polanyi 1957). State power, and rivalry, pivoted on the availability of cheap food, an artifact of a maturing nation-state system sharing a dominant currency. In theoretical terms, this episode of state building was the phenomenal face of an enduring process of construction of global value relations — that is, the integration of world industry and world agriculture via the price form, with significant class effects. At the

state level, with world markets encouraging specialization, commercial inputs replaced the biological inputs of the mixed farming initially practiced by settlers, prefiguring agro-industrialization that linked agriculture and industry as complementary sectors of a modern nationally organized economy (Friedmann and McMichael 1989: 102).

On the prairies, pampas and forests of North America and the Southern hemisphere, native inhabitants were displaced and/or eliminated for cattle runs and wheat lands. In Argentina and Paraguay entrepreneurs divided the pampas into huge wheat farms and cattle ranches to supply the European market, importing farm machinery from the U.S. and Europe, and employing migrant farmworkers originating in Europe (Burbach and Flynn 1980: 93). Meanwhile U.S. corporations like Hershey, W.R. Grace & Co., and United Fruit invested in land, shipping, fertilizer, transport infrastructure and processing facilities in Central and South America to expand plantation agro-exporting of tropical commodities (Ibid: 94).

While the inhabitants of prairies and pampas were largely exterminated with military force, colonial subjects experienced what Davis has likened to a holocaust (2001). The last quarter of the nineteenth century experienced a synchronization of El Niño famines, resulting in a devastating drought across the tropics, accompanied by a swathe of famine-induced deaths (30–60 million people) from India through northern China to Brazil. In India, British colonialism dismantled village grain reserve systems as grain was transformed into an export commodity. Transport systems, including the telegraph and its coordination of price hikes, regardless of local conditions, enabled merchants along the line to transfer grain inventories from the drought-stricken hinterland to hoarding centers. Through this device, India was "force-marched into the world market," with grain exports rising from 3 to 10 million tons annually, coinciding with the rough estimate of 12–29 million deaths during this period. Davis remarks, "Londoners were in effect eating India's bread," and notes that "the perverse consequence of a unitary market was to export famine, via price inflation, to the rural poor in grain-surplus districts" (2001: 7, 26, 285).

The response, across what came to be called the Third World, was an anti-imperial millenarianism that fueled the decolonization

movements of the twentieth century. Whereas Polanyi represented modernity as social regulation of the market, Davis completes the narrative by revealing "the secret history of the nineteenth century" — documenting the profound impact of the gold standard on the non-European world. Modernity, for non-Europeans, involved the subjection of their material life to the price form — a lever by which necessities and new resources alike could be removed without evident force, and transported by price-making merchants to price-taking European consumers.

In short, the elaboration of value relations through an imperial apparatus of violence and under-reproduction of labor and ecologies integrated certain classes of people and marginalized others, in the consolidation of a food regime premised on cheapening food by converting it to the status of a global commodity. Justification for such a regime drew upon the civilizing narrative, where the British claimed to have rescued India from "timeless hunger" — despite an 1878 study in the *Journal of the Statistical Society* accounting for "thirty-one serious famines in 120 years of British rule against only seventeen recorded famines in the entire previous two millennia" (Davis 2001: 299). Meanwhile, the commodification of labor in Britain swelled the ranks of a laboring class with rising demands for adequate food, prompting imperial operator Cecil Rhodes to declare in 1895: "The Empire, as I have always said, is a bread and butter question. If you want to avoid civil war, you must become imperialists" (quoted in Patel 2007b: 84). As Raj Patel suggests, the solution to averting class warfare from below "involved adhering to an unwritten social contract, keeping levels of hunger and deprivation within manageable limits by making sure enough quantities of cheap food were available" (2007b: 87).

Such a calculus produced what Kautsky and Lenin called the "aristocracy of labor" in the imperial centers, where "cheap food demanded slaves and low-paid agricultural workers" elsewhere (idem). Nevertheless, Sandra Halperin (2005: 34) notes that while average British wealth increased nearly three and a half times between 1830 and 1914, "the range of incomes around the average did not significantly diminish; the rich remained much richer than the average, the poor much poorer — up to a third of the population in 1914 had

incomes which did not provide them with sufficient food to sustain health throughout the year" (Floud 1997, quoted in Halperin 2005: 34). Moreover, Floud claimed, "While 30% lived below the margin, perhaps a further 40% or even more lived so close to the margin that they could be, and often were, forced below it by a variety of life events" (quoted in Halperin, 2005: 34).

The point is that the accumulation dynamic associated with a particular food regime includes processes of under-reproduction that call into question the progressive claims for civilization, or development, or food security. Since a "regime" depends on normalizing its claims (informing "implicit rules") it must present its particular structuring as a rational, or natural, ordering of the world in that time. That is, its legitimacy must derive from delivery myths, a foundational one being the "white man's burden" of sharing the fruits of superior labor and knowledge. Such sharing involves appropriating the labor, and expropriating the knowledge, of the subject. The illusion of assistance deflects attention from the exploitative relations of the particular ordering underway.

Such ordering via the structuring of commodity relations simultaneously restructures the life worlds of those people whose habitats underwrite value relations. Thus, while the British Raj was claiming to rescue the Indian subcontinent from famine, on the U.S. frontier cattlemen, capitalized by huge British investments to satisfy the British appetite for beef, followed suit: "having killed off the buffalo and squeezed the Indians off the plains so they could graze their cattle, ranchers then turned around and sold beef to the government to feed the hungry Indians whose source of food they had eliminated" (Rifkin 1993: 83). The colonization of cultures via such restructuring of food provisioning is a fundamental part of a food regime, as we shall see.

The demise of the British-centered world economy in the early twentieth century resulted from an accumulation of protective counter-movements against market rule (class and decolonization movements, alongside inter-state rivalry), accompanying national and imperial conflict among European states and the collapse of the gold standard. Economic depression and urban unemployment following World War I, in addition to a broad agricultural

crisis in Europe resulting from cheap overseas grains, resulted in widespread protectionism. Economic nationalism in Europe and the ecological disaster of the American dust bowl sealed the fate of the frontier model of soil mining and the liberal trade of the food regime. Stabilization of the U.S. agricultural sector, via government intervention with commodity programs, anticipated a new state-managed food regime following World War II.

The U.S.-Centered Intensive Food Regime

The reconstruction of American agriculture in the postwar era combined national programs that consolidated a capital-intensive form of agriculture, based in commodity specialization (basic grains especially), with an international regime disbursing agro-industrial surpluses. United Nations anti-hunger initiatives anticipated this food regime anchored in the geopolitics of decolonization and the Cold War (Phillips and Ilcan 2003; McMichael 2007). The goal of "feeding the world" addressed colonial and postwar deprivations via a politics of containment, as communist movements threatened Western interests inside and outside Europe, where food scarcity became the pretext for turning food into a weapon of power. Thus President Truman proclaimed in his inaugural address in 1949:

> We must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas. More than half the people of the world are living in conditions approaching misery. Their food is inadequate .... Their poverty is a handicap and a threat both to them and to more prosperous areas. (http://avalon.law.yale.edu/20th_century/truman.asp)

In this way, the United States appropriated a human rights crisis for political purposes. In the early 1940s, the United Nations' Food and Agriculture Organization (FAO) had been established with a mandate to stabilize world agriculture and establish global food security. The FAO's role was to foster and manage international trade in foodstuffs to this end. In 1946, the U.S. overrode a proposal of the FAO and U.N. Relief and Rehabilitation Administration (UNRRA) to

establish a World Food Board, preferring to develop its own network of bilateral aid programs, modeled on the Marshall Plan, by which the U.S. transferred food to hungry postwar Europe (Cleaver 1977), anticipating what became a broader food-aid regime.

Meanwhile, in 1947 the GATT, instituted to reduce barriers to trade, excluded agricultural commodities — lending legitimacy to the idea of building national economies with articulated manufacturing and farming sectors, represented in the U.S. model as the development ideal to be replicated (Friedmann and McMichael 1989). The U.S. model deepened through resolving the dust bowl crisis of the 1930s with hybrid technologies promoting specialization, and rebuilding the American farm belt as a political constituency. The solution to this crisis was publicly supported industrial agriculture, centered on commodity stabilization programs by which the U.S. government deployed subsidies and a policy of domestic supply management via price supports and purchases of surplus commodities — policies adopted widely, for example in Argentina, Australia, Britain, Canada, India, South Korea, Japan, Mexico, most of Europe, and many other nations (Winders 2009: 135).

The postwar agro-industrial model in the U.S. depended on the conversion of wartime nitrogen production (for bombs) to inorganic fertilizer, which displaced previously used nitrogen-fixing legumes and manure. Along with mechanization, the use of inorganic fertilizer increased farm demand for fuel oils, gasoline and electricity, "thus increasing agricultural dependence on the energy sector and thereby converting the latter more than ever into a part of agribusiness" (Cleaver 1977: 17). Subsequently, the FAO agreed to a business plan, in the name of the U.N.'s Freedom from Hunger campaign (1960), to provide extension services for the dispersal of surplus inorganic fertilizer across the Third World, intensifying agricultural dependence on the energy sector (ibid: 28). Such a multilateral initiative affirmed the hegemony of the U.S. model of energy-intensive agriculture.

The key shift in accumulation dynamic was from an extensive form of accumulation via cheap prairie food staples in the first food regime, to an intensive form of accumulation combining the incorporation of food manufacturing into accumulation itself with the international disbursement of cheap food staples via the U.S.

government-managed food-aid program, based in price-support programs. At the center of the former was the "durable food complex," serving a dual function: of replacing "simple refiners and final consumers as buyers of tropical agricultural products," with "chemical and biological substitutes for industrial raw materials, including the key ingredients of sweeteners and fats … [such as] sugar and vegetable oils such as peanut, palm, and coconut" (Friedmann 1994: 263). The industrialization of food opened up a new frontier of accumulation in the manufacturing and retailing of processed foods, with high-fructose corn syrup in particular, and other industrial sweeteners transforming grain markets from conversion to simple food products like bread to raw materials for processed foodstuffs. Meanwhile soya oil, originally developed for the margarine industry, was complemented with processed soya meal, combined with hybrid corn for the intensive livestock industry. As Friedmann showed, these three complexes — wheat, durable foods and livestock — became progressively intertwined as a consequence of this new accumulation dynamic (1994).

The shift from provisioning Europe to encompassing the Third World within the domain of agribusiness was represented as essential to the international "development project" (McMichael 1996). Claiming to spread national economic growth along American lines in the post-colonial world, this U.S.-sponsored project was designed to promote freedom of enterprise, including agricultural modernization. It was backed by a massive military and economic aid program (to compensate for dollar deficits), including food aid to strategic states on the Cold War perimeter, such as Chiang Kai-shek's anti-communist forces in China in the late 1940s (Cleaver 1977: 16). Araghi remarks that this international food order "should be seen not only as a response to farm politics in the U.S.A., but also as a way of containing socialist nationalisms" (2009: 129). Under these historic conditions, food security through aid was indelibly linked to the doctrine of development through containment, and vice versa.

The U.S. food-aid program, instituted by Public Law 480 in 1954, recycled food surpluses from its commodity stabilization programs as concessional food subsidies to selected states in Asia (including occupied Japan), the Middle East and Latin America.

> In the 1950s and 1960s the U.S. share of world wheat exports grew from just over a third to more than half. And as Europe substituted domestic production for its historic imports [replication], the Third World and Japan became the major importers. The Third World share of wheat imports grew from 19 percent in the late 1950s to 66 percent in the late 1960s. (Friedmann 1994: 260)

The PL-480 program subsidized Third World national industrial capitalists with cheap food, and, via a counterpart funds program, extended the scope of agro-industrial production through the export of green revolution (intensive farming) technologies to agrarian capitalists in key Third World states, including Mexico, Brazil, Argentina, Venezuela, the Philippines, Indonesia and India. In this way "national development" consolidated U.S. global hegemonic designs through support of domestic ruling classes in the name of food security. The transformation of large parts of the Third World into food deficit regions is the measure of this phenomenon. In Latin America, other than Argentina and Uruguay, all countries switched from being grain exporters to grain importers between the 1930s and the 1970s (de Janvry 1981: 70). Across the Third World as a whole, the ratio of food imports to food exports increased from 50 percent in 1955–60 to 80 percent in 1975 (Araghi 1995). And while the Third World accounted for 10 percent of wheat imports in the 1950s, by the 1980s this measure had risen to two-thirds (Grigg 1993: 241).

National development was one hinge of this food regime linking militarized state power in the Third World with Cold War goals. In Latin America, for instance, public investment in agricultural modernization proceeded apace — for example, in Colombia "public spending in agriculture (including such programs as investment credit, technical assistance, infrastructure development, etc) expanded fifty times between 1950 and 1972" (Burbach and Flynn 1980: 97), even as 78 percent of wheat consumption was supplied through U.S. aid (Friedmann 1994: 261). Agricultural "modernization" was a class project in two senses — not only consolidating a nexus between the state and landowners consolidating agribusiness, but also containing peasant unruliness by "accommodating their

land hunger within a market-led framework" (Araghi 2009: 125), and countering the example of the 1960 Cuban revolution. The resulting waves of "peasantization" via land reform across the Third World dismantled landlordism and released smallholders to the devices of the market and of public credit and marketing schemes (Araghi 1995). The result was a "majority of near subsistence family-sized farm units were petty commodity producers (depending on the state), and the reforms in general left most of the productive land in the possession of large owners" (Araghi 2009: 127–28). In Latin America some of these large owners transitioned from *latifundistas* to commercial agro-industrialists as modernizing states, with U.S. support, "turned agrarian reform into an important factor in the emergence of a modern agrarian bourgeoisie" (Burbach and Flynn 1980: 100).

The pursuit of national development conditioned the second hinge of the U.S.-centered food regime, namely the transnationalization of agriculture and food consumption. In the area of consumption, the food-aid program introduced American-style diets to other food cultures — well-known examples being Nigeria, where wheat imports trapped the domestic economy into replacing local food provisioning (Andrae and Beckman 1985); Egypt, where state policies of wheat importing also allowed the consolidation of a feed grains industry to provision affluent consumers of animal protein (Mitchell 1991); and South Korea, where counterpart funds from PL-480 promoted sandwich-making classes for housewives (Wessel 1983: 173). The U.S. Feed Grains Council channeled counterpart funds, via over four hundred agribusinesses, into the development of local livestock and poultry industries, a PL-480 annual report noting such facilities "will substantially expand the market for feedgrain and other feed ingredients" (George 1977: 171–72). In this way, food provisioning became more dependent on world market supply.

Agro-industrial transnationalization had two characteristic forms: international specialization in component inputs into a final food product, and the elaboration of upstream and downstream agribusiness activity. With respect to the former, Friedmann popularized the concept of the "livestock complex," involving new feed crops as inputs for a transnational feed manufacturing industry supplying

intensive, often industrially organized livestock operations (beef, poultry, pork, fish/shrimp) across national borders (1994: 267). Truly international, this complex comprised "a (U.S.) revolution in maize production based on hybrids requiring intensive mechanical and chemical inputs: the massive introduction of an Asian plant, soya, which substituted a commercial feed crop for forage crops (…redundant as tractors replaced draft animals); and a new capital-intensive feedstuffs industry that interposed itself between crop and livestock producers and organized both sectors through long-term contracts" (ibid: 267–68). It originated in the postwar deal whereby the European Economic Community (EEC) allowed corn and soy imports from the U.S., while pursuing the economic nationalism strategy of protecting European wheat farmers. TNCs such as Continental, Cargill, Unilever, and Bunge and Born extended this specialized trade, including importing tropical oilseeds from the Third World (ibid: 268–69). Such intermediation became particularly prevalent in Latin America, where, in context of a wave of nationalization beginning in the 1960s, agribusiness corporations shifted out of direct production and into processing and distribution activities. Castle & Cook, for example, "diversified its holdings in Central America to include breweries, a margarine plant, a bottling factory, and a cottonseed oil mill, in addition to its plantation lands" (Burbach and Flynn 1980: 103).

The so-called green revolution represented both national and transnational dimensions of the U.S.-centered food regime. It recycled the "feeding the world" trope as it promoted new high-yielding varieties of hybrid seeds (wheat and rice) — dependent on agri-chemicals (pesticides, herbicides and fertilizers), irrigation and mechanization — as key to agricultural modernization. It combined a neo-Malthusian philosophy linking increasing yields to "the specter of increasing population" (Gupta 1998: 54–56) with the anti-communism of the Cold War, by preempting red with a green revolution, focusing on commercial farmers first in Mexico, then beyond in Argentina, South Asia, the Middle East, and Southeast Asia through this period (Patel 2013: 9, 33). Wealthy farmers were weaned from a seed-sharing culture of mixed farming to a monoculture of staple grains for urban consumption. Beyond the myth-making of

"miracle seeds," the green revolution nexus combined state power, philanthropy, USAID, the World Bank and agribusiness, with credit, marketing and support services for a select landed class to ensure yield success and affirm the ideology of productivism (idem).

Nationally, green revolution technology served an import-substitution purpose in context of the food-aid program, and transnationally, it integrated Third World producing regions into circuits of capital in the form of agribusiness technologies. Consistent with food regime inclusion/exclusion dynamics, the green revolution was realized through increased rural inequalities — between ecologically differentiated regions, among farmers, among rural laborers exposed to toxic chemicals, and within households, where women were denied access to agro-inputs and extension services. "Peasant foods" faced discrimination, as, for example, traditional leafy greens (a source of micro-nutrients such as vitamin A) were redefined as "weeds" and targeted by herbicides in the process of optimizing macro-nutrient "wage foods" (Shiva, 1991). Yields held up for a while, but have declined since (along with ecosystem health). In 1984 an Indian farmer remarked: "chemical fertilizer makes the crop shoot up … whereas organic manure makes for strength. Without strength, no matter how much fertilizer you put, the field won't give output" (quoted in Gupta 1998: 4).

While the postwar food regime lasted, agricultural commodity prices remained relatively stable because of the publicly regulated trade in foodstuffs (Tubiana 1989). This regime collapsed when U.S. détente with the Soviet Union in 1972–73 cleared surplus grain stocks for the first time in the postwar period. The price of grains and oilseeds tripled, generating the 1974 world food crisis. Food inflation dovetailed with a general crisis of accumulation. Energy prices spiked, dollar vulnerability in foreign exchange markets forced the U.S. off gold parity and thereby to relinquish the Bretton Woods monetary order, and a relatively high social wage put increasing pressure on industrial profit rates — all leading to a massive restructuring of capital on a world scale as firms and banks internationalized their operations to incorporate cheap labor in the Third World (O'Connor 1984).

In 1974, the FAO convened a World Food Summit, as "billions of

people were defined as 'food insecure' by the disappearance of U.S. surplus stocks and a surge in world grain prices" (Friedmann 1993: 245). "Food security" now became an explicit policy goal of the U.N. through its member governments, linking food production and distribution to an explicitly humanitarian goal of food aid (with grants replacing concessional sales). As the FAO's Director-General Addeke Boerma claimed: "Food is not like any other commodity. If human beings have a right to life at all, they have a right to food" (quoted in Jarosz 2009: 50), reiterating the original concept of food security.

However, with charges that the FAO was incapable of foreseeing and managing the crisis, the successor Director-General Edouard Saouma (1976–93) pledged to decentralize and reform the FAO. This was in context of geo-political tensions exacerbated by radical decolonization movements and a brief assertion of Third World solidarity via the Organization of Petroleum Exporting Countries (OPEC) and the New International Economic Order (NIEO) — tensions that spilled over into the FAO. The Organization for Economic Cooperation and Development (OECD) countries, threatened by Third World unruliness, used the food and oil crises to weaken the FAO's international food and agriculture institutional mandate. They substituted a "patchwork of politically-expedient intergovernmental agencies including the International Fund for Agricultural Development (IFAD), the World Food Programme (WFP), the Consultative Group on International Agricultural Research (CGIAR), the World Food Council (now defunct) and a strengthened agricultural agenda at the World Bank" (ETC 2009). This resulted in the FAO (a one-country-one-vote institution) being weakened by an institutional complex representing donor countries. The original FAO vision disappeared by 1986, when the World Bank redefined food security as the ability to buy food (Jarosz 2009: 51). This was the same year in which the Uruguay Round of GATT negotiations began, leading to the formation of the WTO in 1994, and the institutionalization of the "free trade" regime necessary to a market vision of "food security."

Conclusion

Thus food provisioning across these two regimes took quite distinct forms. The process of British and European industrialization was increasingly fueled in the first food regime by exports of cheap temperate grains and meat from the New World, organized in the form of extensive accumulation geared to keeping industrial wages low. The crisis of this regime, in the exhaustion of the land frontier and a general economic depression followed by a second world war, stimulated a shift to a form of intensive accumulation centered in the U.S. food industry and its export agriculture oriented farm belt. A food inflation crisis with the opening up of the Soviet bloc to U.S. grains in 1972–73 dovetailed with a general crisis of accumulation, and a new preoccupation with world hunger.

The early 1970s food crisis separated public, humanitarian food aid from commercial/concessional sales, opening the door for a realignment of "food security" with market provisioning. This restructuring centered on an intensification of the U.S. role as the world granary, a state-initiated response to the accumulation crisis (Revel and Riboud 1986). A resulting "new international division of labor" in agriculture formed around transnational commodity complexes integrating production and consumption relations across national spaces anchored in the U.S. grain trade (Raynolds et al. 1993). In this way, freedom of enterprise under U.S. hegemony compromised the ideal of national agricultures (and economies), paving the way for an increasingly private regime of global trade managed by transnational corporations (Cutler 2001), as a corporate food regime emerged.

Chapter 3

The Corporate Food Regime

While each food regime has its own profile and role in underwriting power, the unifying thread is food's contribution to capital accumulation via state system structuring. The food regime combines definition of and access to food resources with forms of market disposal that enhance power relations — through strategic provisioning of social classes and states and/or by displacing producers unable to compete with subsidized or monopolized market power. The latter has been the centerpiece of the corporate food regime (McMichael 2005).

Historically, the rise and consolidation of capital has depended centrally on food — as a bio-political or a processing input to provision labor and enhance profits — and this in turn has depended on access to food-producing resources: land frontiers, farmers and farm labor, plant and animal species, and technologies (from cultivars to GMOs). How agriculture has been organized, and food has circulated, has depended on changing power configurations as states have conquered frontiers, managed territories and adopted shared institutional relationships that express the dominance of one or another historical form of capital in a food regime. The corporate food regime demarcates the era following the collapse of the Bretton Woods monetary regime — an era governed increasingly by financialization and neoliberal advocacy of market rule, stretching from the 1980s through the late 2000s.

A Third Food Regime?

Whether there has been a "third" food regime has been a matter of considerable debate among food regimes scholars (McMichael 2009a; Friedmann 2009; Magnan 2012). Friedmann views this period as transitional, with TNCs (particularly global retailers and their association GlobalGAP) organizing agri-food supply chains via privately regulated food-quality standards that appropriate consumer environmentalism to renew accumulation and overrule public food

standards (2005). Viewing these developments as a "period of unresolved experimentation and contestation" Friedmann asks "whether or not there exists a sufficiently stable constellation of agri-food relationships so that states, individuals, corporations, social movements and other actors can predict the outcome of actions," normalized as a condition of legitimacy for a "corporate-environmental" food regime (2009: 335). This pair includes differentiation of food supply chains, "led by private capitals, sometimes the same firms selling quality and cheap commodities to different classes of consumers. In the U.S., the two supermarket chains defining the two class markets are Whole Foods (a stunning appropriation of a 1960s counter-cultural term) and Walmart" (Friedmann 2005: 254).

Friedmann's account of a bifurcating food system on a world scale, as "complementary systems within a single emerging food regime" (2005: 261), captures the content of agri-food relations within a corporate-dominated market, playing to differential expectations associated with class diets. With respect to form, there is the question of regulation, and whether "there exist 'rules' which analysts can infer through consistent behaviors of relevant actors: states, enterprises, corporations, social movements, consumers and scientists" (Friedmann 2009: 336). In this formulation, a regime requires "a negotiated frame for instituting new rules" — ultimately "implicit" because of the process of normalization (Friedmann 2005: 234–35). And normalization requires stability, which is about an international monetary system enabling a regulatory environment providing predictability for relevant actors and expressing hegemony of an agri-food model, "such as which countries specialize in growing certain crops and which countries are importers" (Friedmann 2005: 234). The current lack of a true international currency (to prevent the U.S. from running deficits in its government account and in trade just because the dollar continues to be the default currency) means a provisional and unstable international monetary system (Friedmann 2009: 339).

This raises the issue of what constitutes a regime. Friedmann favors Krasner's foundational definition concerning convergence of norms and rules of the game (1983), which coincides with Giovanni Arrighi's Gramscian concept of international hegemony, whereby a

dominant state represents its interests as those of rival or subordinate states (1994). The exercise of hegemony is appropriately expressed through a dominant currency as the international reserve currency, facilitating inter-state trade. Hegemony also denotes concealment of the relations of production and power.

The first two food regimes more or less fit this kind of definition, although in radically different ways. Gold was designated the money commodity on a world scale. In theory, sovereign nations would adopt the gold standard to facilitate trade relations without the need for an international financial authority. In practice, the ubiquitous British pound sterling was considered "good as gold" (Polanyi 1957), and the City of London promoted trade through redistribution of international liquidity by manipulating its sterling balances (McMichael 1984: 26–27). Even so, as Polanyi points out, the inherent strains produced at the national level by a world currency drove European states to override mutual trade with imperial conquest — to avoid economic adjustments required by pressure of stable exchanges under the gold standard (1957: 214–15). Britain was forced to follow suit, switching trade and investments towards the dominions and the United States in the last quarter of the nineteenth century (McMichael 1984: 27–30) — perhaps rendering the food regime a geographical artifact of the tensions associated with the gold/sterling regime. Further, these states developed protective measures "designed to counteract the destructive effects of free trade plus fixed currencies, and to the degree in which they achieved this purpose they interfered with the play of those mechanisms" (Polanyi 1957: 217).[1]

In the postwar era, the U.S. dollar was the international reserve currency, but currencies were inconvertible and capital mobility was restricted under the Bretton Woods agreement (for currency-stabilization purposes). Here international liquidity depended on foreign aid, whether economic/food or concessional loans by the World Bank.[2] Even so, in this regime multinational corporations evaded Bretton Woods controls by depositing earnings offshore in the Eurocurrency market, centered in London. Bolstered by U.S. military spending, Eurodollar deposits mushroomed from $3 billion to $75 billion in the 1960s, putting mounting pressure on the dollar's ability to cover claims with gold (Helleiner 1996: 111–19). This was

not stable, and led to the decision by President Nixon to terminate the Bretton Woods system of fixed currency exchange in 1971.

The question here is whether the same template applies to the subsequent period, of U.S. hegemonic decline. Is the standard state/market binary associated with the first two regimes sufficient to capture the complexity of an era characterized by new forms of market rule associated with corporate hegemony and the deployment of debt as a disciplinary mechanism in the service of trade and financial profits? In addition to World Bank/IMF disciplining of indebted states, the WTO (a member-state organization) liberalized trade relations (reducing domestic protections) via multilateral market expansion, enabling a "private regime" constituted by TNCs privileged by its protocols (Cutler 2001). As Claire Cutler points out, while legal regimes focus on states as legal subjects, private regimes work to limit state regulations in the service of the neoliberal "competition state," reconstituting civil authority via informal power. In turn, such informal power is formalized in neoliberal policy and is "in effect more sovereign than the state" (Cerny 1995: 618). Cutler's point is that:

> transnational corporations are increasingly functioning as participants in the direct creation, application, and enforcement of international law. Moreover, governments are participating in the expansion of corporate rights and powers ….
>
> As Jan Scholte notes: "governments have facilitated global firms' operations and profits with suitably constructed property guarantees, currency regulations, tax regimes, labour laws and police protection." (2001: 144)

Indeed, the Brazilian soybean agro-export complex reveals the emergence of a privatized agribusiness regime through the back door, via a series of appeals to the WTO's Dispute Settlement Board, as well as funding the Brazilian Institute for the Study of Trade and International Negotiations (ICONE), to advance the free trade agendas of a corporate/state nexus (Peine 2010: 141–43). While the WTO itself is by no means hegemonic, given its compromised structure and reception by G-20 states, it pays lip service to the principle of comparative advantage by promoting freedom of investment and

commodity circulation by corporations. This suggests a corporate hegemony insofar as neoliberal doctrine, in elevating "markets" over "states," transforms the latter into explicit servants of the former, with international financial governance shifting "from states to 'private' institutions such as the Bank of International Settlements" (Nesvetailova and Palan 2010: 7–8). In this context, the World Bank, the IMF and the Bank for International Settlements (BIS) pair with the OECD, the G-8 and the G-20 in coordinating central banks and treasury departments "to constitute an evolving global financial architecture for an international version of the state-finance nexus" (Harvey 2011: 51). There is a small irony here, perhaps, in that while the gold standard regime induced solidary national resistance to the ill effects of the (state-managed) currency exchange mechanism, the current financial regime is premised on national division, where ruling classes negotiate currency stability with their representatives in the international financial institutions.

This is the essence of the private regime. It may not meet the requirements of stability from a state-centered perspective because it expresses a new conjuncture in which states have increasingly privatized. Under these circumstances, taxpayers serve as the default in the event of crisis. "Stability" is based less on convergence of interest across the state system (expressed in a truly international reserve currency) and more on military and economic force, governed by the claim that economic security depends on financial health. Over 70 southern nations undertook structural adjustment in the 1980s, entering the 1990s with 61 percent more debt than they held in 1982 (Bello et al 1994), allowing broad reductions in wages and public services. Stability in this sense is a relative term, where "market stabilization" has depended on three decades of rolling austerity (and financial) crises across the global South and into the global North in the 2000s.[3] A savage regime, neoliberalism is premised on redistribution, rather than production, of wealth (Araghi 2009; Harvey 2011; Sassen 2011). Central to the corporate food regime has been a broad dispossession of smallholders and conversion into casualized labor on a world scale.

The matter of dispossession shadows Pritchard's claim that the WTO is a "carryover from the politics of the crisis of the second food

regime, rather than representing a putative successor" (2009: 297). From this perspective, Pritchard suggests that a key question for food regimes scholars is "how to theorize agriculture's incorporation into the WTO" (idem). What is distinctive about the corporate food regime is that it was the first time farmers universally were confronted with a world market price, so while there is certainly carryover in northern farm politics, the projection of such politics *globally* in a price-assault on smallholder cultures was hardly a carryover. Rather it was a distinctively new chapter in "agriculture's incorporation," whereby the WTO has complied with corporate interests in constructing an artificial (subsidized) world price as the centerpiece of a cheap food regime deployed against smallholders everywhere.

The concept of "international regimes" emerged via a state-centric episteme, and gave life to the food regime project in embedding agri-food relations within processes of state formation, and vice versa. But insofar as the state system is a historical structure, its reconfiguration across time and space necessitates historicizing the regime concept itself. In the first food regime, Britain's "workshop of the world" project integrated emergent European industrial capitalism with food supply chains originating in capital's offshore empire; in the second, the United States deployed cheap surplus food politically to create alliances and markets for products of its intensive accumulation regime. Although agro-industrialization was common to each regime, the social structure of accumulation and of the interstate system differed markedly across these two eras.

The conditions of collapse of the first two regimes — Britain's rivals moving to protect their emerging national economies, and TNCs undermining the "embedded liberalism" (Ruggie 1992) of the United States' postwar world — expressed the maturing internal contradictions of each regime. Arguably the corporate food regime has experienced a similar cycle: a quasi-multilateralism institutionalized via WTO rules privileging an industrial agro-export model which entered into a signal crisis in the late 2000s. The fallout has pivoted on redefinitions of "food security," a central frame of the corporate food regime.[4]

Friedmann remarks that in regime crisis moments, "implicit aspects of the frame become named, when the regime stops working

well, that is, when actions no longer have the same consequences. Arguments over alternative ways of solving problems that arise as a result take place in part over how to name aspects of the faltering regime. When names catch on, it is a sign that the regime is in crisis," such as in the renaming of food aid as dumping (2005: 234–35). The hallmark of the private regime sponsored by public subsidies embedded in the WTO protocols was an implicit assumption that markets were the most efficient means to promote world food security. The twenty-first century has disproven this, with spiking hunger rates during the simmering "food crisis" as the threshold. The consequence has been an unresolved set of arguments over alternatives — ranging from revising expectations of smallholder agriculture (from agribusiness to agro-ecology advocates), to land grabbing, to domestic protectionism, and human rights (cf. McMichael and Schneider 2011).

The Corporate Food Regime

The corporate food regime carries legacies of the previous food regimes, nevertheless expressing a new moment in the political history of capital, which can be conceptualized as the neoliberal "globalization project" (McMichael 1996). This project essentially reversed the order of the previous "development project" whereby states managed markets. States now serve markets. Market rule was consolidated by financialization: a process with several strands, and enabled by a massive debt crisis incubated and then managed by new financial instruments (see chapter 5).

Historically, financialization is associated with hegemonic decline and loss of geo-economic edge, such that investors switch from fixed capital into more liquid financial ventures (e.g., mergers and securitization: consolidating and selling debt). Arrighi relates financialization to last-ditch efforts by the U.S. government during the 1980s, instituting rules promoting liberal capital markets and deregulating banking to attract capital flows to the U.S. with rising interest rates in order to overcome the relative decline in its industrial productive capacity (2007: 145). Financial deregulation began in the 1970s, with dollar convertibility enabling petro-dollars to wash around the world's financial markets in the service of global corporate

and banking ventures, and loans to Third World governments. Global bankers (replicating the role of the City of London at the turn of the twentieth century) redistributed money towards "developmental" states geared to export production (Daly and Logan 1989: 59), a process ultimately secured by OECD central bankers via the Bank for International Settlements (Cox 1987: 301). When the U.S. raised interest rates in 1980, indebted states became targets of structural adjustment instruments determined by the Bretton Woods institutions (World Bank and IMF) on behalf of northern governments and banks (see Cammack 2003). Structural Adjustment Loans transformed states by liberalizing economic policy and redistributing power within states from program-oriented ministries (social services, agriculture, education, etc) to central banks and to trade and finance ministries, compromising national sovereignty (Canak 1989).

In recounting the sea change in the political history of capital, Moore notes that by the early 1980s "finance capital emerged as hegemonic within the accumulation process, and also, as a political force within the states of the Global North … . There was an epochal shift from technological *revolution* to technological *redistribution*, reinforced by finance capital's alliance with state machineries to redistribute wealth and power from the poor and producing classes to the very rich" (2010: 232). This was initially accomplished by two related developments: offshoring of manufacturing and agriculture from North to South, and the elaboration of a debt regime to discipline indebted states with austerity policies matched with export agriculture. As Patel remarks, the "new political economy of food rested not on control through the United States' food surplus, but through the Global South's fiscal debt … the Global North found itself able to access cheap food from the Global South under the aspect of magnanimity — every bite of cheap food eaten in the North was helping the South to pay back its debt" (2007: 93, 96). While states internalized the hegemony of finance capital, Friedmann describes the resulting political coercion in post-hegemonic terms:

> Thus the IMF became an instrument of debt collection on behalf of Northern banks; the dollar remained the world currency without rules, and the U.S. retained effective veto

> power via IMF rules. As a result, Third World countries on the whole shifted from national agri-food policies (including export management) towards corporate-dominated exports (of 'non-traditional commodities' such as counter-seasonal fruits, vegetables, and flowers, and of fish) and deepened their dependence on grain imports. (2009: 339)

The 1980s debt regime consolidated the transnational movement that had emerged in the previous food regime, as southern states adopted an agro-export model expressing a corporate-driven "comparative advantage" termed the "new internationalization of agriculture" (Raynolds et al. 1993). Friedmann (1991) named these states "New Agricultural Countries (NACs)" as counterparts to the Newly Industrializing Countries (NICs) — underlining the constitutive role of agri-food relations in international political economy.

The NACs phenomenon gave rise to studies of "value chains" harnessing non-traditional exports of fruits and vegetables from the global South (LeHeron 1993; Friedland 1994; Llambi 1994; Raynolds et al. 1994) and shaping subsequent research on various commodities such as shrimp, poultry, canned seafood, canned pineapple and fresh fruit from Thailand (Goss and Burch 2001), green beans, baby carrots and corn, and snowpeas from Kenya (Dolan and Humphrey 2000), corporate tomatoes from Mexico (Barndt 2008), and Pritchard and Burch's global analysis of different sources and forms of tomato production (2003).

In the early 1990s a discernible transnational corporate "global sourcing" of foods was most obvious in the technologies of seed modification, cooling and preserving, and transport of fruits and vegetables as non-seasonal, or year-round, access for relatively affluent consumers became available through the management of archipelagos of plantations across the global South. Here, TNCs subcontracted with Third World peasants to produce specialty horticultural crops and off-season fruits and vegetables, and processed foods such as fruit juices, canned fruits, frozen vegetables, boxed beef, and chicken pieces (often in export processing zones), for expanding supermarkets in Europe, North America and Pacific-Asia. Enabling this global process was the "second green revolution" (DeWalt

1985), distinguished from the first green revolution by *shifts*: from public to private initiative, from staple grains to higher-value foods (animal protein, fruits and vegetables, chemical feedstocks), and from domestic to global markets.

The transnationalization of food circuits superseded the politically managed bilateral export of food surpluses and agri-industrial technologies associated with the postwar food regime. By the twenty-first century, about a third of this trade represented purchases between corporate subsidiaries. With the rise of global retailing, corporate takeover of southern domestic food systems (including seed, fertilizer and chemical input sectors) deepened global markets and global and regional supply chains. As John Wilkinson notes: "during the 1980s, biotechnology, heavily dependent on patents, was revolutionizing the genetic and agrichemical inputs sectors. Concerted lobbying by these and the pharmaceutical sectors led to the developing countries' acceptance of patents on food and as a precondition for joining the WTO" (2010: 157). The compromise of sovereignty associated with the resulting Trade Related Intellectual Property Rights (TRIPs) protocol was part of the price of admission — and it was a double compromise, since the South yielded much of the genetic information (Wiessman 1990), prompting claims of "recolonization" (Raghavan 1990).

The new international division of agricultural labor developed and consolidated trends from the previous food regime, involving a rising share (73–82 percent) of the OECD in the volume of cereal exports (1970–96), and the global South importing 60 percent of world cereal volumes. At the same time the NACs expanded their share of seafood exports and tripled the world market for fruits and vegetables. The OECD countries became the world's major suppliers of plant varieties. Here, the most significant shift was political. As Pistorius and van Wyk put it:

> The advent of the Third Agro-Food Order has revealed a tendency for the state as the pivot of crop development to be replaced by private industry. Since the 1980s, the growth of public investment in agricultural R&D has declined, private industry has obtained a greater say in the allocation of public

> agricultural R&D funds, while private investment in agricultural research has risen rapidly. This development has been accompanied by a thorough restructuring of the organisation of the plant-breeding sector, which has given rise to the formation of industrial crop development conglomerates, based in OECD countries. Given the accumulation of unrivalled financial and technological capacity within these industrial conglomerates, they seem to become the central actors and dynamic force of crop development in the Third Agro-Food order. (1999: 51)

Governance

This new order emerged through the politics of the GATT Round, which, in anticipating the formation of the WTO, engaged a profound transition underway in the world economy — between a *residual national* principle deriving from a period of relatively managed trade and investment, and an *emergent global* principle of relatively free trade and capital movement. These principles were not mutually exclusive, as evidenced in the ability of the U.S. and the E.U. in particular to retain (by concealment) farm subsidies despite the norm of universal liberalization. One might say that formally GATT multilateralism expressed the national frame, but substantively it committed to the elaboration of global regulatory mechanisms compromising national sovereignties in advancing a specific social structure of global accumulation. The latter was evident in the prominent corporate voice in the Round. Here, food companies, the grain merchants and the chemical industry in particular pushed the GATT to phase out farm programs, eliminate supply management and drive prices down by exposing producers to differential labor costs across the world (Ritchie 1993: 27). GATT multilateralism was complicated by the realities of internationalization of productive and financial capital (Hoogvelt 1997), where global sourcing by transnational firms subordinated national economic strategy to international competition, and global capital markets outstripped the power of national regulators to defend their currencies (McMichael 1993: 200).

The shift orchestrated by GATT from bilateral to multilateral trade in agricultural commodities, via procedural standardization

and general tariff reduction, imparted a distinctive constitutional dimension, which activated (new) members (Winters 1990: 1298). Such constitutional tendencies provided some legitimacy to the emergent free trade regime, despite the absence of a hegemonic state fashioning its own rules of the game. Member states secured world market rule, represented as a "level playing field" and "harmonization." Such representations played to the advantage of the northern states (with resources beyond the reach of southern states), where a subsidy system was allowed to persist.

While subsidies were a legacy of the previous regime, they now functioned as a competitive world market instrument, to the advantage of food traders and retailers, and were institutionally embedded in the WTO. Where subsidies were originally established as a national regulatory mechanism, and underwrote the U.S. food aid regime, they now underwrote a corporate market regime. The new mechanism, anchored in international financial institution dictates, depended on the withdrawal of state protection of national markets, and a reorganized state system to secure transnational circuits. Further, the organizational scope and complexity of the institutional legacy of U.S. hegemony (the BIS, the IMF and the World Bank) were "a major factor in enhancing their autonomy … from each and every member of the interstate system … and transnational corporations have developed into an integrated system of production, exchange and accumulation which is subject to no state authority and has the power to subject to its 'laws' each and every member of the interstate system" (Arrighi 1990: 403). The WTO compounded this legacy by writing "the constitution of a single global economy" (Ruggiero 1996), meaning that rather than advancing popular sovereignty and protecting life above profits, this was "basically the first constitution based on the rules of trade and the rules of commerce" (Shiva 2000: 58).

Delinking from the U.N. Human Rights Charter (1947), the WTO assumes national health, and social and environmental regulations restrict trade, requiring them to be translated into visible and quantifiable tariffs, subject to reduction over time. In addition, a subsidy hierarchy was constructed, where subsidies (affordable only by northern states) were consigned to "boxes," arranged according

to degrees of protection (Herman and Kuper 2003: 35–36). The box system has worked to the advantage of northern states, which consign decoupled farm support payments to the "non-trade-distorting" Green Box. Decoupling means direct payments to farmers rather than using price supports to distort "free trade." Europe's Common Agricultural Policy (CAP), in particular, justifies such an arrangement through a "rural development" initiative, whereby direct farm payments support the "multifunctionality" of agriculture (but see McMichael 2011a). The combination of reduction of customs duties via "tariffication," and protection of northern farm subsidies via the box system, comprised a regulatory system transferring resources from public to private hands in the North, and exporting food insecurity to the South via dumping.

In effect, the WTO regime represented a new form of development governance with a common set of rules (vs. the structural adjustment conditions individually applied by the Bretton Woods institutions) based on multilateral consensus and internalized by each member state in an institution with independent jurisdiction. The rules were premised on standardizing market conditions as if all states were equal (with some exceptions for so-called Least Developed Countries), underpinned by an integrated dispute settlement mechanism enabling mutual disciplining of state policies according to "free trade" rules. The Agreement on Agriculture (AoA) protocol, advocating universal reductions in trade protection, farm subsidies and government intervention, carried an implicit assumption that the market was the means to world food security. This axiom echoed the U.S. claim during the GATT Round that "self-sufficiency and food security are not one and the same. Food security — the ability to acquire the food you need when you need it — is best provided through a smooth-functioning world market" (quoted in Ritchie 1993: 25). Growing recognition of the shortcomings of a world-economic constitution lacking a human right to food objective is deeply symbolic of the current crisis in the food regime (de Schutter 2012) — see chapter 6.

Food Circuits, Dispossession and Dependency

The WTO's free trade regime intensified the circulation of food associated with the global division of agricultural labor, depressing world food prices by at least a third within a half decade (Ritchie 1999). The AoA outlawed "artificial" price supports, requiring states in the global South to deregulate, while northern states "boxed" away their subsidies (concentrated on corporate farms). This allowed decoupling of subsidies from prices, removing the price floor, and establishing an artificial "world price" (substantially below production costs) for northern grain surpluses dumped on the world market, at the expense of non-corporate farmers everywhere. In 2002, the average price below the cost of production of various U.S. agribusiness exports was 43 percent for wheat, 25 percent for soybeans, 13 percent for corn, and 35 percent for rice (IATP 2004: 3).

The WTO's minimum import rule (aimed at national self-sufficiency strategies) intensified the impact of this cheapened world price on farmers unable to compete, leading to a significant acceleration of smallholder dispossession. In 2000, Oxfam asked: "How can a farmer earning U.S.$230 a year (the average per capita income in LDCs) compete with a farmer who enjoys a subsidy of U.S.$20,000 a year (average subsidy in OECD countries)?" (quoted in Bailey 2000). Between 1998 and '99, farm income in the U.K. fell by 75 percent, driving 20,000 farmers off the land, and U.S. farm income declined by almost 50 percent in the 1990s (Lehman and Krebs 1996, Gorelick 2000: 28–30). In the global South, a conservative FAO estimate for sixteen southern countries claimed between 20 and 30 million people lost their land from the impact of liberalization of agricultural trade (Madeley 2000: 75). A related trend was "de-agrarianization": in Africa, late 1990s evidence suggested between 60 and 80 percent of rural household income was derived from off-farm sources (Bryceson 2004: 618–19), with the poorest households being the most heavily dependent on off-farm, informal and piecework labor (Bernstein 2005, Bezner Kerr 2005). In Asia, between 30 and 40 percent of rural household incomes are supplemented from off-farm sources (Kabeer and Tran Thi Van Ahn 2002), while much of the Latin American peasantry is semi-proletarianized, experiencing a double squeeze

in access to land and employment: "their access to off-farm sources of income, generally seasonal wage labour, enables them to cling to the land, thereby blocking their full proletarianization" (Kay 2006: 472; cf. Scoones 2009).[5]

In 2000, the Indian Ministry of Agriculture observed: "the growth in agriculture has slackened during the 1990s. Agriculture has become a relatively unrewarding profession due to an unfavourable price regime and low value addition, causing abandoning of farming and migration from rural areas" (quoted in Paringaux 2000: 4). Almost 2 million Mexican *campesinos* lost their maize farms to cheap and heavily subsidized corn exports from the North, under the North American Free Trade Agreement (NAFTA), and American farmers faced an intensification of competitive imports from Mexico of fruit and vegetables, with some 33,000 small farms disappearing — six times the decline during the previous half decade (Carlsen 2003; Public Citizen 2001a: iv). In other words, corporate subsidies and transnational food circuits combined in an all-round assault on smallholders.

NAFTA exemplified this process of global enclosure. When NAFTA (1994) opened Mexico to 100 percent foreign investor rights (anticipating the WTO's Trade-Related Investment Measures/TRIMs), Pillsbury's Green Giant subsidiary relocated frozen food processing from California to Mexico to access cheap wages, minimal food safety standards, and zero tariffs on re-export to the United States. Cargill purchased a beef and chicken plant in Saltillo, and Cargill de Mexico invested nearly $200 million in vegetable oil refining and soybean processing in Tula. Further, Tyson Foods operates in Mexico, Brazil, Argentina and Venezuela; ConAgra processes oilseed in Argentina; Archer Daniels Midland crushes and refines oilseed, mills corn and flour, and bioengineers feeds in Mexico, Central America and South America; and Wal-Mart is in Mexico, Argentina and Brazil (Public Citizen 2001a: ii–iv, 19–21). Public Citizen noted: "agribusinesses have been able to create new export platforms, which play farmers from the U.S., Mexico and Canada against one another in a fight for survival as prices paid to producers are steadily pushed down" (2001b: 13).

The AoA's minimum import rule guarantees the "right to export," thereby institutionalizing market-based "food security." By the mid-1990s half of the foreign exchange of the eighty-eight low-income

food deficit countries went to food imports (LeQuesne 1997), and food-dependent states' food bills grew on average 20 percent between 1994 and 1999, in spite of record low prices (Murphy 1999: 3). By the mid-2000s 70 percent of countries in the global South were net food importers (GRAIN 2008: 2).

Food dependency was the counterpart of a process of centralization of global food stocks — 60 percent in corporate hands, six of which control 80 percent of the global wheat and rice trade, with three countries producing 70 percent of exported corn (Angus 2008). From 1970–2000, declines in the world percentage of agro-exports from Africa (10 to 3 percent), Latin America and the Caribbean (14 to 12 percent), and the "Least Developed Countries" (5 to 1 percent), contrasted with a northern increase from 64 to 71 percent (FAO 2004). While northern food corporations have dominated international trade, "local sales by foreign subsidiaries of U.S. processed food firms are five times the exports of processed food from the U.S. to the rest of the world (Reardon and Timmer 2005: 28). In other words, retailing giants such as Tesco (U.K.), Wal-Mart (U.S.), Ahold (Netherlands) and Carrefour (France) colonize domestic markets from within, complementing the grain trader legacy of the previous food regime.

Together, these commodities comprise a unifying world food system, geared to supplying a bifurcated consumer class with high- and low-value foods. And yet these consumers account for less than half of the world's population. What of the other half? In previous food regimes, provisioning of cheap food met strategic goals of the hegemonic state, limited to particular wage-earning labor forces. Global food provisioning via trade in general, in the name of world "food security," was articulated by the chairman of Cargill: "There is a mistaken belief that the greatest agricultural need in the developing world is to develop the capacity to grow food for local consumption. This is misguided. Countries should produce what they produce best — and trade" (quoted in Lynas 2001). The corporate food regime targets wage-earning consumers in a combined bid to stretch the elasticity of food consumption (from "meatification" to product differentiation) and to extend food markets through unfair trade. Despite claims for the security of cheap food, it adversely affects that

majority of the world's population producing peasant foods (ETC 2009: 1), undermining farming and informal provisioning through wet markets, street vending and the commons.

As the international peasant and farmer movement, Vía Campesina, put it: "the massive movement of food around the world is forcing increased movement of people" (2000), displacing peasant families into a casualized labor force (McMichael 1999), and confirming the utility of representing the food regime as a global value relation *par excellence*. It is premised on deployment of the price weapon against smallholders and on incorporating local consumption relations, and local food resources, into global circuits. The paradox of the corporate food regime is that at the same time as it presents as the condition for food security, it immiserates populations through the exercise of monopoly power. The perverse consequence of global market integration is the export of deprivation, as "free" markets exclude and/or starve populations dispossessed through their implementation, consigning people of the colonized hinterlands to an unseen, racialized under-consumption that has been a condition for metropolitan development and over-consumption. The deepening global agrarian crisis, expressing a fundamental contradiction in the food regime, incubated a broad challenge to corporate agriculture in the food sovereignty movement, claiming "food is first and foremost a source of nutrition and only secondarily an item of trade" (Vía Campesina 2002: 8).

Food Sovereignty

The progenitor of "food sovereignty," Vía Campesina,[6] formed from a meeting in May 1993 of farmers' movements from the Americas, Europe and Asia, held in Mons, Belgium. The agrarian crisis resulting from neoliberal policies was the spark for a movement that would publicly defend food sovereignty at the FAO World Food Summit in Rome in 1996 (Nicholson 2008: 456). Nicholson summarized food sovereignty thus: "We propose local food markets, the right of any country to protect its borders from imported food, sustainable agriculture and the defence of biodiversity, healthy food, jobs and strong livelihood in rural areas" (2008: 457). The movement itself claimed:

> Neo-liberal policies prioritize international trade, and not food for the people. They haven't contributed at all to hunger eradication in the world. On the contrary, they have increased the peoples' dependence on agricultural imports, and have strengthened the industrialization of agriculture, thus jeopardizing the genetic, cultural and environmental heritage of our planet, as well as our health. They have forced hundreds of millions of farmers to give up their traditional agricultural practices, to rural exodus or to emigration. International institutions such as IMF (International Monetary Fund), the World Bank, and WTO (World Trade Organization) have implemented those policies dictated by the interests of large transnational companies and superpowers.... WTO is a completely inadequate institution to deal with food and agriculture-related issues. Therefore Vía Campesina wants WTO out of agriculture. (Vía Campesina 2003)

Vía Campesina identifies the fundamental contradiction of the corporate food regime as being "between centralized, corporate-driven, export-oriented, industrial agriculture versus decentralized, peasant- and family farm-based sustainable production primarily oriented towards domestic markets." Since trade negotiations conceal this distinction, the WTO is a "totally inappropriate institution for democratic decision-making" regarding food sovereignty and social and ecological sustainability (Vía Campesina 1999: 3).

As a strategic intervention, food sovereignty is hybrid, in addressing both immediate (formal) needs and posing substantive, long-term alternatives. Formally, it invokes the right of nations to protect domestic food production and producers, who "are currently producing the very large majority of the world's food" (Vía Campesina 2008). There are already initial attempts to redefine state constitutions by institutionalizing food sovereignty. Substantively, it offers an alternative ontology: claiming rights beyond market rights, with an agrarian identity based in a value complex weaving together ecological subjectivity and stewardship as a condition for social and environmental sustainability. Defending "the peasant way" is not about preserving a "culture" so much as strengthening

cultural practices that do not reduce food and agriculture to the price form. In so doing, the food sovereignty movement asserts the incommensurability of diverse agri-food cultures with a monocultural food regime that objectifies and fetishizes food as a vector of capital accumulation.

The food sovereignty vision, for the long term, unsettles the state-centric mold. It advocates re-territorialization of states through the revitalization of local food ecologies and recognition of the rights of people of the land. This vision expresses a civilizational episteme emerging from an apparent general crisis of capitalism (see chapter 7). More than a question of declining state hegemony, the contradictions of the corporate food regime are cumulative insofar as industrial agriculture is ecologically unsustainable, and socially exclusionary. The food sovereignty movement, recognizing state complicity in the neoliberal market project, seeks to reconstitute the state (and its spatial relations) via a politics of "agrarian citizenship" (Wittman 2009). These politics seek to refocus on collective rights, build coalitions with other social justice movements, and embed social relations in ecologies rather than markets. As Marc Edelman argues, "peasantness" is a political rather than an analytical category (2009). Patel views food sovereignty rights as a "means to mobilizing social relations," in turn "a call for a mass re-politicization of food politics, through a call for people to figure out for themselves what they want the right to food to mean in their communities, bearing in mind the community's needs, climate, geography, food preferences, social mix and history" (2007: 88, 91). In short, this is a call for the right to self-governance, with rights geared to social ends.

Such a re-politicization of food is underway in many local communities across the world, as farmers and citizens experiment with alternative food systems (Wittman, Desmarais and Wiebe 2010, Fairbairn 2012, Rose 2012, Andree et al. 2013). In these early phases, as outlined by Jose Bové of the French Farmers' Confederation, food sovereignty depends on access to credit, land and fair prices to be set via rules negotiated in a reformed U.N. and alternative multilateral institutions such as a Convention on Food Sovereignty and Trade in Food and Agriculture, an International Court of Justice, a World Commission on Sustainable Agriculture and Food Sovereignty, and

so forth (Bové and Defour 2001: 8). As Bové asks, "Why should the global market escape the rule of international law or human rights conventions passed by the United Nations?" (Bové and Defour 2001: 165). The premise, of course, is farmers' movements participating in democratic definition of agricultural and food policies. An emerging global moral economy would be strengthened by the adoption in the U.N. of an International Convention on Peasant Rights, currently *sub judice* (Edelman and James 2011).

Conclusion

This chapter has outlined the processes of the corporate food regime. While the first two regimes pivoted on a hegemonic state backed by an international currency and military force, the third regime has projected corporate hegemony backed by international finance and multilateral rules. Each regime's stability depended on variable combinations of coercion and consent, as required by particular dynamics of accumulation in cheap food provisioning.

Under the corporate food regime, cheap food depends on the union of North Atlantic grains and southern fruits, vegetables and seafood in an international division of agricultural labor coordinated by transnational corporate supply chains, with trade relations governed by International Financial Institution (IFI) structural adjustment policies and WTO protocols. With the combined effect of intellectual property protections, agribusiness centralization and subsidization, and private quality standards for global retailing, the agro-export model fostered a "world farm" phenomenon, demanding standardization from producers for world supermarkets. Farmers unable to meet certification requirements or compete with cheap grain flows face displacement and dispossession, exacerbating world hunger. It is this fundamental contradiction, in a now *global* food regime, that defines the corporate food regime. The measure of this is the politicization of this food regime by the food sovereignty movement and the renewal of debates regarding food security in the unfolding "food crisis" — indicating a signal crisis of governance and perhaps a terminal crisis of sustainability.

Notes

1. Thus: with "the coming of the gold standard … tariffs, factory laws, and an active colonial policy were prerequisites of a stable external currency (*Great Britain with her vast industrial superiority was the exception which proved the rule*). Only when these prerequisites were given could the methods of market economy now be safely introduced" (Polanyi 1957: 214, emphasis added).
2. Timothy Mitchell argues that this was also a method of disbursing dollars to enable/encourage states to embrace the post-war oil regime (2011: 111).
3. Pritchard and Burch (2003: 13, 263) make a point of emphasizing instability, from their extensive research on the global tomato processing industry. The absence of a global market price for tomato paste is explained by the fact that most paste is exchanged between supply chain partners via supply contracts (ibid: 250) — conventionally, the food regime is represented by a global price of staple grain.
4. Thus the 2010 Millennium Development Goals Report observed: "Since 1990, developing regions have made some progress towards the MDG target of halving the proportion of people suffering from hunger. The share of undernourished populations decreased from 20 per cent in 1990–1992 to 16 percent in 2005–2007, the latest period with available data. However, progress has stalled since 2000–2002" (U.N. Department of Economic and Social Affairs, The Millennium Development Goals Report 2010: 11, at http://www.unfpa.org/public/site/global/lang/en/pid/6090).
5. Interestingly, while there is analogous de-agrarianization in China (since the 1970s Reforms), full proletarianization, or de-peasantization, has been slowed by China's land-rights institution, which entitles "peasants to economically inalienable access to farmland" (Zhang and Donaldson 2010: 469), despite rising land seizures (Walker 2008).
6. An international coalition comprising over 150 organizations from 70 countries. In 2000, Vía Campesina joined with fifty-one other civil society organizations to form the International Planning Committee for Food Sovereignty, which operates at the international policy level.

Chapter 4

Food Regimes and the Agrarian Question

The agrarian question is a centerpiece of agrarian studies. Urban revolutionaries posed it at the turn of the twentieth century as a political question concerning the allegiances of the European peasantry. Of immediate concern was the question of whether and to what extent capitalist relations were eroding pre-capitalist rural landed property, and how this might contribute to an urban-rural worker alliance. It has since become synonymous with analysis of class transformations in the countryside, from the point of view of the capitalization of land.

This chapter qualifies this approach to the agrarian question by resituating it in a world-historical context, examined through the lens of the food regime. Such a lens broadens, and deepens, the relationships implicated in the agrarian question, showing that its classical, capital-centric approach discounts landed ecology, and discounts farmers/peasants as historical subjects. At the same time, the food regime lens itself refocuses to incorporate political-ecology and producer agency.

The food regime and the agrarian question were linked, via global value relations, at the end of the nineteenth century. Thus, the food regime drive to establish offshore food supplies in the New World in order to lower wage costs in Europe was both consequence of, and consequential for, landed relations within Europe. As grains flooded European markets in the late nineteenth century, landlords, capitalist farmers and peasants alike were confronted with a price depression for farm goods. The squeeze on European agriculturists encouraged capitalization of agricultural production, transforming landed property along capitalist lines and eroding surviving landlord and peasant classes. The contours of the agrarian question, then, were shaped within the value relations of the food regime, with global consequences (Araghi 2003).

What was initially a question about class transformation in the European countryside has since been extended to the wider world via the cumulative dynamics of successor food regimes, but by no means in linear fashion. Subsequent universal imposition and/or adoption of industrial agriculture marks the deepening of global capitalist markets, with decolonization encouraging the extension of green revolution technologies followed by a trade regime premised on southern food dependency and specialized agro-exporting, and, consequently, the marginalization of smallholder farming. The industrial agriculture underwritten by energy and agribusiness subsidies is reproduced by methods of "biophysical override" (Weis 2007), which substitute short-term financial gains (value-override) for long-term ecological sustainability. Value override by the food regime has critical ecological consequences requiring a reformulation of the agrarian question.

Agrarian Question Reformulation?

Reformulation builds on an initial attempt to situate agrarian questions globally (McMichael 1997), focusing on how food regime dynamics and the agrarian question are mutually conditioning across time and space. This formulation draws critically upon more recent reflections on the agrarian question (Akram-Lodhi and Kay 2009; Bernstein 2010), suggesting much of this reflection is governed by a need to reconcile present-day agrarian (and urban) realities with a set of nineteenth-century theoretical postulates.

Such reconciliation requires reconceptualizing (the narrative of) capitalist development in an era when agriculture has become a global industry, marginalizing farming and generating a "planet of slums" (Davis 2006). New social forms of landed relations have emerged alongside the variety of agrarian class relationships identified in the late nineteenth century, renewing a political economy of agrarian change but without a *political ecology* of agrarian change. Where ecology enters in, the tendency has been to examine it from the perspective of biophysical barriers to capital, to be overcome by methods of "appropriationism" such as mechanization, synthetic fertilizer and transgenic seeds (Goodman, Sorj and Wilkinson 1988).

In this narrative, capital's movement commands analytical privilege at the expense of examining ecological conditions. That is, whether and to what extent capital is able to accomplish a "real subsumption" of agricultural labor and biological processes drives the classical version of the agrarian question. But this formulation — that the agrarian question is for capital to resolve — remains one-sided. In effect, it reproduces a modernist assumption regarding the autonomy of social processes from their ecological base.

A reformulation of the subject of the agrarian question today might just as well invoke an ecological question, articulated not by the analysts or captains of agro-industry, rather by the stewards of farming. The idea of an "ecological question" refers not simply to ecosystem degradation and/or restoration, but also to *human* ecology issues including over-urbanization, outlined for example in Araghi's reconceptualization of the agrarian question in lieu of the "great global enclosure of our times" (2000; see also Menon 2010). In addition, there are the growing concerns regarding "population biology," which Friedmann characterizes as a syndrome "resulting from industrial farming and livestock operations, which multiply not only the number of human beings but of the beings favoured in agro-food markets, all at the expense of the many beings and relationships in self-organizing ecosystems" (2006: 464). Both formulations underline the consequences of agro-industrialization and rural dispossession, and evoke variants of food and land sovereignty movements that connect ecological questions about repairing the metabolic rift (Schneider and McMichael 2010; Borras and Franco 2012).

Reformulation of the agrarian question here means shifting the focus from capital's subordination of landed property to its subordination of land, where the former is the condition of the latter. That is, class resolutions on the land are one thing, but how they affect the land is another. To take this further, when capital is our methodological point of departure, rural inhabitants are necessarily represented in one-dimensional terms as capital's "frontier" (or barrier to be overcome). While this representation may be necessary to a theory of modern agrarian change where capital is the dominant vector, it discounts farming cultures and, likely, their resistance to dispossession. And resistance to dispossession is not simply about

losing control of land, but also losing knowledge of farming the land as a reproductive necessity. Accordingly, a reformulated (and historicized) agrarian question, is, simply, who shall farm the land and to what socio-ecological end?

The reformulation enables recognition of how a classical formulation can be recast in such a way as to underscore the significance of farmer/peasant mobilization today around questions of land rights and ecological farming. While these questions may have been marginalized during the twentieth century, they are now condensing in the crisis of the corporate food regime. That is, across this time the generic food regime has concentrated its contradictory relations, expressed now in a global agrarian crisis and a rural mobilization to reclaim rights to the land and its stewardship. There are two related issues here. Food sovereignty is the counter-movement to capital's movement in the current corporate food regime. Its opposition to agro-industrialization crystallizes the longer-term process of socio-ecological degradation, and informs a growing consensus regarding the restorative role of agro-ecology at this world-historical moment of profound environmental uncertainty.

The Agrarian Question in the Food Regime

At the turn of the twentieth century, the agrarian question concerned the politics of capitalist transition in agriculture, specifically how peasantries would interpret their interests during a transformative time. This was, in the first place, a significant dimension of national politics, given growing rural enfranchisement. William Roseberry has suggested that the agrarian question was formulated as a political question with primarily an economic answer — in other words, the relation of the peasantry to national politics was evaluated by its variable class location (1993: 336). In Lenin's terms (1972), the political identity might be extrapolated from whether the peasantry was "differentiating" or actually "disintegrating." In relation to these transitional class forms, Karl Kautsky observed:

> What decides whether a farmer is ready to join the ranks of the proletariat in struggle is not whether he is starving or indebted,

> but whether he comes to market as a seller of labour-power or as a seller of food. Hunger and indebtedness by themselves do not create a community of interests with the proletariat as a whole; in fact they can sharpen the contradiction between peasant and proletarian once this hunger has been stilled and debts repaid, should food prices rise and make it impossible for workers to enjoy cheap food. (1988: 317)

The class relations reshaping European peasantries were not simply a matter of how capital was "resolving" the agrarian question, that is, whether and how pre-capitalist or semi-capitalist production relations were disappearing. Rather, class transitions were also conditioned by global value relations. In fact, one might say that the subordination of landed property to capital was largely indirect. Instead of the conventional image of capital penetrating agrarian relations, the political history of capital in lowering the cost of factory labor with offshored wage foods production was likely more consequential in reshaping rural class relations.

Kautsky linked the question of peasant-worker allegiance to declining food prices from the 1870s, against the interests of European agrarian producers, as a world wheat market materialized under the terms of the British-centered free trade/food regime. Friedmann (1978) has documented the particular historical conditions of New World agricultural frontiers (cheap land, household labor, transport technology) in driving down wheat prices and posing a profound competitive threat to European farmers. As Kautsky wrote:

> It was not the volume of imported food which threatened European agriculture, but rather the *conditions under which it was produced*. Such produce did not have to bear the burdens imposed on agriculture by the capitalist mode of production. Its appearance on the market made it impossible for European agriculture to continue shifting the rising burdens imposed by private property in land and capitalist commodity production on to the mass of the consumers. *European agriculture had to bear them itself. And this is what is at the heart of the current agrarian crisis.* (1988: 243, emphasis added)

While the agrarian question was posed in state-centric terms, in Western Europe it was clearly conditioned by the late nineteenth-century food regime. Rural producers and urban workers shared a common experience in low food prices, but they also shared a deepening exposure to value relations, commodifying land and labor. The separate but combined counter-movements of agrarians and workers to protect these social resources contributed to the formation of the twentieth-century social-democratic state (Polanyi 1957). In other words, class effects of the food regime had considerable import for maturing European nation-states, contributing to the protectionist interlude marking the transition between the British-centered food regime and its successor regime. Polanyi noted that the great expense of international transport infrastructure was justified if the "prize to be gained is high" — namely, access to cheap foodstuffs on the frontier: "International free trade, if unchecked, must necessarily eliminate ever-larger compact bodies of agricultural producers.... Once the great investments involved in the building of steamships and railroads came to fruition, whole continents were opened up and an avalanche of grain descended upon unhappy Europe" (1957: 182).

Polanyi's account underscores the class and political consequences of the British free trade food regime, in addition to the protectionist response that performed the "socially useful function" of "stabilizing the European countryside and ... weakening that drift towards the towns which was the scourge of the time" (Polanyi 1957: 185). In Polanyi's view the "fierce agrarianism of postwar Europe," and "the 'reagrarianization' of Central Europe started by the Bolshevik scare" (ibid: 188), were keys to understanding how, paradoxically, the liberal market project instituted by Britain generated agricultural protectionism. With regard to the competition from cheap grains, he remarked: "it had been forgotten by free traders that land formed part of the territory of the country, and that the territorial character of sovereignty was not merely a result of sentimental associations, but of massive facts, including economic ones" (ibid: 183–84). In these senses the agrarian question was fully embedded in the food regime, and, incidentally, anticipated the rise of today's food sovereignty movement.

It is not as if the agrarian question interlocutors were not aware of the impact of empire and trade on agrarian producers. Kautsky in particular was fully cognizant of the international origins of the agrarian crisis, which he projected more or less accurately forward to the present day. The point, however, is that the question was governed by theories of change in the agrarian sector alone. Within the terms of the agrarian question, the political potential of the peasantry was largely understood in terms of its imminent expropriation by capitalist market processes (Lenin 1899) or preservation (as a "disguised proletariat") in tenant-like relations with large capitalist farmers (Kautsky 1899). In other words, a political question was understood in economic terms that were inadequate in scope — not only because the economic sphere was global, but also because it was politically mediated. This is where food regime analysis is useful in specifying the political mediations of the world market with respect to landed relations, and by extension, the terms of the agrarian question.

The political mediations of the center of the late nineteenth-century world market are implicit in the concept of the food regime. Indeed, Polanyi's focus on the so-called "self-regulating market" underscores that this was a world-hegemonic construct of liberal elites managing the British state, and depending on combined military and commercial power. British rule rested on opening colonial markets protected by rival powers to world trade, and securing a global market in the mercantilist manner of a "colonial system" writ large, but governed by free trade ideology ("free trade imperialism"). The result of British-led liberalization was a 50 percent increase in world crop cultivation between 1840 and 1880, a switch from luxury to staple trade, and an increasing domination of the staples trade by world, rather than local, prices (Woodruff 1967: 268).

This was the international context for the agrarian question, as formulated in Europe. But why only Europe? Was this to be the model for subsequent formulations as successor food regimes have introduced capital-intensive agriculture into the non-European world? If the late nineteenth-century European agrarian question formed within the vortex of an international food regime, were there no effects, or questions, elsewhere? This is not a simple matter

of rehearsing a similar question in other contexts. It also involves considering the implications of marrying a state-centric political question with a capital-centric theory — both perspectives limiting our view of the broader set of determinants and consequences. What follows is one example.

Agrarian Question or Agrarian Crisis?

The classical approach asks how capital will resolve the agrarian question. As Henry Bernstein puts it: the classical question concerned the development of a *home market* for capital as "the *agrarian question of capital*, and specifically *industrial capital*. In the context of transition(s) to capitalism, this was also assumed to be the agrarian question of labour as well as capital, inasmuch as these two definitive classes of an emergent capitalism shared a common interest in the overthrow/transformation of feudalism, and of pre-capitalist social relations and practices more generally" (2003: 209).

While a state-centric focus on the home market for capital may have been a proximate field of inquiry for the "peasant question" in Europe (e.g., its degree of dissolution), it rehearses a developmentalist narrative. That is, the observed changes in European states register the supersession of peasant farming by capitalist agriculture as a process driven by class transformation within a national space. Whether this involves Lenin's scenario of peasant disintegration, or Kautsky's scenario of countervailing tendencies, the logic of "subordination" remains the key *telos*, as a process governed by capital's relation to landed property. Such an accumulation problematic privileges the *theory* of capital over its political history.

Class transformation was indeed at work, but conditioned by the food regime. As above, agrarian relations within Europe were influenced directly by the New World food market. Furthermore, the world market brought peasantries across the world into relation such that their fates were mutually conditioning. For example, in addition to New World family farmers, Turkish peasants gained access to the European market, exporting grain to pay state taxes (Luxemburg 1951). In India, tax and irrigation policies of the British Raj forced farmers into export agriculture, such that by 1900 England

depended on India for almost 20 percent of its wheat consumption (Davis 2001: 26).

A developmentalist reading of these outcomes loses sight of the significance of world-historical relations in the political history of capital — a consequence of a state-centric political question collapsing the theory of capital into a national economic space. However, this was a period in which the foundations for agricultural outsourcing emerged, and the historical structure of capital accumulation depended on a world market (capital's food regime). Accordingly, Terry Byres' three-dimensional agrarian question (1996) — the historic confrontation of landed property by capital, the balance of political forces in relation to agrarian transition, and the role of agricultural capital in accumulation — requires qualification. While all three dimensions are apposite, their interpretation through a national lens de-historicizes capitalism, discounting the world-historical politics underpinning agrarian transition in European capitalist states.

The politics of English agrarian transition were clearly not simply about contesting domestic landlordism (as barrier to capital/productivity). Rather class politics were entwined with a pursuit of hegemony. In the 1840s Cobden's Anti-Corn Law League brokered an alliance between manufacturers and workers, advancing England's "workshop" ideal as a formula for economic growth. As Ricardo had remarked in 1822: "there would always be a limit to our greatness while we were growing our own supply of food" (quoted in Semmel 1970: 71). Evidence suggests, however, that English agriculture provisioned "one of the most rapidly growing populations ever seen in history and did so on the basis of a system that generated continuously improving yields *without need of external inputs*" (Duncan 2000: 193). "High farming" was based on sophisticated forms of cattle- and sheep-corn husbandry, with on-farm nutrient recycling, continual soil improvement and pest management.

Colin Duncan suggests England did not have a "predatory" landlord class, noting that Marx did not investigate this, taking his view from middle-class Radicals "who despised the aristocracy and alleged that agriculture was starved of capital and was consequently under-producing" (idem). The English landed property relation, whereby aristocratic families rented to capitalist farmers via a form of

entail (stewarding the land for future generations), was distinct from Western Europe, where family farming was increasingly capitalized with synthetic fertilizers and specialty feedstuffs. Russian peasants subsidized industrialization via taxes on grain exports (Duncan 1996: 104). High, and capitalized, farmers met their match when the food regime introduced New World grains "produced by methods more akin to mining than to proper farming" as frontier settlers expropriated prairie grasslands (from indigenous inhabitants), appropriating their storehouse of humus and reviving "the technically 'primitive' farming method of shifting cultivation" (ibid: 102).

Duncan's thesis is that capitalist agriculture, under certain conditions, can be ecologically regenerative. Offshore farming, via a settler diaspora depending on export markets, illustrates the operation of "value relations." As Friedmann notes, diasporic settlers' dependence on railways and merchants for consumption goods and tools encouraged farming specialization, and their "reliance on unpaid labor of men, women and children — exploitation of family labor — allowed them to lower costs relative to farms in England and elsewhere, including former export regions in Eastern Europe" (2005: 238). Mining virgin soil on an "open" frontier was a short-term ecological bonanza with no accounting for unsustainable methods, therefore able to deliver grains at short-term low prices. But the longer-term price was ecological collapse as family farms over-produced to compensate for falling prices in the new century, stressing the land and creating the American dust bowl of the 1930s and a deepening protectionism spreading from Europe.

As above, Kautsky identified the conditions in the late nineteenth century that gave rise to early twentieth-century European agricultural protectionism. These were essentially the threat of New World cheap grains to European farming, rendering it economically unviable. Kautsky viewed this threat as permanent, by extrapolating forward from the late nineteenth century, implicitly invoking a path-dependent model:

> But should the time ever come when all the wheat or rye lands are full, and grain prices inexorably begin to rise, the spirit of invention would immediately throw itself upon the problem of

> replacing customary cereals with surrogates made from tropical products. Those tropical countries which are not suited to wheat cultivation — Central America, Northern Brazil, large parts of Africa, India, South Eastern Asia — would then also join the ranks of the European grain farmers' competitors … as long as capitalist society continues, agrarian crisis will be its permanent accompaniment. And if the capitalist burdens which once depressed agriculture in Western Europe now begin to do the same to its competitors in the USA, Russia, and so on, this is not proof that the crisis in Western European agriculture is coming to an end. It simply proves that the crisis is extending its grip. (1988: 252)

But frontier farming itself was ecologically (and therefore economically) unsustainable. The 1930s Depression brought to an ecological halt the soil-exhaustive agriculture associated with the settler frontier, prompting a commodity stabilization program based on farm subsidies and government purchases of food surpluses to manage farm prices, protected by import controls. This was the foundation of the U.S.-centered food regime.

The agrarian crisis identified by Kautsky was thereby contained behind mercantilist structures. That is, Kautsky's linear assumption did not anticipate the mercantilist interlude of the postwar food regime, and its consequences: for stemming agrarian crisis in the First World, for compromising Third World agricultures, and for installing agribusiness models to deepen non-European agro-export provisioning of the global North. It was a projection devoid of political contingency in the manipulation of a chronic agrarian crisis. The point is that a deductive theoretical perspective is unable to accommodate transformation of the political conditions of capital accumulation, and especially the changing world-historical context *and content* of the politics of landed property. The latter nurtured an overproduction of agricultural commodities in the U.S. and then the E.U., whose management of food surpluses instituted a dynamic of "dumping," which continues today. In effect, the mercantilist resolution of Kautsky's agrarian crisis (for the early twentieth-century First World) was the condition for a deepening of agrarian crisis in

the global South at the turn of the twenty-first century as cheap food imports from the global North have steadily decimated smallholder farming on a world scale (McMichael 2005).

A food regime analysis allows recognition that the appearance of agrarian crisis in the global South resulted from its resolution in the North in the form of a mercantilist food-aid regime. And this resolution is telling as it exposes an ecological blind spot in capital narratives — in two senses. First, Kautsky's projection of agrarian crisis was economic, thereby discounting the ecological "externalities" which asserted themselves in the 1930s, giving meaning to the concept of "value override," whereby farmers driven by the price form exhausted ecosystems. Second, the solution to depletion of the land was wholesale introduction of forms of "biophysical override" (Weis 2007) via U.S. New Deal commodity programs instituting energy-intensive "petro-farming" (Walker 2005) that masked underlying (and problematic) ecological conditions. And this agro-industrial model of course has been universalized.

Inverting Agrarian Question Politics

The agrarian question shifted its coordinates in the postwar era. While it was originally a socialist problematic concerning the political role of the European peasantry in revolution, it became essentially an imperial problematic. That is, in context of the Cold War, the question of how to demobilize postcolonial peasantries and buttress states with landholding elites against communist movements inverted the politics of the original agrarian question (cf. Araghi 2000: 148). This involved a postwar economic nationalism premised on industrialization matched by agricultural modernization via land reform, green revolution technologies and public support of farm sectors with rural credit and marketing boards. Agricultural modernization included expanded delivery of foodstuffs to growing urban-industrial complexes, as well as intensification of export agriculture stemming from colonial times. This contradictory combination in turn informed the postwar debate regarding the peasant question, which, arguably, "applied the lessons of the original debate to an altogether different purpose, turning the political peasant question

into a developmentalist peasant question focused on third world development" (Araghi 2009: 118).

Capitalist-oriented land reforms sought to replicate the American family farm model, as a counter-insurgency strategy of rural stabilization — often in the wake of policies privileging urban classes. Their counterpart, socialist land reforms in China, Cuba and Vietnam, confiscated landed property for redistribution as collective farmland. East Asian (Japan, Taiwan and South Korea) land reforms, instituted in the late 1940s, were a model in two senses: (1) peasant and tenant militancy was substantial prior to the American Military Government land reforms; (2) the reforms reduced tenancy and promoted owner-occupancy on a smallholding basis (McMichael and Kim 1994). From then on, land reforms "came on a 'first struggle, first served' basis," revealing their conservative thrust (Araghi 1995). Agrarian reforms within the capitalist world generally bypassed commercially developed farmlands (idem), reconstructing subsistence producers as petty-commodity producers at the same time as they sanctioned agro-industrialization (de Janvry 1981: 203).

Repeasantization did proceed in some regions on the basis of land redistribution and settlement of new frontiers, as containment of peasant demands (but at the expense of indigenous communities). In Africa, traditional colonial exports such as tea and coffee were reorganized along smallholder lines in Kenya and the Ivory Coast (Grigg 1993: 145). The World Bank financed large resettlement schemes, notably in Indonesia, Brazil, Malaysia and India. Such schemes often simply relocated poverty and have been characterized as resembling "a war against the earth's rapidly dwindling tropical forests" (Rich 1994: 95). In Latin America two-thirds of the additional food production between 1950 and 1980 came from colonization of new land (Grigg 1993: 185), the number of petty commodity producers with an average of 2 hectares increasing by 92 percent (Araghi 1995). In Honduras, state-sponsored colonization of the Aguán Valley contained instability via resettlement (Kerssen 2013: 100). Overall, in Latin America, "arable land increased by 94 million hectares or 109 percent; in Asia by 103 million hectares or 30 percent, [while in Africa] it seems likely that there was an actual decline.... In the 1970s new land in the world was being settled at the rate of 4–5 mil-

lion hectares per annum, an addition to the arable area of 0.3 percent per annum; but in the 1980s less than 3 million hectares were being added, at 0.2 percent per annum" (Grigg 1993: 103–04).

Araghi characterizes the contradictory trends within the peasant sector during this developmentalist era as "nation-based peasantization and global depeasantization" (2009: 130) — expressing a development paradox where repeasantization via land reform was countered with depeasantization via the food-aid regime. The "relative depeasantization" trend was matched by the fact that "the reforms left most of the productive land in the possession of large owners" (ibid: 128).

Within a development framework agrarian reforms juxtaposed capitalist farming and petty commodity production in various combinations with varying outcomes for the peasantries concerned. The ultimate goal was to strengthen states by incorporating peasantries into market relations. Some wealthy farmers were targeted for the green revolution — a politically driven developmental initiative designed to secure wage-foods for urban workers via a form of import-substitution agriculture, and to demonstrate the productivity of Western agribusiness (Patel 2012). Incorporation of petty producers into commodity circuits anticipated an expansion of contract farming (Little and Watts 1994). In this regard, the World Bank's 1970s Assistance to the Rural Poor Scheme — professing to assist 700 million smallholders (not the landless) with credit — integrated smallholders into green revolution technologies, applied increasingly to developing new agro-exports in livestock, animal feeds, fruits and vegetables, forestry and so forth, drawing on peasant labor and/or products (Feder 1983: 169–70).

Thus the conversion of the agrarian question into a political arm of an imperial development project powered the U.S.-centered food regime. The extension of rural commodity relations generated heterogeneous class relations of dispossession, contract farming and commercial land concentration, receptive to a new agro-industrial dynamic. From a green revolution in staple grains, a second green revolution spread to other agricultures, substituting feed for food crops, and high value foods for export, and eventually foreign-owned domestic supermarkets.

This version of the agrarian question, then, pivoted on the construction of an international division of agricultural labor via partial transformation of southern home markets to complement North Atlantic grain supplies, and, through relative depeasantization, a conversion of basic food cropping to commercial cropping in order to provide agro-industrial inputs and foods for elite consumers elsewhere. Related agrarian reform, whether state-led or subsequently market-led (World Bank), consolidated this structuring in favor of large landowner class power at the expense of the land and livelihood needs of the rural poor and landless (Borras 2003, 2007; Borras, Kay and Lahiff 2008). Contrary to the original socialist-inspired agrarian question, the late twentieth-century agrarian question emerged in conservative clothing.

One way to perceive this outcome is to explain it as an agrarian question of labor (Bernstein 2003), insofar as agribusiness has triumphed globally, leaving a large reserve army of labor across the world. However, it is not clear what this means for the "peasant question" aspect of the agrarian question, unless it is assumed that the countryside is occupied by labor only. Everyone labors of course, and labor is a trans-historical category. The notion that the agrarian question is a question for capital and labor alone may well be the case, in classical terms, but this does not square with contemporary reality. Especially when this reality is one in which the slum-dweller is as much a displaced and unemployed peasant as s/he is labor. And what about those remaining in the countryside, the landless and the farming peasantry?

This updated formulation of the agrarian question appears to invert the classical trajectory, where labor struggles "for land against 'actually existing' forms of capitalist landed property" (Bernstein 2004: 202), with the goal of labor returning to the land — against the grain of modernity. Such a perspective stems from a focus on agrarian *relations of production*, and, therefore, of the disposition of (semi)proletarianized labor. This formulation — if capital has resolved its agrarian question, then what remains is a labor question resolved by restoring a peasantry of sorts — is at odds with both the developmentalist narrative *and* Marx's methodological directive. History appears to be in the reverse gear of change. It prompts the

question "why labour would struggle for land rather than employment?" (McMichael 2006: 410).

The struggle to reclaim land, against the projections of capital theory in the classical agrarian question, suggests the subject of the question (namely the peasantry) is making its presence felt and the discounting of peasantries in the capitalist development narrative is finally revealed. Moyo and Yeros bear witness to this in noting that rural movements have recently laid claim to the land via the "mass land-occupation tactic … to secure their livelihood" by confronting landed political power (Moyo and Yeros 2005: 35). Their reformulation confirms Araghi's claim that the peasant question has become a developmentalist question, as they conclude that political-economic realities "demand that organizational priority is given to the unification of peasant-workers across the urban-rural divide, with the objective of defending articulated accumulation" (ibid: 52). That is, the "agrarian question, despite its globalization, remains intimately tied up with the national question" (ibid: 55).

In reproducing developmentalism Moyo and Yeros discount the international political-economic relations that condition local/national peasant struggles. There is another dimension of the national struggle over the agrarian question. It concerns agrarian policy. In the global South in particular agrarian policy has been reshaped to conform to the neoliberal food regime, exposing extant smallholders to artificially cheapened food imports from the imperial centers, and implementing market-led agrarian reforms strengthening agro-exporting. Here states internalize transnational relations of circulation (of food), which have real national effects (such as dispossession, semi-proletarianization and hunger). It is not for nothing, then, that peasant-based resistance has formed under the slogan of "food *sovereignty*," an explicit strategy for national autonomy in food and agrarian policy as a precondition for domestic support of local food producers (Desmarais 2007). In short, a national emphasis (with its political and/or policy implications) is insufficiently served by a singular focus on relations of production, which removes imperial, or food regime, relations of circulation from view.

The consequence of the relations of production approach is to dehistoricize agrarian conditions (cf. Tomich 2004). The agrarian

question reduces history to (class) theory, substituting a capital logic for its political history. A political history includes the food sovereignty counter-movement — not an anomaly within a narrative but a mobilization challenging the capitalist episteme. The distinctiveness of the food sovereignty movement is that its struggle is located within capital's relations of subjection, but not within the *terms* of those relations (Beverley 2004: 266). While peasants and farmworkers may be subject to the consequences of "biophysical override," they may not acquiesce to "value override." That is, peasants under pressure from industrial agriculture do not necessarily internalize commodity relations in household/livelihood practices (see chapter 7). Nor do they necessarily view nature through the lens of the price form, that is, via capitalist value relations. This much is evident in the politics of the food sovereignty movement. Its political mobilization suggests an agrarian question with a difference.

Here, rather than posing the agrarian question as a question of how capital forms (and employs?) a labor force through transforming agriculture, it can be posed alternatively from the perspective of agrarians subject to these transforming processes. This perspective is not an essentialist perspective of a besieged peasantry, rather it is a perspective shaped by the uneven and contradictory historical conditions in which they find themselves. And these conditions are not limited to the failures of neoliberal capitalism to "develop" the global South or to regulate the transfer of labor from rural to urban sectors, or to preserve the peasant way of life. Rather they concern the question of rights: to the land, to farm, to a seed commons, to environmental stewardship, to provision citizens, and so forth. In particular, given the putative residual status of peasant farmers or smallholders, pastoralists and fishers, this means first the right to have rights, which is the transcendent dimension of a peasant movement (however heterogeneous) at this time (Patel 2007). As a concrete first step, Vía Campesina proposes a program of substantive rights: "The government should introduce policies to restore the economic condition of small farmers by providing fair allocation of these production [water, forest, local genetic and coastal] resources to farmers, recognizing their rights as producers of society, and recognizing community rights in managing local

resources" (2005: 25, 31). At the global level, a Peasants' Rights Declaration is under consideration at the U.N. (Edelman and James 2011).

Thus, rather than consign agrarian relations to a narrative of industrial subordination and elimination, or marginalization, of peasant-farmers, the food sovereignty movement constructs an alternative narrative working within the context, but against the dictates, of corporate globalization. In particular, the food sovereignty movement at large (represented by the International Planning Committee for Food Sovereignty) seeks to reverse and denaturalize dispossession and thereby limit peasant subjection to capital — materially and discursively. The contemporary agrarian resistance challenges neoliberal capitalist ontology, confronting real material constraints, policy-driven assaults, and the ideologies that inform and legitimize these constraints and policies. Confrontation takes the form of an alternative politics about what is possible on the land, refashioning the agrarian question from the point of view of agrarians (McMichael 2006: 475).

An Agrarian Question of Food

With growing awareness of the "externalities" of the agri-food system (climate change, ecosystem degradation, resource limits, biofuels, public health, slum expansion and so on) it is no longer sufficient to view the agrarian question simply as transition. We must refocus on the impact of transition, and what constitute barriers not to capital but to developing healthy, just and sustainable agri-food systems.

Conventional understandings of the agrarian question, focusing on "the manner in which forces and relations of production articulate to facilitate (or not) an agrarian transition" (Akram-Lodhi and Kay 2009: 336), reproduce a capital narrative, however contingent and conjunctural. While this may produce complex analysis of structural transformations in the agrarian sector alongside "ongoing struggles over land, labour and livelihoods" (idem), those struggles are likely to be misrepresented when interpreted through the capital structuring lens. If, however, these struggles are given voice, so to speak, the epistemic/value override of structural analysis can be muted sufficiently

to hear how the (mobilized) subjects of structural transformation interpret their condition.

The first casualty is likely to be the "agrarian transition" trope — the law of value is not adequate to struggles that articulate alternative values. It is not as if the peasant countermovement is unaware of how that law operates. Rather, as a countermovement its struggle is to unsettle that law and its self-referential categories by which rural producers are viewed as residual. If capital is our point of methodological departure we risk committing to an episteme that renders peasant struggles as resistance to agrarian transition only, not as embodying or foreshadowing an alternative agrarianism.

The peasant countermovement reframes the agrarian question through a food sovereignty lens. This is a lens that names the structural transformations of the corporate food regime as the premise for an ontological shift. Thus at the time of the U.N. Rio+20 conference (2012), Vía Campesina declared:

> 20 years after the Earth Summit, life on the planet has become dramatically difficult. The number of hungry people has increased to almost a billion, which means that one out of every six people is going hungry, mostly children and women in the countryside. Expulsion from our lands and territories is accelerating, no longer only due to conditions of disadvantage imposed upon us by trade agreements and the industrial sector, but by new forms of monopoly control over land and water, by the global imposition of intellectual property regimes that steal our seeds, by the invasion of transgenic seeds, and by the advance of monoculture plantations, mega-projects, and mines.
>
> We should exchange the industrial agroexport food system for a system based on food sovereignty, that returns the land to its social function as the producer of food and sustainer of life, that puts local production of food at the center, as well as the local markets and local processing. Food sovereignty allows us to put an end to monocultures and agribusiness, to foster systems of peasant production that are characterized by greater intensity and productivity, that provide jobs, care for the soil and produce in a way that is healing and diversified.

> Peasant and indigenous agriculture also has the ability to cool the planet, with the capacity to absorb or prevent almost 2/3 of the greenhouses gases that are emitted every year. (2012)

In naming the global transformations of the food regime, the food sovereignty movement politicizes not simply the production relations but also the circulation relations that encompass and displace smallholder cultures. This has allowed the movement to articulate a global political strategy unavailable to a class-based, *national* approach. Just as the late nineteenth-century agrarian question was about agrarian politics in Europe, so the early twenty-first century agrarian question is about agrarian politics in a now *global* food regime (with shared, but variable, class effects across the interstate system). The contradictions of capital and its food regime are not simply about class relations but are also about their political expression in the global system of food circulation. Food production and circulation relations are inseparable in politicizing capital's movement — and establishing this has been the genius of the food sovereignty movement.

Agrarian politics now center on the peasant question, given the growing crisis of industrial agriculture in a climate-challenged world with widespread malnourishment. Whereas the original agrarian question concerned the rate of disappearance of the traditional peasant, the current agrarian question concerns the reappearance of a "new peasantry" with the potential to farm sustainably (van der Ploeg 2009; Altieri and Toledo 2011) — a product of the food regime.

The origin of the "food sovereignty" slogan is instructive here, insofar as it has politicized the "food security" claims of the corporate food regime (McMichael 2003). Food provisioning via the global market managed by TNCs has proven not only inadequate, but also a device by which small producers have been undermined by what Peter Rosset calls a "cheap food regime" (2006). Vía Campesina noted in 2000: "the massive movement of food around the world is forcing increased movement of people." That is, the market is not about feeding the world, rather it is about consolidating the power of agribusiness to install "agriculture without farmers." The resulting global agrarian crisis, which nurtured the rise of the food sovereignty

movement, made visible the false claims of neoliberalism: at the 1999 WTO ministerial summit in Seattle, Via Campesina declared "neo-liberal agricultural policies were leading to the destruction of our family farm economies, to a profound crisis in our societies, and that they were threatening the very existence of our societies" (2011). The power of this intervention, in calling into question the claim that markets "feed the world" (confirmed in the "food crisis" of 2007–08), was that it centered the food question as a civilizational question, anticipating the stream of reports in the 2000s — from the U.N. *Millennium Ecosystem Assessment* (2005) through the FAO *Organic Agriculture and Food Security* (2007) report to the U.N./World Bank *International Assessment of Agricultural Science, Technology and Development* (2008) — in context of a combination of food, energy, climate and financial crises (Araghi 2009; Bello 2009; Houtart 2010; Rosin, Stock and Campbell 2012; McMichael 2012).

In recentering agriculture and food, the food sovereignty movement is on a double mission: to reverse the expulsion of farmers from the land, and to restore the agrarian base of human civilization. This is not simply a matter of "transition," rather it concerns the survival of humanity, which depends on adequate and accessible food as well as farming methods that renew ecological cycles. Food sovereignty advocates a political economy of representation (Patel 2006). "It's a movement of people of the land who share a progressive agenda. Which means we share the view that people — small farmers, peasants, people of the land — have a right to be there.... That it's our job to look after the earth and our people. We must defend it and we have to defend it in the global context" (Nettie Wiebe, quoted in Desmarais 2002: 98).

Defending the land in the global context, as suggested, reverses the classical agrarian question in two senses: in restoring agency to farmers as food producers, and foreshadowing a post-capitalist path. In the classical agrarian question, food is invisible. Only its price features — where it affects political relationships, and accumulation patterns (nevertheless implicating the food regime in the agrarian question via cheap food). Whatever the politics, the frame concerns conditions of reproduction of capital. What happens on the land is subordinate, and of no intrinsic consequence. And this

is the case whether late nineteenth-century socialism or the means of subsistence of redundant labor is at stake. The alternative frame of the food sovereignty movement concerns social reproduction on and of the land, as an ecological act, to restore the production of food to a socio-ecological, rather than an industrial, act. Food sovereignty encourages agroecology schools and expansion of the *campesino-á-campesino* methodology of seed- and information-sharing (Holt-Giménez 2006; Rosset and Martínez-Torres 2012; Massicotte 2013). As Rosset and Martínez-Torres report, Vía Campesina has "recently begun to identify, self-study, document, analyze, and horizontally share the lessons of the best cases of farmer-led climate-robust agroecology and food sovereignty. LVC has opened regional agroecology training schools and/or peasant universities in Venezuela, Paraguay, Brazil, Nicaragua, Indonesia, and India, with others on the drawing board for Mozambique, Zimbabwe, Niger, and Mali; these are in addition to the establishment of dozens of national and sub-national level schools" (2012: 17).

Conclusion

The notion of an "agrarian question of food" echoes the food sovereignty movement's concern to denaturalize market-based "food security" and to embed food relations in (democratically organized) ecological practices. It would be a mistake to view this formulation as simply food, or peasant-driven. Rather, the food sovereignty movement transforms the way we can think about possibilities for a sustainable socio-ecological future. It is not a movement simply about food; rather it has broader, civilizational claims, precipitated by the deepening contradictions of the food regime. It politicizes the agrarian condition in relation to the overall social structure of capital accumulation. If one views these dynamics solely through the capital/labor lens, substantive food and ecological relations are rendered inconsequential or invisible. Arguably, it takes the voice of a mobilized peasant and landless labor movement to articulate a more complex agrarian question regarding the contemporary crisis of capitalism, and to posit an alternative ontological path.

Chapter 5

Food Regime Reformulations

Returning to the food regime *project*, this chapter explores possibilities of broadening dimensions of the "food regime." A principal distinction to make is between identifying food regime moments (periods of accumulation and associated transitions), and using food regime analysis to identify significant relationships and contradictions in the political history of capital across space and time, as this chapter illustrates. As such, the food regime concept invokes the commodity as relation (rather than as object), with definite geo-political, financial, social, ecological, and nutritional relations at significant historical moments.

Regional Food Regime Analysis

The East Asian Region

The East Asian region has been a consequential part of the food regime since the mid-twentieth century. The patterning of its food relations provides a lens on the transition between the U.S.-centered and the corporate food regimes, and now, the restructuring of the corporate food regime. Demonstration of this patterning centers on Japan for the first transition and China for the second, as particular import poles expressing different moments in the evolution of the food regime at large.

The postwar East Asian food import complex, centered on Japan, was a regional component of food regime restructuring. Not only were Japan and South Korea key recipients of U.S. food aid, and subsequently commercial food imports, but also this regional hub conditioned a transition from the bilateral U.S.-centered food regime to an increasingly multilateral corporate food regime (McMichael 1987, 2000). Postwar reconstruction in both states, including significant land reforms, resulted in farm policies geared to supporting industrialization with rice complemented by food imports from the U.S. and increasingly from the Southeast Asian region as East Asian social diets were transformed.

The origins of this import complex stem from the 1930s when the Japanese state organized a regional empire termed the "Greater East Asia Co-Prosperity Sphere," reorganizing Korea and Taiwan as agricultural colonies, and controlling access to natural resources in both Manchuria and Southeast Asia given Japan's territorial ecological limits. A postwar offshore resource strategy deepened this dependence on foodstuffs (by the twenty-first century Japan was importing half of its caloric intake), dovetailing with the rise of agro-export regions rivaling the role of the United States as global granary. During 1961–89 Thai mangrove forests declined by half with the "blue revolution" exporting shrimp to Japan; 55 percent of farm land in the Philippines was devoted to export crops by the mid-1990s, including bananas and pineapples for Japanese consumers (McCormack 1996: 133); and the Australian beef industry was converted to intensive lot-feeding for Japanese markets (Lawrence and Vanclay 1994).

Japanese dietary transformation involved three phases. First, the U.S.-Japan Mutual Security Act of 1954 complemented Japan's rice policy with concessional imports of U.S. surplus grain (Ohno 1988). Counterpart funds from sales encouraged Japanese consumption of wheat-based products, and related agribusiness operations (Shinohara 1964). Wheat consumption deepened and rice consumption declined by 30 percent from 1960–83 (Coffin et al. 1991: 5).

The second phase expanded animal protein consumption. Livestock production increased to almost a third of the value of Japanese agricultural output during 1950–85, chicken consumption increased 32-fold, and rice production declined from 49 to 33 percent (Riethmuller, Wallace and Tie 1988: 154; Taha 1989: 9). With trade liberalization in 1961, feedstuffs such as corn (and soybeans) supplemented food grain imports, the value of Japanese (and South Korean) farm imports doubling the rate of world imports during 1961–87 (Huang and Coyle 1989: 42). Japanese dietary "modernization" involved intensification of domestic livestock production with an explosion of feeds imported by grain traders like Cargill and large *soga shosha* feed suppliers (Rothacher 1989: 64).

The third phase of dietary transformation accompanied the global restructuring of agriculture, originating in the international-

ization of the intensive meat complex (Berlan 1991). In context of the 1973 U.S. soy embargo and the 1979 U.S. grain embargo on the Soviet Union, Japan launched a feedstuffs diversification strategy, encouraging joint public-private ventures to consolidate alternative feed sources: corn in Thailand and Indonesia, soybeans in Brazil, and coarse grains in South Africa, China, Argentina and Australia (Hillman and Rothenberg 1988: 46–47). Japanese finance in fact initiated the transformation of Brazilian savannah for soy cultivation (de Sousa and Vieira 2008: 236). This global sourcing strategy anticipated the rise of so-called "nontraditional exports" (NTEs) such as feedstuffs, meats, (exotic) fruits and vegetables, and a variety of processed foods. Even more significantly, the move to global sourcing foreshadowed a transition from bilateral agricultural trade towards multilateralism in the corporate food regime, anchored in "New Agricultural Countries" supply zones (Friedmann 1993).

As global agricultural restructuring matured, from the 1980s on, livestocking was relocated to middle-income states such as Thailand, Taiwan, Mexico and Brazil, with agribusiness firms re-integrating feed and feedlot production operations (McMichael 1993: 111). Some agribusinesses operated regionally — such as Thailand's Charoen Pokphand (CP), with its eighty companies in China, including feed mills, breeder farms, broiler chicken farms, processing factories and chicken fast-food stores (Gargan 1995: D4). Such "decentralized" intensive meat operations emerged to supply regional and global markets in specialty meats for a rising global class of middle-income consumers, Japan being no exception.

Thailand expressed this transition, as its traditional tropical exports (rice, sugar, pineapple and rubber) were supplemented with NTEs of cassava (feed grain), canned tuna, shrimp, poultry, processed meats, and fresh and processed fruits and vegetables (McMichael 1993: 112). Former cereal exports (especially corn and sorghum) now sourced a local intensive meat subsector, contributing to Thailand's new profile as "Asia's supermarket." Japanese investment in Thai agriculture had begun in the 1970s, expanding feed (soybean and corn) and aquaculture supply zones for Japanese markets (Suthy and Sontepertkwong 1986: 193). Japanese food companies established joint ventures with Thai agribusinesses,

matching high-technology production facilities with foreign market access (Suehiro 1989: 270).

Supported by the Thai government, the poultry subsector was a case in point, where the Thai share of Japan's broiler imports expanded 41 percent to overtake U.S. exports, which fell from 59 to 40 percent during 1980–87 (Bishop et al. 1990: 23). By 1994, Chinese poultry production overtook that of Thailand as the main supplier to Japan in particular and Asia in general. As Thai feed costs rose, Thai feed producers invested in neighboring countries. Thus CP, with $1 billion invested in a range of ventures in China, produced 300 million of the 3 billion chickens consumed by the Chinese in 1994, and exports of Chinese poultry meat to Japan almost quadrupled during 1988–93 (Handley 1990: 56). During the 1990s, China became the key destination of Japanese foreign direct investment (FDI) in offshore production of frozen foods, fish products and vegetable processing for the Japanese consumer, such that China is now Japan's second-largest source of food imports after the U.S. (Hall 2006: 200–02).

Thus the Japan-centered East Asian food import complex reproduced the food regime at large, pioneering strategies of global sourcing. This was driven partly by Japan's resource diversification strategy reflecting its ecological limits (Bunker and O'Hearn 1993), and partly by Japanese industrialization (and associated consumerism) as a consequential state on the Cold War perimeter (Cumings 1984). Such a regional complex played a key role in the 1980s, when low-value bulk foods associated with the postwar food regime were displaced by high-value food products associated with the proliferation of "non-traditional exports." In this sense, the East Asian food import complex was a key pillar of a global food regime forming around corporate, rather than state-driven, agro-food markets.

The second East Asian transition proceeds from the first. China emerged as an important supplier of Japanese food imports, and also a growing food importer in its own right, accounting for 9 percent of world agricultural imports by 2010. Of this import complex, soybeans accounted for 38 percent, palm oil 8 percent and dairy products 4 percent — with such commodities supplying the processed foods, animal feed and energy sectors. The most dramatic shift since the

1978 Reform and Opening has been in soybean imports — in 2012 China reduced tariffs on soybeans from 114 to 3 percent (Smaller et al. 2012: 3). While soybean imports (via the four largest grain traders) expanded ten-fold in the first decade of the twenty-first century, this pattern replicates the consolidation of a global livestock complex as an anchor of the corporate food regime.

The China Reform spurred a rising middle class and a process of "meatification" (Weis 2007), with pork overtaking beef and chicken as the world's leading consumed meat in 1979 (Schneider 2013: 12). In the early 1990s China redefined soy as an industrial crop, rather than a food crop, in order to sustain accumulation in the livestock industry — sacrificing its domestic small and medium soy producers to cheaper soy imports in the process (Olmstead 2011). In the late 1990s the World Bank made a $93.5 million loan to China for 130 feedlots and five beef processing centers for its beef industry (McMichael 2001: 217). Between 1994 and 2004, the soybean trade doubled, with China accounting for 70 percent of the increase, matched by a roughly equal volume of soybean exports from Brazil and Argentina (Bello 2009: 86). In consequence, by 2011–12, Chinese imports of soy accounted for 56 percent of the global soy market (Schneider 2013: 13). The maize (carbohydrate) complement of soy (protein) may now undergo redefinition as an industrial crop, with 2010 as a turning point in exploding maize imports. As Mindi Schneider points out, a potential shift in the official definition of Chinese "grain security" as national self-sufficiency (95 percent) in rice and wheat, and no longer in maize, is indicative of the displacement of this food crop by a feed crop supplying a higher-value food sub-sector and thereby supporting the development of a class diet bifurcation between "meat for the elite [urban consumers], and grain for the masses" (2013: 14).

Arguably, this patterning inverts the initial food regime relationships whereby the movement of grains in the first two regimes supplied wage foods for the industrializing regions of the world in those periods. Britain imported grains to subsidize wages at home and the U.S. exported grains to subsidize wages on its Cold War perimeter, but China is importing soy and maize to supply its rising middle class with meat and to sustain the expansion of domestic agribusinesses

("dragon-heads"). China is feeding 21 percent of the world's population on 9 percent of the world's land. And with strong roots in the revolutionary era there remains a (stated) commitment to domestic food security (see Bello 2009: 87; Schneider 2013). Nevertheless, the concept of "food security" is complicated by redefining "grain security" to accommodate a rising flow of soy and maize imports on the one hand, while on the other hand, as of 2008 an explicit "Go Global" strategy is prioritizing offshore investment in agriculture (Smaller et al. 2012: 4). While still dwarfed by foreign investment in other sectors, Chinese foreign agricultural investment ranks third in the world behind the U.S. and Canada (ibid: 5). Reports of actual land grabs vary and may be exaggerated (Hofman and Ho 2012). Smaller et al identify 54 land projects covering 4.8 million hectares overseas — about half in Asia, five in Latin America, and one large million-hectare soybean project in Kazakhstan operated by the state-owned Jilin Grain Group (2012: 8).

While China has adopted the class diets trajectory of previous core states like Britain, the United States and Japan, as well as the U.S. agro-industrial model of accumulation, its global positioning expresses the multi-centric restructuring of the corporate food regime (see chapter 6). Further, the restructuring is not simply geo-economic — it is driven by agribusiness accumulation strategies, in this case along South-South lines. The four grain corporations — ADM, Bunge, Cargill and Dreyfus (ABCD) — organize the movement of Brazilian (and U.S. and Argentinian) soy to China, controlling the entire process, from credit and inputs through processing (with crushing plants in China) and shipping. Despite unrealized proposals by Brazilian and Chinese leadership to denominate the trade in the Chinese *yuan*, instead of the dollar, and Chinese visions of foreign investment in soy production facilities (with Brazilian pushback), the soy-pork chain (a "global protein assembly line") nevertheless remains a South-South exchange within a TNC-controlled complex (Peine 2013: 9). Thus, in context of the food regime's deepening patterns of global sourcing, China is now emerging as a new global import pole provisioning the growing consumer segment of its outsized population.

The Latin American Region

In a special issue of the *Canadian Journal of Development Studies* Gerardo Otero attempts to deploy food regime analysis at the regional level, shifting attention from the world economy to the state, as the centerpiece of the "neoliberal food regime in Latin America" (2012). Otero's concern is to question the use of agricultural biotechnology: "whatever level of transgenic crops is adopted in Mexico or other Latin American countries, it is doubtful that this will help feed the people in their countries" (2012: 289), since these crops will be primarily for export. He emphasizes the role of the public sector (states and the Consultative Group on International Agricultural Research, or CGIAR, system), in developing biotechnologies deployed by agribusiness under WTO trade rules and intellectual property rights protocols ("neoregulation"). That is, states source biotechnologies and implement private accumulation regimes to the benefit of corporations and capitalized farmers who "look beyond producing use values for human consumption" and profit from feed and agrofuels (Otero 2012: 289). In short, the "neoliberal food regime" operates through states that have internalized the market principle, as posited in the concept of the corporate food regime.

In Argentina, for example, through its "non-traditional agro-export" project IFIs advanced funds to the state to encourage agri-investment in foreign biotechnologies. Government approval of Monsanto *Roundup Ready* soybeans followed in 1996. Since then, GM soy production has expanded at the rate of almost a million hectares annually (to 2010/11), with China's livestock sector as the principal destination of soybean exports. The "soy complex" (beans, oil and pellets) provides 70 percent of Argentine agricultural revenue (agricultural exports accounting for over 50 percent of total exports). The labor and farm displacing impact of such agro-industrialization has reduced the rural population from 13 percent in 1995 to 7 percent in 2010, and GM soy monocultures have been responsible for intensified deforestation and forest degradation as well as soil depletion. With the appearance of "superweeds" agro-chemical use has accelerated, degrading public health. Despite these socio-ecological impacts, and

following the 2001 financial crisis, the successive Kirchner governments have deepened the GM soy monoculture as a core development strategy, seeking to legitimize the impact by recycling some revenues into social expenditures and public infrastructure (Leguizamón 2013). As Teubal (2008) notes, echoing Otero, the GM soy culture has clearly undermined domestic food security.

Earlier, Pechlaner and Otero suggested the neoliberal food regime's trajectory would be subject to considerable local resistance (2008: 2) — as elaborated in two well-grounded case studies published in the *CJDS* issue, documenting disparate forms of resistance to transgenic crops: a successful peasant countermovement to transgenic maize in Guatemala (Klepek 2012) and an about-face by ex-transgenic crop farmers in Brazil as they object to deepening dependency relations with Monsanto (Preschard 2012). Such cases put a national face on the "many strands of resistance to the corporate food regime," belonging to a "diversity of agrarian producers across the world" united in the vision of Vía Campesina as the political-intellectual "core of the resistance to the corporate food regime" (McMichael 2005: 295).

Elsewhere in the region, Vía Campesina is present in the anti-GM corn coalition in Mexico (Fitting 2011: 111). The discovery of transgenes in local corn varieties in 2001 stimulated debate about the fragility of Mexico's maize culture within the broader context of the corporate food regime. As Lauren Baker describes it, the response was a decentralized "social movement rooted in communities across Mexico but linked to global food sovereignty efforts" (2013: 3), represented by such alternative food network initiatives as Itanoní Tortillería, Nuestro Maíz, and the Michoacán Centre for Agribusiness (2013: 4). Baker's *Corn Meets Maize* captures the central contradiction of the corporate food regime: "corn is used as a symbol for the commoditization of food and the corporate control of food production, processing, and consumption. Maize, on the other hand, is used as a symbol to describe agricultural and food practices grounded in practical farming knowledge, culinary traditions, and local economic exchanges" (2013: 3). In Baker's ethnography the ongoing contestation between life-sustaining maize and its innovators and the neoliberal extractive corn economy is a potent metaphor

for an age in which market price cannot match ecological value — a key tension in the global food regime perhaps best expressed as a contest over the logic of (socio-natural) reproduction in human civilization (see chapter 7).

Elizabeth Fitting's complementary case study of *The Struggle for Maize* (2011) provides an in situ account of the context of such contestation, institutionalized (with significant effect on maize producers) through NAFTA via a "neoliberal corn regime" structured around the import of corn and the export of labor (Fitting 2006). She offers a valuable ethnographic perspective on the impact and implications of the food regime in the Tehuacán valley, a region of maize producers, giving texture to the connections between farming communities and activist coalitions in the struggle against "trade liberalization, the expansion of corporate agriculture, cuts to rural subsidies, and circular migration and outmigration from the countryside" (2011: 234). Sensitive to the multiple meanings of maize culture restructuring, under the pressure of neoliberal policies and essentialist representations of *campesinos* as inefficient and backward, Fitting reconstructs the contradictory inter-generational and gender relations constituting the dynamics of the food regime at "ground level." She claims the "future of *in situ* maize conservation depends on the regulation of GM imports, but perhaps more importantly on the livelihood practices of rural Mexicans," whose social relations of production and reproduction affect maize biodiversity, and of course its future integrity as a food culture (2011: 5).

The key contradiction here is between the multiple uses of (white) maize as food, feed and fuel in the smallholder economy, and tortilla and corn flour industrialization via imported (yellow) corn (food from nowhere), resulting in the erosion of "Mexico's self-sufficiency in maize for domestic food consumption" (2011: 18). Through close attention to changing livelihood strategies among small producers Fitting historicizes the maize culture, suggesting that the struggle pursued by the national In Defense of Maize coalition to resist transgenes requires a nuanced understanding of transnationally situated and fluid cultural practices of *campesinos* irreducible to a "millennial indigenous or peasant culture" (2011: 236).

The value of Baker's and Fitting's studies is not simply that they

ground food regime analysis in the lives and struggles of food producers and their movement supporters as they challenge and shape the tide of neoliberal policies and corporate markets, within a single national case. It is also that each in her own way historicizes the social relations within which policy-makers, producers, workers and activists operate, avoiding essentialist representations of economy and culture, and demonstrating how the food regime at large translates in a particular political-institutional and material space.

The Middle Eastern Region

As elsewhere, the Middle Eastern region has experienced declining food self-sufficiency with rising food import dependency during the consolidation of the corporate food regime. As a whole, Arab states depend on imports for about 60 percent of their food needs and are the largest grain-importers in the world (Babar and Kamrava 2013: 12). How this came about is a regional story shaped by the colonial era, especially during the decay of the Ottoman Empire, when free trade imperialism integrated the region into the world market via colonial export crops (cotton and wheat), resulting in land concentration (Woertz 2013b: 31, 34). Tenants or sharecroppers farmed fragmented land holdings for cereals as food staples. In the post-World War I period, Anatolia, Iraq, Transjordan and Egypt exported grains as part of the food regime periphery (ibid: 39).

In the new post-World War II development project, failed land reforms across the Middle East (the result of unclear titling and lack of agricultural supports) were matched by food importing to provision urban labor as industrialization proceeded. Within the postwar U.S. food regime, Egypt was the largest recipient of food per capita worldwide between 1958 and '65. By 1964, 91 percent of Egyptian grain imports were in the form of U.S. food aid. A decade later, Egyptian grain imports were overwhelmingly of feed grains to sustain an expanding livestock industry for affluent consumers — between 1966 and '88 feed grain consumption increased 268 percent, with USAID subsidizing $3 billion worth of Egyptian grain purchases from the U.S. since 1975, and the government taxing Egyptian farmers growing food grains and subsidizing animal protein production (Mitchell 1991: 21).

Food dependency became a defining condition of the Middle East, and despite expanded oil revenues in the 1970s to finance increasingly expensive food imports (as the postwar food regime ended), Egypt's experience with a food embargo by President Johnson in the 1960s over conflict with Israel served as a warning to address food dependency. A second threat by the U.S. to use the "food weapon" in the 1970s during the Arab oil boycott deepened Gulf States' interest in diversifying food supplies (Woertz 2013a: 88). Subsequent failure of the Sudan project for an "Arab bread basket" stimulated a self-sufficiency drive by the Gulf States, especially Saudi Arabia (Woertz 2013b: 47, 48).

In the 1980s the U.S. and the E.U. were competing for outlets for grain surpluses, but the Saudi rulers rejected U.S. advances, having "used their wheat program to redistribute oil rent and reward cronies," thereby creating vested interests in a highly subsidized domestic cultivation of wheat. Subsidies declined during the 1990s and by the end of the next decade the Saudis were winding down wheat cultivation in the desert for ecological reasons and acquiring land offshore for food production. This was a pattern repeated across much of the Middle East, and Eckart Woertz concludes: "As the largest grain importers of the world, Middle Eastern countries are at the center of the changing realities of the global food regime. The availability of an exportable surplus on a global level and domestic income to pay for imports are crucial for them" (2013b: 49, 52). These imports include wheat and rice staples, and barley and alfalfa feedstock for the livestock industry (Woertz 2013a: 89).

Solutions vary across the region, as examined in *Food Security in the Middle East* (Babar and Mirgani 2013). The Gulf Cooperation Council — representing Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates — are pursuing a diversification strategy, including portfolio investment in global agribusinesses, building "grain ties" with major agro-exporters (the U.S. and Latin American countries in particular), and land investments offshore — such as Saudi Arabia's acquisition of land in Ethiopia under a share agreement (Tétreault et al. 2013: 333). In 2008, at the height of the food price crisis, Saudi Arabia launched the King Abdullah Initiative for Saudi Agricultural Investment Abroad, geared toward

supporting offshore investment in land to produce rice, wheat, barley, corn, sugar, green fodders and livestock, and enabled by substantial sovereign wealth funds (Green 2012). This initiative can recycle oil rents from domestic agro-investments to offshore production, with sovereign wealth fund assistance, and indeed the Riyadh Chamber for Commerce, enabling such a switch with compensation for idling wheat lands (Woertz 2013a: 92-3).

Qatar, meanwhile, has a Master Plan for food security, based on hydroponics and solar-driven desalinization, to "produce up to 70% of its food by 2023, while it currently imports 90% of it," but still relying on imports for cereals (Woertz 2013a: 92). Establishing niche production of high-value agro-exports is the alternative for several Middle Eastern states to generate revenues to offset food dependency. Lebanon and Jordan, unable to attain food self-sufficiency because of resource deficiency, are likely to rely on high-value agro-exports in place of oil revenues (Harrigan 2013). Similarly Egypt is developing this capacity in lieu of a vibrant domestic farm sector of smallholders, oppressed by rent-seeking urban merchants and absentee landowners (Bush 2013), while Iran, an oil state, has considerable food self-sufficiency given its history of geo-political and economic isolation (Salami et al. 2013). Yemen meanwhile depends on remittances to defray food import costs (Mundy et al. 2013).

The historic food dependency of the Gulf States focuses their attention on the current restructuring of the corporate food regime. While land acquisition offshore by China includes an interest in agrofuels and tree plantations, Gulf States (as rentier states) are single-mindedly focused on managing food supplies at this time, including rebuilding grain reserves (Woertz 2013a: 99). For Gulf States, then, land grabbing is for food and virtual water access — particularly since advocacy for the rights of food importers in multilateral forums is limited (ibid: 96). At the same time Abu Dhabi has formed a food trading company and invested in the international commodity trader Glencore, along with other Gulf investors, gaining access to Canada's largest grain trader, Viterra (ibid: 97). In these various ways, Gulf State manoeuvres express a particular conjuncture in which the oil regime can no longer rely on the infrastructural legacies of the corporate food regime, and require

new ways to access food for their citizen and subject populations (as discussed in the next chapter).

Food regime relations can be particularized at the regional level at the same time as they provide a regional lens on the food regime at large. Thus the East Asian lens illuminates the rise of an alternative organizing principle as the bilateral U.S.-centered food regime transitioned towards an increasingly multilateral corporate food regime. The Latin American lens offers a glimpse of the growing contradictions attending the rise of transgenic crops with their threat to food cultures and environments, and the political and social texture of local food sovereignty counter-movements. In this sense, the food regime is a dialectical, rather than a linear, relationship. And, finally, the Middle East lens highlights the contours and specificities of food dependency relations as experienced in particular states, and how their individual solutions simultaneously express the overall challenges attending the restructuring of the corporate food regime.

Food Regime Relations

Gender, Race and Labor

Food regime analysis has had a tendency to privilege value relations in such a way as to understate the social face of commodity relations on the ground — whether activities in the "informal sector" or social reproduction activities. This includes a range of social forms of labor that mediate households, self-employed and informal work, and the commercial sector. Corporate food chains contract and sub-contract work to farmers, day laborers and informal workers alike, using intermediaries to sell their products in informal settings (such as street kiosks and mobile venders). As Marion Dixon shows, poultry corporations sell chicks to contract farmers for maturing, with live adult birds then sold in markets in Cairo (2013: 138). A huge underclass of labor of various kinds constitutes part of the realization of corporate profit on the one hand, and on the other it enjoins a perpetual army of women realizing social reproduction needs — in urban and peri-urban settings and the countryside.

In most of the global South women "have the main responsibility

for feeding their families, and are estimated to produce 60-80% of food grown" (FAO, quoted in George 2010: 84), and yet are involved in continual struggles for land security (Agarwal 1994; Deere 2003; Razavi 2009; O'Laughlin 2009) and land sovereignty (Patel 2006; Monsalve Suárez 2012: 20–25; Kerssen 2013: 91). Also, food regime driven processes of semi-proletarianization and de-peasantization have feminized agricultural workforces across the world (Shiva 1988; Mackintosh 1989; Raynolds 2001; Mooj, Bryceson and Kay 2000; Deere 2005; Barndt 2002; Garikipati 2009).

Feminization of labor brings a bonus for capital's under-reproduction strategies. For example, Laura Raynolds notes that poorer growers under banana contract in the Dominican Republic "typically engage wives and daughters in the packing sheds and sons in the banana fields" (1997: 129). In Kenya, where almost 90 percent of horticulture is destined for Europe (especially the U.K.), the shift away from smallholder-contract production to centralized employment on farms and in packing houses in the mid-1990s depended on a labor force of women migrating for short-term employment to help sustain the household, performing the "comparative advantage of women's disadvantage" (Dolan 2004). Jane Collins documents processes by which agribusiness firms hire women to combine high-quality labor with the lower costs associated with the flexible employment patterns of women, related to their primary responsibility to provision their household. Thus, "agribusinesses use gender ideologies to erode stable employment and worker rights where women are concerned. Of equal significance, employing women provides the employer with a way of invoking institutions beyond the workplace to extend and reinforce labor discipline" (Collins 1995: 217). Deborah Barndt reinterprets the rural family unit as the "family wage economy," where family farm labor is supplemented by "remittances from members who migrate, and migrating families often offer several family members as salaried workers to agribusiness" (2002: 182). Here, value relations are not simply market relations, but implicate household relations also as part of their conditions of (under)reproduction.

Barndt's exceptional "commodity chain" research retraces the journey of the corporate tomato from Mexico to the ubiquitous fast

food and retailing outlets of North America. Naming it Tomasita to mark its ethnic and gender labor origins, she describes the Sayula plant of large agro-exporter Santa Anita Packers, employing over two thousand pickers and seven hundred packers in peak season. The improved seed varieties originate in Mexico but are developed and patented in Israel or the United States. Such seeds need heavy doses of pesticides, but the company does not provide any health and safety education or protective gear. The company employs hundreds of young women moved by season from one site to another as a:

> mobile *maquiladora* … the only Mexican inputs are the land, the sun, and the workers.… The South has been the source of the seeds, while the North has the biotechnology to alter them … the workers who produce the tomatoes do not benefit. Their role in agro-export production also denies them participation in subsistence agriculture, especially since the peso crisis in 1995, which has forced migrant workers to move to even more scattered work sites. They now travel most of the year — with little time to grow food on their own plots in their home communities … with this loss of control comes a spiritual loss, and a loss of a knowledge of seeds, of organic fertilisers and pesticides, of sustainable practices such as crop rotation or leaving the land fallow for a year — practices that had maintained the land for millennia. (1997: 59–62)

Raj Patel's "stuffed and starved" dialectic is at work here, with northern consumers depending on labor supplies garnered from racialized processes of under-reproduction and market violence, combining gendered outcomes enabling a universal casualization of labor in non-wage and semi-waged forms (Patel 2007; McMichael 1999). In *Strawberry Fields*, concerning the revival of sharecropping in California, Miriam Wells contests the "viewpoint of traditional and Marxist economics, both of which posit the disappearance of sharecropping and the increased dominance of impersonal wage labor in rationalized capitalist agriculture" (1996: 238). She interprets sharecropping as a class strategy by growers to undercut the power of organized farm labor with "employees with a share feature to their

wage contracts" (ibid: 302), where labor contractors hire devalued and vulnerable labor.

Here, sharecropping involves specific world-historical relations: the decline of the wage contract and the rise of sharecropping express a neoliberal deterritorialization of labor relations — where the Mexican subsistence, or informal, sector, subsidizes severely underpaid and underemployed laborers on sharecropper plots (ibid: 285). This phenomenon is embedded in race/ethnic relations, which condition the transnational circuits of labor engaged in reproducing "core" and "peripheral" world regions alike. Such relations define the "great turnaround," where southern European states formerly the source of migrant labor to industrialized centers of northern Europe and overseas have become a new destination for inflows of migrant labor. Thus Alessandra Corrado reports 13 percent of farm labor in Italy is foreign, with migrants performing a "transhumance across the various regions of the south of Italy" depending on seasonal harvests, living precariously in material, legal and racial terms (2011).

The world-historical character of industrial agriculture (or a "world agriculture") refers not to the entirety of agriculture, but to a transnational space of corporate agricultural and food relations of production and reproduction integrated by commodity circuits. Integration of social reproduction enables a "paradigmatic form of biopower" (Hardt and Negri 2000: xv), where capital reconstitutes humans through reconstituting the natural order, in the name of food security. This is especially so for farm workers, more than half of whom are women, and who comprise a third of the 1.3 billion people actively engaged in agricultural production (half of the world's labor force), concentrated in the global South, and as much as 80 percent of the workforce in some countries (IUF 2002: 3), exposed to unusually dangerous workplaces (chemicals, knives, extreme temperatures) and employed under tenuous and exploitive conditions. A recent Food Chain Workers' Alliance survey of food workers along the U.S. food chain (17 percent of the entire workforce), reported that only 13.5 percent earned a livable wage, given temporary or seasonal work in agriculture, prevalence of wage-theft, undocumented and immigrant labor, and the shift to non-standard work arrangements in the 1990s (2012: 32–34). The food regime's ultimately irony is

that most of the world's hungry are food workers. As a Caribbean worker remarked: "in most instances, we eat what is imported, we don't eat what we grow. We produce food, but we are not able to buy food to feed ourselves" (quoted in IUF 2012).

Financialization

One of the key structuring relations of the corporate food regime has been finance, promoting an increasing integration, and recomposition, of the agri-food chain across space and time. Vía Campesina noted that "now capital is not content to buy labour and hold land as private property, but it also wants to turn knowledge, technology, farm technologies and seeds into private property as part of a strategy of unification of agrofood systems across the world" (2004: 2). With regard to recomposition, Luigi Russi notes the growing influence of financial capital on the food regime via the entry of financiers into the food business, and the incorporation of a strictly financial calculus into the operations of food corporations (2013: 39).

For financiers, strategic positioning in food chain flows transforms food relations into financial relations: "from turning food into just another tradeable commodity mobilized on financial markets, to the progressive extraction of value from the food chain in order to carve new spaces for corporate profit" (ibid: 30). Such articulation of financial and food markets not only turns food into an object of speculation, it also deepens the abstraction of food from its organic relationship with humans (and livestock) — particularly as foods are fractionated into reconstituted food products as sources of capital accumulation.

One measure of financialization of industrial foods is that whereas U.S. farmers received 37 cents on the food dollar in 1973, by 2000 they earned less than 20 cents — the remainder appropriated by agribusiness and finance capital (Roberts 2008: 114). Corn is perhaps the quintessential food (feed and fuel) crop grown for industrial recombination. Corn's relationship to the food system is extensive. It is grown as a feed-crop for beef, poultry, eggs, dairy and pork production, and used as a component of sweeteners for candy, cereals, soft drinks and other supermarket staples (Philpott 2006). Michael Pollan observes: "a Chicken McNugget is corn upon corn

upon corn, beginning with corn-fed chicken all the way through the obscure food additives and the corn starch that holds it together. All the meat at McDonald's is really corn. Chickens have become machines for converting two pounds of corn into one pound of chicken" (2002). In other words, the threading of certain basic foodstuffs through the manufacturing of animal proteins and convenience foods illustrates dietary reconstruction increasingly reflecting, and reflected in, financial conglomeration.

The foundations for financialization were laid during the previous food regime, as wholesale agro-industrialization deepened the linearity of food production as an input-output operation, from hybrid seeds with agri-chemical inputs to feedstock for the food processing industry — where harvested crops served as inputs (sugars, oils, grains) for the production of durable foods (Friedmann 1994). For instance, the substitution of vegetable oils for butter to create margarine reconstitutes food via an industrial process endlessly replicated in the contemporary food processing industry. It represents the self-referential logic of financialization of food (Russi 2013). As industrial processes, fractionation and reconstitution lend themselves readily to a financial logic of restructuring of agri-food relations. David Burch and Geoffrey Lawrence suggest the emergence of a "financialized food regime":

> the role played by a number of financial institutions and instruments that have the capacity to reorganise various stages of the agri-food supply chain, and to alter the terms and conditions under which other actors in the chain can operate. In the case of the private equity company, for example, we see a fraction of capital which views the agri-food company — whether it is a third-party auditor, an input supplier, a farm operator, a food manufacturer or a retailer — as a bundle of resources which provide opportunities for a quick profit, (Burch and Lawrence 2009: 275)

Burch and Lawrence argue financialization is endemic to the food industry. Supermarkets establish their own financial services in partnerships with banks, acting like private equity companies that

realize shareholder value by exploiting and transforming corporate assets. And food manufacturing companies generate rental income from brand name licensing to producing "wellness foods," such as nutraceuticals and functional foods which "blur the distinction between food and pharmaceutical products" (ibid: 277). Referring to these practices as finance-driven engineering of food, Russi notes that investors "are able to enact a coercive re-patterning of production flows leading to the progressive artificialization of food that —however — allows them … to take advantage of global sourcing strategies" (2013: 65). Wayne Roberts claims "Westerners don't buy food any more. They buy processed meals assembled from ingredients or inputs" (2008: 122). Global sourcing strategies focus on bundling, rather than producing, multi-sited ingredients as global foods (ibid: 123). Foods composed of global ingredients (food from nowhere, as Jose Bové puts it) are not the only food available, as food from somewhere provisions those who can afford it.

Incorporating and constantly transforming agri-food chains across the world, finance capital seeks to re-pattern peasant-style co-production of food, ecosystems and livelihoods along economic lines, isolating the land "with a view to include it in different assemblages from which the enduring extraction of financial profit can be sustained" (Russi 2013: 82). In this respect, Jan Douwe van der Ploeg notes that capital (as food empire) does not attach to *extant* activities, rather "it imposes its own order" on smallholdings (e.g., transforming farmers into contract workers) in a particular predatory fashion, absorbing and repatriating local resources (cf. McMichael 2013b). Here, capital "hardly creates any additional wealth; it simply taps into locally produced wealth in order to concentrate and reuse it according to its own logic," such that "hardly any capital is brought from outside into the local situation. Capital is basically mobilized on the national capital market through the promise that the cash flow generated by means of the new enterprise will render considerable profit and security. The local situation and the resources and potentials entailed in it are used as *collateral*" (2009: 77–78). Such predation is a key source of what Russi calls "hungry capital," with its drive to "unlock" value by reordering extra-economic relations "into strictly economic assemblages that are subject to a financial metric"

(2013: 94). The consequence is the severing of the metabolism between farmer and ecosystem, and the reconstitution of value in exchange terms. Financialization, having reduced food to a fungible rather than socially constructive relation, is poised to deepen this process and hasten the exhaustion of natural processes by converting them to speculative "resources."

Nutritionalization

Jane Dixon incorporates a distinctive, nutritional perspective into food regime analysis, using the "nutrition transition" as a benchmark of modernity and positive national development. The transition — from plant-based diets towards consumption of animal protein, oils and fats, processed sugars and processed carbohydrates — is typically associated with rising affluence. This linear scenario focuses national development policy on nutritionalization of the food supply, that is, ideally a greater dietary diversity and available energy leading to positive public health outcomes. Countering the ideal are two significant forces: social/class diets and the artificialization of food as agro-industrialization proceeds. With respect to the latter, we know that expanded crop yields increase food quantity at the expense of quality (as in nutrient density) — for instance, "new varieties of corn, wheat and soy, bred to increase yields, have lower protein and oil content, and high-yield tomatoes are lower in vitamin C, lycopene and beta-carotene." At the same time industrial agriculture's metabolic rift deprives the soil of organic matter, thereby reducing micronutrients available for crops (Albritton 2009: 116).

While affluent consumers are more likely to have access to healthy (organic) diets, the structuring of the food regime distributes highly processed high-calorie foods to poorer populations. The resulting explosion of malnutrition (associated with obesity) parallels a persistent under-nutrition for a considerable portion of humanity — the WHO estimates over 3 billion (almost 50 percent of the world's population) suffer from malnutrition (Albritton 2009: 95). Dixon identifies these latter phenomena as the crisis phase of the nutrition transition, with "diseases of affluence" appearing alongside global regions of hunger. Underpinning this crisis is a cultural economy involving nutritionalization of modern food

systems. This is based in a science of the "metabolic fate of food" as a form of governance — in Dixon's terms: "the co-option of nutrition science to extract surplus value and authority relations from food … most transparent when framing corporate strategies and public policies in terms of nutritional disease and health-wealth advancement" (2009: 322).

Dixon's food regime analysis spotlights how nutritionalization of food systems is represented in a long-standing "technical and knowledge revolution" beginning with the identification of the calorie in the late nineteenth century. That is, the "capacity to quantify human energy introduced 'scientific eating' into public policy and legitimised the agri-food import-export complexes that underpinned the 1st and 2nd food regimes" (2009: 331). She alerts us to the increasingly contested nature of the "search for nutritional and diet-based ontological security" in a world of shrinking dietary diversity and natural resources, a legitimacy crisis of nutritional science (authority) and corporate nutritionalization (vs. viable cuisines or cultural diets) as unwanted side effects mount.

Aya Hirata Kimura develops Dixon's framework with a substantive case study of "nutritionism" programming in Indonesia as constitutive of the corporate food regime (2013: 10). Titling her study *Hidden Hunger*: *Gender and the Politics of Smarter Foods*, Hirata Kimura documents how the purported invisibility of micronutrient deficiency invites expert knowledge of nutritional science to address the problem of malnutrition as a matter of individual consumption, rather than as a socio-ecological condition related to impoverishment of people and ecosystems. As such the policy lens through which food security is addressed focuses on managing personal nutrient intake, and is directed primarily at holding women "accountable for not feeding children and their family properly while the food industry emerges as the savior of the hungry" — unless, of course, a food crisis inflates prices of commodities such as wheat, oilseed and sugar used for fortification, rendering them too expensive for the poor (2013: 165–66).

Nutritionism includes fortification of processed foods (e.g., wheat flour products, baby food) and biofortification via genetically engineered crops (e.g., Golden Rice) — both of which engage

corporate market logic to address dietary deficiency, transforming it into a technical problem and thereby depoliticizing hunger. Hirata Kimura argues that nutritionism is a "technique of power" targeting women in a mode of governance that "systematically organizes knowledge about food and bodies, privileging an expert view while silencing" women, who are on the front lines of producing, making and delivering food across the global South (2013: 6). As a gendered form of biopower exercised through public-private partnerships geared to nutritional fixes, nutritionism is deeply emblematic of the neoliberal era, which reduces food to "a vehicle for nutrients … [to capitalize] on the know-how of agrofood businesses" (ibid: 11). Contextually, the micronutrient "revolution" coincided with declining public support for international agricultural research in the post-green revolution era of neoliberalism, as "food security" was privatized and institutionalized as an international market relation in the WTO's Agreement on Agriculture (ibid 2013: 10).

The attempt to introduce Golden Rice into Indonesia, as Hirata Kimura shows, was fraught with contradiction — underscoring the elemental tension in the corporate food regime between market rule and food sovereignty. Through the cultural lens, "rice has perhaps one of the most tangled and complicated sets of meanings of any food in Indonesia," linked not only to gods and goddesses, but also to ethnic and sexual identity (ibid: 157). A nutritionist perspective misses (or invisibilizes) such sentiment, inadvertently politicizing rice — so much so that life science companies were compelled to focus on "profitability rather than penetration," and so prioritize hybrid corn and soybeans in Indonesia, rendering Golden Rice a discursive symbol more than an actualized biofortified crop (ibid: 156–57). Ironically, in context of representing the global South as a dystopia, to be fed by the utopia of nutrionalized food, GMO proponents have met with such strong resistance to the risk and reductionism of transgenic foods that the scientific rationality of medicalized food has dissolved into a moral crusade, fueled by the trope of "feeding the world" (ibid: 159–60).

Ecology

Food regimes have ecological consequences. The initial formulation of the food regime reproduced a political economy perspective largely devoid of an environmental dimension. This is unsustainable. And so Hugh Campbell, taking his cue from Friedmann's ecological sensibility (2000, 2003), introduced the concepts of "ecologies at a distance" and "ecological feedback" into food regime analysis to counteract its invisibilization of ecological impacts (2009). Developing the idea that a sustainable food system involves re-embedding food production in local ecosystems, thereby subverting agro-industrial "distance and durability" (Friedmann 1994), he underscored the current turn towards locality and seasonality, as environmental and public health concerns mount. Campbell sees narratives of empire and development associated with food regime cultures focusing on legitimacy and stability, "characterised by the ability to disguise what Marx had … described as an irreparable metabolic rift that increasingly disrupted the interaction between human beings and nature" (2009: 312). Further, just as commodity fetishism and the metabolic rift "obscured the violent social conditions of production of commodities, so too it obscured ecologically catastrophic conditions" (ibid: 315).

To illustrate: for the second food regime, the cultural framing of pesticides within a technological optimism began unraveling with the critique stemming from Rachel Carson's *Silent Spring* (1962). Developing Friedmann's point that social movements legitimize or challenge regime cultures, Campbell focuses on contradictory tendencies around a "food from nowhere regime."[1] The latter, built on the cultural legitimacy of "cheap food" has "an emerging acute problem of cultural legitimacy" stemming from declining trust in science, environmental mobilization, communication of "previously invisible relations typical of 'Food from Nowhere'," risk politics and food scares, retailer power and explicit consumer preferences, and a perceived nutrition crisis associated with convenience foods (Campbell 2009: 312–13). Accordingly, Campbell claims "Food from Somewhere" — such as Slow Food and community-supported agricultures — has emerged through these cultural dynamics. Food

from Somewhere[2] represents a counter-logic to the conventional foods of the agro-industrial food regime, "stretching over the metabolic rift" (ibid: 318).

Campbell's legacy, building on the environmental thread spun by Friedmann, is not only to re-ground food regime analysis explicitly in political ecology, but also to underline the current tension between abstraction and situation of food cultures in the struggle over the trajectory of sustainable farming and food systems. Further, by emphasizing the notion of "ecological feedback," Campbell reinforces Weis's substantive contribution to analysis of the ecological contradictions of the "global food economy" with food miles, mounting toxicity, and the huge "ecological hoofprint" associated with "meatification." Weis proposes that "moving away from meat-centred consumption patterns is an elemental part of reducing humanity's collective space in the biosphere and leaving room for other species into this century, with well-balanced plant-centered diets also holding the additional promise of an array of public health benefits" (2007: 171) — thereby echoing Lang and Heasman's call for a principle of "ecological public health" governing food systems (2004), and offering a counterpoint to the nutritionalization vector of modern food science. In this way, an ecological perspective on food regimes links the fractionation, adulteration and financialization of modern food to the original metabolic rift, involving the separation of social life from nature and the radical simplification of agriculture for yield, with technological inputs substituting for ecological relations.

The "metabolic rift" marks the subordination of agriculture to capital, reducing natural cycles of nutrients in soil and water, and substituting agro-inputs such as chemical fertilizers and hybrid seeds to replace polyculture with monoculture (Foster 2000). The historic separation of city from countryside is a product of the metabolic rift, with agriculture specializing as an economic sector (Moore 2000). Removed from biological cycles, industrial agriculture is in principle spatially incestuous, as the "intrinsic qualities of the land matter less" (Duncan 1996: 122) in a system premised on "biophysical override" (Weis 2007). Modern "petro-farming" (Walker 2005) deepens the metabolic rift, by extending inputs of inorganic fertilizer, pesticides, herbicides along with mechanization, increasing farm use of carbon-

emitting fuels and inputs, in addition to releasing soil carbon to the atmosphere along with even more damaging nitrous oxide from fertilizer use, and from livestock waste in factory farming. The agro-industrial model displaces agricultural ecosystems that reverse the metabolic rift, promote biodiversity, use six to ten times less energy than industrial agriculture, restore soils and water cycles, and reduce emissions, in addition to supporting smallholder farming (Pretty et al. 2006; Apfelbaum and Kimble 2007).

Bringing ecology back in is not simply about the environmental impact of "ecologies at a distance" and "ecological feedback" but also about recognizing that capital's food regime erases biological farming, forecloses sustainable agrarian futures. The central tension in the corporate food regime concerns the nowhere/somewhere food antagonism and the pendulum swing between fouling and restoring the human nest. Climate change is the ultimate "ecological feedback" as it is about massive disorganization, and discontinuance.

Conclusion

The "food regime" is, then, a form of historical method. It can be deployed in a variety of ways to illuminate local, national, regional and global processes governed by the contradictory dynamics of the generic and the periodic food regime. While the original food regime project concerned outlining the inter-relations of the state system and international food circuits within a particular ordering of the world, it is clearly spawning new formulations that enrich and enlarge its scope, uncover silences, and address new and emergent dimensions.

Notes

1. This phrase comes originally from Jose Bové (2001).
2. Cf. McMichael (2002).

Chapter 6

Crisis and Restructuring

The patterning of food regimes is represented, phenomenally, as a succession of regulatory structures organizing the relations of production and circulation of food. Such regulatory structures represent episodes of accumulation dynamics governed by patterns of expansion and crisis. Each regime anchors in a specific form of accumulation, which we can characterize, simply, as extensive, intensive, and financial forms respectively. These forms have conditioned geopolitical and institutional relationships premised on the deepening commodification of agriculture and food. Each food regime episode, then, is a successive part of an evolving historical conjuncture — the age of industrial agriculture. While each regime is predicated on expansive "spatial fixes" to revitalize accumulation via resource provisioning, there is at the same time a *cumulative* deterioration of ecosystem sustainability whose limits are now evident in acknowledged ecological, energy and climate thresholds. The question here is what relation exists between these thresholds and the crisis of the corporate food regime? While it is too early to determine whether the food regime is in transition or simply restructuring, the accumulation crisis itself can be examined through the food regime lens.

Crisis? Which Crisis?

The question concerns temporality. Methodologically, the food regime is a generic feature of capital's structuring of agricultural relations across time and space as the foundation of accumulation and processes of production and reproduction of labor forces. Substantively, the *corporate* food regime is a conjunctural form of the long-standing food regime through which historical capitalism has reorganized world agriculture. This regime embodies both synchronic and diachronic processes and contradictions that, together, have produced a food provisioning crisis. From this perspective, as Braudel (1969) might say, the recent food price inflation is an *event*,

within the political *conjuncture* of neoliberalism, within the *longue dureé* of capitalism.[1] That is, the so-called "world food crisis" constitutes a layering of spatio-temporal relations — in particular the longer-term cycle of agro-industrialization, involving simplification via monoculture and growing fossil-fuel dependence, combined with conjunctural declines in food production yields, and current inflation-producing effects of agrofuel offsets and financial speculation. Rising costs, related to peak oil and fuel crop substitutes, combine with monopoly pricing by agribusiness to inflate food prices, globally transmitted via liberalized forms of finance, trade and food security.

The crisis of the corporate food regime registered in the public domain in the form of a spike in food prices in 2007–08, and a cascade of "food riots," the most notable in Haiti, Italy, Uzbekistan, Morocco, Guinea, Mauritania, Senegal, India, Indonesia, Zimbabwe, Burkina Faso, Cameroon, Yemen, Jordan, Saudi Arabia, Egypt, Mexico and Argentina — with up to thirty countries experiencing some sort of food protest over this period (Jafri 2008). In the first eight years of the decade, world grain production lagged steadily behind consumption (Cribb 2010: 3), from 2005–07 food prices rose 75 percent and world grain reserves reached their lowest level (Holt-Giménez and Kenfield 2008: 3). By mid-2009, almost one-sixth of humanity (about 1 billion) were considered hungry or undernourished, especially women. And almost three-quarters of this world sub-group reside in rural areas. By 2011, the food crisis had returned with a vengeance, food prices surpassing those of 2008. The world's attention refocused on agriculture, following a long period of neglect and seduction by a food regime claiming to "feed the world."

At one (epiphenomenal) level, agflation represented the end of the "cheap food regime" (Rosset 2008), a quarter-century-long decline in staple food prices enabled by the WTO subsidy regime and the corporatization of world food markets. At another, political, level, the food riots were not simply about staple food price and accessibility, but about the political economy of food provisioning (Patel and McMichael 2009). That is, food riots stemmed from neoliberal structural adjustment policies imposed from the 1980s onwards by the International Financial Institutions, dismantling public agri-food

capacity such as rural credit, price supports, food reserves (World Bank 2007: 138), and from deepening food dependency across the global South. Financially driven policies were justified in the name of "food security" — understood as a market good, where the price form substitutes for political calculus, shifting the social provisioning of food from a public necessity to a private right (McMichael 2003: 173). With WTO liberalization denying states the right to food self-reliance, "food security" was vested in TNCs "feeding the world" through their capacity to organize global relations of production and circulation of food.

As was suggested earlier, while the discourse of "food security" sought legitimacy for the corporate food regime, it was targeted by the food sovereignty counter-movement from the mid-1990s onwards. This movement politicized the privatization of food as a direct critique of the corporate food regime, mobilizing farmer/peasants experiencing the deepening of a global agrarian crisis of public neglect and price assaults from the grain traders (Nicholson 2008: 456). The long-term agrarian crisis included an "income deflation" via neoliberal policies, rendering the social reproduction of the peasantry increasingly unviable. Such "accumulation by encroachment" also contributed to a deepening stagnation in food supply, and smallholder inability to respond to price hikes by growing more food (Patnaik 2008: 113).

The agrarian crisis was compounded by falling agro-industrial grain yields — from increases between 5 and 10 percent at the height of the green revolution (1960s) to 1 percent or less in the new millennium (Cribb 2010: 8); alternatively, "the volume of per capita grain production on a global scale has been level since peaking in 1986" (Weis 201: 327). Such material limits are socially constructed, of course, including: annual losses in soil erosion exceeding nutrients applied worldwide as fertilizer at a rate likely to destroy two-thirds of the world's productive land by 2050; the collapse of the global nutrient cycle with phosphorus peaking in 2030; rising competition for available freshwater for agriculture, which already uses 70 percent; the predicted collapse of the ocean fish catch by 2040, a peaking in 1989 of world phosphate reserves, essential to crop and pasture growth and with no substitute; and a calorie inflation since

the 1960s of 20 percent per average global citizen (Cribb 1010: 10–11, 54, 76; Cordell 2009).

Combined with socially constructed limits are the differential policy effects between the commodification and regulation of food. Rice prices increased across much of Southeast Asia in 2008, less so Indonesia, where trade and price controls slowed inflation (Nielson and Arifin 2012: 163). Meanwhile, prices remained relatively stable in East Asia because: "First, they have their own domestic production. Second, they augment domestic production with domestic grain reserves. Third, they're only able to do this because they're aggressive and powerful negotiators in international trade agreements. Japan has long held that its rice isn't just a commodity but a way of life" (Patel 2008). Ironically, Japan joined the GATT Uruguay Round only when members agreed to "remove the ability of countries to restrict exports in times of critical shortages" (Ritchie 1988: 3). But export bans at the height of the "food crisis" challenged this rule, perhaps for the foreseeable future.

Exception to this export restriction rule may now be the rule. In 2008, wheat export bans or restrictions in Kazakhstan, Russia, Ukraine and Argentina closed off a third of the global market, and for rice, export bans or restrictions from China, Indonesia, Vietnam, Egypt, India and Cambodia left only a few export suppliers, mainly Thailand and the United States (GRAIN 2008a: 2). In fact this may have registered a *signal crisis*, namely the obsolescence of the WTO as the centerpiece of the corporate food regime, given members' defiance of WTO free-trade rules with export bans, compounding the earlier defiance of the G-20 over unfair trade relations.

In addition to a long-simmering agrarian crisis for farmers, agflation expresses the articulation of the oil and food regimes. While agro-industrialization has had a long cycle of fossil fuel dependence, postwar U.S.-led reorganization of fossil fuel networks transformed the international political economy, with the value of the dollar dependent on oil flows energizing the capitalist economy and ignoring energy resource depletion (Mitchell 2009: 418), thereby underwriting an intensive, extractive agro-food regime. But in the 2000s, in lockstep with rising food prices, oil prices spiked, rising six-fold between 2003 and 2008, inflating production costs of food

(Cribb 2010: 6) and invoking the potential of agrofuels as a transitional energy source.

However, in public discourse agrofuels were linked directly to food inflation. Between 2006 and 2007, the demand for corn from U.S. ethanol distilleries increased twice as much as the increase in global demand for corn, affecting global markets since the U.S. produces 40 percent of the world's corn (Holt-Giménez and Kenfield 2008: 3). In 2007 the Bush administration's Renewable Fuels Standards legislation and biofuel mandates in Europe (10 percent of transport fuels by 2020) provided huge subsidies for corn ethanol, diverting food crops to fuel crops. Demand for corn displaces wheat and soy crops, and given the centrality of corn and soy as inputs for food processing and livestock feed, corn inflation triggers food price inflation worldwide (idem). Jacques Bertholet identified biofuel policies of the U.S. and the E.U. as contributing to "huge food trade deficits of both countries," and as being "at the heart of the current explosion of agricultural commodity prices" (2008b: 26). Further, "U.S. corn ethanol explains one third of the rise in the world corn price according to the FAO, and 70% according to the IMF. The World Bank estimates that the U.S. policy is responsible for 65% of the surge in agricultural prices, and for … the former USDA Chief economist, it explains 60% of the price rise" (Berthelot 2008b: 27).

At a deeper level, the timing of this agrofuels project expresses an integration of oil and food markets, as food and fuel crops (corn, sugar, palm oil, jatropha) become interchangeable (McMichael 2010). Thus, the palm oil "now used widely in food products ranging from instant noodles to biscuits and ice cream, has become so integrated into energy markets that its price moves in tandem with crude oil prices" (Greenfield 2007: 4). The impact of course varies across class diets. At the height of the "food crisis" *The New York Times* reported: "Cooking oil may seem a trifling expense in the West. But in the developing world, cooking oil is an important source of calories and represents one of the biggest cash outlays for poor families, which grow much of their own food but have to buy oil in which to cook it" (2008). Privatization-induced vulnerability of the most basic forms of social reproduction, matched with food rioting, spurred governments to reinstate some basic food subsidies,

impose price controls and restrict food exports. Thus the "food crisis" revealed a conjuncture combining a long-term agrarian crisis, an integration of food and energy markets, and an associated legitimacy grab by governments with short-term horizons deepening the crisis by sponsoring an agrofuels project.

Capital Accumulation Crisis

The current crisis of accumulation combines a long-term structural feature of capitalism (under-reproduction) with a conjunctural form (financialization). While the former concerns capital's neglect and active erosion of its conditions of production, the latter refers to neoliberal capitalism in which, in the absence of a stable international monetary order, capital eschews production for circulation, securitizing and spreading risk arbitrage via an array of financial instruments (Hoogvelt 2010). The conjunction of each of these features is unique to the corporate food regime. We examine each in turn.

Historically, the metabolic rift symbolizes the process by which capital undermines its conditions of production by disrupting the natural nutrient cycles that replenish soil and water health, thereby separating capitalist production from its natural foundations, and erasing ecological knowledges (Foster 1999; Schneider and McMichael 2010). Industrial agriculture serves the manufacturing sector as host and source of commodity inputs and outputs, respectively, exploiting both labor and land. It is from this relationship that Moore derives the concept of capitalism as a "world-ecological regime" (2011), and Araghi derives the concept of "global value relations," in which the food regime is a project dedicated to ecological reductionism in order to reduce the cost of labor with cheapened food (2003).

On both counts, capital's production of commodities has depended on increasing access to natural resources (land and fossil fuels). Capitalization of non-human nature over time, to fuel accumulation, depends on drawing down earth's "ecological capital." For Araghi this is "surplus nature,"[2] and for Moore this represents the "under-reproduction of nature," in the sense that capital's predatory relationship with the natural world exhausts certain resources/

processes. While these concepts are distinct, together they speak to the current environmental dilemma. Thus capital's dependence on surplus nature refers to the occupation of natural spaces and processes at the expense of future sustainability, signaling the possibility of an *absolute* exhaustion of ecosystem "services." Moore's notion of under-reproduction of nature refers to processes of the *relative* exhaustion of ecosystem services, via a progressive colonization of new frontiers of accumulation as temporary solutions to accumulation crises. Here capital defers exhaustion of nature through a serial under-reproduction of ecosystems in particular frontiers, until such time as the frontier option disappears (absolute exhaustion).

Arguably, the current crisis uniquely combines each of these forms of exhaustion. It is expressed phenomenally in food price inflation, triggering concerns about food security. At the same time, a series of recent reports — such as the *Millennium Ecosystem Assessment* (2005) and the *IAASTD Report* (2008) — have linked a deepening environmental crisis (and therefore food insecurity) to industrial agriculture's erosion of its natural conditions of production. This is clearly compounded by an agrofuels project intensifying the "urbanization of the countryside" (Marx), as capital has sought a new frontier of accumulation (McMichael 2010). And to the extent that food and fuel crops are interchangeable "flex crops" (Borras et al. 2012: 6), such frontier cropping has assumed a speculative dimension — thus between 2004 and 2007, venture capital investment in agrofuels increased by 800 percent (Holt-Giménez 2007: 10). Arguably, agrofuels production represents an attempt to defer exhaustion of nature (peak oil), despite International Energy Agency estimates that by 2030 biofuels will "barely offset the yearly increase in global oil demand" (Holt-Giménez 2007), and all renewables, including agrofuels, will amount to only 9 percent of global energy consumption (GRAIN 2007: 6).

This scenario underscores Moore's point that capital accumulation is at once an ecological crisis-*generating* and crisis-*attenuating* formation. Peak oil presents as an exhaustion (under-reproduction) of extra-human nature, only to be supplemented with another bioenergy source as a crisis-attenuating strategy. The dialectic between generation and attenuation of crisis, driven by the abstraction of the

value relation dynamic (externalizing natural limits), is dramatically evident in the agrofuel rush and its negative environmental impact.[3] Agrofuels under-reproduce nature in cycles of relative exhaustion. With concerns about absolute exhaustion generating such "green" policies, agrofuels proponents attempt to legitimize a new round of capital accumulation in the name of sustainability. Since by some measures industrial agriculture is already responsible for a third of greenhouse gas emissions, agrofuels recycle the problem as a solution.

Agrofuels nonetheless represent a new frontier for capital (Houtart 2010). Here frontier capitalization is perhaps a key last resort of financial capital, no longer content to create value through the wage relation, following the relocation of manufacturing to "cheap" labor regions of the global economy (McMichael 1999). Unlocking value through financial means depends on securitization and speculating in futures (from debt to food security). In the early twenty-first century, finance capital gravitated towards investment in speculative ventures in land and flex crops, especially following the collapse of the financial derivatives market in 2009. Trade in agricultural futures and other derivatives increased in 2007 by 32 percent, and the "number of futures between October 2007 and the end of March 2008 increased by 65 percent on the Chicago Mercantile Exchange, without a corresponding increase in real production" (Bank for International Settlements, cited in Ernst and Wahl 2010: 13). Jennifer Clapp links this recent movement to the weakening of the U.S. dollar, noting that as investors in dollar-based ventures experience a decline in real value of investments "they move instead into other financial products linked to physical commodities" to capture rising returns (2012: 137). Rather than responding to a rise in demand for food per se, such financial activity views agriculture as a safe haven and/or the next commodity investment frontier, and therefore a source of speculative rents. Private equity capital, speculative by nature, has received direct technical and local market assistance from the World Bank's International Finance Corporation, in the name of development (Daniel 2012: 714, 722).

Food speculation intensified via commodity index funds, whereby investors targeted "agro-futures" (alongside energy and

industrial metals) as agricultural contracts were converted into derivatives (following deregulation of the commodity contract business in the 1990s). Henceforth, speculators joined handlers of agricultural products in an agro-futures market. What was once a market in food converted to a self-driven market in food contracts, counting on rising derivative prices, as futures traded multiple times (Kaufman 2010). Buying and selling food futures, then, developed into a derivative market, which in turn inflated food prices. That is, "the mechanism created to stabilize grain prices had been reassembled into a mechanism to inflate grain prices" (ibid: 34). World Bank economists estimated speculation was responsible for 37 percent of food price inflation (Mahon 2012: 91).

Thus the general accumulation crisis, expressed in the conjunction of food, energy and financial crises, has resulted in international capital markets gravitating towards agriculture as a relatively safe investment haven for the relatively long-term, triggering the "global land grab" (McMichael 2012b). At the same time southern nation-states invest in land offshore to secure food and fuel supplies against rising prices, food rioting and ecosystem exhaustion at home (see below). Such offshore designs override the WTO free trade architecture, presaging a relocation of agro-industry from North to South, as the gap between land prices widens,[4] signaling a transformation of the geography of the food regime.

Corporate Food Regime Restructuring

The re-patterning of trade circuits in the food regime via the land grab coincides with a historic refocusing on southern smallholders in context of the agrarian crisis erupting into a global food crisis. In 2008 the World Bank's new *World Development Report* on "agriculture for development" framed the World Food Summit at the FAO in Rome, where institutional, corporate and philanthropic elites resolved to address the crisis by reorienting investment towards incorporating smallholders into agribusiness value-chains, as a new frontier for capitalization via agri-inputs and marketing infrastructures (McMichael 2013b). The unifying vision views lands occupied (farms) or accessed (commons) by smallholders and pastoralists as

low-yield and underutilized lands that, with capitalization, could improve rural incomes and global food security. Management of this new attention to southern land would be designated in soft laws such as the Bank's Responsible Agriculture Investment Principles (RAI), designed to justify and enable enclosure and giveaways of smallholder and common lands alike (Borras and Franco 2010). At the same time, biodiversity banking and offset investments intensify enclosure as the Kyoto Protocol's Clean Development Mechanism and incipient Reduced Environmental Degradation and Deforestation (REDD) protocol set aside lands and forests for carbon sequestration (Fairhead, Leach and Scoones 2012; McAfee 2012; Lohmann 2006).

At one remove, the contemporary land grab repeats the pattern of British land grabbing in colonies and settler regions in constructing the initial food regime. At another remove, as Kautsky forewarned, the resulting agrarian crisis (for European farmers) would deepen globally, as land giveaways, subsidies and financialization associated with the land grab express declining northern productivity and extend the (cheap) land frontier to its ecological limits. As he put it: "Those tropical countries which are not suited to wheat cultivation — Central America, Northern Brazil, large parts of Africa, India, South Eastern Asia — would then also join the ranks of the European grain farmers' competitors" (Kautsky 1988: 252).

While the initial food regime centered on wheat, the content of its food circuits has broadened, towards flex crops such as soy, corn, palm oil and sugar. Departing from or complementing previous patterns of investment in high-value export crops, the new investment patterns in the global South favor bulk commodities — thus, for Southeast Asia, "83% of the farmland being acquired or leased on a long-term basis is dedicated to the production of major row crops (soft oilseeds, corn, wheat and feed grains)" (Borras and Franco 2010: 31). And in the Southern Cone, where soybeans account for 50 and 80 percent of Argentina's and Paraguay's cultivated land, respectively, the soy revolution deepens monoculture, since soybeans are only profitable via industrial production (Wald et al. 2012: 168–69). In general, large-scale land investments in Africa "follow a simple model of concentrated production using a plantations system"

(Committee on World Food Security 2011: 34). Justification for this patterning comes from World Bank economists:

> Recent innovations in crop breeding, tillage, and information technology may make labor supervision easier and reduce diseconomies of scale of large operations. Pest-resistance and herbicide-tolerant varieties facilitated broad adoption of zero tillage and, by reducing the number of steps in the production process and the labor intensity of cultivation, allowed management of larger areas. (Deininger and Byerlee 2011: 13–14)

Accordingly, the 2008 report of the European Union's High Level Group on the Competitiveness of the Agro-Food Industry (HLGCAI) — representing agribusiness, TNCs, the European Commission, member states, and some civil society organizations -- notes that Europe's domestic protein crop has been decimated by cheap soy imports augmented by land grabbing, primarily via monocultures in Latin America. This reflects the more general restructuring of food regime geography. The HLGCAI report, for example, notes rising competition in food markets to the E.U. (as well as the U.S.) from agro-exports from Brazil, China, Argentina, Thailand, Indonesia and Malaysia, with Brazil almost doubling its food exports over the previous decade (Fritz 2011: 10–11). In other words, as anticipated by Kautsky, the European agro-export complex protected by the WTO regime is losing its world market share as food exporting relocates to middle-income countries, fueling public and private interest in accessing cheaper food and fuel supplies offshore. While the HLG report affirms WTO multilateralism, it recommends completion of bilateral trade negotiations between the E.U. and rising agricultural producers (Fritz 2011: 10), thereby reflecting an eroding WTO multilateralism and the offshoring of northern agriculture.

The Bioeconomy

Offshoring of northern agriculture via land grabbing includes the development of the bioeconomy (Levidow 2011), a self-legitimating paradigm including "economic activities which capture the latent value in biological processes and renewable bio-resources to produce

improved health and sustainable growth and development" (OECD 2005: 22). The conversion of "the liquid fuel market to biomass" represents the initial bioeconomic turn (ETC 2010: 3), and is arguably the clearest manifestation of the "revaluation" of land, driven by the neoliberalization of nature (Birch et al. 2010). As ETC (2010, 6) notes:

> The new bioeconomy as currently envisioned by foresters, agribusiness, biotech, energy and chemical firms furthers the ongoing enclosure and degradation of the natural world by appropriating plant matter for transformation into industrial commodities, engineering cells so they perform as industrial factories, and redefining and refitting ecosystems to provide industrial support "services."

Bioeconomy proponents target the global South, as Stephen Chu, U.S. Secretary of Energy, observed in 2006: "Land best suited for biomass generation (Latin America, Sub-Saharan Africa) is the least utilized" (quoted in ETC 2010: 15). A European report claimed in 2004: "A prerequisite for the bioenergy potential in all regions is … that the present inefficient and low-intensive agricultural management systems are replaced in 2050 by the best practice agricultural management systems and technologies" (Smeets et al. 2004). This observation echoes World Bank rhetoric about "yield gaps" as justification for the introduction of value-chain agriculture. Whether peasant fields or commons, land and its living carbon bounty is the new target for the biomasters, as the limits of dead carbon (fossil fuel) become apparent. Accordingly, Rachel Smolker notes that "agriculture is thus poised uniquely at both 'ends' of the debates on food and energy policies, as both a source of, and a solution to, the problems at hand" (2008: 519).

As a key driver of food regime restructuring, the global land grab anticipates the rising value of living biomass as the source of inputs into the bioeconomy, where "innovation in synthetic biology is allowing companies to retrofit the hydrocarbon economy to accommodate carbohydrate feedstocks" (ETC 2010: 11). The U.S. Department of Energy claims "there are very few products that are

made today from a petroleum base, including paints, inks, adhesives, plastics and other value-added products, that cannot be produced from biomass" (quoted in Smolker 2008: 520). In other words, the (profitability) projections and technologies of the bioeconomy depend on increasing access to offshore production of biomass to power affluent economies.

The emerging bioenergy economy, fusing "global ecology" (Sachs 1993) and political economy, depends on the enabling role of financialization in managing a spatio-sectoral shift in capital accumulation toward a new extractive food/fuel/biomass regime enclosing the world's remaining land and water. Whether and to what extent such a shift can underwrite a capital accumulation revolution is a matter of speculation (cf. Moore 2012), since climatic changes threaten the durability of any such developments.

The prospect (and reality) of climate crisis simultaneously encourages bioeconomy and the intensification of monocropping at the expense of habitats and livelihoods. Smart agriculture, or "sustainable intensification" (Royal Society 2009; FAO 2010) is allied with the extractive food/fuel/biomass regime, and is interpreted by firms like Monsanto to require new agricultural technologies that lead to "more production on less land, and collectively reduce the amount of resources needed per unit of production" (quoted in Abergel 2011: 267). Elizabeth Abergel situates this development within the terms of the climate emergency, noting that: "by defining climate-related environmental stress narrowly along technoscientific possibilities and the isolation of biological traits, biotechnology research into CC fails to radically alter our reliance upon the conventional agri-food paradigm" (2011: 261). Qualifying the crisis conjuncture, she notes that climate change discourse promotes the embedding of ecological relations in market logic (ibid: 262). This encourages the "technologization of nature" as the defining feature of what Moore calls a strategic "attenuation of crisis" by a new "technological accumulation regime" that gears scientific innovation to the enabling of market penetration into all aspects of life, individual and collective. The new regime in turn "provides the means through which the properties of living systems become appropriated via titles, patents, governance and other quasi-legal

instruments within a neo-liberal trade regime that ensures the generation of capital" (Abergel 2011: 262).

In other words, a food regime geared to climate-ready crops involves the "reorganization of boundaries between science and agriculture as well as a new understanding of the status of food crops and agricultural practice." Bio-capitalism organizes land grabbing via its ability to convert *nature* to the environment, as *intellectual capital* (ibid: 263). The outcome, "bio-value," represents a "smart agriculture" designed for the bioeconomy, premised on annexing "under-utilized" land.

Such a premise is convenient for land grabbing. The World Bank claims: "none of the African countries of most interest to investors is now achieving more than 30 percent of the potential yield on currently cultivated areas" (2010: vii). And the European Commission advocates land reforms to address this gap: "Secure access to land and secure land tenure and use rights are prerequisites for higher productivity of small holder farmers" (quoted in Borras and Franco 2011: 40). The reality is that such a gesture from on high is unlikely to stem a tide of dispossession governed more by a financial than a productivity calculus, but nevertheless represented as a necessary global good (food yields, green fuels, and even carbon offsets). As expressed in innumerable reports in the media, journals and NGO outlets, the land grab involves governments authorizing large-scale removal of rural populations from ancestral lands. The U.N. reported: "Experience with existing and extensive oil palm plantations in … Indonesia conclusively demonstrates that Indigenous peoples' property and other rights are disregarded, their right to consent is not respected, some are displaced, and they are left with no alternative but to become *de facto* bonded labourers gathering oil palm fruit for the companies that manage the plantations" (quoted in Smolker et al. 2008: 30).

In this process, highly subsidized biomass-driven land grabbing substitutes management of an accumulation crisis for the sustainability of human and natural ecology. In 2011 *The Guardian* reported:

> Half of all [Guatemala's] children under five are malnourished — one of the highest rates of malnutrition in the world. Yet the

> country has food in abundance. It is the fifth largest exporter of sugar, coffee and bananas. Its rural areas are witnessing a palm oil rush as international traders seek to cash in on demand for biofuels created by US and EU mandates and subsidies. But despite being a leading agro-exporter, half of Guatemala's 14 million people live in extreme poverty, on less than $2 a day. (Lawrence 2011)

Lending objectivity to the market, in its 2008 *World Development Report* the World Bank extrapolates future (unsustainable and inequitable) trajectories: "To meet projected demand, cereal production will have to increase by nearly 50 percent and meat production 85 percent from 2000 to 2030. Added to this is the burgeoning demand for agricultural feedstocks for biofuels" (2007: 8). In other words, bulk commodities such as wheat, corn, rice, soy, sugar and palm oil are the logical extension of an agro-industrial future, or biomass regime, driven by a heavily subsidized "demand." This temporary escape clause for capital (deferring ecosystem exhaustion) requires dispossession and/or incorporation of small producers into value chains, in which all crops are fungible and ultimately subordinated to a financial, rather than a social, calculus. This vision portends an interchangeable food/feed/fuel regime based in land grabbing waves, and the emergence of new South–North, East–North, East–South, and South–South circuits of food, fuel and biomass.

Capital's Frontier

Peaking oil and food, emission mandates, and stalled investment funds all find material resolution in the land grab, and are legitimized by an ideology of enclosure ("global ecology") in championing humanity (food) and the environment (green fuel). In addition to the prominent tropes of feeding and fueling the world, other forms of land grabbing constitute this moment: such as resource grabbing of water (Mehta, Veldwisch and Franco 2012), "green grabbing" (Leach et al. 2012; Corson and MacDonald 2012), individual land grabbing by producers large (R. Hall 2012) and small (D. Hall 2011), and carbon forestry (Osborne 2011). At the very local level,

for example, West African rural women who must lease land from male relatives or community members may find their land grabbed when the title holder decides "there is more profit in selling to a foreign state or corporation" (Ndiaye and Ouattara 2011: 60; see also Behrman, Meinzen-Dick and Quisumbing 2012; and Razavi 2009: 212–13).[5]

On a world scale, whether a new land frontier can resolve the capital accumulation crisis is in question, but arguably the logic of financialization privileges futures over productivity gains. Echoing development agency reports of a "yield gap" between attainable and potential yields in southern agriculture, the World Bank claims "none of the African countries of most interest to investors is now achieving more than 30 percent of the potential yield on currently cultivated areas" (2010: vii). But the notion of a "yield gap" is premised on a linear and extractive definition of agriculture that would further under-reproduce smallholding populations (Araghi 2009). The assumption that "sustainable intensification" resolves a "yield gap" misleads insofar as the bioeconomic paradigm reproduces generic and aggregated solutions that override specific ecosystems and their sustainability (Marsden 2012: 263).

Capitalizing a new land frontier via agro-industrialization and bioeconomic processes further compromises capital's conditions of production and its ability to resolve its accumulation crisis (O'Connor 1998; Moore 2010). For a start, capitalizing grassland and forestland with agro-inputs degrades the natural foundations of production. Global fertilizer production has increased over 31 percent since 1996 — a trend now intensified by agrofuels and the removal of cellulose fiber from fields (ETC 2009). In addition, it is questionable whether there is sufficient biomass available to convert into renewable chemicals, plastics and fuels to realize the open-ended claims of the bioeconomic vision of such entities as governments, the U.S. military, and the chemical and power industries (ETC 2009). When displacement of food crops by agrofuels is paired with speculation on food futures, the possibility for the land-grab frontier providing cheap energy and food resources to reduce capital's costs of production and reproduction, respectively, will be short lived but nonetheless devastating to inhabitants and habitats.

Once the concept of a "global commons" becomes the modus operandi (Sachs 1993; Corson and MacDonald 2012), agency, government and investor acquisition of land devalues its cultural and socio-ecological functions. Eviction of "unproductive" populations serves "rational planning" — driven by claims for increased productivity, debt-reduction, export enhancement and rural development. Eviction follows state-managed enclosure, extending subsidies of cheap/free land to investors at the expense of the social reproduction rights of smallholders. Public subsidies for land grabbing enable a composite set of "externalized" environmental, social, cultural, and human rights costs. Displacing the social and intrinsic value of such habitats eventually recycles as monetary costs of population resettlement, food shortages and ecosystem depletion for governments and development agencies. The "external" costs of doing agribusiness multiply, with global warming and ecosystem degradation (following the capitalization of nature via land grabs, oil palm plantations, GM seeds, etc.) combining to undermine the conditions of capital accumulation in the long run.

Agro-Security Mercantilism

While the new land frontier is capital's accumulation crisis reflex, it depends on northern subsidies to agribusiness, energy and transport companies, and southern concessions to investors. In other words, consistent with original food regime analysis, such restructuring exemplifies a new state/capital nexus, in several forms. One such form is "security mercantilism,"[6] by which certain states seek to guarantee access to food and agrofuels via sponsoring direct acquisition of land offshore. That is, beyond private investment, the use of sovereign wealth funds for land grabbing overrides the multilateral trading system instituted by the WTO, substituting direct access to productive land for food and fuel supplies rather than relying on market access. For states, this form of land grabbing pivots on a dialectic of "re-territorialization" via state investment in offshore lands for agro-exporting of food, feed and fuel, and "de-territorialization" as host states surrender land and water for export to (largely) food-dependent states.

A recently released data set documents over four hundred land grabs, a substantial portion of which are initiated by state companies or states, predominantly from East Asia (e.g., China's state-owned Beidahuang Land Cultivation Group) and the Middle East and its Gulf Cooperation Council (GRAIN 2012). Such "re-territorialization" avoids dependence on markets, or more particularly, market intermediaries, such as commodity traders like Cargill and Bunge (Pearce 2012: 202). In addition to public investments, China has sent expatriates to Africa to construct agricultural operations, and Saudi Arabia's King Abdullah Initiative supports offshore investment in land to produce rice, wheat, barley, corn, sugar, green fodders, and livestock, and facilitates land/water grabbing by private Saudi companies (Green 2012), whereas the United Arab Emirates, Qatar and Egypt directly acquire agricultural land, notably in Africa.

BRIC nations (Brazil, Russia, India and China) and other middle-income states are also acquiring land offshore (Middle East Business News, 2012). Such investments are not solely driven by "security mercantilism," but also anticipate supplying third markets in the longer run (ibid; Pearce 2012: 202) — underscoring the parallel proliferation of food/feed/fuel supply zones and circuits that mark a significant transition in the geography of the food regime (McMichael 2012b). Thus the land deal between Brazil and Mozambique for 6 million hectares at a symbolic price will underpin an offshore agro-export operation — as the Mato Grosso Cotton Producer Association president noted: "Mozambique is like Mato Grosso in the middle of Africa, with free land, without so many environmental obstacles, with a much cheaper shipment cost to China. Nowadays, as well as land being extremely expensive in Mato Grosso, it is impossible to get a license to clear the area" (quoted in MercoPress 2011). In addition to direct state investment, mandates such as the E.U.'s Emission Trading Scheme (ETS) stimulate palm oil expansion in Malaysia and Indonesia, and Guatemala and Colombia, where local states and private investors participate in developing food/fuel export complexes that provision both states and global markets (Borras et al. 2012: 863; McMichael 2010).

Thus, instead of market rule under WTO auspices, organized by TNCs around the (subsidized) principle of "comparative advantage,"

the food regime geography associated with security mercantilism approximates a set of bilateral arrangements organized by states and/or sovereign wealth funds. *Approximates* is the operative word because despite the World Bank's report finding agribusinesses and investment funds as the principle land acquirers (Deininger et al. 2011), Lorenzo Cotula cautions against overestimating the private/public divide, as "home country governments of investors can play a major supportive role for private-sector led initiatives, providing diplomatic, financial and other support to private deals .... Also the very borderline between public and private investors may be fluid, as the implementation of deals signed between governments may be driven by private operators" (2012: 660).

Nonetheless, there is a pattern of state-driven land grabbing, arguably a "late-developer" phenomenon, where while northern states depend on a substantial network of corporate food supply chains — Carrefour, for instance, has 15,600 across 34 countries (Fritz 1011: 11) — Asian and Middle East and North Africa (MENA) states depend more on sovereign wealth funds and state firms and banks to acquire land offshore. Thus South Korea, a major food importer (90 percent of its wheat and corn), in 2008 "suddenly found that key foreign suppliers were banning exports in order to feed their own people. In Seoul, the government established a National Food Strategy to subsidize national corporations willing to annex foreign land to secure key supplies ... to grow a quarter of its food on foreign soil owned or leased by Korean companies" by 2030 (Pearce 2012: 204–05). In this way, food and fuel dependence is expressed in a rising (mainly southern) agro-security mercantilism that complements northern land grabbing. Both contribute to the restructuring of the corporate food/fuel regime along multi-centric lines (beyond the northern "granary" relationship), thereby deepening the agro-export model instituted by WTO liberalization and International Financial Institutions (IFI) structural adjustment protocols.

Importantly, such agro-exporting depends directly on southern state sponsorship of land grabbing (Fairbairn 2013; Lavers 2012). This re-patterning of food/fuel circuits reframes the contours of the food regime — qualifying the WTO architecture of "liberalized" commodity flows. Given the centrality of agro-exporting, direct an-

nexation of supply zones deepens the corporate regime (with state complicity in commodification of land and water) without evidently transitioning to a successor regime.

From a food regime perspective, "agro-security mercantilism" defies the architecture of the WTO's Agreement on Agriculture. Whereas WTO trade rules and structural adjustment mandates have required lowering of agricultural protections to institutionalize export agriculture, now a parallel infrastructure of private and voluntary rules and protocols via soft laws facilitates land grabbing (non-trade based food circulation). This infrastructure is in turn enabled by international legal protections that have deepened during the era of political-economic liberalization. Thus: "a burgeoning number of treaties (over 2,600 by 2010) and growing state consent for settling disputes through international arbitration rather than through domestic courts have considerably strengthened international safeguards for foreign acquirers of land" (Anseeuw et al. 2011: 53). In contrast, international conventions regarding land rights for indigenous peoples and communities are considerably weaker than investment law. This condition is exacerbated in Asia and Africa by state ownership and control of lands traditionally occupied by producers, which "makes it perfectly legal for governments to sell or lease out lands on which their citizens live or which they use. This is important to prospective land acquirers" (Anseeuw et al. 2011: 50–52).

In terms of soft law procedural guidelines, the food/fuel regime incorporates a private framework with voluntary codes of conduct proposed by the development agencies (the World Bank's RAI in particular) to legitimize and facilitate restructuring associated with land grabbing. The new land acquisition protocols foreshadow global enclosure in the name of generic commodification — "responsibly destroying the world's peasantries," as Olivier de Schutter put it (2008). These include public–private partnerships to finance agribusiness; bilateral agreements on land access; emerging climate protocols sanctioning appropriation of land and forests as carbon sinks; and platforms for green fuels (including round tables for certification).

Conclusion

Evidently, northern states are losing their centrality in organizing and dominating the food/fuel regime — not only because of the G20 challenge to WTO rules and a proliferation of agro-exporting from southern countries, but also because certain states (especially Asian and MENA states) are overriding WTO multilateralism in directly commandeering agricultural supplies. The land grab is generating a move to institute parastatal and private forms of governance. Arguably, these new developments mark the shift from the "massive movement of food" towards a complementary "massive movement of capital around the world … forcing the increased movement of people," to paraphrase Vía Campesina.

These development "services" provide a broad infrastructural complex supporting land grabbing — both material and ideological. Insofar as a food regime has an institutional framework, governed by implicit rules (Friedmann 2005: 234), such services with emerging "guidelines" register an institutional updating of the corporate food regime, embodying a normative vision of agricultural modernization, enhanced food production, smallholder incorporation into value chains, rural employment, and smart agro-technologies (McMichael and Schneider 2011; Marsden 2012).

Whereas WTO rules institutionalized a "cheap food regime" sanctioning corporate subsidies (institutionalizing northern food dumping), current institutional trends restructure the regime framework, with four key dimensions. First, a multi-centric complex of rules and codes of conduct emerges via the development community at large (including influential NGOs), but centered in the U.N. organizations (notably the FAO) and the International Financial Institutions (notably the World Bank) concerning management of farmland acquisition and technical assistance. Second, this emerging framework advances patterns of circulation centered on southern agro-exporting of food, fuel and general biomass, as firms and investors capitalize new agro-export zones. Third, the commodities circulating are increasingly fungible as food, feed, fuel, and processed food ingredients. And fourth, circulating commodities embody the cheap land, water, and labor resources captured by land deals

effected by a state-finance capital nexus dedicated to constructing new frontiers of accumulation.

Notes

1. Braudel's *longue dureé* was of course geographical time. I would modify this to refer to the time–space of capitalism, in reorganizing the global social and ecological geographies.
2. "Surplus nature is the potential surplus labor time of the future. Surplus nature can be distinguished from 'necessary nature,' which signifies sustainable transformation of nature" (Araghi 2009: 121).
3. That is, the conversion of rainforests, peatlands, savannas, or grasslands to produce biofuels in Brazil, Southeast Asia and the U.S.A. "creates a 'biofuel carbon debt' by releasing 17 to 420 times more CO_2 than the annual greenhouse gas (GHG) reductions these biofuels provide by displacing fossil fuels" (Fargione et al 2008). Further, as industrial crops biofuels intensify soil and water degradation via dependence on chemical inputs.
4. For example, arable land prices in the U.S. rose 13 percent in 2007, and over 10.5 percent in 2008, while in the U.K. prices rose 28 percent in late 2007, and by more than 10 percent in the first quarter of 2008 (Berthelot 2009: 16).
5. Tanya Kerssen reformulates Honduran land grabbing as a *political power play* (the 2009 coup) against a substantial land sovereignty movement responding to an "internal" land grab for oil palm plantations in the 1990s (2013).
6. Hofman and Ho (2012) refer to this as "developmental outsourcing."

Chapter 7

The Food Regime and Value Relations: Which Values?

This final chapter opens up the value question with respect to food regimes. Food regime analysis has been framed by capital-centrism. Such analysis has underscored the significance of agriculture as a source of raw materials and food upon which industry and its labor force, and the exercise of state power, have depended. Nevertheless, it has offered a one-sided narrative of the making of the modern world. This resonates with James Scott's point that in maize culture corn is more than its grain, given the corn crop's multiple uses and symbolic value (1998: 295; and see Baker 2013). Analogously, the food regime project chronicles the simplification of "corn,"[1] at the expense of corn's cultural and ecological dimensions. The evident constraints of the Anthropocene age are bringing these dimensions to the fore, as humans face the necessity of biotic carbon restoration and "low-carbon" lifestyles.

To the extent that the food regime project has privileged a "coherent, cohesive and regulatory lock-down of a set of relations" named and framed "in binary and oppositional terms" (Le Heron and Lewis 2009: 346), it has sidelined extant food cultures that actually represent the world's majority populations. In this sense, industrial agriculture should be regarded as the alternative, not the other way around, as is the analytical norm. It is from extant food cultures that we can derive a healthy logic of reproduction of social and ecological relations, as opposed to the degrading and disabling force of capitalist agriculture's dynamic of under-reproduction of social labor and ecosystems. The food sovereignty movement, writ large, represents a multiplicity of critical engagements and experiments with restoring socio-natural reproduction to sustainable capacities. This entails broadening and recovering values that reconstruct diversity and supersede the homogeneity of the exchange value regime.

Araghi's concept of "global value relations" is invaluable in re-centering a historical theory of the food regime, but it also begs the ontological question regarding "value." The extraction of colonial foodstuffs, for example, may well have reduced capital's wage costs, but the consequences for colonial food cultures and ecologies are critical to a complete narrative — not least for understanding questions of "ecological feedback" (Campbell 2009) and episodic land rights, labor/food worker rights, agrarian and food movements, and riots (e.g., Holt-Giménez 2011; Borras et al. 2008; Patel and McMichael 2009; Borras and Franco 2012). Push-back is necessarily conditioned by capital relations, but its terms are not necessarily understood through the capital lens (Beverly 2004; van der Ploeg 2009). This chapter addresses its title in two ways: (1) suggesting an interpretive framework for including additional dimensions of food regime analysis to problematize its ontology and enrich its political-analytical impact,[2] and (2) developing the question of social movement input, focusing on the implications of the current food sovereignty movement.

Value Relations

The corporate food regime has progressively modeled a form of agriculture valuing its product solely as a commodity. The bio-economy represents the highest stage of commodification in the fact of crop substitutability. Here exchange value erases use value, and crops become fungible investments — as in the multiple uses of corn, soy, palm oil and sugar, for example, whether as foods, feeds, fuels, cosmetics, stabilizers and so on. For the crops mentioned, their conversion from food to exchange-value is the ultimate fetishization of agriculture, as an input-output process geared to indiscriminate production of commodities for profit. For Vía Campesina this is "agriculture without farmers," where agro-industrialization is ultimately about combining commodified inputs (seeds, fertilizer, antibiotics, privately-owned genetic materials, pesticides and so on) with land or water or factory farms to produce outputs as ingredients of processed commodities to fuel labor or machinery, without regard for social or ecological consequence. In other words, the process of

abstraction is not simply about the destination of the product, but also about biophysical relations. Crop fungibility depends on the process of "biophysical override" (Weis 2007), which disregards, or externalizes, environmental consequences. In the case of agrofuels, they are not only a "crime against humanity" in displacing food cultures, according to former U.N. Human Rights *rapporteur* Jean Ziegler, but also degrade environments. In short, fuel crops threaten social reproduction (production and human ecologies), and while enriching investment portfolios (especially with massive subsidies) they threaten planetary and human sustainability.

The associated fetishization of (exchange) value relations represents not simply a material, but also an epistemic, crisis of irrationality. As a prime example agrofuels increase emissions,[3] cannot solve the energy crisis, and threaten existing commonlands, prairies and forests upon which a large portion (and ultimately all) of humanity depends, and where a substantial proportion of food is produced (ETC 2009). Epistemic crisis is expressed in a series of developments — from the International Assessment of Agricultural Science and Technology for Development (IAASTD) report, the U.N. *rapporteur*, and NGO and agrarian counter-movements — all suggesting that industrial biofuels are part of the problem rather than the solution (see, e.g., Borras, McMichael and Scoones 2011). Furthermore, their contribution to the food crisis of 2007–08 stimulated second thoughts in the "global technobureaucracy" (Wilkinson 2009: 91), including the IMF, the International Food and Policy Research Institute (IFPRI), the FAO, the World Bank, and subsequently the U.K. Gallagher Report (2008), even if such (short-term) doubts have been tempered with new proposals for codes of conduct and certification schemes (cf. Borras and Franco 2010). Arguably, these misgivings portend an epistemic sea change. The possibility of an epistemic shift informs the twenty-first century agrarian question, which is no longer about agriculture's political contributions to state formation, but rather about agriculture's value. That is, the epistemic question concerns how we understand "value."

In the original and value relations perspectives of the food regime, the capital accumulation lens obscures the socio-ecological consequences of the appropriation and conversion of ecological

food into exchangeable food. This is a cumulative but non-linear process, whereby capital seeks to overcome or eliminate barriers to its accumulation. The phenomenal outcomes of this process (agro-industrialization, global supply chains, animal protein complexes, supermarketization) overshadow the subordinating mechanisms, at the risk of reproducing dominant narratives, and what Araghi calls the "illusion of abundance" (2009). Similarly, forms of resistance and experiences of dispossession remain largely unexamined.[4] And, just as the concept of the "nutrition transition" charts a progression of social diets up a modern food chain without regard for dietary regression for those surrendering their food ecologies, so the food regime has focused on the "stuffed" side of the "stuffed and starved" equation (Patel 2007).

At the same time the capital accumulation lens reinforces a social ontology, an organizing principle, externalizing ecological relations (McMichael 2011b). Campbell's proposal to re-ground food regime analysis in political ecology emphasizes tensions within food regimes between abstraction and situation of food cultures. This opens up the ontological question, insisting that other worlds are not only possible, but already in existence — in particular those addressing the environmental crisis without "costing" the environment, rather restoring and sustaining humanity's practical metabolic exchange with nature (cf. Schneider and McMichael 2010; Perfecto, Vandermeer and Wright 2009). And this is where "value" interpretations come in.

As noted, Araghi has insisted that the food regime is best conceived of as "a political regime of global value relations" (2003). Since food is central to reproduction of wage labor and other forms of labor, food is intrinsic to capital's global value relations. Thus the food regime is a political mechanism of cost reduction for capital by cheapening wage foods (grains and meats especially) as a significant input and/or value-added to processed foods. It also over-consumes "'surplus nature' at the expense of future exhaustion of natural resources and irreversible damage to biospheric life" (Araghi 2009: 121). Here, surplus nature is "potential surplus labor time of the future" (idem), since natural fertility affects the amount of labor time (value) necessary for social reproduction. Thus capital's food regime

is a "form of value transfer from surplus nature and the global poor to the more affluent customers" (ibid: 137).

The value relation analytic thereby reveals how capital's food regime exploits labor-power and nature together. Insisting that the act of labor is simultaneously the transformation of nature, Araghi collapses the society/nature binary, positing a unity in the exploitation of human labor and its natural component. In this way value is a methodological concept, allowing Araghi (and Marx) to demystify price (and payment for ecosystem services) as a fetishized representation of the social and ecological relations inherent in commodity production. Here value becomes a historical relationship through which capital produces, circulates and accumulates. It is a powerful explanator of capital's regime, including its contradictory relations such as the over-exploitation of labor and the natural world. Nevertheless, precisely because the concept of value with which Marx (and Araghi) work insists on the original unity of labor and nature, this concept implicitly recognizes the possibility of alternative expressions of this relationship. That is, "value" historicizes capitalism as an alienated form of social reproduction. It therefore allows the possibility of transcendence, expressing value in terms other than price.

Revisiting the Agrarian Question

Transcendence includes reframing the agrarian question as a "food" question, recognizing that as a use-value food has metabolic qualities linking humans with their environment. Such revaluing of agriculture transcends the food regime's abstract market calculus, and its devaluation of ecology and other cultures in the service of time-space compression. In this regard, Joan Martinez-Alier observes that capital's extractive imperatives generate tension "between economic time, which proceeds according to the quick rhythm imposed by capital circulation and the interest rate, and geochemical-biological time controlled by the rhythms of Nature, … expressed in the irreparable destruction of Nature and of local cultures which valued its resources differently" (2002: 215). This contradiction is central to industrial shrimp farming, where conflicts between mangrove

conservation and shrimp exports express tensions between different languages of valuation (political ecology). Thus Martinez-Alier claims industrial shrimp farming "entails the loss of livelihood for people living directly from, and also selling, mangrove products. Beyond direct human livelihood, other functions of mangroves are also lost, perhaps irreversibly, such as coastal defence against sea level rise, breeding grounds for fish, carbon sinks, repositories of biodiversity (for example, genetic resources resistant to salinity), together with aesthetic values" (ibid: 80).

Here the multiple practical values are erased by the price abstraction of the market ("all the shrimp you can eat" — the illusion of abundance). Certified and/or green consumerism may require that consumers pay the full (environmental) "cost" through a price subsidy, but at what *practical* cost to dispossessed shrimpers? Thus capital's self-valorization imposes a violent ontology privileging a development narrative and misconstruing and devaluing other cultural claims based on quite distinct practical experience. Where capital commodifies and fractionates ecology, the price form abstracts from, and invisibilizes, biological process. In relation to such abstraction, Marx noted:

> Capital asks no questions about the length of life of labour-power. What interests it is purely and simply the maximum of labour-power that can be set in motion in a working day. It attains this objective by shortening the life of labour-power, in the same way as a greedy farmer snatches more produce from the soil by robbing from its fertility. (1990: 376)

In this way the food regime of capital exercises "value override" in the service of "modern" rationality. Whereas ecological practices organize around replenishment, economic practices organize for robbery. The former respects biological time, the latter is concerned solely with value's velocity of circulation. In consequence, ecological (rather than economic) practices are deemed anachronistic and change-resistant. This economic episteme routinely discounts forms of peasant social reproduction. Thus: "peasant-like ways of farming often exist as *practices without theoretical representation*. Hence they

cannot be properly understood, which normally fuels the conclusion that they do not exist or that they are, at best, some irrelevant anomaly" (van der Ploeg 2009: 19, italics added).

The contemporary agrarian question, then, concerns how to transcend the exchange-value calculus, as applied to agriculture. This is a methodological issue, concerning Marx's theory of value as a social relation represented by price, which objectifies social (and ecological) relationships. Value is not *intrinsic* to labor, or nature, rather it is produced through social combinations of labor/nature as commodities with exchange value. Capital's language of valuation is monetary value alone (determined by commodity exchanges at any one time), but value theory demystifies this alienated language, opening up the possibility of critique and counter-alienation. What appears to be a universal rationality is in fact an abstraction and form of denial of space-based practical value. In other words, value theory implies (but elides) other relationships embodying distinctive forms and understandings of value. I argue below that "peasant practices" force such recognition insofar as they address the agrarian question by seeking to repair the metabolic rift.

One dimension of revaluing the agrarian question is the appeal to agricultural "multifunctionality" in the IAASTD Report. However, with its official representation in the OECD, the FAO and the Council of Europe through the 1990s, as a designation of sustainable agriculture, this concept is not unproblematic. During formulation of the WTO's Agreement on Agriculture, the E.U. attempted unsuccessfully to insert "multifunctionality" as a principle of environmental governance. The concept attempts to transcend the radical simplification of industrial agriculture, noting that agriculture "may have multiple outputs, and, by virtue of this, may contribute to several societal objectives at once" (OECD 2001). The term "output" suggests a functional role for agriculture — contributing to a multiplicity of ends such as landscape management, rural employment, food security and environmental protection. But in a market context, it is a short step to auditing and commodifying these outputs, and consigning some (e.g., environmental conservation, rural employment) to "green" and "blue" boxes to meet subsidy reduction requirements in the WTO, while continuing to direct the bulk of payments to corporate farmers (McMichael 2011a).

Nevertheless, multifunctionality has emerged as a "counternarrative to the neoliberal vision for European agriculture" (Potter and Tilzey 2005: 590) among coalitions of farmer and environmental activists. In this usage, multifunctionality is understood as a restorative and regenerative principle. Rather than designate separate (audited) spaces for conservation to protect biodiversity and waste sinks, the meaning of multifunctionality here refers to integrating ecological repair and reproduction into the practice of farming itself (cf. Perfecto, Vandermeer and Wright 2009). Part of this coalition includes the European food sovereignty movement (Nyéléni Europe), which politicizes multifunctionality via a distinct language of value. This is formative of the contemporary agrarian question.

Social Reproduction vs. Capital Reproduction

Whereas the classical focus of the agrarian question concerned the reproduction of capital, the food sovereignty movement inverts this as a question of social reproduction, embedded in agricultural practice. In so doing food sovereignty redefines what it means to be modern, beyond scientific rationalism, in order to address the current social and environmental emergency. This vision of modernity advocates a historically specific conception of multifunctionality: "agrarian reform can put an end to the massive and forced rural exodus from the countryside to the city, which has made cities grow at unsustainable rates and under inhuman conditions" (Vía Campesina 2006). Beyond land redistribution, the vision seeks to reverse the association of progress with urbanity, counterposing a "planet of fields" to the "planet of slums" catastrophe of neoliberal capitalism (Ajl 2011), and revaluing agriculture as the key to social and ecological reproduction writ large. Food sovereignty resonates in China, where a parallel movement is underway with the aim of organizing the remaining peasantry as a social force to counter state and market initiatives commodifying farming as an industrial sector to source urban-industrial growth. The New Rural Reconstruction, a broad rural social and cooperative movement that has emerged in response to the deepening inequality between town and country and the erosion of rural culture, is a patchwork of organizations and

projects seeking to build self-reliance on the land via agroecology and alternative marketing (Wen 2007; Day 2008; Hale 2013).

Food sovereignty is a vision matching a "land sovereignty" alternative (Borras and Franco 2012). As Movimento dos Trabalhadores Rurais Sem Terra (MST) leader João Pedro Stedile observes:

> From the time of Zapata in Mexico, or of Julio in Brazil, the inspiration for agrarian reform was the idea that the land belonged to those who worked it. Today we need to go beyond this. It's not enough to argue that if you work the land, you have proprietary rights over it .... We want an agrarian practice that transforms farmers into guardians of the land, and a different way of farming that ensures an ecological equilibrium and also guarantees that land is not seen as private property. (2002: 100)

In this sense, the food sovereignty movement is engaged in constructing an alternative (historicized) narrative within the context, but against the dictates, of the corporate food regime (McMichael 2005, 2009d). It is not a vision premised on an abstracted concept of (market) value, rather it foreshadows a political ontology directly valuing self-organizing practice through networks of co-operation (Holt-Giménez 2006), including collapsing the urban/rural divide and repairing the metabolic rift (Schneider and McMichael 2010). Such an ontology is well expressed by Jésus León Santos, from Centro de Desarrollo Integral Campesino para la Mixteca (CEDICAM), who characterized *milpa* agriculture thus: "It's not a way of improving nature — it's a way of getting closer to the processes of nature, getting as close as possible to what nature does" (quoted in Canby 2010: 36). *Milpa* cultivation is a form of family-farming agro-ecology on relatively small fields based on cycles of cropping of corn, squash and beans, and fallow systems complemented by side crops for biodiversity and for dietary variety.

The ontology of self-organizing diverse farming communities and networks draws from emergent practices across the world. In southern Brazil (Rio Grande du Sol), for example, continued deterioration of soy farming conditions in particular has stimulated

autonomous struggles by a majority of farmers (Preschard 2012), expressed in a new priority on self-provisioning, which "represents an economical mode of farming, based on the internalization of resources, the maximization of resources available in the family unit, and co-production associated with the craftsmanship of family labour" (Schneider and Niederle 2010: 394). The rise in on-farm food processing, involving at least a third of the 608 farms surveyed, generates new local and regional market structures (ibid: 396). Additional "agriculture-based pluriactivity" characterizes almost half of the farms, supplemented with non-farm income sources. Income from any commercial farming depends increasingly on the consolidation of (decommodified) farm resources.

Elsewhere, in Honduras the Unified Movement of Aguán Peasants (MUCA) have, since the 2007–08 food crisis, experimented with rebalancing value between cash cropping and self-sufficiency. This involves refocusing from oil palm to producing basic grains (corn and beans) as local food sovereignty projects, extending to perennial crops such as yucca, plantain and pineapple, "indicating a long-term investment in the land" (Kerssen 2013: 116). MUCA has also developed a network of small food markets to distribute low cost local produce. Tanya Kerssen notes that these cooperatives continue to sell palm fruit as a "development tool," using the revenues to finance basic grains, livestock, fisheries, bakeries and woodworking, welding and autobody shops, as "economic diversification projects aiming at putting whole economies back in the hands of local communities and families" (ibid: 117).

In Mexico, government policy in the NAFTA era favors eliminating the small-farm sector to save subsidizing the "poverty" of 2.5 million maize farm families. Increasingly, indigenous farmers have withdrawn from the formal economy, "weaning themselves off expensive chemical fertilizers and subsisting on the corn they can grow, harvest and barter" (Canby 2010: 30). While neo-classical economists understand this as a "retreat to subsistence," it embraces the value of producing and reproducing corn landraces intrinsic to the maize culture (Barkin 2002). It also anchors *milpas* which "farmers have coaxed out of their biodiverse surroundings through astute and assiduous husbandry" (Canby 2010: 31), as a combined

defense against climatic changes and crop diseases, with global rather than simply local implications. That is, the preservation of genetic resources, as a grounded local practice, is potentially more globally significant (in time) than the universal claims of agro-industrializers.

In the Guatemalan highlands, peasant preservation of on-farm genetic diversity depends on off-farm markets, transnational migration, and hiring of field hands to support *milpa* cultivation, "even when it would be more economical to purchase food in the market [suggesting] that the subsistence-oriented agriculture generates benefits beyond the market value of the crops" (Isakson 2010: 740). Data from 120 farms, 97 percent of which cultivate *milpa* for autoconsumption, shows off-farm labor is common to all landholders. Such labor (including migration) and cash cropping enhance *milpa* cultivation, "the practice [of which] should not be reduced to the market value of the output" (2010: 735, 737). That is, farming biodiversity is more than producing exchange value. Off-farm income, including that from petty commodity production (especially artisan goods) is viewed as a complement to self-provisioning (ibid: 738, 743) — contradicting the Ministry of Agriculture, which claims, "Maize isn't profitable. We try to discourage its cultivation. We want the *campesinos* to diversify" (quoted in ibid: 749).

Ryan Isakson's research reminds us that the value of *milpa* is more than the market value of the maize and other crops, and is governed by the social relations in which farms are embedded, including, for example, the existence of gender discrimination in labor markets, such that "for many the use of female labour power in the *milpa* represents a rational use of household resources" (ibid: 752). Contrary to claims that subsistence is a retreat, or an act of desperation, peasants cultivate *milpa* "as an expression of cultural identity, as a medium for fortifying social bonds, as a form of food provisioning that offsets the vagaries and uncertainty of the market, and as a rejection of the complete commodification of food" (ibid: 755).

In a crisis context, official pressures to commodify food globally discount the multitude of self-organizing defenses against global markets — and now climate change — practiced by peasant farmers and communities across the world (McMichael 2010). Conservation farming, returning nutrients to the soil via compost,

crop cover, and the use of intercropping are common methods of land management. In East and southern Africa, in drier seasonal-rainfall environments, the Africa Center for Holistic Management leads an initiative to use livestock to heal the land, and "simulate what huge herds of wild animals like buffalo and wildebeest have been doing for millennia" (Wilson 2012: 79). In the Tahoua region of Niger, peasant farmers (primarily women) have reclaimed 250,000 hectares of degraded land, following environmental and political crises in the 1980s and 1990s respectively, improving household food security and techniques of dry season cultivation, such that "according to FAO statistics Niger produced in 1980 100,000 tons of dry onions, but 270,000 tons in 2004, which was a drought year" (Reij 2006).

While social reproduction is routinely ignored by corporate, development and state agencies, given the market lens, arguably its gender dimension is also routinely discounted in political economy (including food regime) research (Razavi 2009: 207). There are at least two dimensions here: first, women's predominance in the farm sector (70 percent of food production and processing in Africa); and second, neoliberalism's negative redistributive mechanisms, which increase women's informal/non-commodified work in sustaining households (Whitehead 2009) — a palpable example of capital's "under-reproduction" effect.[5] Shahra Razavi notes that arguments for positive redistribution of land to women, as more "efficient" farmers, discount gender inequities (e.g., relative lack of access to farm input for women farmers), such that their efficiency "is surely a sign of distress and exploitation of family labour" (2009: 204).

Women's particular role in social and ecological reproduction has universal value. At the Terra Preta forum (Rome 2008) a representative from the Network of Peasant Organizations and Agricultural Producers in West Africa reported that flexible seed selection by farming women has managed recurring drought and that these practices and outcomes are being documented. In her study of seed diversity management in the dry Deccan Plateau of South India, Carine Pionetti (2005) documented the value of women's work in forming a "localized seed economy" through seed exchanges, which have ecological, economic, social and cultural significance.

In contrast to seed monopolization under patents favored by the development industry:

> The continuous exchange of seeds for local crop varieties circulates genetic resources from one field to another within a village territory and beyond. The dynamic management of genetic resources enhances the stability of traditional agrosystems, increases the adaptation potential of local crops to evolving environmental conditions and limits the risk of genetic erosion. Seed transactions also help ensure that land is not left fallow for lack of seeds, thus avoiding soil erosion and increasing the soil's organic matter content and water retention capacity. (Pionetti 2005: 154)

Seed saving minimizes risk, increases crop diversity and nutrition, provides "self-reliance and bargaining power within the household" (ibid: xiv) for women, allows women to select seeds to meet specific individual, environmental and climatic needs, allows planting at appropriate times, and provides assets (seeds constitute a currency, particularly among women with few resources). Seeds constitute the security of a "knowledge commons" (Holt-Giménez 2006: 97) — a defense against agribusiness and states under pressure to adopt "value-chain" agriculture, and consequently a "site of struggle" (Bezner Kerr 2010). Once farmers join "value-chains" they become dependent on a production chain "where the choices of inputs and the use of the harvest are predetermined by agro-chemical and food-processing firms" (Pionetti 2005: xv). Elisa Da Via's research in Europe underscores the relationship between seed-saving networks and the promotion of agro-ecological methods enhancing integration, resilience and livelihood security (2012).

ActionAid's report *We know what we need: South Asian women speak out on climate change adaptation* documents how farmers in the Ganges basin bordering Nepal, India and Bangladesh manage livelihoods under conditions of erratic monsoon patterns, evidencing "that women in poor areas have started to adapt to a changing climate and can clearly articulate what they need to secure and sustain their livelihoods more effectively" (2007: 4). Typically, development

agencies are not geared to support small-farmer ingenuity, since agencies generally know "what *they* need." In another ecological zone, the drylands of the Deccan Plateau, where a variety of rainfed crops grow, including sorghum, millets, pulses and oilseeds, the "symbiotic relationship between these crops provides solutions to a wide range of problems faced in today's Indian agriculture such as management of soils and their fertility, pest control as well as minimizing risk and uncertainty" (DDS Community Media Trust et al. 2008: 35). While such biodiversity may allow farm communities to manage climatic conditions in tenuous environments, the value episteme of the market is oblivious to "the many values of uncultivated biodiversity used by people for food, fodder and medicine." Thus:

> The number of uncultivated foods that are harvested in Medak district (Andhra Pradesh) greatly exceeds the number of cultivated species. Some 80 species of uncultivated leafy greens are locally used as foods and many dozens more species of uncultivated plants including roots, tubers and fruits. This vast array of "wild" leafy greens, berries and fruits are sources of many nutrients … . Most of them are rich sources of calcium, iron, carotene, vitamin C, riboflavin and folic acid. Therefore they are a boon to pregnant and nursing women as well as to young children. Since they come at no monetary cost at all, they are a blessing for the poor. Dalits know it and have woven these uncultivated foods into their food system. (idem)

The problem here, ultimately, is epistemic. Local practices value, and depend on, local ecosystems and labor networks. For example, for reclamation of Sahara regions, "high population densities, far from being a liability, are actually essential for providing the necessary labour to work the land, dig terraces and collect water in ponds for irrigation, and to control weeds, tend fields, feed animals and spread manure" (Lim 2008). The modernity episteme devalues peasant labor and its practical knowledge, expecting peasants to evaporate into urban areas and/or gainful employment. The conventional wisdom that peasant farming is obsolete proceeds

from naturalized understandings of subsistence or near-subsistence farming as poverty, meaning low or absent income.[6] It is misleading to assume that peasant farming represents an initial developmental stage, as if agrarian conditions have been fixed in time. Farming and farm labor adapt continually, often under deteriorating conditions. While certainly not romantic circumstances, the resilience of landed and landless peasants alike accounts for their continuing presence (Holt-Giménez 2006; Desmarais 2007: 19). In fact, as van der Ploeg's extensive research (2009) in Peru, Italy and the Netherlands suggests, there is a global process of "repeasantization" underway, akin to the above examples in Mexico, Brazil and Burkina Faso (see also Altieri and Toledo 2011; Corrado 2010; Vanhaute 2008).

Repeasantization: Revaluing the Agrarian Question?

Van der Ploeg distinguishes his conceptualization of the peasantry from a historicist one that would confine the peasantry to the past and/or the periphery, referring to "the peasant condition" (2009: 34). This condition stems from the crisis of the corporate food regime, or what he considers a complex of supply-chain driven food empires. It is centered in a peasant practice of co-production with living nature, that "aims at and materializes as *the creation and development of a self-controlled and self-managed resource base*," which may be strengthened by engaging in pluriactivity/other non-agrarian activities (ibid: 23, 33).[7] Here, whereas a market lens portrays peasant agriculture as stagnant, in fact reproduction and development of the resource base is both definitive of the peasantry *and* the condition of its emancipation.

In this vein, van der Ploeg insists that "European peasants are far more peasant than many farmers in the developing world and this explains why they are somewhat better off" (ibid: 40).[8] Thus he universalizes the peasant condition, contrary to conventional assumptions that locate peasantries on the margins of an advancing capitalist frontier in the global South. He places the modern peasant in time, simultaneously exploding the pejorative meaning of "peasant" in modernist ontologies that erase the peasant condition as backward or pre-modern.

The modern "peasant mode of farming" is defined as "the production and growth of as much value added as possible" — generating income through reproducing and augmenting self-managed resources (ibid: 42). This mode is distinct from "entrepreneurial farming," geared to takeover of others' resources as well as value-adding given resources, and from the profit focus of "capitalist farming" (ibid: 42–43). The peasant mode animates given resources (i.e., those produced and reproduced through previous production cycles) with labor-driven intensification, enhanced by reciprocal relations within peasant networks mobilized for value-adding. The possibility of transitioning from economic to ecological value-adding follows: "the more the farm is distanciated from the large upstream markets (and the imperial control rooted in them) the larger the room for manoeuvre to construct the new alternatives on the downstream side" (ibid: 20).

Such a transition allows the epistemic claim that peasant agriculture is distinct from other forms of farming in prioritizing ecological value. In this sense it is unthinkable in modernist terms, and distinguished by the centrality of labor. Commercial operations, *tout court*, are governed by a drive to accumulate by replacing labor in production. Thus industrial agriculture renders peasant labor redundant, appropriating practical knowledge by deskilling farming with commercial inputs, centered on seed technologies which override local ecologies and reduce labor requirements (Kloppenburg 1988). For van der Ploeg, labor intensification is the *differentia specifica* of the peasant mode of farming. In contrast, modernist perceptions view peasant labor as outmoded and constrained by a paucity of resources (physical, rather than biophysical) contributing to a subsistence level of farming that is "unable to drive development" (van der Ploeg 2009: 46). In response "labor-driven intensification emerges as a strategic, if not unavoidable, development trajectory" (ibid: 48), where ecological value has its own positive logic:

> A non-commoditised exchange with nature allows the building of an important line of defence: the more that farming is grounded on ecological capital the lower the monetary costs of production will be. Ecological capital, if cared for, also allows for patterns of growth that are independent of the main

> markets for factors of production and non-factor inputs: herds are enlarged and improved through on-farm breeding and selection; fields are well-cultivated and made more fertile; new experiences are translated into expanded knowledge. (ibid: 4–5)

The concept of "ecological capital" invokes value-adding as the goal and outcome of this conception of peasant agriculture. This form of value depends on a *reduction* of monetized inputs, insofar as farm resources are reclaimed as use-values rather than exchange-values. Farming here is decommodified as a practice (even if crops and livestock are sold), and in this sense has an emancipatory outcome where farmers gain autonomy from debt and agro-input standardization. "Value-adding" augments the reproductive value of agricultural resources on farms rather than contributing to capital accumulation in external value-chains. "Ecological capital," then, represents an alternative form of valorization as the core of the farming enterprise (even though it may realize market exchange-value, but now on the farmer's terms).

Food Sovereignty

Arguably, "ecological capital" is analogous to "food sovereignty." Each term appears problematic, drawing upon conventional languages. Just as "food sovereignty" is a political form of strategic essentialism, using the idiom of sovereignty to reclaim lost juridical ground in the short term but reformulating the meaning of the category in the long term (McMichael 2006), so "ecological capital" may perform a similar function. That is, each politicizes the tensions in capital over the meaning of value, offering a more robust understanding of "use value" that highlights the reproduction of ecologies and cultures (rather than capital). In short, van der Ploeg's concept of "repeasantization" suggests a social theory of emergence, paralleling food sovereignty's emancipatory politics, given by the terms of dispossession (material and epistemic) of the neoliberal project (McMichael 2008).

Van der Ploeg's juxtaposition of "value-adding" and "ecological capital" notes the fluidity and overlap among his three types of farm-

ing (peasant, entrepreneurial and capitalist). In practical terms, this allows some mutation (and mutual conditioning) between types, particularly peasant and entrepreneurial farming. His research groups "peasantries" with quite distinct time/place coordinates. The more substantial the "ecological capital," where peasant households are in a position to mobilize resources off and on the farm and stabilize their material base, the greater the emancipatory possibilities and the socio-political impact of the peasant mode of farming — with developmental consequences. In Europe at least, to the extent that peasant farming "easily unfolds as multifunctional agriculture … entrepreneurial farming will find it far more difficult to do so … there will be an overarching need to create high employment and adequate remuneration levels in these new rural areas of the enlarged European Union … . Repeasantization will occur as a material need (if it is not already one)" (van der Ploeg 2009: 285). The Coordination Paysanne Européene claimed, "maintaining the number of people working in agriculture is not a sign of economic 'backwardness' but an added value" (2003).

In more visionary terms, use of the term "ecological capital" underscores the revaluation theme of the contemporary agrarian question. Thus:

> In this respect, the beginning of the twenty-first century represents a clear rupture: land is back again as major issue. This is evident in the way that land is once again becoming the object of peasants' struggles … and of "land-grabbing" … . More than either of these, it is also evident in the way in which land is now being considered as ecological capital. Farming is again being understood, and practised, as co-production: the interaction and mutual transformation of human actors and living nature. Farming is not only based on "economic exchanges," but also on '"ecological exchange." (van der Ploeg 2010: 4)

The point here is that to the extent that producers can base farming in "ecological exchange," subsequent "economic exchange" is more likely to be on local or regional markets, given the premium on agro-ecology and non-market value reorientation.

By *revaluation* I mean that a pivotal struggle now within the terms of the agrarian question concerns land sovereignty (Borras and Franco 2012). For an emergent (twenty-first century) peasantry, land is not only an object of struggle to secure, but also is being reclaimed (through bio-reclamation and the use of agro-ecology for restorative practices) for the purpose of resource building as "ecological capital," to restore previous (including women's) rights to land security, to secure territorial/cultural identity (cf. Escobar 2008), and to re-establish food self-reliance. Land reclamation includes securing new conceptions of "agrarian citizenship" (Wittman 2009), as proposed by Brazil's MST in reference to repositioning agrarian labor in the body politic (repositioning citizenship beyond urbanity), and introducing environmental stewardship into a collective notion of citizenship.

Such a politicized form of land reclamation, as "land sovereignty," combines the autonomy reflex of the "new peasantry" with peasant and landless mobilization as an emancipatory politics of the food sovereignty movement (Desmarais 2007, Borras 2004). In each case, emancipation is from the neoliberal intensification of value relations that encompass and displace smallholders, and compromise ecosystems. Sovereignty means not only the right to produce, but also control of production, and food sovereignty "is a principle and an ethical lifestyle that does not correlate with an academic definition but arises from a collective, participatory process" (Stedile and de Carvalho 2011: 25; see also Patel 2009).

The question of rights is significant at this juncture: both morally and politically. The IAASTD refers to food sovereignty as "an explicitly moral enterprise that stands in contrast to the economic processes of market-driven globalization," devolving power from corporate/scientific control to popular forces "for the production of social and ecological knowledge" (quoted in Ishii-Eiteman 2009: 691). As Sofía Monsalve Suárez remarks: "it is well known that WTO and the international investment protection regime have at their disposal strong sanction mechanisms, whereas the U.N. Human Rights System unfortunately still lacks them. Additionally, commercial and investment law regimes still do not accept the primacy of international human rights law" (2012: 13).

Concretely, according to the Nyéléni Declaration (2007) food sovereignty is "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and the right to define their own food and agriculture systems" (2009: 673). While championing an International Convention on the Rights of Peasants, who include farmers, landless and indigenous people who work the land themselves, Vía Campesina recognizes that its name refers to "a *process* of peasant culture, a peasant 'way.'" Paul Nicholson, a founding member of *La Vía Campesina,* continues:

> The debate isn't in the word "farmer" or "peasant." The debate is much more about the process of cohesion … . It is a process of accumulation of forces and realities coming together from the citizens of the entire planet. Food sovereignty is not just resistances, as there are thousands of resistances, but also proposals that come from social movements, and not just peasant movements. From environmental movements, among others, come many initiatives that develop proposals of recuperation, of rights, of policies. This is also an autonomous and independent process. There is no central committee, and food sovereignty is not the patrimony of any particular organisation. It's not La Vía Campesina's project, or even just a peasants' project. It is a proposal, based on principles of struggle and objectives, coming from social movements, not from institutions or organisations. It is being constructed from the local level, and we're going to continue accumulating strength towards a national force and an international expression. (2009: 678-80)

In short, food sovereignty is a civilizational movement, combining a conjunctural critique of neoliberal "food security" (as a corporate power play and a confidence trick in equating agro-exporting with "feeding the world") with *longue dureé* principles of self-determination reframed as democratic rights for and of citizens and humans. The central ethic — food as a right, not a commodity — expresses the contemporary politicization of "food security." At the same time food sovereignty refutes capital's food regime at large, as an institutionalized structure subordinating a diversity of use

values to a singular exchange-value driven political order, creating a "hunger regime"[9] in the process.

The food sovereignty movement's maturation involves a rising commitment to agro-ecological farming. Miguel Altieri defines agro-ecology as a science and a set of place-specific practices. Its core principles include "recycling nutrients and energy on the farm, rather than introducing external inputs; enhancing soil organic matter and soil biological activity; diversifying plant species and genetic resources in agro-ecosystems over time and space; integrating crops and livestock and optimizing interactions and productivity of the total farming system, rather than the yields of individual species" (Altieri and Toledo 2011: 588).

Several studies conclude that the relative yields of organic/agro-ecological versus non-organic farming are sufficient to provision the current daily average consumption of calories across the world (Pretty and Hine 2001; Pretty, Morison and Hine 2003; Badgley et al. 2007). Jules Pretty and colleagues (2006) compared 286 projects across 37 million hectares in 57 southern countries, finding agro-ecological techniques increased crop productivity by an average of 79 percent on over 12 million farms, with improvements in environmental services. And Catherine Badgley and colleagues (2007) examined 293 cases in a global data set, finding that on average organic farming in the global North produces 92 percent of conventional agricultural yields, but in the global South organic farming produces 80 percent *more* than conventional agriculture. Further, they found that sufficient food could be produced organically to feed the world, even without expanding farmland, and that leguminous cover crops could fix sufficient nitrogen to replace current applications of synthetic fertilizer (which, with overuse, undermine soil health).

Cuba offers an exemplary case in a peak-oil age, having lost access to imported oil, agrochemicals and farm machinery following the collapse of the Soviet Union in 1990. Cuban agriculture survived the crisis by developing organic farming, urban gardens, animal traction and biological pest control. A recent study revealed that in less than a decade, depending on the region, 46–72 percent of peasant farms use agro-ecological practices, producing about 60 percent of the vegetables, maize, beans, fruits and pork consumed on the island.

Following Hurricane Ike in 2008 it was found that agro-ecological farms suffered a damage level of 50 percent compared to that of monocultures with levels of 90–100 percent. Agro-ecological farms recovered faster and about 80 percent of the farms were producing 40 days after the hurricane (Altieri and Toledo 2011). In a country where 75 percent of the population lives in cities, urban agriculture is well established: utilizing around 87,000 acres in and around Havana, it accounts for 60–90 percent of produce consumed in the city (Ergas 2013: 48).

Cumulating studies and examples of successful agro-ecological experiments, including agro-forestry (see, e.g., de Schutter 2011, Lin et al. 2011) confirm the "obvious principle that natural areas will be successfully protected over the long run only when they are embedded within … economies that provide for greater levels of economic diversity, resilience, security and political participation. An essential tool … is the integration of productive agriculture with conservation" (Perfecto et al. 2009: 124). This principle, central to the practical vision of food sovereignty, has been advocated by U.N. Human Rights *rapporteur* Olivier de Schutter, addressing the U.N. Commission on Human Rights: "Agriculture should be fundamentally redirected towards modes of production that are more environmentally sustainable and socially just…. [Agro-ecology] helps small farmers who must be able to farm in ways that are less expensive and more productive. But it benefits all of us, because it decelerates global warming and ecological destruction" (2011).

Research has shown small farms are climate-friendly, treating soils with organic fertilizer that absorbs and sequesters carbon more effectively than industrial agriculture, such that "the conversion of 10,000 small- to medium-sized farms to organic production would store carbon in the soil equivalent to taking 1,174,400 cars off the road" (Altieri 2011). For food sovereignty, land is viewed not through a commodity lens, but rather through an ecological, cultural and/or multi-functional lens as the basis of (relatively) labor-intensive low-input agro-ecological farming. It is on this foundational principle that the countermovement to the food regime has strengthened, with the IPC for Food Sovereignty claiming that the world's peasantries feed the world and cool the planet.[10]

Scaling Up

Of course the food sovereignty movement has a long way to go, especially in alliance building (Rose 2012). But the compression of time by space, as earth's ecosystems degrade and land grabbing intensifies, accelerates the proliferation of alternative food networks and strategic alliances in global South and North (Holt-Giménez and Patel 2009; Holt-Giménez 2011; Borras, Edelman and Kay 2008; Andrée et al. 2013). Meanwhile, as Nora McKeon claims, "for the first time in history, the international community has established a global policy forum for food issues where people's movements can defend their proposals" (2011: 265).

In spite of the FAO's ambiguous position on land grabbing, and its support for GMOs and the Alliance for a Green Revolution in Africa initiative, agrarian movements have been able to empower the IPC for Food Sovereignty to make its case in the U.N. system's "ministry of agriculture," as an alternative intergovernmental policy forum to the Bretton Woods institutions and the WTO (idem). The IPC has facilitated the participation of over 2,000 representatives of small producer organizations in FAO policy forums, and, with the 2007–08 food crisis, a breach was made in "intergovernmentality" given the "apparent global policy vacuum" (ibid: 266) and the evident "dysfunctionality of unregulated markets" (Wilson 2010: 8). The world food crisis shock refocused attention on food security issues, symbolized by the Bank's new "agriculture for development" trope, and a renewed focus on global hunger and its alleviation. The latter centered on FAO reform (in particular of the Committee on World Food Security), consolidated in November 2009. In addition to revitalizing the one-country-one-vote structure, civil society organizations were recognized by member states as critical to the reform and action plans (Duncan and Barling 2012). The IPC for Food Sovereignty played a key role in securing the Right to Food as a central objective, and shifting the center of gravity of participants from the international financial institutions towards civil society organizations, representing a variety of key stakeholders including smallholding farmers, artisanal fisherfolk, pastoralists, landless, urban poor, agricultural and food workers, women, youth, consumers,

indigenous peoples and related NGOs (Wilson 2010: 20).

The FAO's reformed Committee on World Food Security (CFS) represents the possibility of qualifying the WTO trade regime with a renewed mandate for constructing a global food system infrastructure capable of supporting the U.N. Human Rights *rapporteur*'s call for measures to promote domestic food security, based in smallholder (agro-ecological) farming. The CFS thus "provides for a totally unprecedented level and quality of participation by non-state actors, with particular attention to organizations representing small food producers and poor urban consumers … [and recognizes] the right of civil society organizations to autonomously establish a global mechanism to facilitate their participation in the CFS" (McKeon 2011: 15). While the CFS intervention is still tenuous, it is clear that because of the food price shock (which continues for vulnerable populations), there has been a shift in the balance of moral forces as neoliberal institutions have been compromised and the majority interests of smallholding food producers have found an institutional voice in the FAO at least. In effect this strengthens the claim for the institutionalization of domestic food security measures, and the unfolding of a politics of food sovereignty.[11]

Meanwhile, at least two dozen countries have embraced the right to food, with half a dozen (Ecuador, Venezuela, Bolivia, Nepal, Mali and Senegal) including food sovereignty in their constitutions — indicating a normative (and epistemic) shift underway (Rose 2012: 174). In Ecuador, for example, the Framework Law (the product of political pressure from the Confederation of Indigenous Nationalities of Ecuador) articulates food sovereignty goals: national self-sufficiency in food staples and reduction of food dependency, privileging and supporting small farming and artisanal fishing, promoting multifunctionality, redistributive agrarian reform and rural development, implementing organic and agro-ecological methods to protect agrobiodoversity, optimizing public health in the food system, shortening the food chain, protecting traditional knowledges, and prohibiting GMOs (ibid: 175–76). In Venezuela, food sovereignty measures have been implemented, via land redistribution, expansion of rural credit and technical services, distribution networks for small farmers and fishers, a national school lunch program, community kitchens for the

poor, attainment of self-sufficiency in staple grains by 2008, and near self-sufficiency in animal protein (Schiavoni and Camacaro 2009).

Of course all these initiatives take time as they falter, renew and evolve. Much work takes place in urban areas too, from city regions to village networks. As Terry Marsden notes, in the U.K. "most of the major cities now have some form of 'food strategy' — be it formed around food charters (Brighton), food councils (Bristol), or the development of types of food hubs and trusts (Plymouth, Exeter Stroud)" (2012: 271). Harriet Friedmann, a principal mover on the Toronto Food Policy Council, notes:

> I understand the Toronto community of food practice to include more than networks among individuals, and more than their skillful access to institutional resources. It also includes the specific functions of a municipal government body, the Toronto Food Policy Council, and a vibrant network of non-governmental food security organizations, especially the largest, FoodShare. These organizations have provided strategic resources, as well as opportunities to experiment and learn from others' experiments, to the diverse individuals who move through them, usually leaving behind new projects and ideas. These institutions are unique in linking a wide range of top-down and bottom-up initiatives that emerge and evolve within and across a range of "sectors" — public, voluntary (NGO), and market. (2010: 68)

And yet Friedmann, distinguishing "scaling up" from "the growth imperative," also notes that in the surrounding region, the Golden Horseshoe, "farmers and farmland are disappearing, but the Greenbelt and many initiatives are working to renew farmers and save farmland. Eaters are unequal and unhealthy at younger ages and in increasing numbers. These conditions present a great challenge … food sovereignty has become a framework shared by many" (2011: 185–86). The construction of food sovereignty landscapes is hardly linear, but inspiration continues to flow from new generations of producers, citizens and consumers, and from cumulating recognition of the violent shortcomings (literally) of the corporate food regime.

Conclusion

Politicizing the epistemic surrender to value relations in the food regime opens up the possibility of alternative values. This concluding chapter argues that the peasant process, or the food sovereignty movement, has accomplished that precisely by virtue of its experience of exchange value. The early 1990s agrarian crisis was the crucible for an international mobilization that unmasked the power relations and the illusion of "food security." Having denaturalized the neoliberal market, food sovereignty has evolved and broadened to include a wide range of practices that incorporate, recover and develop value orientations supporting positive social and ecological relations of reproduction, in contradistinction to the under-reproducing tendencies of capitalism.

In this sense, the corporate food regime spawns a contradictory conjuncture: a tension between a trajectory of abstraction in agro-industrialization (agrofood/fuel from nowhere) and place-based forms of agro-ecological farming (food from somewhere), nurtured by food sovereignty politics — a politics of modernity rooted in a global moral eco-economy. That is, the food sovereignty movement is at once a reflex of the neoliberal project, and an alternative and formative political ontology, constructing values antithetical to the self-valorization of capital at whatever cost. It crystallizes long-held claims for self-determination at this moment of absolute exhaustion of the conditions of capital accumulation, as ecological feedback signals the closing of the frontier, with land grabbing going through the motions of a final, desperate enclosure.

One might note that the food regime at large has contained (in both senses) resistances all along — the difference now is that the food regime is fully global, increasingly claustrophic and therefore generative of real utopias. This is a long-term ontological transition, with the violence of abstraction contested by new languages of multifunctionality, food sovereignty and agrarian citizenship, and new practices seeking to slow and overcome the environmental and social emergency facing the world.

Notes

1. For a more complex account of "corn" see Lind and Barham (2004), and Fitting (2011).
2. This develops the argument in McMichael (2012a).
3. Fargione et al. note that converting various landscapes to biofuels production creates a significant "biofuel carbon debt" (2008).
4. See, for example, Mike Davis' *Late Victorian Holocausts* (2001) for the "external" view.
5. O'Laughlin makes the case for women's access to land as "social security against the vagaries of wage employment" (2009: 205).
6. This baseline assumption appears on the first page of the World Bank's *World Development Report* (2008), the opening sentence of which recycles the trope of poverty as an original condition defining much of the rural South. For a critique, see McMichael (2009c).
7. This definition allows for engagement with commodity circuits (without becoming petty commodity producers), and for peasant opportunism: "whether and to what extent peasants produce commodities that routinely enter capitalist circuits, and whether and to what extent peasants perceive themselves as utilizing, rather than internalizing, commodity production to sustain their households and communities" (McMichael 2006: 411). Claiming peasants constantly adapt to changing circumstances, van der Ploeg (2009: 30) emphatically avoids "identifying or limiting the concept of survival (and for that matter, the concept of the peasantry more generally) to that of 'subsistence' (or self-provisioning of food)."
8. In fact, van der Ploeg cites comparative research in seven European countries indicating that 60 percent of professional farmers cut costs through self-provisioning (2010: 7).
9. This term is Farshad Araghi's brainchild.
10. There are various estimates of peasant food provisioning: ETC estimates "peasants" produce 70 percent of the world's food (2009); McCalla claims 90 percent of the world's food is consumed where it is produced, with rural producers consuming 60 percent of their food (1999: 3); and Public Citizen and the food sovereignty movement claim 90 percent is peasant produced: "Family farm- and peasant-based production for domestic purposes is responsible for approximately 90% of the world's food production, much of which does not even pass through markets. On the other hand, international agriculture trade represents only about 10% of the world's agricultural production" (Public Citizen, available at: www.citizen.org/documents/wtofood.pdf). See also: http://ag-transition.org/?p=1769.

11. Nevertheless, the CFS needs strengthening from "below" — as Borras et al. claim, "to date we have not witnessed … a spark of multi-level protests from the same groups of civil society organizations with scale and intensity that is anywhere close to the anti-WTO campaign…. There are scattered mobilizations, including those in the arena of the U.N. Committee on Food Security (CFS)" (2011: 43).

Glossary

Accumulation regime a techno-political structure of capital accumulation corresponding to a specific capitalist conjuncture.

Agrarian citizenship the food sovereignty practice and vision of stewarding the land, producing foodstuffs for fellow citizens, and revaluing agriculture in the modern era.

Agrarian question classical theory regarding the structural transformation of agriculture subjected to capitalism, and the political-economic fate of the peasantry.

Agreement on Agriculture a World Trade Organization protocol concerning liberalization of agricultural trade and reduction of farm protections.

Agro-ecology a science and set of place-specific practices, geared to recycling nutrients and energy on-farm, building healthy soils, promoting biodiversity and optimizing productivity of the farming system, rather than of individual species.

Agro-fuel term for biofuel created as a reminder that industrial biofuels (corn, palm oil, soy, jatropha, sugar) use crop and forest land, displacing food crops.

Agro-industrial refers to the industrialization of farming as an economic sector integrated into industrial complexes, producing foods for large processors and traders with agro-inputs (hybrid seeds, chemicals, machinery) along monocultural lines.

Agro-security mercantilism recent tendency of regional states (Middle East, East Asia) to deploy sovereign wealth funds and financial support for offshore land acquisition for non-trade food transfers back to the investing country.

Animal protein complex cross-national integration of feed sources and concentrated animal protein production (beef lots, poultry motels, aquaculture).

Aristocracy of labor privileged sections of metropolitan working class within an imperial economy exploiting offshore and local unskilled labor.

Bank for International Settlements (BIS) coordinates financial regulation and cooperation of central banks, and serves as banker of last resort.

Bioeconomy increasing use of plant-derived feedstocks to replace petroleum-based industrial commodities (plastics, fuels, etc).

Biofortification nutritional fortification of crops via genetic engineering (e.g., Golden Rice fortified with vitamin A from beta carotene biosynthesis).

Biophysical override agro-chemical substitution for ecological processes in agriculture, requiring continual compensation for soil fertility loss and pest and weed contamination.

Bretton Woods system a postwar (1944) monetary regime based in fixed exchange rates and controls on international capital movements.

City of London financial district in London city, operating as hub of international financial exchanges and settlement of trade accounts.

Climate-ready crops bioengineered crops designed to withstand the effects of global warming.

Committee on World Food Security (CFS) key organ in the FAO for monitoring and debating a broad range of food security issues, now with legitimate civil society input in addition to member state representation.

Commodity fetishism objectification of commodity relations (market exchange), and concealment of the social and ecological relations by which commodities are produced.

Contract farming commercial dealers contract with farmers, supplying seeds and other agro-inputs and market access in return for guarantees of crop delivery at harvest.

Corn Laws British legislation (1804) protecting landowner profits from imports of corn.

Counter-movement reflexive resistance or opposition to a political-economic regime.

De-agrarianization rural depopulation as farmers or farm family members migrate to urban centers.

De-commodification reducing dependence of farming on external commercial inputs by improving the cultivation of ecological wealth.

De-peasantization active process of dispossessing and displacing smallholders.

Developmentalism an ideological vision naturalizing capitalist development.

Durable food industrially processed food with high oil, fat and sugar content to extend shelf life.

Ecological capital term for the resilience/wealth of ecological processes and cycles.

Ecological public health an alternative principle to nutritionalization, advocating agro-ecological methods of food production for healthy soils and healthy (non-toxic) foods.

Episteme an approach to knowledge about the world, based on a core set of assumptions represented as common sense.

Fair trade a certified practice that includes social and environmental costs in the price of traded commodities to adequately compensate producers and their communities, and to render producer conditions and relations to consumers more transparent.

Financialization accumulation by financial dealing, in services, securities, speculation, and in mergers and acquisitions of companies, rather than production *per se*.

Flex crops the condition of interchangeability among food, feed and fuel crops in particular, according to a profit, rather than a social, calculus.

Food dependency national dependence on imported foodstuffs, sometimes at the expense of local food systems.

Food empire assemblage of institutions, firms and producers privileging corporate accumulation, concentration and centralization in the food sector.

Food regime a political-economic structuring of international trade in foodstuffs catering to class differentiated diets and projecting hegemonic power.

Food sovereignty a counter-movement to neoliberal food policies, politicizing the privatization of "food security" and projecting a vision of democratic land use and food provisioning.

Global commodity chains cross-border relationships organized by transnational firms involved in the production, assembly and circulation of world products.

Global ecology top-down rationalization of global environmental protections (biodiversity, reducing pollution, ocean health, climate-smart agriculture) for sustainable economic growth.

Global sourcing offshore accessing of products or components of products to be assembled for world markets.

Gold standard standard of gold price equivalency of all national currencies involved in the international trading system established by the British in the nineteenth century, and requiring all states to adjust their trade balance to retain relative equivalence.

Green grab enclosure of inhabited land and forests for conservation, eco-tourism, and generating carbon credits via agro-industrial feedstock plantations.

Green revolution agro-industrial technology to increase yields on well-endowed farms with bio-engineered seeds requiring agro-input packages and intensive water supply.

Hegemony ability to dominate via consent to leadership by the dominant party as a cover for coercion.

International division of labor cross-national differentiation of labor skills and inputs in commodity production for the world market.

Land grab enclosure of lands, forests, waters and habitats by colonizing or neo-colonizing powers (states, firms, financiers, and neighboring landowners).

Land sovereignty a political movement building on land rights, including securing territorial control and identity, bio-reclamation and food self-reliance.

Landed property ownership relations on the land, with different implications for forms of agricultural production depending on the social system.

Latifundia large-scale plantation or estate lands introduced by Iberian settlers in the New World, dependent on indigenous or forced labor.

Liberalization subjection of institutions, from states to markets, to deregulation of trade and economic policy, as well as privatization of public assets.

Livestock complex see animal protein complex.

Meatification intensification of meat consumption, along with concentration and centralization of livestock production, depending on narrowing of genetic base.

Metabolic rift the subordination of agriculture to monocultural commodity relations, with agro-inputs (chemical fertilizers, hybrid seeds) replacing the natural metabolism of nutrient cycles in soil and water.

Monoculture specialization in single crop of animal species production.

Multifunctionality refers to agriculture's potential multiple uses in producing food, providing employment, stabilizing farm cultures, restoring biodiversity, preserving landscapes and reducing greenhouse gas emissions.

National regulation postwar social democratic compromise whereby states adopted methods of regulating economic activity, capital

mobility and capital/labor relations.

Neoliberalism ideological policy assuming market and productive efficiency via privatization maximizes economic growth, with state shrinking and abolition of labor contracts and environmental safeguards as corollary targets.

New Agricultural Countries (NACs) Third World states that emerged as significant agro-exporters in the 1980s on – counterparts to Newly Industrializing Countries (NICs).

Non-traditional exports (NTEs) agro-exports from the global South displacing or complementing tropical exports (e.g., cassava, poultry, vegetables).

Nutrition transition the shift from plant-based diets towards consumption of animal protein, oils and fats, processed sugars and carbohydrates, and fruits and vegetables associated with industrial agriculture.

Nutritionism application of nutritional science to problems of malnutrition appearing in an industrial food system that reduces micronutrients in soils and dietary diversity.

Ontology an implicit ordering of the world and its inhabitants.

Peasant question a sub-set of the agrarian question, focused on the fate of the peasantry, often represented in terms of socio-economic differentiation (e.g., size of holding) or simply disintegration (class transformation).

Political ecology the politicization of ecological relations.

Re-peasantization reduction of commercial inputs in farming to recover "peasant practices" of self-organizing agro-ecology in the service of rebuilding ecological wealth.

Semi-proletarianization deterioration of peasant farming, involving off-farm labor or contract farming relationships.

Social reproduction the process of reproducing labor and social life, characteristically dependent on unpaid work and ecological foundations (including common lands).

Social structure of accumulation social organization of producer and consumer relationships as governed by (geo)political and technological forces.

Soy complex agro-industrialization of soy production for the livestock complex or agro-fuels, increasingly via transgenic technologies.

State building the process of exercising political dominion over territory in the name of a national project organized around economic

growth and international competition.

Structural adjustment neoliberal policies requiring states to reduce the public sector and social expenditure, wages, and farm subsidies, as well as to export to repay debt.

Supermarket revolution the expansion of the supermarket model from global North to global South and Eastern Europe, displacing local venders and local diets.

Sustainable intensification a term addressing the need to develop farming methods (whether agro-ecological or biotechnological) to conserve land and nature.

Trade Related Intellectual Property Rights (TRIPS) a World Trade Organization protocol protecting property relations of companies operating cross-nationally.

Under-reproduction erosion of human energies, nutrition or wage claims, and of ecological processes and cycles, to the point of exhaustion.

Value chains incorporation of producers into market relations organized and dominated by agribusiness as input suppliers.

Value override the subordination of production and social relations to commodification and price.

Value relations a methodological perspective emphasizing the governing commodity relations in the trends and cycles of world capitalism.

Workshop of the world manufacturing center of international trade. Britain became the first workshop as it offshored food production for its growing industrial classes.

World system concept of a world market governed by capital accumulation, structured by a single division of labor ordering a hierarchical inter-state system into core, semi-peripheral and peripheral states competing for market spoils alongside firms, and punctuated by periods of political hegemony.

World Trade Organization (WTO) a member state institution established in 1995 to govern international trade relations according to the principle of comparative advantage, where states are expected to specialize in export production in which they have a relative competitive advantage.

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