

A food regime analysis of the ‘world food crisis’

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Abstract 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. It is not about food per se, but about the relations within which food is produced, and through which capitalism is produced and reproduced. It provides, then, a fruitful perspective on the so-called ‘world food crisis’ of 2007–2008. This paper argues that the crisis stems from a long-term cycle of fossil-fuel dependence of industrial capitalism, combined with the inflation-producing effects of current biofuel offsets and financial speculation, and the concentration and centralization of agribusiness capital stemming from the enabling conjunctural policies of the corporate food regime. Rising costs, related to peak oil and fuel crop substitutes, combine with monopoly pricing by agribusiness to inflate food prices, globally transmitted under the liberalized terms of finance and trade associated with neoliberal policies.

Keywords Food regime · Value relations · Social reproduction · Agrofuels · De-peasantization

Introduction

The ‘food regime’ has always been a historical concept. As such, it has demarcated stable periodic arrangements in the

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production and circulation of food on a world scale, associated with various forms of hegemony in the world economy: British, American, and corporate/neoliberal. In its original formulation, it also posited periods of transition, anticipated by tensions between social forms embedded in each hegemonic order—tensions resolved by regime demise and rebirth along a different historical trajectory.

Subsequently, scholars (represented in this issue) have further specified and/or broadened the concept of the food regime to reinterpret its historical, social, ecological and nutritional dimensions. An additional dimension is that the food regime is an important pivot on which other capitalist relations depend, across time and space. For example, the large-scale dispossession of peasant agriculture under conditions of a ‘corporate food regime’ provides a reserve labor force for export-processing, and special economic zones across the world, as neo-liberalism deepens the phenomenon of the ‘world factory’ (McMichael 2005). My point is that 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. It is not about food per se, but about the relations within which food is produced, and through which capitalism is produced and reproduced. As such, the food regime is an optic on the multiple determinations embodied in the food commodity, refocusing from the food commodity as *object* to the commodity as *relation*, with definite geo-political, social, cultural, ecological, and nutritional relations at significant historical moments (see McMichael 2009b).

Methodologically, the food regime is generic to understanding capital’s structuring of agricultural relations across time and space as the foundation of accumulation and the processes of production and reproduction of labor forces. Substantively, my point is that the current, or

recent, ‘corporate food regime’ is a conjunctural form of the long-standing food regime through which historical capitalism has reorganized world agriculture.¹ Accordingly, the corporate food regime embodies both synchronic and diachronic processes and contradictions that, together, have produced the food provisioning crisis. From this perspective, as Braudel (1969) might say, the recent agflation is an *event*, within the political *conjuncture* of neoliberalism, within the *longue durée* of capitalism.² That is, the so-called ‘world food crisis’ constitutes a layering of spatio-temporal relations, in particular the long-term cycle of fossil-fuel dependence of industrial capitalism (‘peak oil’), combined with the inflation-producing effects of current biofuel offsets and financial speculation, and the concentration and centralization of agribusiness capital stemming from the enabling conjunctural policies associated with the corporate food regime. Rising costs, related to peak oil and fuel crop substitutes, combine with monopoly pricing by agribusiness to inflate food prices, globally transmitted under the liberalized terms of finance, trade and food security arrangements associated with neoliberal policies.³

Contours of the food crisis

Food riots cascading across the world in 2007–2008 (Italy, Uzbekistan, Morocco, Guinea, Mauritania, Senegal, West Bengal, Indonesia, Zimbabwe, Burkina Faso, Cameroon, Yemen, Jordan, Saudi Arabia, Egypt, Mexico, Argentina, Haiti...) bore witness to rising basic food prices.⁴ They are urban-based and reminiscent of the ‘IMF riots’ of the (largely) 1980s (cf. Walton and Seddon 1994). While the

¹ Here I am raising the question about the scope and content of ‘food regimes,’ through and beyond the *extant* definition: ‘a rule-governed structure of production and consumption of food on a world scale’ (Friedmann 1993, pp. 30–31). But the rules tend to be implicit (Idem.), and as such express practices embedded in social and political relations, structures of accumulation (Arrighi 1994) and institutions—depending on the historical period under examination. Through a derived Braudelian perspective we can observe relatively ‘stable pattern(s) of production and power’ (Idem.) at different removes across time and space.

² Braudel’s *longue durée* was of course geographical time. I would only modify this to refer to the time–space of capitalism, in reorganizing the global social and ecological geographies.

³ Note that transmission of world prices of commodities to domestic prices is not complete, mainly because of US dollar depreciation against a range of currencies (FAO 2008, p. 10).

⁴ Rising hunger rates, across the global South, are concentrated in Sub-Saharan Africa. As of mid-2009, roughly 14% of humanity (almost 1 billion) is considered hungry or malnourished, especially women. The majority of the hungry (65%) are in India, China, the Democratic Republic of Congo, Bangladesh, Indonesia, Pakistan and Ethiopia. While global food prices peaked in 2008, staple foods still cost more than 25% on average than in 2007.

latter concerned the general withdrawal of social protections, as the debt regime installed neo-liberal policies across the global South, food riots today are one outcome of these policies, insofar as they dismantled public capacity (specifically food reserves), and deepened food dependency across much of the global South through liberalization of trade in foodstuffs.

Rising prices signal the intensification of energy and food demand under conditions of peak oil by a class of 1 billion new consumers in 20 ‘middle-income’ countries ‘with an aggregate spending capacity, in purchasing power parity terms, to match that of the U.S.’ (Myers and Kent 2003). These countries include new admits to the OECD: South Korea, Mexico, Turkey and Poland, in addition to China and India, with 40% of this total. The symbols of their affluence are car ownership and meat consumption, although whether China’s meat consumption has affected corn (not soy) prices is in question (Ray 2008, p. 3).⁵ These commodities combine—through rising demand for agro-fuels, and feed crops—to exacerbate food price inflation as their mutual competition for land has the perverse effect of rendering each crop more lucrative, as they also displace land used for food crops. At the same time, financial speculation compounds the problem, for example, with the price of rice surging by 31% on March 27, 2008, and wheat by 29% on February 25, 2008. The *New York Times* of April 22, 2008, wrote: ‘This price boom has attracted a torrent of new investment from Wall Street, estimated to be as much as \$130 billion’; with the Commodity Futures Trading Commission noting that ‘Wall Street funds control a fifth to a half of the futures contracts for commodities like corn, wheat and live cattle on Chicago, Kansas City and New York exchanges. On the Chicago exchanges... the funds make up 47% of long-term contracts for live hog futures, 40% in wheat, 36% in live cattle and 21% in corn’ (quoted in Berthelot 2008a). A contributing factor to speculation in commodity futures has been the financial meltdown (financial deregulation), encouraging investors to shift their funds into agricultural commodities and oil, driving up the price of food and farm inputs (Shattuck 2008).⁶ An indirect result of the financial crisis has been the protective imposition of export taxes on grains and fertilizer by countries such as India, Pakistan, Ukraine, Argentina, and especially China, to secure domestic food

⁵ The *New York Times* editorialized: ‘The rise in food prices is partly because of uncontrollable forces—including rising energy costs and the growth of the middle class in China and India. This has increased demand for animal protein, which requires large amounts of grain. But the rich world is exacerbating these effects by supporting the production of biofuels’ (2008 April 9, p. A26).

⁶ There is some debate about whether and to what extent speculation has affected food prices (see, eg, Wahl 2008; Ambler-Edwards et al 2009; IATP 2008; Cha and McCrummen 2008).

supplies, thereby hiking fertilizer costs in parts of Kenya, Tanzania, Ethiopia and Somalia (IATP 2008).

Agflation is expressed in the doubling of maize prices, wheat prices rising by 50%, and rice by as much as 70%, bringing the world to a 'post-food-surplus era' (Vidal 2007). By the end of 2007 the *Economist's* food-price index reached its highest point since originating in 1845, food prices had risen 75% since 2005, and world grain reserves were at their lowest, at 54 days (Holt-Giménez and Kenfield 2008, p. 3). According to the International Food Policy Research Institute (IFPRI), agrofuels-led agflation 'would lead to decreases in food availability and calorie consumption in all regions of the world, with Sub-Saharan Africa suffering the most' (quoted in Holt-Giménez and Kenfield 2008, p. 3). Agrofuels also generated a 'knock-on' effect, where expanding U.S. corn production for ethanol, reduces oilseed acreage, such that 'oilseed prices then also increased as a result of tightening supplies and this price strength was enhanced by rising demand for meals as a cereal feed substitute and increasing demand for vegetable oils for bio-diesel production' (quoted in Greenfield 2007, p. 4).

Market signals are all very well, and indicate financial as well as productive shifts at the moment, but they need interpretation in order to understand the historical conditioning of financial and productive shifts, which in turn leads to analysis of the control and political management of the global food system. While governments, with varying resources, resort to food import liberalization, price controls and/or export controls on domestically-produced food to quell civil unrest,⁷ nevertheless spiraling food prices signal a more fundamental structural process at work. Specifying this is a task for food regime analysis.

Food regime analysis

The concept of the 'food regime' has come to be associated with particular periods of hegemony, and hegemonic transitions, in recent capitalist history (Friedmann and McMichael 1989).⁸ An alternative concept (a friendly

amendment), which this paper will address, is Farshad Araghi's notion of the food regime as a 'political regime of global value relations' (2003). Here food is intrinsic to capital's global value relations, insofar as it is central to the reproduction of wage labor, and, indeed, other forms of labor coming under capital's sway. As initial food regime analysis argued, by the mid-twentieth century, food was incorporated into consumption relations, as the industrial food system began endlessly differentiating class diets with value-added foods, 'fast foods' and 'durable foods' (Friedmann 1992).

In other words, the value relations perspective needs historical specification, especially now as food is transformed into fuel at the expense of labor provisioning. This is particularly so given the ease with which the development establishment's mantra of 'feeding the world' has given way to a rush to convert agriculture to biomass for alternative energy—a literal 'gold rush' according to Cargill's executive director (quoted in Howard and Dangel 2007). While a normative perspective on food availability continues to shape the current controversy over 'biofuels', the controversy itself is a direct result of the substitution of fuel for food. Whether a purely corporate strategy to enhance profits or a state-assisted attempt to replace fossil fuels and curb carbon emissions, this fungibility of food and fuel is indicative of a contradictory threshold for agriculture, for which a value relations perspective is well-suited.

A value relations perspective focuses on the deepening of the contradictions of industrial agriculture, and its attendant food regime. Such contradictions include tensions between class (wage/profit) foods, dispossession processes via the price form, ecological damage, and the exploitation of agriculture for alternative energy, as in the 'agrofuels project' (McMichael 2008b).⁹ The form in which these contradictions appear depends, of course, on the historical conjuncture through which they are expressed. Agrofuel commercialization converts agriculture for short-sighted alternative energy/emissions targets at a time

⁷ The *Wall Street Journal* reported that, in January, 'China said it would require producers of pork, eggs and other farm goods to seek government permission before raising prices. ...Thailand is taking similar steps on instant noodles and cooking oil, while Russia is trying to cap prices on certain types of bread, eggs and milk. Elsewhere, Mexico is trying to control the price of tortillas, and Venezuela is capping prices on staples including milk and sugar. Malaysia is setting up a National Price Council to monitor food costs and is planning stockpiles of major foods...' (Barta 2008).

⁸ From my own point of view, it has traced the construction and reconstruction of world food orders, with distinct organizing principles (empire to state to market) across the periods of British, United States, and neo-liberal political-economic hegemony (McMichael 2005).

Footnote 8 continued

Each period embodied institutional structures and rules governing the organization of food production, circulation and consumption relations, expressed in turn in a world price for food. And each period has included contradictory relations whose maturity has signaled the demise of that food regime, and an unstable process of transition. A widely-considered question is: at what point are we today?

⁹ 'Agrofuels' alerts us to the agricultural dimensions of what are conventionally termed 'biofuels', as if such fuels represented life, as opposed to competition for scarce crop land, de-forestation, and so on. Here I am distinguishing (land-displacing and forest-destroying) commercial agrofuels from local biofuels, long an integral part of agro-ecology and peasant farming, and still an important ingredient of food and energy sovereignty.

in which the market episteme governs problem framing and solving.¹⁰ A commercial disembedding of biofuels from agriculture deepens the ‘metabolic rift’,¹¹ and resorting to biofuels to mitigate rather than resolve the so-called ‘energy crisis’ and climate change becomes a corporate project, as much driven by legitimacy concerns (environmental, geopolitical) as by peak oil and global warming. The agrofuels project, thus far, converts a source of human life into an (inefficient and greenhouse gas emitting¹²) energy input at a time of rising prices. The conventional understanding of the food crisis, in (market) scarcity terms,¹³ conceals the relations and processes underlying the corporate appropriation of agriculture.

What are these processes? The transnational peasant coalition, Vía Campesina, baldly claims that ‘agribusiness TNCs want to stop family farmers and peasants to feed people in the world because their objective is to control the world food market and to convert peasant based production into industrialized production. After expropriating many small farmers and peasants they exploit consumers increasing world food prices’ (2008). Within the terms of the development narrative, rendered more virulent under neoliberalism, the elimination of peasant agriculture is understood to be inevitable.¹⁴ Under such license, agribusiness *performs* this narrative, supported by development agencies and the institutional rules governing the corporate food regime, essentially viewing peasant agriculture as a barrier to be overcome through the self-fulfilling prophesy of accumulation by dispossession (cf. Harvey 2003). Having set this process in motion, in effect confirming the ‘inefficiency’ of the small farmer in the corporate world market, the TNCs move on to capture profits through price inflation, at the expense of the waged consumer, in this scenario.

While this claim omits mention of agrofuels, and an entropic system addicted to fossil-fuel consumption, it alludes to a key value relation. Through waves of de-peasantization,¹⁵ corporate agriculture has destabilized small

farm cultures and their food provisioning capacities for a significant portion of the world’s food, manufactured slums (Davis 2006), and generated a relative surplus labor force. It is this labor reserve that fuels accumulation—providing cheap labor for webs of outsourcing across both North and South, and exerting downward pressure on (social) wages.

Arguably, this so-called race to the bottom underlies contemporary food riots. That is, the neo-liberal process of casualization of labor, and the global wage relation (McMichael 1999), is now manifest in growing public disorder as food price inflation further devalues wages, and even devastates subsistence producers, still dependent on purchasing cooking oil. Perhaps as a corollary to the observation that ‘global agriculture and food are inseparable from the reproduction of labour power’ (Araghi 2003, p. 51), this moment is one in which the contradictory relations of the corporate food regime are finally made visible, after a long process of dispossession, slum expansion, immiseration, and underconsumption (malnutrition). That is, the relationship of the food regime to the reproduction of labor power is less about producing cheap food to reduce wage costs—a definitive feature of previous food regimes—and more about combining the corporate food regime’s (subsidized) price assault on small farmers (predominantly women) with a (monopolized) price assault on vulnerable consumers of wage-foods. Araghi underlines neo-liberal capitalism’s resort to ‘forced under-consumption and under-reproduction strategies’ within ‘*slavish* conditions of employment...without visible *enslavement*’ (Araghi 2003, pp. 60–61)—which conditions are now intensified by the food price turn. The question now is how would today’s structural agflation alter the relationship between food and the reproduction of labor power? Whereas previous food regimes stabilized (lowered) food prices to reduce the value of labor and its reproduction, how should we interpret this reversal in food prices through the food regime optic? How can value relations accommodate this apparently contradictory condition? As a method of historically specifying capitalist political-economy, the food regime has some answers.

What has been termed the ‘first food regime’, under British hegemony, represented an imperial conjuncture through which metropolitan states and firms reduced the cost of labor via mass production of food staples such as grain, meat, sugar, coffee and so on, in the settler states and the European empire. Harriet Friedmann’s research on the late-nineteenth century North American family farm frontier revealed how the emergence of a world wheat price

¹⁰ For an extended discussion of the market episteme, see Da Costa and McMichael (2007).

¹¹ ‘Metabolic rift’ is Marx’s term for the separation of social production from its natural biological base, reducing nutrient recycling in and through soil and water, and extends to reconstituting energy sources as commodified inputs (cf. Foster 2000).

¹² See Fangione et al. (2008).

¹³ It is generally acknowledged that over the past century aggregate global grain yields have kept pace with, and even exceeded, population growth (cf. Evans 2009, p. 20; Kaufman 2009, p. 51).

¹⁴ This narrative is not simply about peasants having no place in a modern world, whether because they are inefficient, or cultural throwbacks, but also about socially-constructed hunger under neoliberalism, represented as ‘population overshoot.’

¹⁵ Araghi (1995) has documented cycles of peasantization and de-peasantization for the post-WWII era. Conservative estimates from

Footnote 15 continued

the FAO are that 20–30 million peasants have been displaced during the WTO regime, and in Mexico, upwards of 2 million campesinos have left the land under the destabilizing effects of NAFTA (Madeley 2000, p. 75; Carlsen 2003).

cheaped food prices, and therefore the cost of labor, in industrializing Europe (1978; see also Davis 2001; Halperin 2005). The so-called 'second food regime' stabilized American farmers following the dust-bowl experience, by reorganizing agriculture as 'petro-farming' (Walker 2005), the surpluses of which provisioned food manufacturers in the First World and Third World labor forces with subsidized food aid that lowered labor costs in strategic states on the Cold War perimeter, and sought to pacify urban labor forces (Patel 2007). As Northern manufacturing shifted offshore, agribusiness matured around the commodity specializations that underwrote the industrialization of food.

Now, whether or not the food aid program, based in public market intervention, constituted a 'food regime' proper, governed by value relations,¹⁶ this agri-food order sustained a stable world price for food, contributing to the reproduction of US hegemony. In each moment, then, the food regime represented politicized value relations through imperial geo-politics, and served to lower wage costs in regions of industrial capital accumulation. The neoliberal revolution was conditioned by the consequences of this food order insofar as wage-costs in the North were relatively high compared to those in the South. The deregulation of financial relations, in combination with the debt regime of the 1980s, spurred the relocation of capital investment in cheap land and labor in the global South—an outcome institutionalized in the WTO protocols of 1995.

The current regime is conditioned by the previous regimes, but has its own distinctive set of relationships. I characterize it as a 'corporate food regime', insofar as the organizing principle is the market, not the empire or the state, as in previous food regimes (McMichael 2005).¹⁷ States of course have still structured this regime, via an ultimately unstable combination of Northern subsidies (for food and now agrofuel production) and Southern agricultural liberalization, legitimized through WTO rules (and related free trade agreements). Through the politicization of global value relations, with liberalization and privatization privileging corporate power, states serve the market (cf. Altvater and Mahnkopf 1997). Whereas the first phase of this food regime (1980s–1990s) deployed a low world

price of traded agricultural commodities against small producers across the world, providing relatively cheap food to match declining wages in the North (a recursive effect of the growth of a global reserve of labor), the second phase (2000s) appears to be the reverse: a rising world price of food—against consumers, broadly, but especially wage-food consumers. This whiplash experience contributed to the food crisis.¹⁸

The connection between food and the reproduction of labor power, from a value relations perspective, is no longer the obvious one of provisioning labor with cheap food, as a function of reproduction and rule. Under the terms of the corporate food regime, food, in its price-form, has performed a very different kind of reproduction, namely the expanded reproduction of a labor reserve. As Vía Campesina observed: 'the massive movement of food around the world is forcing the increased movement of people' (2000). That is, the artificial cheapening of traded food has undermined peasant agricultures, eliminating barriers on the land to agribusiness and generating a labor reserve. Additional pressures on the world's peasantries include an 'income deflation' via neoliberal policies, rendering the social reproduction of the peasantry increasingly unviable. Such 'accumulation by encroachment' (Patnaik 2008) has also contributed to the stagnation in food supply over the last quarter century, and the inability to respond to agflation today with an increase in food supply—insofar as the peasantry is the 'agency through which [the adoption of land-augmenting technological progress] could be introduced' (Patnaik 2008, p. 113).

Arguably, the labor reserve itself reproduces labor power under deteriorating conditions of social reproduction, exacerbated by neo-liberal policies, which have institutionalized a public disregard for labor rights. When Marx wrote that 'independently of the limits of the actual increase of population, [the capitalist mode of production] creates, for the changing needs of the self-expansion of capital, a mass of human material always ready for exploitation' (Marx 1967, p. 632), he anticipated the recent targeted liberalization and privatization that 'establishes an accumulation of misery, corresponding with accumulation of capital' (Marx 1967, p. 645)—cycling *disposable* generations of labor through casual jobs, who experience a pronounced under-consumption with rising food prices.

Thus, while food riots cascade across the world, building on tortilla protests in Mexico over the last decade, in Egypt salary and wage-worker strike attempts, suppressed by the state, indicate that agflation is generating elemental

¹⁶ Araghi, skeptical of the notion of a food-aid *regime*, claims this was an 'aid-based food order of an exceptionally reformist period of world capitalism' (Araghi 2003, p. 51). I argue that in this, as in other regime moments, a particular geo-political configuration organized a set of production and circulation relations of food that maintained capitalism's empire (McMichael 2005). That is, the materiality and/or expression of value relations are subject to specific socio-political configurations of the wage relation in the politics of the state system.

¹⁷ Colloquially it has been called the 'neoliberal food regime' (Pechlaner and Otero 2008), but in fact this designation obscures the subsidized agricultural surpluses of the North versus the liberalized and unprotected agricultures of the South.

¹⁸ Between 1983 and 2003, the FAO recorded 408 import surges in 102 countries for rice alone, in Africa, and Central America in particular: 'it was due in part to these floods of imports that the high prices of today had such a fatal effect in some countries' (Paasch 2008, p. 5).

struggles around the question of social reproduction. The *New York Times* editorial of April 10, 2008 reported that while food accounts for only 16% of the budget of the poorest 20% of US households, Nigerians spend 73% of their budgets on food, Vietnamese 65% and Indonesians 50%. Thus, for Egypt:

what has turned the demands of individual workers into a potential mass movement officials and political analysts said, has been inflation of food prices, mostly bread and cooking oil. The rising cost of wheat, coupled with widespread corruption in the production and distribution of subsidized bread in Egypt, has prompted the government to resolve the problem. ‘People in Egypt don’t care about democracy and the transfer of power’ [Belal Fadl, a script writer and satirist in Cairo] said. ‘They don’t believe in it because they didn’t grow up with it in the first place... *Their problem is limited to their ability to survive*, and if that is threatened then they will stand up’ (Slackman 2008, p. A6, emphasis added).

The question of survival, under conditions of a permanent labor reserve and casualization of the wage relation, now magnifies the question of food’s relationship to the reproduction of labor. There are two issues here. First, the reproduction of labor, as a relationship of rule, is threatened by rising food prices and declining real wages, as evidenced in food rioting. Second, from the value relations perspective, while the cost of food is critical to labor, the cost of labor is less important to capital, given access to an army of casual labor in tenuous conditions that mitigate against pushing up wages.¹⁹

Here is where the historicization of ‘value relations’ becomes important. Arguably, through previous cycles of de-peasantization (Araghi 1995), agribusiness (and its liberalizing market structure) has so casualized the global wage relation that capital, and its deepening patterns of outsourcing, can pick and choose its labor force at will, from an expanding global labor reserve. States having (been) enlisted in the neoliberal project, governments are, as the above Egyptian example suggests, absorbing responsibility for rising food costs, and therefore for subsidizing capital.²⁰ Paradoxically, the neoliberal compact has always depended on public subsidies—whether

¹⁹ Food riots certainly address public forms of food provisioning, but not wage setting.

²⁰ This is a moment of crisis in this regime—in Friedmann’s language, implicit subsidy practices (rendered ‘implicit’ by the WTO box system), are likely to become more explicit as the global South continues to paralyze the Doha Development Round (by refusing to negotiate so long as these subsidies are in place), and as taxpayers question corporate subsidies for an increasingly destructive form of industrial agriculture/agrofuels.

through privatization (selling off public assets), and for agribusiness and energy companies, and now agrofuel infrastructures. Privatization rolled back food subsidies for labor under the debt regime, but the consequences of two decades of ‘accumulation by dispossession’ (de-peasantization and public asset stripping) are now materializing in rising food prices and rolling food riots.

State responses to the latter include food price stabilization measures through various makeshift policies (Egyptian army baking bread) as prices rise beyond their citizen-consumers’ means. It is too early to tell how this latter process will unfold, but it intensifies the *degradation of social reproduction*—beyond the deepening reliance on women’s informal labor and the general impoverishment of vulnerable classes to absorb the austerity of structural adjustment—to such an extent that urban rebellions threaten public order, such as it is. And states are compelled to internalize responsibility for the reproduction (management) of labor, on capital’s behalf—as the central legacy of neo-liberalism. A *New York Times* report noted, in January 2008:

Governments in many poor countries have tried to respond by stepping up food subsidies, imposing or tightening price controls, restricting exports and cutting food import duties...No category of food prices has risen as quickly this winter as so-called edible oils... 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.

Few crops illustrate the emerging problems in the global food chain as well as palm oil, a vital commodity in much of the world and particularly Asia. From jungles and street markets in Southeast Asia to food companies in the United States and biodiesel factories in Europe, soaring prices for the oil are drawing environmentalists, energy companies, consumers, indigenous peoples and governments into acrimonious disputes (Bradsher 2008, p. A9).

Such a multiplicity of disputed interests reveals, of course, the relative integration of the food–fuel complex, registering how value relations pervade the social order constituted by neo-liberalism.

Legacies of the corporate food regime

Within the terms of the corporate food regime, neo-liberal policies (particularly liberalization and financial deregulation) have encouraged agribusiness consolidation, including strategic alliances between agribusiness, the chemical

industry and biotechnology. Most importantly, dismantling national marketing boards, eliminating small farmer subsidies and rural credit, and liberalizing trade and investment relations have accelerated de-peasantization and legitimized a wholesale conversion of the global South into a 'world farm' (see McMichael 2005). At the same time as displacement of small farmers reduces overall food production, super-marketization has undermined local means of subsistence, converting wet market operations into contract farming for powerful foreign retailers. 'Accumulation by dispossession' has been instituted through new regulatory arrangements premised on compromising state sovereignty via shrinking and 'marketing' the state, especially in the global South (Harvey 2003). These arrangements have, in effect, constructed an integrated global market in foodstuffs, as is evident in the very contagion of agflation. To underline this point, the IMF riots may also have been contagious, but they were transmitted institutionally, through Structural Adjustment Programs (SAPs), administered nation by nation. Agflation is a neo-liberal virus,²¹ transmitted through markets organized by transnational corporations, which profit from the integration, since they manage overlapping and competing supply chains. In addition, while rice prices have increased across Southeast Asia:

East Asia hasn't, however, been affected. In China, the prices are barely up at all, and they're lower than last year. This compares to a 200% increase in the Philippines over the same period. South Korea is opening its grain reserves to keep prices down. Japan isn't suffering at all, by the sound of things. What distinguishes all three of these countries from others in Asia? 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, it was Japan that agreed to join the GATT Uruguay Round (forerunner of the WTO's Agreement on Agriculture), once the condition was established whereby members 'agree to modify GATT specifically in order to remove the ability of countries to restrict exports in times of critical shortages' (Ritchie 1988, p. 3). Given the state of paralysis of the WTO, exception to this particular rule may become the rule, as is evident in moratoria that governments have implemented on food exports. In fact, 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, p. 2). The consequences intensify agflation:

Countries like Bangladesh can't buy the rice they need now because the prices are so high. For years the World Bank and the IMF have told countries that a liberalized market would provide the most efficient system for producing and distributing food, yet today the world's poorest countries are forced into an intense bidding war against speculators and traders, who are having a field day. Hedge funds and other sources of hot money are pouring billions of dollars into commodities to escape sliding stock markets and the credit crunch, putting food stocks further out of poor people's reach. According to some estimates, investment funds now control 50–60% of the wheat traded on the world's biggest commodity markets. (GRAIN 2008a)

Integration of Southern agriculture into a privatized 'world farm' has been orchestrated by WTO protocols—from trade rules through investment vehicles (TRIMs) to intellectual property rights (TRIPs). The Agreement on Agriculture outlaws 'artificial' price supports, requiring states in the global South to deregulate their farm sectors, while Northern states have retained subsidies under the guise of the so-called 'box' system. The decoupling of subsidies from prices removed the price floor, establishing an artificial 'world price' (below production costs), deployed as a weapon of dispossession, or incorporation, against farmers everywhere through the dumping of agricultural surpluses (McMichael 2005).²² The WTO's minimum import rule (aimed at strategies for national self-sufficiency) intensifies the impact of this lowered world price on small farmers forced or unable to compete in markets where the prices for farm products fell substantially through the decade following implementation of WTO rules.

By the twenty-first century, centralization of global food stocks—60% in corporate hands, six of which control 80% of the global wheat and rice trade, while three countries produce 70% of exported corn (Angus 2008), was matched by the displacement of millions of small farmers. WTO rules, by liberalizing trade relations, restructure food circuits, by deepening food dependency in both directions. Not only are 70% of countries in the global South net food

²¹ Cf. Amin (2004).

²² The EU's CAP reform fully embraced the US model of decoupling payments to producers, as it phased out export subsidies. As Aileen Kwa noted, 'Internal prices are now much lower, especially on grains...when these grains are exported, decoupled payments are effectively the new generation of export subsidies' (2007).

importers (GRAIN 2008a, p. 2), exacerbated by food import surges against local producers (Kwa 2007), but also, in 2007, the ‘food import bill of developing countries rose by 25% as food prices rose’ (*New York Times* editorial, April 10, 2008). In addition, the restructured circuits constitute a new international division of agricultural labour, dedicated to growing ‘food from nowhere’ (Bové and Dufour 2001, p. 55), to supply affluent global markets, centered in the North. Thus Mexico—the home of maize—has been transformed by NAFTA-style liberalization into a food deficit country, importing US corn and exporting fruits and vegetables from corporate agro-industrial estates along the border (Public Citizen 2001).²³ This new international division of labor constitutes an asymmetrical form of corporate ‘food security’, based in a dialectic of Northern ‘overconsumption’ and Southern ‘underconsumption’, as the South exports high-value foods at the expense of its own local food supplies, in turn addressed through imports of cheap staple foods, which destabilize local food producers of the South. This form of ‘food security’ represents the food regime as global value relation *par excellence*.

Neo-liberal ‘food security’ means a privatized global (trade) relation on grounds of the superior efficiencies of ‘comparative advantage’, with transnational food corporations managing the global movement of food to meet (market) demand (McMichael 2003). Paul Krugman invoked this problem in a *New York Times* column, ‘Grains Gone Wild’:

Governments and private grain dealers used to hold large inventories in normal times, just in case a bad harvest created a sudden shortage. Over the years, however, these precautionary inventories were allowed to shrink, mainly because everyone came to believe that countries suffering crop failures could always import the food they needed. (2008, p. A21)

Krugman refers here to the naturalizing neo-liberal rhetoric of a privatized system of international ‘food security’, institutionalized in WTO protocols under the discourse of ‘comparative advantage,’ which sanctioned corporate advantage in a liberalized world food system. But debt burdens have often reduced the ability to import food. This has been matched by requests to governments (eg.

Malawi)²⁴ by international agencies, such as the IMF, to reduce strategic grain reserves to defray debt (Patel 2007, p. 150), or by decisions taken, for example, by the Indian government to sell grain reserves on the world market (Waldman 2002). Such measures illustrate how a corporate food regime is premised on the assertion of global value relations, where exchange-value of food trumps its use-value (as reserve for hungry citizens, particularly during episodes like the recent agflation, when the market no longer delivers imported food). As Vía Campesina notes:

National food reserves have been privatised and are now run like transnational companies. They act as speculators instead of protecting farmers and consumers. Likewise, guaranteed price mechanisms are being dismantled all over the world as part of the neo-liberal policies package, exposing farmers and consumers to extreme price volatility. (2008)

As liberalization has sacrificed food reserves for corporate ‘food security’, the broader integration of the world food market has transmitted price increases. Transmission follows supply chains moving fresh foods and food inputs across national borders downstream towards manufacturers or processors, and thence to retailers and the consumer. These supply chains are heterogeneous and network-like (Pritchard and Burch 2003), nonetheless, they are increasingly integrated, and internal to corporate retailers’ operations. The retailing revolution has transformed domestic food markets (typically the source of about 85% of food consumption). Sales by foreign subsidiaries of Northern firms, to Southern consumers, have increased dramatically. For example, ‘local sales by foreign subsidiaries of US processed food firms are five times the exports of processed food from the US to the rest of the world’ (Reardon and Timmer 2005, p. 28). And these subsidiaries—of retailing giants like Tesco (UK), Wal-Mart (US), Ahold (Netherlands), and Carrefour (France)—source their inputs globally and regionally, as part of the transmission of a world price. In Mexico Wal-Mart has 200 stores, and Patel claims 30% of supermarket food purchases are made in Patel (2007, p. 63).

Transmission of rising commodity prices is not simply a matter of integration of markets it is also about the resulting consolidation of agribusiness power.²⁵ A case in

²³ Under NAFTA, the Mexican government followed the U.S./EU policy of privileging the price-form by eliminating the floor price for, and obligation to purchase (under CONASUPO), staple crops such as maize and beans, replacing these guarantees with direct-assistance to farmers under PROCAMPO. Removal of price supports exposed *campesinos* to commodity markets controlled by the transnational grain traders, reducing real market maize prices to *campesinos* by 46.2% between 1993 and 1999 as U.S. corn shipments to Mexico grew 15-fold (Public Citizen 2001, pp. 17, 24).

²⁴ Note that Malawi subsequently reversed this situation by reinstating fertilizer subsidies, against the advice of Britain and the U.S., ‘contributing to a broader reappraisal of the crucial role of agriculture in alleviating poverty in Africa and the pivotal importance of public investments in the basics of a farm economy’ (Dugger 2007).

²⁵ Nadal remarks: ‘Today conglomerates like ADM, Cargill, Bunge, Monsanto and Syngenta have so much control over markets and infrastructure that they can manage stocks, invest in grain futures and manipulate prices on a world scale so that they can obtain huge profits. But neither the WTO nor the FAO are interested in tackling this problem’ (2008).

point is the Mexican corn market. While corn prices fell continuously following NAFTA's liberalization of corn imports from the US (50% between 1990 and 2003), tortilla prices in Mexico tripled during the 1990s (Rosset 2006, p. 57; Philpott 2007). And during 2006, tortilla prices doubled again, so that 'low-income people found themselves priced out of the tortilla market, and forced into less-nutritious alternatives like white bread and ramen noodles' (Philpott 2007). With only two food processors controlling 97% of the industrial corn flour market, and the state reducing food subsidies, tortilla riots have become part of the political landscape—spurred by a 10% reduction in wages resulting from rural migrants displaced by corn imports (Patel 2007, p. 53).

The corn trade is highly concentrated, with just nine maize importing firms accounting for 50% of imports in the early 21st century—firms such as ADM, its Mexican partner Maseca, Cargill, Arancia (Corn Products International), Pilgrims Pride, and MINSA, a public firm jointly owned by an American investment bank, while 'Cargill, ADM and Zen Noh control 81% of maize exports from the US. With the recent privatization of grain marketing in Mexico, Cargill, Arancia, Maseca and MINSA have also become the principal buyers of maize from Mexican farmers' (Rosset 2006, pp. 60–61). During the agrofuels boom, U.S. corn has been diverted to ethanol production, encouraged by considerable subsidies from the U.S. government.²⁶ While Archer Daniels Midland (ADM) has profited from ethanol, it also profits from rising tortilla prices, since it owns a 27% share of Gruma, Mexico's largest tortilla manufacturer. Further, 'ADM also owns a 40% share in a joint venture with Gruma to mill and refine wheat—meaning that when Mexican consumers are forced by high tortilla prices to switch to white bread, Gruma and ADM still win' (Philpott 2007). To underline how class diets articulate with the food/fuel complex, the 2007 'tortilla crisis' was a consequence of the diversion of white corn to cattle feed to make up in turn for the diversion of yellow feed-corn to agrofuels—with tortilla consumers forced to pay more to sustain meat consumption elsewhere (Holt-Giménez and Kenfield 2008, p. 4). Emblematic of the food crisis, Mexican food insecurity is a consequence of the construction of profitability, which in turn underlines the value relation dynamic of the corporate food regime—in privileging exchange over use-value of food.

The Mexican case illustrates ways in which the consolidation of agribusiness under the corporate food regime conditions a rather permanent world food crisis associated with the neoliberal era. It is well known that despite the agrarian crisis—triggered by the dismantling of the

Mexican national food system in the 1980s, and the dress-rehearsal for NAFTA, when Article 27 of the Mexican constitution was 'reformed' in 1989 to allow the dismantling of the *ejido* system and foreign investment in farmland, and liberalizing the maize economy was institutionalized in NAFTA in 1994—*campesinos* have stubbornly clung to their land, by resorting to off-farm work which includes remittances from family members working in the US, which sustain 'agricultural activities that have been deemed non-viable by the international market but that serve multiple purposes: family consumption, cultural survival, ecological conservation, supplemental income, etc' (Carlsen 2003).

Nevertheless, the agrarian crisis flared up in the *El Campo No Aguaga Más* ('the countryside can't take any more of this') protest in January, 2003—the largest farmer protest in Mexico City since the 1930s, spilling over into protests in Cancun at the WTO Ministerial later that year (Rosset 2006, p. 62). The point is that food crisis is endemic to this food regime—it is an expression of deteriorating peasant households and the working poor, that is those who experience dispossession from their land, casualization of work, malnutrition wages, and displacement into the informal economy under conditions where rural displacement and 'no-growth urbanization' combine to degrade the conditions of social reproduction of at least one billion of the world's population (Davis 2006). The question is what has agflation got to do with it?

Here the food riot phenomenon is critical, because it is the politicized expression of the food crisis geography outlined above (cf. Patel and McMichael 2009). While the Mexican *campesino* protest of 2003 was one of a number of forerunners of the 2007–2008 season of food riots, the spontaneous uprising across the world, largely in the global South, registered the crisis of neoliberal rule, and the inability of governments, in the aftermath of privatization of grain reserves, to counteract a food prices spike, stoked by a more general crisis of value relations.

The food regime at large

As suggested in the Introduction, the food regime concept is both historical and methodological. It enables us to interpret capitalist history in both cyclical and secular terms. As a cyclical tool, it identifies periods of relatively stable global food relations, and periods of unstable transition. The corporate food regime is, arguably, a relatively stable set of relationships privileging corporate agriculture, in the service of capital accumulation on a world scale and at the expense of smallholder agriculture, local ecologies and 'redundant' urban fringe-dwellers. Its essential institutional expression has been the WTO's Agreement on

²⁶ U.S. government subsidies for agrofuels will approach \$100 billion for 2006–2012 (Leahy 2008).

Agriculture, in turn an amalgam of the previous food-surplus aid regime, and neoliberal principles as applied to a recolonization of the global South (McMichael 2009b). At the same time, the corporate food regime is a short-term, cyclical expression of the long-term, secular food regime through which historical capitalism has developed. That is, this regime's inflated food prices conjoins the long cycle of fossil fuel dependence, understood now as 'peak oil', with the inflation-producing effects of current biofuel offsets, and the concentration and centralization of agribusiness capital stemming from the enabling policies of the corporate food regime.

Neo-liberalization and privatization combine to accelerate food circulation globally and restructure food production and retailing along corporate lines, enabling corporate profits from price fixing, in addition to the transmission of rising prices through processes of corporate integration of markets in agri-food products. The monopoly structure of the (heavily subsidized) agribusiness food system not only means producers receive low prices for their products, but also suppliers, traders, processors and retailers are in a position to raise food prices. While global food prices rose 24% in 2007, the FAO claimed they rose 52% between January and September, 2008. Meanwhile, profit increases for the top three global fertilizer companies (Potash, Mosaic and Yara) rose 139% in 2007, while, in the first quarter of 2008, Potash net income rose 186%, and Cargill subsidiary Mosaic's net income rose more than 1,200% (GRAIN 2008a, p. 3, 2008b). In 2007, profits of the top three grain traders (Cargill, ADM, Bunge) rose 103%, while those of the top three global seed/pesticide companies (Monsanto, Syngenta, and Dupont) rose 91%, and the Asian giant, Charoen Pokphand Foods (Thailand), forecast revenue growth of 273% for 2008 (GRAIN 2008a, p. 4, 2008b). Meanwhile, in 2007, the number of people below the hunger threshold rose 10%, that is, an additional 75–923 million (GRAIN 2008b). GRAIN (2008a, p. 4) remarks:

Intimately involved with the shaping of the trade rules that govern today's food system and tightly in control of markets and the ever more complex financial systems through which global trade operates, these companies are in perfect position to turn food scarcity into immense profits. People have to eat, whatever the cost.

Part of the consolidation of corporate power involves the conglomeration process, combining integration of supply chains with versatile acquisitions in related industries. Here, recombinant forms of capital associated with agriculture, particularly in the deepening of the 'food-fuel complex', express the subordination of agriculture to value relations—a key structural condition for the upturn in food

prices. Perhaps the most significant recombinant capital relation is the new link between the agrofuels project and edible oil crops and maize, the fuel–food complex that now underlies agflation. Thus, 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, p. 4). Further, with rising oil prices, 'food is worth more as petrol than it is on the table, even if the subsidies are removed' (Goodall 2008). Given Richard Manning's claim about the 'oil we eat' by consuming food produced with fossil fuels (2004), the agrofuels project reveals this truth through its impact on food prices.

Popular perceptions of the underlying cause of food inflation lay considerable blame on the biofuels revolution, with one author noting that the unsustainable agriculture and agrofuels policies of the US and the EU have led to 'huge food trade deficits of both countries', being 'at the heart of the current explosion of agricultural commodity prices' (Berthelot 2008b, p. 26). Thus, food stocks in the global North were run down by ballooning food trade deficits in addition to highly subsidized agrofuel policies, especially for US corn-ethanol, identified by international institutions as the chief culprit in the explosion of world food prices:

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. The World Bank states that: 'Prices for those crops used as bio-fuels have risen more rapidly than other food prices in the past two years, with grain prices going up by 144%, oilseeds by 157% and other food prices only up by 11%.' The U.S., as a result of its corn ethanol production, is clearly responsible for the explosion of world agricultural prices. The second largest world corn exporter, Brazil, produces ethanol from sugarcane and hence has not influenced world market prices for corn. In addition to the U.S. corn ethanol program, the U.S. biodiesel program [soybeans] also contributes to soaring prices. (Berthelot 2008b, p. 27)

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 (Holt-Giménez and Kenfield 2008, p. 3). The bonanza created by the Bush administration under the Renewable Fuels Standards legislation (2007) encouraged 'ADM, Bunge and Cargill to diversify their monopsonistic purchases to include corn for fuel as well as corn for food' (Berthelot 2008b, p. 2). With corn

prices rising over 50% in 2006, nevertheless these grain traders profit from the captive market created by ethanol targets, with corn inputs to US ethanol distilleries tripling during 2001–2006, from 18 to 55 million tons (Berthelot 2008b).

The corn market expresses the subordination of agriculture to value relations, as strategies to enhance corporate profits equate fuel with food. And corn's impact on the food system is extensive, via its significance as a feed-crop for beef, poultry, eggs, dairy and pork production, and as a component of sweeteners for candy, cereals, soft drinks and other supermarket staples (Philpott 2006). As 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 expresses a recombinant process of dietary reconstruction increasingly reflected in agribusiness conglomeration.

In addition to dietary recombination, there is the 'knock-on' effect with corn substitution for fossil fuels. The diversion of US corn to fuel feedstock affects world grain markets, of which US corn accounts for 40% of global production of corn: '(a)s demand for corn increases, more is planted, pushing out other food grains such as wheat and soybeans. With less land available for cultivation, the price of these products goes up. Because corn and soy are main inputs for processed food and livestock feed, the increase in corn prices dramatically increases food prices worldwide' (Holt-Giménez and Kenfield 2008, p. 3).

Rising prices can be interpreted as resulting from a conjunction of uncontrollable forces expressed as a 'perfect storm' of dramatic market signals. But markets signal more than physical limits, represented in discourses of 'scarcity'. They also express, or transmit, the restructuring of market power, as agribusiness centralization combines with strategic alliances to manage what is understood as the (era of) 'energy transition'. The twin crises of peak oil and peak soil legitimize an agrofuels project, supplementing Northern fuel needs with cheaper (Southern) forms of ethanol and biodiesel, but without substantially affecting the total amount of emissions (cf. Fangione et al. 2008). Agrofuels production consumes more fossil-fuels, fertilizer, pesticides and water, and degrades the soil, globally, as U.S. (and EU) biofuels mandates (President Bush mandated 36 billion gallons of agrofuels per year by 2022) cannot be met without importing from Southeast Asia and Latin America (Leahy 2008). Brazil plans to replace 10% of the world's fossil fuels by 2025 with sugar ethanol, Malaysia and Indonesia are expanding oil palm plantations to supply

20% of EU bio-diesel needs, India plans 14 m hectares of land for jatropha plantations, and Africa 400 m²⁷ (Holt-Giménez 2007; Vidal 2007, p. 3).

The agrofuels project is increasingly driven by a new complex of recombinant corporate arrangements, assisted by alternative energy mandates and subsidies in the North. New oil, auto, food, biotech industrial alliances, investing in Southern land and agro-fuel infrastructures, and developing a global agrofuels infrastructure, complement private-public partnerships. Agrofuel firms, in competition with food, seek to control their own feedstock supplies: 'most agrofuel factories are being built with simultaneous investments in crop production. The clear trend is towards the formation of fully integrated transnational agrofuel networks, bringing together everything from seeds to shipping' (GRAIN 2007, p. 12). A new alliance, between Cargill and Monsanto, incorporated as Renessen, seeks to integrate animal feed and agrofuels, where GM maize, soy and rapeseed produced for feed can produce agrofuels from the same biomass. Agribusinesses already producing potential feedstocks (soya, maize, palm oil and sugar) are financing 'a wave of new alliances and business groupings, bringing together financial companies, shippers, traders, and producers. In some cases major investment funds, such as the Carlyle Group, are even setting up their own fully integrated agribusiness/energy networks' (GRAIN 2007, p. 13). Beyond the agribusiness complex, 'BP and Conoco-Phillips have struck deals with major meat processors for the supply of animal fats to produce biodiesel. BP, along with several other companies, is also developing jatropha as a feedstock, while Chinese and South Korean corporations are busy making deals in Nigeria and Indonesia for the large-scale production of cassava' (GRAIN 2007, p. 13). In the palm-oil complex, the Indonesian palm oil trade is managed by a combination of Cargill (world's largest private company),²⁸ an ADM-Kuck-Wilmar alliance (world's largest biofuels manufacturer), and Synergy Drive, and the Malaysian government firm 'soon to become the world's biggest palm oil conglomerate' (Greenpeace 2007, p. 3). Such strategic alliances illustrate the restructuring of agribusiness in a period of so-called 'energy transition', but the more significant issue is the increasing fungibility of the food–fuel complex—a phenomenon paralleling the argument of Burch and Lawrence (this issue) that food retailing and manufacturing is increasingly restructured by private equity companies. The enabling

²⁷ Note that plans to produce jatropha in Africa via small scale producers are up against international trading standards, which privilege corporate actors, managing global commodities (patented varieties). Thus, a Southern African Development Community (SADC) biofuel feasibility study claimed small-scale projects will negatively affect standards (GRAIN 2007, 42).

²⁸ Kneen (2002).

process of financialisation portends further centralization of agribusiness as the global financial crisis unfolds.

Conclusion

As suggested, the concept of the food regime serves as a *method* of focusing the contradictory relations underlying the institutional and power structures across capitalist time, and at a particular conjuncture such as this. Arguably, the switch to agrofuels represents a confluence of a long cycle of fossil fuel dependence reaching a threshold, expressed in alternative energy policies in an age of global warming, which simultaneously raise food prices and intensify the crisis of social reproduction stemming from cycles of de-peasantization. While the long-term process of conversion of non-European land to monocrops of (tropical and temperate) food, raw materials and now biomass characterizes the broad contours of capital's food regime at large, food regime cycles condition shorter-term oscillations of stability and transition in patterns of capital accumulation. Thus far, the food regime concept has addressed stable periods, while the latter, transitional periods, have received less attention (but see Friedmann 2005; McMichael and Friedmann 2007). Arguably, we are in a period of transition, *appearing* as 'agflation', as the contradictions of neoliberalism (expressed drastically in financial meltdown) and its particular corporate food regime mature.²⁹

In focusing on the question of hegemonic succession, food regime analysis has identified stable orderings of the world around implicit (hegemonic) principles. Friedmann has argued: 'beneath the natural appearance of a working regime lie unstated assumptions that are in effect implicit rules guiding relationships, practices and outcomes' (2005, p. 234). These may include assumptions about divisions of agricultural labor, the role of trade, feeding the world, efficiency over ecology, land use patterns, animal protein consumption, and so forth. Friedmann's point is that when these assumptions are breached, what was implicit or taken for granted, may become explicit, problematic and contentious. Thus, the demise of the postwar food-aid regime in the 1970s amidst US/EU rivalry for outlets for food surpluses renamed 'certain transfers of agricultural commodities, which once went under the universally approved

rubric of *aid*, as *dumping*' (2005, p. 232)—generating a Uruguay Round to re-stabilize markets via reform of trade rules in a newly-created World Trade Organization (1995).

Arguably, the assumptions underlying this short-lived corporate food regime are now unraveling. Most notably, food price inflation makes visible the shortcomings of the market, as an efficient allocator of food supplies. Hence vulnerable citizens riot, states and investors appropriate agricultural land offshore to secure future food supplies (GRAIN 2008c), and editorials recall the importance of public food stocks, even as they may still accord primacy to the market. Public discourse acknowledges the perverse effect of agrofuels on food prices, and sometimes even the folly of a biofuels policy, especially as it concerns the Emissions Trading Scheme in Europe. Finally, the moral issue of fuel versus food, expressed in a global crisis of social reproduction, has been articulated by UN spokesperson, Jean Ziegler, in October, 2007, as a 'crime against humanity'. Attempts will be made to stabilize food supplies and to address the contradictions of agrofuels, even as they are now embedded in new corporate complexes and the short-term minds of politicians anxious to appeal to green, and/or consumer, citizens.

In underlining the politics of the world food system, as an institutionalized corporate structure of agri-food relations that feeds the rich and not the world, food regime analysis opens up the possibility of a broader historical and epistemological perspective. Consistent with an original emphasis on contradictory dynamics of the food regime, which account for its continual transformation, marked by cycles of stability/hegemony and transition/contestation, the unstable moment we inhabit is no different. The question of agrofuels raises two sets of issues: first, the role of agrofuel subsidies in revealing the capture of Northern states by agribusiness, already paralyzing multilateralism in the agricultural realm; and second, the role of agrofuels in displacing food crops and in ecological damage, both of which are focusing social movement and official³⁰ attention on the shortcomings of current 'market environmentalism'.

In this sense, the food crisis, and the associated agrofuels controversy, express the contradictory relations of the corporate food regime, and perhaps mark a turning point in the organization of the production and circulation of food on a world scale. Food and energy security are priorities, and ruling elites have been compelled to rethink how they manage national food provisioning—the irony is that while the agrofuel project extends the corporate food regime subsidy structure, it also rebounds on states via fuel–food competition and rising food prices. Interestingly, despite concern about the fuel–food competition, the recent UK

²⁹ Some (Pritchard, this Issue) would argue that the 'corporate food regime' represents a hybrid formation, an atavism of the food aid regime insofar as the Agreement on Agriculture institutionalized dumping, concealing its origins in colored boxes, and, with the collapse of Doha, moving towards a fully neo-liberal regime in which agricultural trade is fully liberalized. The 'food crisis' appears to have interrupted this process given the unilateral moves to regulate trade and outsource food production by states no longer confident that 'food security' via the world market is viable.

³⁰ See, for example, the UK's Gallagher Report (2008).

Gallagher Report on biofuels argued that 'it should be possible to establish a genuinely sustainable industry provided that robust, comprehensive and mandatory sustainability standards are developed and implemented' (Gallagher 2008, p. 9). This suggests that the Northern subsidy system (complemented with access to Southern agrofuel plantations) is a new renewable in an age of energy anxiety (which may have more potency than an agribusiness lobby for food surpluses under the corporate regime).

The contradictory relations of the food regime are nowhere more explicit than in the food sovereignty mobilization on a world scale. This includes alternative agri-food and environmental organizations in the North (from community-supported agricultures to Slow Food), and a swelling coalition of small farmers, fisherfolk, indigenous peoples and pastoralists in the South. These combined social forces call into question a development narrative that would define smallholders as historical relics, control nature, and corporatize food relations. Food sovereignty movements politicize the current trade regime, revealing the complicity of states in incorporating agriculture into the reproduction of capital, rather than sustaining it as a site of social and ecological reproduction (McMichael 2008a).

The institutional mechanisms of the corporate food regime are unlikely to provide solutions to its socio-ecological contradictions—as evidenced by the business-as-usual approach to productionist agriculture in the World Bank's 2008 *World Development Report*, matched by the silence with which the report on the unsustainability of industrial agriculture by the FAO's 2008 International Assessment of Agricultural Knowledge, Science and Technology for Development was met at the FAO's Rome food crisis summit in June, 2008 (McMichael 2008c, 2009a). Sustainable solutions will come from elsewhere, in the food sovereignty interstices and on the margins, where the food and ecological crises meet (cf. Friedmann and McNair 2008). How these solutions articulate with material pressures to shorten food chains and reduce industrial food production is yet to be seen, even though there is a plethora of experimentation. In the meantime, the food regime optic (like the food sovereignty mobilization), brings food to the political center, not simply as a relation of consumption, but also as a relation of cultural production and social reproduction. Insofar as it eschews the subordination of agriculture and food to value relations rather than human and ecological values, it offers insight into the historical roots and political resolution of the world food crisis.

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