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Supermarkets' Governance of the Agri-food Supply Chain: Is the 'Corporate-Environmental' Food Regime Evident in Australia?

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Abstract. This article investigates the extent to which the purported greening of food retailing and consumption in Australia is consistent with the development of a *corporate-environmental food regime*. Recent developments in food regime theory, particularly the concept of an emerging third food regime (the so-called 'corporate-environmental food regime'), provide a useful organizing framework for understanding recent agri-restructuring trends. We find that, while a globally based, third food regime is becoming more apparent, the attributes that relate to corporate retail-driven greening of the supply chain are less evident within Australia's domestic market than in its EU counterparts. However, there is some evidence that Australia's export market is subject to some degree of 'greening at a distance' due to private regulations imposed by supermarkets overseas. We argue that while broader agri-restructuring trends may be evident at an international level, elements of greening specific to national contexts are important for determining the trajectory of any third food regime.

Introduction

The global agri-food system has been described as a 'set of relationships that coordinates food production by harmonizing the choices made by producers, processors,

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retailers, food service outlets and consumers' (Bain et al., 2005, p. 1). This system has been undergoing a period of significant restructuring (Fold and Pritchard, 2005). That is, while food production remains situated at local and national levels, the trends to global sourcing, the introduction of new international trading rules, changing state regulation, along with the increased influence of transnational retail capital, have combined to influence the character of the global agri-food system (Burch and Lawrence, 2007, 2009). New power relationships, defined by the global trend towards retailer-driven standard setting, have also arisen. These have sought to address widespread concern about the environmental sustainability of food production systems. For instance, certification schemes such as GlobalGAP (originally used for trade with Europe and now subject to global roll-out) and Red Tractor in the UK have been established to help secure consumer confidence regarding the 'clean-and-green' credentials of the foods they buy. These shifts, along with many others, have altered food production and distribution practices, as well as social relations, on a global scale (McMichael, 2005).

Structural explanations of recent agri-food restructuring commonly highlight processes of globalization, corporate transnational trade, governance, reflexive consumption, and the role of retail capital. Attempts to understand structural changes have been approached via commodity-systems chain analysis (Gereffi, 1996), neo-regulationist perspectives (Lipietz, 1992), actor-network theory (Murdoch, 1998), cultural economy (Dixon, 2004), sociology of consumption (Warde, 1997), and from fields as broad-ranging as food ethics (Mepham, 1996) and business management (Fineman, 2000). Although yielding valuable insights, each provides only a limited opportunity to theorize combined political-economic shifts in food governance within consumption, production and retailing spheres. In contrast, 'food regimes' theory provides a platform for integrating the areas of production and consumption and, in so doing, allows for the discovery of new insights about agri-food restructuring (see Pritchard, 1998, p. 65). Food regimes theory helps to explain capitalism in the past, as well as current 'crises' of neo-liberalism (McMichael, 2009a) and debates around positive futures (Campbell, 2009).

Based on the historical trajectory of the first two regimes (described below), it is widely debated whether the world is on the verge of an emerging, globally based, third food regime (Pritchard, 1998; Buttel, 2001; Friedmann, 2005; McMichael, 2009b).

A new food regime is said to be emerging out of a combination of the concerns of 'greening' consumers, increased supermarket power, and new forms of regulation (Friedmann, 2005; McMichael, 2009b, 2009c). In Australia, as in Europe, the United States and, indeed, throughout the developed world, consumer concerns about the quality, safety and environmental sustainability of foods have contributed to increased demand for 'green' foods. Consumers have become increasingly concerned about both the environmental effects of agriculture and the social effects of the globalization of food production, leading to increased support for 'alternative' and more sustainable food production (Burch and Lawrence, 2005, 2007). This is evident in the rise of Alternative Food Networks such as farmers' markets, community supported agriculture and box schemes – where consumers seek to secure food from localized, transparent and 'green' supply networks (Morgan et al., 2006). This process of 'greening' – where increased awareness of environmental degradation has created stronger discourses of sustainability, corporate responsibility, and environmental protection for consumers (Lyons et al., 2004) – has opened up new spaces for actors, such as those in the retail sector, to shape the global agri-food system.

On the basis of their depiction as legitimate representatives of consumer interest, supermarkets have emerged as key sites of power (Marsden et al., 2000; Dixon, 2003; Hattersley and Dixon, 2010), by creating private industry responses to recent consumer greening (Burch and Lawrence, 2007). This signifies a shift from previous food manufacturer-controlled supply chains, to ones that are directed by consumer demand and corporate competition to capture the market for the 'green' products that consumers increasingly demand. According to food regimes theory, these trends are characteristic of food production and consumption on a global scale (McMichael, 1994; McMichael and Friedmann, 2007). But whether a third food regime is emerging or is already in place is an ongoing debate (McMichael, 2009b).

In this article, we present an overview of literature describing the historical events leading up to recent agri-restructuring, through the lens of food regimes theory. In particular, we critically analyse recent developments in food regimes theory and compare global trends with observations of changes occurring in Australia. These observations are based on empirical interview data from research conducted by the authors with stakeholders in key positions along the Australian agri-food chain (retailers, suppliers, regulators, and industry and consumer representatives) from 2005 to 2010. The current literature and documents relating to retailer dominance and agro-environmental governance also inform this qualitative analysis, as do public submissions to the Australian Competition and Consumer Commission inquiry into food retail which was held in 2008.

The corporate-environmental elements of the proposed third food regime identified by both Friedmann and McMichael are discussed in relation to evidence of agri-restructuring in Australia. This leads to an assessment of the existence and/or extent of a predictable, proprietor-led, green 'shape' to the current food system and hence contours of an emerging third food regime from an antipodean perspective (see McMichael, 2009c).

Food Regimes Theory

First presented in 1989 in the international journal *Sociologia Ruralis* by Harriet Friedmann and Philip McMichael, food regimes theory examines the links between international relations of food production and consumption and specific forms of accumulation under capitalism since the 1870s (Friedmann and McMichael, 1989). This approach draws from Wallerstein's world-systems theory, Marxist/Gramscian accounts of the social world, and Polanyi's economic sociology, in which the macro-social context of the world system and capitalism is enacted through the practices of capital and the politics of the nation state (Buttel, 2001). The concept of 'regime' emphasizes the global institutionaliation of political restructuring of food, by illustrating the:

> 'sustained but nonetheless temporary constellations of interests and relationships… shaped by (unequal) relations among states, capitalist enterprises, and people who migrated, bought, sold, and reshaped cultures of farming and eating within large, indeed, global constellations of power and property' (Friedmann, 2005, p. 228).

Food regimes theory represents a theoretical move away from a linear explanation of food relations and places 'food relationships at the centre of the cluster of relationships comprising historically stable formation of capitalist development' (Campbell, 2007, p. 4). It does this through examining patterns of food circulation and the role of food politics in the broader geo-politics of global power and class relations, capital accumulation, industrialization, modernization, development, imperialism, crisis, transformation and transition in global capitalism (McMichael, 2009b; see also Friedmann, 2005). Friedmann and McMichael's (1989) early work identified the parameters of two food regimes, spanning from the late 1800s to the Second World War.

The first system of production and consumption that can be identified as a 'food regime' is characterized by colonialism and nation-state formation from 1870 to the mid-1940s (Friedmann, 2005). Despite their eventual decolonization and independence, the colonies of Europe and the UK inherited patterns of international trade in which exports of tropical products, staple grains and livestock served the interests of the metropolitan economies. Colonies in the periphery became a source of raw materials and labour to drive industrialization and capital accumulation in the metropole; by extracting surplus value from colonies, colonial administrators attempted to improve surplus value, increase labour productivity and decrease the value of labour power underpinning colonial expansion (Araghi, 2003). European values of nation-state formation meant therefore that products differentiated by climate and social organization gave way eventually to products based on comparative advantage (Friedmann and McMichael, 1989; Patel, 2007). Trade between periphery and metropole was reorganized, from earlier periods of mercantilism and trade in luxuries, in order to support growing national populations and satisfy an international demand for food exports. Family farms, which previously prepared basic, seasonal, undifferentiated, products, were encouraged to expand through technological advancement and protective tariffs (Le Heron, 1993). Consumers had little influence over what was produced, and the environment was not prominent in political discourse (Burch and Lawrence, 2005). This enforcement of specialization in labour and primary agricultural products, identified by Araghi (2003, pp. 51–52) as 'the first colonialism', consequently gave rise to the dominance of industrial capital that followed in 'the second colonialism'.

This was the beginning of the agri-industrial complex, in which domestic capital formation became the priority of nation states in the period after the First World War and preceding the Second World War (Friedmann and McMichael, 1989; Pritchard, 1998). Despite wealth creation, the majority of goods produced through industrialization did not contribute directly to the subsistence needs of labour. Poverty and hunger of the working classes prevailed along with over-consumption by wealthy upper classes, leading to the 'uneven development of relations of exploitation' and limited opportunities for capital (Araghi, 2003, p. 53). The solution was to use colonies as markets for the export of capital and the import of cheap foods and industrial raw materials (Araghi, 2003). These processes and accompanying regulations persevered until the end of the Second World War, forming the basis for the second food regime (Pritchard, 1998).

From the 1950s to early 1990s, the internationalization of food aid, industrialization of agriculture, and the growth of corporate transnational capital, defined the second food regime (Friedmann and McMichael, 1989). In a context of intense competition, expansionism and continued imperialism, states began to restructure international trade and production by subsidizing exports of surplus commodities. This continued the uneven development of capitalism and resulted in a major 'crisis of accumulation' (Araghi, 2003). After the Second World War, the United States engaged in high-level state protectionism of its agricultural sector and extensive wheat 'dumping' via aid, at a time when new states (primarily in developing countries) sought cheap food. Together, these settings transformed the US into a dominant exporter; turned Japan and developing nations from self-sufficient to importing countries; and framed the emergence of agri-food companies dominated by industrial capital (Friedmann, 2005). 'Agriculture for development' had replaced the 'colonial-diasporic' ambitions of the first food regime (see McMichael, 2009b, p. 143), reflecting political contestations over the implicit rules governing the transfer of value to states (see also Friedmann, 2005).

Based upon productivist agriculture – the widespread use of large machinery, synthetic pesticides and fertilizers, and advanced plant and animal breeding (see Lawrence, 1999; Lang and Heasman, 2004) – agricultural specialization intensified. Agricultural production became dependent upon the agrochemical and mechanical inputs of large transnational firms. Similarly, farm output was increasingly finding its way to processing firms that produced standardized, branded and durable products (Friedmann and McMichael, 1989).

According to food regime theorists, by 1974 this regime had fallen in crisis due to increased protectionism by nations other than the US, a surge in world grain prices and suspension of food aid, Third World famine and aid dependency, the collapse of the Bretton Woods regulatory system, and the failure of the green revolution (Friedmann and McMichael, 1989; Le Heron, 1993; Robinson, 1997; Pritchard, 1998; Friedmann, 2005; McMichael, 2009b, 2009c). These all contributed to a crisis of political representation and legitimation of the second food regime, whereby the resulting global economic insecurity has meant a restructuring of the world food economy (McMichael, 1992; Buttel, 2001). In the context of the latest 'crisis-ridden interregnum' (Fold and Pritchard, 2005), many theorists have attempted to outline the contours of an emergent third food regime. While the exact parameters of the new regime are debated, it is argued that a new regime is emerging in response to the structural problems, as listed above, of the second food regime, to the political realities of globalization, and to increased pressures for environmental sustainability (Robinson, 1997). These issues are heightened by the recognition of recent 'multiple crises' – food, climate, fuel and finance – facing global capitalism (see McMichael, 2009a). Table 1 represents an 'ideal type', or 'analytical abstraction', of the key elements of the first, second and (emerging) third food regimes.

Dimensions of the Third Food Regime

According to Friedmann (2005, p. 232) food regimes arise out of 'contests among social movements and powerful institutions, and reflect a negotiated frame for instituting new rules'. Since the 1990s, state responses to concerns arising from early trade movements and farm lobbies in the EU and the US, and the increasing prominence of land reform issues emanating from the global South, have prompted shifts in the governance of food industries and resulted in new power relationships along agri-food chains. Issues such as gender equality, cultural and biological diversity, health and ecological effects of farming, fair trade, agricultural labour, hunger and social justice have combined with more traditional food related movements, resulting in a third food regime within which these issues are contested (Friedmann, 2005). More recently, food rioting and the strengthening of peasant social movement resistance in response to the global 'food crisis' have drawn attention to the failure of neo-liberalism to provide food security, social and economic justice in trade relations, and environmental sustainability in the face of climate change (Patel, 2007; McMichael, 2008, 2009a, 2009c).

Incorporating these tensions, the emerging third food regime is said to include: the growth of transnational corporate power, particularly that of supermarkets; new regulatory frameworks; the intensification of production; greater flexibility and specialization of the food system; global and direct sourcing; new production–consumption relationships; increased consumer demand for new health-giving (functional) foods; the rise of environmentalist critiques of industrialist agriculture; and the financialization of the food system (Le Heron, 1993; Lang and Heasman, 2004; McMichael, 2005; Burch and Lawrence, 2009). Thus, food regimes are not necessarily about food, but instead about the ways in which food is:

> '[...] intrinsic to capital's global value relations, insofar as it is central to the reproduction of wage labor, and may constitute a profitable industry in its own right. The focus remains on the movement of capital, rather than food itself, which embodies capital relations' (McMichael, 2008, p. 3).

McMichael (2008, p. 4; see also McMichael, 2005) has characterized the new regime as a corporate food regime, emerging from neo-liberal corporate agendas for the control of capital by 'accumulation through dispossession' of peasant-based agriculture and raising prices to consumers – something that has come further to the fore in regard to land acquisitions in both the developed and developing worlds by financial institutions and investment funds since the global financial crisis (Kugelman and Levenstein, 2009; Burch and Lawrence, forthcoming). The new regime is also char-

Table 1. Basic elements of food regimes.

	1st Food Regime	2nd Food Regime	Emerging 3rd Food Regime
Historical period	1870–end WWII	1950s–1990s	1990s–present
Name of regime	Colonial-diasporic.	Mercantile-industrial	Corporate-environmental
Main driver/ decision-maker	Farmers; consumers have little influence.	Processing companies.	Retailers; consumers increasingly discerning about food quality, safety and ethics.
Principle tendencies	Colonialism; rise of nation-state system.	Extension of state system to former colonies; transnational restructuring of agricultural sectors by agri-food capitals; productivist agriculture.	Contradictions between productive forces and consumption trends; disintegration of national agri-food capitals; increasing power of agribusiness and financialization of the food system.
Types of food products	Basic foodstuffs for home preparation; seasonal; unbranded and/or undifferentiated products.	Basic and processed foodstuffs for home preparation; branded and standardized products.	Continued expansion of processed foods, accompanied by a growing fresh food complex – flexible batch production of differentiated products marketed on price, variety, novelty, retail loyalty, convenience; functional foods; branded products and supermarket own brands; eco-labelling.
Environment	Of little concern.	To be utilized to maximize profit.	To be farmed in a sustainable manner; organic production; criticism of productivist agriculture and its environmental impacts; climate 'crisis'; tension between agro-industrial and agro-ecological mode of production.
State and regulation	Encouragement of family farming; protectionism; assistance for land settlement and infrastructure.	Support for productivist agriculture, food manufacturing; food aid and cheap food policies.	Encourage global trade but also self-regulation by firms (CSR); opposing trends of further protection and deregulation of agricultural sector; rise of private regulation; decoupling of farm payments from production.
Global trends	Nationally organized farming sectors producing mass commodities for export to colonies; technology transfer; imports of cash crops (tea, sugar) from colonies.	Organization of world food economy under US hegemony after 1945.	'Greening' of consumers; risk society; multipolarity of power (e.g. US, EC, Japan); shift from government to governance.

Source: Developed from Friedmann and McMichael, 1989; Le Heron, 1993; Burch and Lawrence, 2005, 2007; Friedmann, 2005; McMichael, 2005, 2009b; Campbell, 2009.

acterized by the mainstreaming of what were once considered alternatives, such as fair trade and organics (Hughes, 2007; Lyons, 2007). This has resulted in a tension defining the third food regime, whereby a 'food from nowhere' regime is in constant dialectic with a 'food from somewhere' regime. In the latter, products are branded as geographically specific to meet traceability requirements that underpin green claims (Campbell, 2009). In the former, corporate industrialization has driven the conversion of the whole of the global South into a 'world farm', undermining local variance and environmental sustainability at the same time (McMichael, 2008).

Friedmann has suggested a food regimes framework synthesising the above elements into what she terms a *corporate-environmental food regime*:

> 'A new regime seems to be emerging not from attempts to restore elements of the past, but from a range of cross-cutting alliances and issues linking food and agriculture to new issues. These include quality, safety, biological and cultural diversity, intellectual property, animal welfare, environmental pollution, energy use, and gender and racial inequalities. The most important of these fall under the broad category of environment' (Friedmann, 2005, p. 249).

Through this process of 'greening' – described as the 'change in the ideologies and practices of (largely) western social systems as they move toward the incorporation of ecological discourses, and of practices which seek to address environmental concerns' (Lyons and Lawrence, 1999, pp. 67–68) – the environmental movement has introduced new demands, altering the way that food issues are framed and how the rules of the regime are played out (Friedmann, 2005). Existing research indicates that new power relationships are being forged within agri-food supply chains between producers, retailers and consumers. While the environment may be only one site of conjuncture in emerging power relationships, recognizing the ecological failures of previous regimes has certainly led to normative questions about the sustainability of new relationships (Campbell, 2007). For example, Friedmann (2005) has argued that power relationships between importing and exporting countries have shaped, and continue to shape, constructions of social class within each food regime. Nevertheless, new culturally sanctioned ecological issues are finding their way into food regulations (see Campbell, 2007) through new – often 'hybrid' – forms of regulation that are becoming a key means of controlling these relationships (Higgins and Lawrence, 2005).

Periods of transition between regimes are viewed by Friedmann (2005, p. 229) as opportunities for debates and discussions relating to the potential reorganization of power. For decades, political economists have been arguing that the waning power of nation states is being replaced by the power of transnational corporate capital, as part of states' willingness to shift towards a neo-liberal economic model (see McMichael, 1992). Prior to the 1980s, the organization of agriculture was a major role of states, and food and environmental safety was primarily the responsibility of governments. However, globalization, free trade, and the accumulation of agri-food capital have restructured agriculture, reducing the capacity (and willingness) of the state to regulate food production. International organizations such as the WTO are faltering at the same time that new forms of global regulation replace national regulation (Llambi, 1993; Friedmann, 2005; Ansell and Vogel, 2006). As shown in Table 1, the regulation of agricultural trade and production has shifted significantly since the first food regime, revealing a global trend towards private interest regulation (McMichael and Friedmann, 2007).

The third food regime differs from the second in that a neo-liberal rollback of state regulation has led to co-ordination of the fresh food supply sector being reorganized by transnational corporations (TNCs), namely global supermarket chains (see Burch and Lawrence, 2005, 2007; Friedmann, 2005; Fulponi, 2006). The state has willingly shifted the responsibility for emerging food-related issues onto the retail sector (Marsden et al., 2000), encouraging global trade while at the same time disengaging from previous responsibilities. This is characteristic of the current era of neo-liberalism (Lawrence and Burch, 2007) in which the centrality of individualization and globalization discourses has meant that governments actively enable the private sector to govern. For example, at the nation-state level, governments in Australia and Britain have legislated that the responsibility of food safety rests with retailers, whereas at the level of meta-governance instruments such as the GATT and Europe's Common Agricultural Policy (CAP) pressure nation states (especially in the developing world) to open up their markets to global retailers (Vorley, 2007), while reinforcing the capacity of supermarkets to compete on issues of quality and diversity through voluntary standards (see Busch and Bain, 2004). These are based on audit criteria that go beyond national laws or regulations, thus walking a fine line between neo-liberalism and protectionism (see Campbell and Le Heron, 2007). As Pritchard (2005, following Higgins, 2002) acknowledges, this is not a 'hollowing out' of the state but represents, instead, changes in the technologies and rationalities of governing.

Recently, there has also been a detectable shift from what was once the domain of the 'environmental movement' to more mainstream incorporation of environmental values. This has emerged as consumers are increasingly responding to the distribution of 'bads' associated with bioscience influenced, industrial food production (Lang and Heasman, 2004) and the resultant concerns of food safety and environmental sustainability. This public resistance to the penetration of the agri-food industries by transnational capital has led the TNCs (and particularly the supermarkets) to respond to consumers' desire for 'greening' through the creation of retailer-led private standards, certification, accreditation, eco-labelling, and branding systems. These private regulatory measures toward 'greening' are emerging as a means for supermarkets around the world to seek to meet consumer demand for clean-and-green foods, and thus to increase market share and consumer loyalty (Fulponi, 2006). But what this also demonstrates is the increased power of supermarkets to 'reach back' into the food chain to control the behaviour of suppliers (Cary et al., 2004; Chang and Kristiansen, 2004; Fox and Vorley, 2004; Bain et al., 2005; Burch and Lawrence, 2005, 2007; Fulponi, 2006). This is evident in Europe (Vorley, 2007), North America (Konefal et al., 2007), India (Neilson and Pritchard, 2007, 2009), Africa (Freidberg, 2003), Australia and New Zealand (Pritchard, 1998; Campbell et al., 2006), albeit taking different forms, at different times. According to Campbell (2009, p. 311, following McMichael, 2005), this represents the tendency in all food regimes whereby 'the key dynamics of the regime have simultaneously created consent and resistance'.

Friedmann (2005) contends that *greening*, *supermarket power* and *new regulatory structures* are the key themes defining the emerging third food regime. As a relatively new theoretical addition to the study of the sociology of food (including its relationship to agriculture, globalization and capitalism), much of the existing research has focused on identifying and describing historical patterns (Le Heron, 1993). This has led to criticisms that food regimes theory is too focused on descriptive accounts of the 'symptoms' of a new regime, without paying attention to deeper processes of crisis and transition in capitalism that these shifts might represent. McMichael (2008) agrees, however, that although the current food order is conditioned by previous regimes, it also has its own characteristics, which suggest another 'reversal' of how the global food economy is functioning – it is organized by the market rather than the empire (as in the first regime) or the state (in the second regime), meaning that 'the current conjuncture is a distinctively different transition than its predecessor' (2008, p. 1). If agri-food restructuring signals a transition to another – as yet somewhat nebulous – food regime, understanding the present transitional period is crucial.

Up until recently, this theory explains patterns of change resulting from intersections of a global food system with the global capitalist economy, where profit capture is organized around internationally co-ordinated flows of production, commodities and financial capital (Pritchard, 1998). Food regimes theory links systemic changes in global food economies at a macro-scale but has, in turn, received criticism for its inability to theorize national specificities in the construction of food regulation (Moran et al., 1996). For instance, Le Heron (1993) has argued that the early formulations of food regime theory have so far failed to grasp the importance of regulatory dimensions, particularly in terms of national contexts:

> 'While much national and extra-national policy responses can be associated with earlier food regimes and, it is suspected, the present transition period, the literature is relatively light on the genesis of policy frameworks and, more particularly, the conditions of their support and eventual rejection… [A] much deeper understanding of farming, agriculture and the food system is required' (Le Heron, 1993, p. 78).

Moran et al. (1996) conclude that the experiences of Australia differ greatly from the global agricultural industrializing process described by Friedmann and McMichael in their 1989 article. This has implications for understanding the third food regime in Australia, and questions the 'global' nature of third regime governance. Rather than a single global trajectory, regional dynamics are influential (see Campbell, 2009). In addition, shifting power relations in the third food regime take multiple interconnected forms: historical class relations (such as between empire and colonies); levels of financialization and market share; regulatory power (i.e. shifting from governments to corporations, as well as national regulatory structure); and social legitimacy (negotiated between social movements, consumers and supermarkets at different points in time). Of these, this article is most interested in exploring regulatory power and how this relates to the negotiation of 'greening' by consumers, regulators and supermarkets, in line with Friedmann's core elements of a third food regime. Historical relations, particularly in terms of shifts towards neo-liberalism and Australia's relationships with UK markets are of secondary interest. Exploring financialization is beyond the scope of this article to address, as is the full history of class relations between Australia and the colonial 'core'.

In summary, investigating whether elements of a third food regime are emerging in Australia requires exploring the extent to which supermarkets are responding to consumer greening, and how this is expressed in retailer-led regulations. In doing so, and in keeping with food regimes emphasis on historical shifts in capitalism and power relations, we can theorize how nationally specific contexts of power (namely between farmers, retailers and regulators), neo-liberal national policy trajectories and green social movements have shaped Australian supermarkets' responses to the broader trends of greening within a global third food regime. As such, the following assesses the extent to which Friedmann's (2005) 'corporate-environmental' food regime can be detected in Australia.

The Third Food Regime: Evidence from Australia

While food regimes theory provides a macroanalysis of supply and demand (Robinson, 1997), recent shifts are also dependent on national policies and priorities, with subsequent effects on national agricultures (Friedmann, 2005). Although most existing research originates from Europe and the US, Worsley and Scott (2000) found that food safety, regulation (food labelling, enforcement of standards), along with ecology and equity issues, are also of great concern to Australian consumers. For example, the growth in organic consumption in Australia is estimated at roughly 20–30% per annum, with over 40% of the population reporting having consumed organic food (Lockie et al., 2006). Environmental advocacy groups and the 'green' movement more generally have been active in informing consumers of debates around genetic modification, biotechnologies, and the impacts of productivist agriculture, and it is well understood that consumers are increasingly concerned about the environmental attributes of the food they purchase (Lockie et al., 2006). Recent research in food marketing in Australia found that heightened concerns regarding health and the environment had led consumers toward the purchase and consumption of organic food (Smith and Paladino, 2010). This theme was also apparent in the current study, where a comment by a representative of the then Australian Consumer Association (now known as CHOICE) illustrates the shift to greener consumption that was also noted by many participants in the study:

> 'I would agree that consumers are interested in how the foods are produced. And that often translates into environmental aspects such as pesticides, organic production, genetic modification, and things like that… They would probably be the three that occurred to me as being some of the most important when it comes to environmental issues.'

While consumers might have high expectations of the responsibilities of retailers at the top of global supply chains, it is less clear how and to what extent these expectations influence supermarket regulatory strategies in Australia. While one retailer may claim that 'we will see a changing dynamic in the way things are done' (Smith, 2005), other supply chain actors explain that while some issues are influencing regulation, others are not:

> 'The retailers have done a fair bit to promote food safety, but similarly that's not really publicized to the consumer... I haven't really seen a lot here [suggesting retailers are not] taking that next step to starting to promote the environment' (Quality Assurance representative).

Sustainability claims are not readily apparent in Australia. Rather, supermarkets are keen to emphasize Quality Assurance (QA) attributes such as food safety and the cosmetic appearance of fresh products. This can be attributed in large part to the structure of the Australian food regulatory system. In 1996, Food Standards Australia and New Zealand (FSANZ) was developed to ensure that food produced in Australia would meet internationally recognized codes and practices, such as Hazard Analysis and Critical Control Points (HACCP) (Baines et al., 2000). This prompted the emergence of a number of national, industry-owned programmes to regulate safety and quality to meet FSANZ guidelines. These include Freshcare (the leading code of practice in horticulture), Safe Quality Foods (SQF) 2000 and Great Grains (Baines et al., 2000). Each Australian supermarket requires producers to meet the requirements of one or more of these schemes, and have only recently begun to create QA schemes of their own. QA differs from other forms of re-regulation in that quality is based around reducing food safety risks for consumers at the same time as appealing to aesthetics. These can run counter to sustainability principles, as these comments from a growers' representative suggests:

> 'So their specification says that we want apples that are 70% red or 70% green, you know, and we want them to all be 130 grams… [G]rowers have to push their tree to do it, to make it do stupid things to get this specification. So it's not a better quality apple, it's just a more marketable apple… I don't think there are many or any growers who would have the capacity to say with any confidence that "this is a sustainable farming system".'

Given such evidence common amongst participants, it seems that at present, supermarket chains in Australia are reaching back along the supply chain in terms of 'clean' (quality assurance) rather than 'green' (environmental sustainability) credentials of produce. Participants argued that recent attempts to harmonize supermarket QA programmes have been extremely problematic, and that this has created a political climate unfavourable for the implementation of retailer environmental standards. Suppliers have had to choose which supermarket QA programmes to adopt, and put time and money into achieving compliance. This has resulted in retailers' hesitance to pursue further private regulation in the short term, because:

'[T]hey're still coming to terms with the QA/Food Safety stuff, they don't want to overload people, their suppliers at the moment' (Quality Assurance representative).

'[P]eople have made their choice now about which they're part of, and they're generally pretty happy… I think it's kind of settled out to where it is now, and that's where it will probably stay. No one's really ready for a supermarket requirement for an environmental assurance' (Grower).

In Friedmann's (2005) understanding of a corporate-environmental regime, production practices are altered in order to reduce environmental degradation and thus satisfy 'green' cultural shifts. This should suggest that supermarkets would increase their public standing in demanding that the foods they purchase are from sustainable farming systems. However, as suggested by Lyons et al. (2004), there appears to be little encouragement from Australian retailers for production to be clean and green, beyond emphasizing quality through product specifications. In the US and the UK, consumers can 'vote' for sustainably-produced foods by examining labels, identifying and purchasing those products. However, at this time, Australian supermarket QA schemes are not consumer labelled – that is, do not carry 'green' symbols that would allow consumers to choose products purporting to be from sustainable production systems.

Instead, consumers concerned about sustainability are more likely to identify with, and purchase, organic foods. Studies have shown that organically produced foods are perceived to provide enhanced animal welfare and environmental protection benefits over conventionally produced foods (see Lockie et al., 2006). However, organic accreditation systems certify producers, not supermarkets; while supermarkets will label their own brand organic products as such, this does not necessarily confer a 'green' status on the supermarket brand beyond individual products. It has also been shown that many consumers purchasing organics do so for nutritional reasons, rather than green claims per se (Lockie et al., 2006), meaning that organics contributes to increasing supermarkets' legitimacy as 'health authorities' rather than as 'green' authorities (Dixon, 2007). Considering that fresh organics make up only 5% of total sales for Woolworths and 2–3% for Coles, but that both retailers have increased the range of organic products under their own labels (Lyons, 2007), we may conclude that supermarkets' move towards organics probably represents an effort to capture a niche market share for their own brand products rather than to rebrand or reconstruct their brand reputation via explicit environmental labelling. Neither major supermarket was making explicit efforts to position themselves as experts in organics and, as Lyons (2007) found, neither had an organic sourcing policy. Thus, there is growing concern that as Coles and Woolworths implement similar contractual, quality and efficiency norms on organic producers as for conventional producers, increasing concentration of the organic sector has occurred with negative consequences for small producers and the environment (Lyons, 2007).

It may be that 'green' retailer regulations are not necessary in the Australian context. Evidence from the UK indicates that supermarkets – rather than the state – have faced pressures to respond to serious health and environmental concerns (Lang and Heasman, 2004). Warde (1997) suggests, for example, that poor governmental responses to food scares in the UK have resulted in a lack of consumer confidence in state regulation, and thus a greater willingness to trust private entities such as supermarkets. At the same time, the UK green, consumer and food movements have been successful in raising consumers' awareness and advocacy, as well as policy recognition, particularly around the issues of food contamination and food miles (Lang, 1999). These have been less contentious for Australian consumers, however, considering the absence of major food scares, mad cow disease or airborne pollutants in Australia, and considering that around 97% of fresh produce sold by Australian supermarkets is Australian grown (Lyons, 2007). According to Burch and Rickson (1998), this has meant that Australian consumers assume that food is already 'clean and green'. Early quality assurance schemes and the development of (FSANZ) have also been instrumental in establishing (and perpetuating) Australia's clean-and-green image in the minds of consumers (Baines et al., 2000; Chang and Kristiansen, 2004). Supermarkets, therefore, do not yet have to construct this discourse through their private regulations in order to gain legitimacy, as this comment illustrates:

> 'I don't think it's likely in the short term. Once again, I still think we are trading and enjoying the benefits of a clean-and-green environment that the rest of the world envies in many cases… Well I don't think yet that we're seeing this as having a strong place in the food chain in Australia… [W]e are a lucky country' (Regulator).

Australian consumers do not appear to be engaging with retailers and regulators as might otherwise be predicted. Rather, evidence from Australia indicates that while supermarket power is increasing, the legitimacy of food retailers' attempts to regulate is being challenged. Concerns from both consumers and farmers about the pricing fairness of Australia's two major supermarket chains (which control over 70% of market share) led to the establishment of an inquiry by the Australian Competition and Consumer Commission into the competitiveness of retail prices for standard groceries (ACCC, 2008). Despite official findings that food retail was 'workably competitive' in Australia, this process enabled the airing of grievances from various actors along the supply chain about the 'unconscionable practices' of retailers.

Importantly, although this 'green' momentum is not evident in the practices of Australian food retailers, this is clearly the case elsewhere. For instance, Tesco, the UK's biggest supermarket chain, has various private standards to steer the conduct of their farm-produce suppliers. One of these private standards is 'Natures Choice', which requires independent auditing in relation to safety, quality and environmental standards (Tesco, 2009). Growers who do not comply are given a warning via a 'yellow card' system. Two yellow cards suspend supply contracts. Through such private mechanisms, supermarkets have the power to police actors along the supply chain. As yet, this is not evident in Australian supermarkets' relationships with suppliers.

This does not mean that Australian producers are immune from standards imposed by the large corporate retailers. As Australia is a major food exporter, its food producers are subject to the regulatory requirements both of overseas governments and of private retail corporations that operate abroad. GlobalGAP is now the main private standard applied by Europe-based retailers (Campbell, 2005). It is a business-to-business, private retail protocol through which exporters of agricultural produce into many European supermarkets must be certified in relation to Good Agricultural Practice (GAP). GlobalGAP was created to improve consumer confidence in the aftermath of the mad cow disease food scare. It requires the certification of sustainable farming practices, traceability and quality through independent, third party verification (usually at the growers own cost). Major European supermarkets, such as Tesco, Migros, and Marks and Spencer, increasingly require imported produce to be GlobalGAP certified (Campbell, 2005); there are now 113 Australian producers accredited to GlobalGAP (GlobalGAP, 2009). As such, powerful entities such as European supermarkets are able to express their regulatory power in what amounts to 'greening at a distance' (drawing upon the concept of 'action at a distance' from the governmentality literature), whereby Australian producers are involuntarily enrolled into the third food regime regardless of regulations on home turf.

Such distant corporate environmental governance fits neatly with Friedmann's observations regarding the key elements of the third food regime. Whilst it may only be a matter of time, Australian supermarkets currently do not exert this environment-focused regulatory power along the supply chain. In fact, the web sites of Australia's two major supermarkets (Coles, 2010; Woolworths, 2010) refer to their environmental responsibility in terms of the reduction of plastic bag use, recycling, and energy efficiency. No reference was made to private regulatory standards, nor was this evident from the interviews. When asked about the future of regulation and quality assurance, interviewees predicted that private environmental regulations would become part of supplier arrangements in the near future. As one reported:

> 'Supermarkets could specify, if they wish to, that as well as products meeting their specifications or their standard – their quality management system standard which would have safety built into it – they could add on to that another tier, which could be an environmental standard… And that may come, down the track.'

The apparent refrain by Australian supermarkets to regulate via specific standards for the environmental sustainability of food raises many questions about the current socio-political context of food retailing in Australia. Although the diminishing role of government food regulatory authorities in Australia has been widely noted (see Dixon, 2003), two important outcomes – in terms of who claims legitimacy for regulating Australia's 'clean-and-green' food system – can be observed.

First, co-operating with existing state regulation is an integral part of supermarket power politics (Marsden et al., 2000). Both advantages and disadvantages of this reality were revealed in the empirical research:

> 'I don't see that [supermarkets] are going any further than what they're required to do by law' (Consumer representative).

> 'Woolworths has to make regulations according to government regulations' (Supermarket employee).

Second, Australian farmers are hesitant to concede regulating rights to retailers (Smith, 2005). Evidence from Australia indicates that while supermarket power is increasing, food retailers' attempts to regulate may be challenged by growers who are currently enrolling in voluntarily schemes such as Environmental Management Systems (EMS) to differentiate their products as sustainable (Higgins et al., 2008) and perhaps to pre-empt further supermarket governance of farming practice. The importance of the sector setting their own environmental standards was a common theme, as explained by one grower:

> 'As an industry, we want to be in control of that, because no one knows about the farming systems as much as the actual industry members do… That's kind of the rationale for the industry developing its environmental assurance standards of its own … [T]he industries said "well if we're going to address it, let's come together once and minimise the potential for six thousand systems to happen again"… And the concept is, get in and do that as growers, before Woolworths or Coles adds an environment bit of their own creation into their existing requirements' (Grower).

While it may not be supermarkets driving these voluntary regulations, they remain a key strategy by which to shift power relations, thus illustrating the tendency towards private re-regulation and state deregulation depicted by the third food regime. As Fulponi (2006) suggests, supermarkets' efforts at voluntary self-regulation may signal the first steps towards global management of food systems, whereby re-regulation and deregulation go hand in hand. Certainly, given the level of concentration in Australian food retailing, growers are finding themselves under increasing pressure to comply with the will of the supermarkets, whether they find these conditions satisfactory or not (Burch and Lawrence, 2007; ACCC, 2008). As discussed previously, Quality Assurance schemes have been instrumental in establishing (and perpetuating) Australia's clean-and-green image in the minds of consumers (Chang and Kristiansen, 2004). Supermarkets, therefore, do not yet have to construct this discourse through their private regulations in order to gain legitimacy. Retailers' capacity to add to already established notions of 'green' through self-regulation is increasing, however.

This closely reflects trends towards neo-liberal governance affecting Australian agriculture more generally (see Colemana, 1995; Gray and Lawrence, 2001). The current regulatory structure of the Australian food industry can be described as a mix of public (government-led health and hygiene-related minimum standards) and private (proprietor/industry-led standards that incorporate and in many cases expand upon mandatory standards). These mechanisms of governance enable growers to take primary responsibility for producing clean-and-green foods, and create a basis upon which supermarket claims of supporting sustainability can be grounded. This hybrid public–private regulatory mix corresponds with neo-liberal regulatory frameworks found elsewhere, in which the government serves not only to regulate directly, but to 'enable' markets to regulate themselves. For instance, in both Australia and the UK, changes to the Trade Practices Acts have placed the onus on retailers to ensure that the food they sell is safe (Fulponi, 2006; Burch and Lawrence, 2007). This reflects shifts throughout the developed world in which governments remain responsible for base-line health and safety regulations, while requiring retailers to be responsible for meeting consumer demands for food (Marsden, 2000). While supermarkets in Australia are not yet involved in standard-setting to the extent experienced in the UK and elsewhere, research suggests that retailer-led environmental regulations will form a substantial element of Australian supermarkets' greening strategies in the near future (DAFF, 2000; Lockie and Higgins, 2007).

A process of re-regulation is thus occurring in line with new priorities for economic governance (Le Heron and Roche, 1999). Papadakis and Grant (2003, p. 27) suggest that, by mixing state intervention with voluntary and market-based approaches, Australia is a pioneer in 'light-handed regulation'. In this new regulatory style, governments increasingly facilitate processes that provide the basis for firms to secure profit from food production: the state neither wants to subsidise nor to direct firms (Le Heron and Roche, 1999). Rather than radically replacing state regulation with private regulation via 'audit technologies', Australia appears to be engaging in a process of re-regulation in which supermarkets and the state share the regulatory 'legitimation process'. This is consistent with Marsden et al.'s observation that 'both the retailers and the state have to constantly redefine their relationships with each other' (Marsden et al., 2000, p. 34). As Campbell and Le Heron (2007, p. 149) have argued:

> '[W]hile a blanket claim of a shift in power from food producers to food retailers may be appealing, it actually misses a range of diverse power gains within agri-food systems and dismisses their cumulative effects.'

Conclusion

Food regimes theory asserts that power relationships shape patterns of accumulation, defining each food regime and resulting in particular consequences for agricultural production (Friedmann and McMichael, 1989). The third food regime includes, among other things, supermarket-driven, private standards relating to environmental sustainability: our research suggests there is little evidence that supermarkets are using their market power to address environmental issues through meaningful regulation in Australia. From the little research available, national trends suggest that Australian supermarkets have not yet moved to cement their environmental credentials through private regulation to the extent suggested in the food regimes literature. Instead, it appears that supermarkets improve their power positions by virtue of their capacity to represent the consumer interest and to 'fit' with government desires for self-regulation. This may change in the future, however, due to the neo-liberal trajectory of self-regulation in Australia, just as it may change as the world moves into recession, or even depression and nation states begin to re-regulate. However, at the present time, Australia is reliant on a 'clean and green' image within a domestic market that has not yet been subject to the food scares experienced in Europe; there is perception that government regulation is satisfactory and that farmers should be working with governments rather than supermarkets. Consumers appear to be relatively satisfied with green claims made by industry or asserted through third-party organic certification, meaning that supermarkets' quality assurance schemes are free to focus on food safety and appearance, often with neutral or negative impacts on the environment. Supermarkets only superficially deal with environmental issues through addressing more salient and visible reputational issues such as plastic bags or packaging. Another interpretation is that Australia could well be on a trajectory towards these 'corporate environmental' characteristics but is currently experiencing a degree of regulatory lag.

In a study of the British food sector, Marsden et al. (2000) have demonstrated that supermarket involvement in food regulation has occurred in concert with state deregulation and re-regulation (see Le Heron, 1993; Marsden et al., 2000). However, as this article has shown, although this validates observations of the emergence of a third food regime – it seems to hold more relevance to retailers operating within Europe rather than Australia, whose full manifestation of a third food regime may be delayed. This suggests that the third food regime is indeed developing unevenly (Araghi, 2003). This questions the extent to which a third food regime is 'globally institutionalized', as claimed by Friedmann (2005) – our evidence suggests that while the regime may indeed be global, Australia seems to be in a state of 'transit' and thus different from other countries (such as the UK) further along the transition process.

Unlike their European counterparts, Australian consumers are not being assured that farming practices are environmentally sustainable. Yet, the fact that agricultural and land-stewardship practices in Australia can be determined by private retailers in distant markets in Europe presents evidence of partial conformity to the corporate environmental standards elsewhere within global trading circles. As such, we argue that in the absence of such measures for its own domestic markets, Australia is not yet fully immersed in the third food regime. In fact, we find a certain resonance with what Campbell (2005) termed 'ecological neo-imperialism', where former colonial relations between countries such as New Zealand and Australia still carry the cultural signifiers of the past: namely, providing food and sustenance to the 'mother country'. In this particular rendition, however, the rules are not determined by the sovereign power of the nation state, but through private standards imposed 'at a distance' by European supermarkets. This reflects Friedmann's (2005) concerns with class reproduction through food regimes, and reinforces the importance of class relations in interpreting the third food regime.

The concept of 'greening at a distance' also suggests an interesting direction for future research, and would respond to Campbell's (2007) call for food regimes theory to embrace more explicitly the 'ecological turn'. While broader agri-restructuring trends may be evident at an international level, elements of greening specific to national contexts are extremely important for determining the trajectory of any third food regime. This article has sought to illustrate how the emergence of new forms of supermarket regulation is dependent on the national context, especially at the intersection of state regulation and consumer attitudes and behaviours. By highlighting some of the specific components of this process, it appears that Australia is only partly immersed in the corporate-environmental (that is, third) food regime.

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