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The complexities of globalization: The UK as a case study of tensions within the food system and the challenge to food policy

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Abstract. This article proposes a number of arguments about the contemporary food system. Using the UK as a case study, it argues that the food system is marked by tensions and conflicts. The paper explores different strands of public policy as applied to the food system over the last two centuries. It differentiates between various uses of the term globalization and proposes that the real features and dynamics of the new world food order are complex and neither as benign nor as homogeneous as some of its proponents allow. Opposition to the new era of globalization is emerging in the food system. This is already having some impact, questioning not just the products of the food system but the nature of its production and distribution.

Key words: Food system, Food policy, Globalization

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Introduction

This paper outlines a number of key features of the UK food system to posit some core arguments about the nature of contemporary food systems.

The first is that food systems are the outcome of policy and political choices. Food is contested territory. There are conflicts of analysis and interest between diverse groups and sectors.

Secondly, it is argued that food policies, like the food system itself, are in a state of some flux at present. This is not unusual as the balance of power ebbs and flows over time. These shifts and consolidations are part of wider politico-economic processes. In the UK, like many developed economies, state food policies have tended to serve production interests, yet a series of crises have shaken this convention. Considerations of public and environmental health, as well as consumer rights, have increasingly troubled public confidence and thus commercial and political interests. Contemporary tensions over food supply and quality have echoes of conflicts in previous eras. Coherence between commerce, health, security, access, and equity has tended to be achieved more in time of war than in times of peace. Only then do governments intervene to give high priority to public interests and to co-ordinate otherwise fissiparous tendencies within the food system.

The third argument is that although the world of food, like other economic sectors, is often described as being increasingly subject to the pressures of "globalization," it would be a mistake to think of these processes as either immutable or unidirectional. Even though there are strong pressures to globalize institutions of governance, in fact, regional groupings are much more powerful politically at present, e.g., the European Union (EU), the North American Free Trade Agreement (NAFTA), the Asia-Pacific Economic Co-ordination (APEC). There is also growing awareness of, and opposition to, the current package of globalization measures. The article argues that the food system is one key area in which a tension between globalization and internationalism is being fought out.

Fourthly, although globalization is nothing new in the world of food, the current phase is characterized by a new pace and scale of change. Although political discourse is dominated by a commitment to free trade with its accompanying language of trade liberalization, comparative advantage, and "level playing fields," the realities of the food sector are characterized by large-scale concentration and centralization, both politically and economically.

Fifthly, at its apparent moment of triumph, the globalization package is also engendering a world-wide political opposition. As well as emerging politically, a set of cultural counter-trends is noticeable.

This celebrates the local over the global, fresh over processed foods, diversity over homogeneity, skills rather than de-skilling, rights rather than acceptance, etc. Although currently small, it is possible that this represents the opening of a battle for the future of the food system. A schematic representation of this tussle is proposed.

Finally, to meet these challenges, there is a need for reformers – academics, consumer/citizen groups, environmentalists, and proponents of public health – to continue to build an integrated understanding of food as a system and to refine and help organize alliances accordingly.

Globalization and the food system

The term globalization has been much analyzed and used by social scientists (e.g., Sklair, 1991; Robertson, 1992; Castells, 1996). The term is used by various disciplines and schools of thought – post-modernists, Marxists, politicians, economists, and cultural theorists – to refer to different processes as well as states of existence. Inevitably, these diverge over how accepting of, or opposed to, the forces of globalization it is possible to be. This poses issues of underlying ideology. Broadly, but not exclusively, political discourse is accepting of globalization, although opposition is emerging with surprising effectiveness. For instance, plans for a Multilateral Agreement on Investment have been halted (Clarke and Barlow, 1997), and the case that high standards of public (or environmental) health protection should not be sacrificed on the altar of international competitiveness is gaining ground (Labonte, 1998; Lang, 1998a).

Although more firmly rooted in neo-liberal economics, where the phrase can almost be taken as a code for the removal of barriers to trade, exploration of the meaning of globalization has been equally intellectually fertile in social and cultural theory (Robertson, 1992; Hirst and Thompson, 1996). Social theorists have acknowledged that as barriers to trade between nations come down, so the old disciplines and political realities of international relations are re-structured (Sklair, 1991). A lively debate about whether this process has weakened the capacity of national governments to act in the public interest (particularly on the environment), as opposed to the corporate or state interest, has ensued (Featherstone, 1990; Lang and Hines, 1993; Hirst and Thompson, 1996; Mander and Goldsmith, 1997; Karliner, 1997).

Globalization is a misnomer in this respect, for there is pressure to transcend and weaken national democratic networks and to replace them with new transnational ones, whether regional, continental or genuinely global. In food policy discourse, a tension is emerging between globalization, which tends to be associated with the power elite, and internationalism, which tends to be associated with "views from below."

In food, it could be argued that there is nothing new about globalization. Trade has spread foods, processes, and diets around the world (Tansey and Worsley, 1995). Seismic historical processes such as the Columbian "exchange" and the annexation of colonial empires were periods of considerable change in which seeds, diets, recipes, and products rapidly percolated the world (Hobhouse, 1992; Salaman, 1949; Mintz, 1985).

The history of humanity since settled agriculture began is one of exchange (Smith, 1995). In ancient Greece, and particularly classical Athens, social relations and the empire can be traced through the food eaten and by whom it was eaten (Dalby, 1996). Arabs brought oranges to the Mediterranean (Bianchini et al., 1988). Salt, too, has been a prized traded commodity (Adshead, 1992). Coffee, cocoa, sugar, tea, spices, potatoes, tomatoes, all have traveled far from their origins, their so-called Vavilov centers. In the last half millennium, they moved from being plants to become commodities in markets (Rowling, 1987; Winson, 1993), and in the last century in the case of some, notably wheat, have been subject to market concentration almost ever since (Morgan, 1979). Such studies have shown that taste and cultural predilections for certain foods are made, not given. The tomato may have a treasured place within Italian cuisine but it only arrived a few centuries ago with the Columbian exchange, the "discovery" of the so-called New World by the Old. There have, in other words, been many previous phases of global transfer of foods, habits, and techniques.

What is new about the new phase of globalization is the pace and scale of change and the systematic manner in which it is executed and organized. Companies are today able to organize the planting and distribution of crops more holistically and speedily than before (Thrupp, 1995; Kneen, 1995), even altering nature itself (Goodman and Redclift, 1991). While mainstream social science has begun to remark on globalization only in recent years, studies of the food economy, particularly those of hunger, agribusiness, and science and technology in the labor process, had pointed to this process emerging decades ago (e.g., George, 1976) often in the guise of industrialization of agriculture (Clunies-Ross and Hildyard, 1994). Studies of the international lettuce and strawberry markets are cases in point (Feder, 1977; Friedland et al., 1981). Less attention was given by scholars to the restructuring of relations off the land, yet it is in the

distribution and retail sector that the changes have been most extensive and powerful.

Another feature of the new era of globalization is the systematic molding of taste. The speed with which burger culture, for example, is being introduced into Asia in the 1990s is matched by the extent of its impact (Ritzer, 1998; Lang, 1997b). Centuries-old diets are being altered comparatively speedily, resulting in changing health profiles. So-called "Western" degenerative diseases (coronary heart disease, some cancers) are emerging in more significant numbers in cultures that lack the medical facilities to treat them (WCRF, 1997; Shetty and Gopalan, 1998).

Barnet and Cavanagh (1994), in particular, have strongly argued that a cultural dimension – the systematic molding of taste by giant corporations – is now a central feature of the new era of food globalization. Whilst it should be acknowledged that the cultural flow is two ways – the West is now heavily influenced by immigrant foods – the more powerful flow is in the other direction. As processed food styles are exported from North to South, consumers in the developing world are encouraged to think of food and drink as coming not from farmers or the earth but from processed food corporations. After a comparatively short exposure to Western brands, 65% of people in China now recognize the brand name of Coca-Cola; 42% recognize Pepsi, and 40% recognize Nestlé (Gallup, 1995). The global reach of large food corporations is now a major "driver" behind dietary change. Brand marketing is facilitated by revolutions in distribution and production within and between continents. The arrival of this so-called post-Fordist economy, marked by "flexible specialization" systems of production and intensive use of information technology, renders the distributor rather than the consumer sovereign (Raven and Lang, 1995; Hughes, 1994). While much of the free trade rhetoric concerns the sovereignty of the consumer, it has to be acknowledged that marketing renders this, at times, an unequal exchange (Gabriel and Lang, 1995).

In most markets, even before global trade liberalization, concentration was marked; after it, the corporate reach accelerated. In many national markets, a handful of manufacturers now dominate. A struggle for market share becomes a driver of innovation. The tendency for technology-driven modern food systems to yield increases in labor and land productivity simultaneously creates a tendency to over-produce and to "re-fashion nature" in a global assembly line; the biotechnology revolution is an extension of this process (Goodman and Redclift, 1991). Off the land, the retail revolution runs in parallel. There has been what Raven and Lang (1995) have called the transition from market economics to hypermarket economics. This is explored further below, but for the present it should be noted that through contracts and specifications to suppliers and through the tight managerial control that use of information technology allows, the retailer can *de facto* control and monitor the entire supply chain (Trienekens and Zuurbier, 1996).

Throughout this transition, and despite its obvious complexity, public policy has been dominated by a trade liberalization model of economics, which marginalizes other perspectives (Lang and Hines, 1993). Until recently, the social, cultural, and health features of this changing food system have not received the emphasis they deserve from decision-makers (Fine et al., 1996). But pressure to do so now stems from the evidence about widening world inequality and fragmentation of social fabrics (UNICEF, 1998; UNDP, 1998). Far from being a cause for celebration, the new globalization of the food system raises considerable tensions and heralds an unprecedented scale of centralization, intensification, and concentration with direct effects on developing and marginalized economies (Watkins, 1996; Watkins, 1997). The "down-side" of current globalization also threatens the capacity to protect the environment and public health by centralizing and refining the use of scientific standards in a manner that reduces local and national democratic accountability (Lang, 1992).

Before focusing upon the UK's food system, as a case study of a system evolving within different phases of globalization, we may summarize the debate and struggle about globalization as applied to the food system, as revolving around at least five core processes:

- *economic* processes of trade liberalization, tariff reduction, standards harmonization, and de/self-regulation that are accelerating a new international division of (food) labor (Watkins, 1991; Lang, 1996; McMichael, 1998), new delineations of what a market is (Sklair, 1991; Raven and Lang, 1995; Goodman and Watts, 1997) and new scientific controls over food processes (Goodman and Redclift, 1991).
- *ideological* processes in which political and corporate leaders sell a view that there is no alternative to the politico-economic package of reform; the argument is that citizens, companies, sectors, and whole societies have no option but to accommodate the new international division of labor. Thus farmers are encouraged to expand or get out; retailers to increase power through the food chain by placing contracts as easily with distant as local suppliers; consumers to relish the increased choice and price competitiveness.
- *political* processes whereby new institutions

are being created such as the World Trade Organization with immense power over food commerce and new roles given to existing institutions such as the United Nations' Codex Alimentarius Commission on food standards (Avery et al., 1993). There is an accompanying process of heightened regionalization, which is part response to globalization and part furtherance of it. Key trade groupings include the Asia Pacific Economic Conference (APEC), the European Union, Mercosur, and the North American Free Trade Agreement. These are at different stages of development.

- *cultural* processes of dietary transfer from the West to the South (Popkin, 1994; Drewnoski and Popkin, 1997; Lang, 1997b) in which branded, processed foods and commodities from overproducing regions of the globe penetrate hitherto more regionally self-reliant markets. This is more than the ubiquitous burgerization; it represents a final erosion – for good or ill – of slowly evolved culinary practices, based upon local or regional provision. Women's role in particular is altered.
- *internationalist and oppositional* processes in which new forces emerge both against globalizing tendencies in general (e.g., Mander and Goldsmith, 1996; Raghavan, 1990; Martin and Schumann, 1997) and the food dimension in particular (Lang, 1992; Magdoff et al., 1998). Specific food campaigns such as that conducted by consumer and small farmers against biotechnology particularly Monsanto (e.g., *Ecologist*, 1998) and in favor of local markets (e.g., Festing, 1987; Henderson, 1998) are finding new resonance world-wide.

Different phases of globalization: Public policy and the British food system

The global food era began in the modern sense with the consolidation of the British Empire in the 19th century. In 1846, the British made an historic decision to operate a global food market. After a titanic struggle between manufacturing and landed capitalist interests, tariffs, which favored home-production, were removed from cereals with the Repeal of the Corn Laws. The Corn Laws were tariffs that were imposed on imported cereals; home-grown corn was protected and cheaper produce from central Europe and particularly North America was kept out. The triumph of the trader and industrial interests over landed capital meant that far-off lands were allowed to feed their domestic manufacturing classes. The new mercantilist "bargain" in food policy was that Britain made goods, traded through the Empire, and in return was fed by the Empire and other sources, notably North American wheat-growers. This was the so-called cheap food policy.

Later in the century, new technologies such as freezing and chilling allowed meat from abroad to be transported by ship. New Zealand and Australian sheepmeat reared on plentiful cheap land with benign climates could be marketed for industrial workers more cheaply than sheep grown on nearby hills. With competition like this in the 19th century, British agriculture slipped into near-terminal decline from which it was only rescued by World War I. In that war, as state responsibility to feed its people was enshrined, a new Ministry of Food to pursue that goal was set up (Beveridge, 1928). No sooner was the war over than policy returned to "business as usual." Agriculture was allowed to decline again until the threat of blockades by submarines in World War II reinforced a different lesson: security of supply is best achieved by growing food at home. The policy principle is that the state has an obligation to its subjects to ensure a reasonable supply of affordable food. A trade-off or "bargain" was struck in public policy: support for markets and commerce while ensuring security of supply to the population as a whole and the provision of a baseline of welfare to minimize starvation or malnutrition. In the 1940s, a concerted structure of policy and financial support was put into place to support domestic production (Hammond, 1951). A barrage of influential reports argued that policy could not be allowed to remain as it was (e.g., Boyd Orr, 1936; Le Gros et al., 1939; Boyd Orr, 1943).

By the start of World War II in 1939, the UK produced only 40% of its food. Threats to trade routes necessitated urgent remedial action; this included a plough-up policy, encouraging everyone to grow food in gardens, setting up a Land Army (female) to labor on farms, designing a food rationing system, and providing a host of other supports for agriculture. The policy change was effective. Within four years, in dire circumstances, the UK was producing 70% of its food needs (Minns, 1980). Such experience shows that state intervention, which was accepted by private food capital because of the war, can be enormously effective. After the war, as with the previous one, the private sector expended considerable effort in unraveling such regulation as speedily as possible but the welfare commitment remained and was strengthened.

The war period taught social planners a clear lesson (Fenelon, 1952; Hammond, 1951). There is nothing fixed about the food system. It is made; policies frame it (OECD, 1981). These policies are political constructs to make sense of perceived and contestable facts. Richard Titmuss, later Professor of Social Administration at the London School of Economics,

and others also argued that plans, which are imposed from above without thinking about the needs of people and their domestic circumstances, are doomed to idiocy (Titmuss, 1958, also see Oakley, 1996). "In the sphere of food policy," wrote Titmuss of the war in terms others later echoed, "it was no longer thought appropriate for members of the Armed Forces to receive better diets than the civilian population. The scales of rationing had to be kept in balance between civilian and non-civilian" (Titmuss, 1958: 83). Even though World War II is rightly frequently cited as the period when the UK had its clearest, most just, and integrated food system (e.g., Walston, 1976), the popular backing for the war effort was a key driver of its success.

By the late 1970s, the trade-welfare bargain was under heavy ideological fire. The New Right argued that farming should not be supported any more than the indigent urban poor (Body, 1982). These neo-liberal views, once marginal to the Keynesian hegemony, took center stage both sides of the Atlantic and ultimately throughout the West (Cockett, 1994). Welfare was deemed a burden on the state and efficiency rather than the mark of a civilized society. In Britain, this attack on the principle of state responsibility and welfare was symbolized by the removal of nutrition standards for school meals. In place since World War II, they were abolished by the Thatcher Government in an early piece of legislation, the Education Act 1980. This bulwark against child malnutrition, the first act of modern welfarism dating from 1906, was removed the same year as the Black Report on inequalities in health, done by a government advisory committee, recommended an extension of school meals. The report was squashed and only disseminated later (Townsend and Davidson, 1982).

Conflict in the UK food policy: From Colonialism to productionism to consumerism?

The UK food policy put in place after the repeal of the Corn Laws in 1846 – described earlier – was radically revised a century later in the aftermath of World War II. A period of reform ensued, both in policies and institutions. Even before that war, influential voices were arguing that to have the country's fertile fields in ruin was potentially hazardous for social morale and national nutrition – what we would now call food security (Astor and Rowntree, 1938; Le Gros Clarke and Titmuss, 1939). The war-time experience reinforced the validity of this position. In the immediate aftermath of the war, the Atlee Government, elected by a landslide, reviewed food policy. With the 1947 Agriculture Act, it institutionalized a policy that, on the one hand developed national food marketing schemes from the 1930s, together with a system of price support, to rebuild national agriculture, and, on the other hand, instituted a highly popular series of welfare reforms in social policy. The latter ranged from the setting up of a national health service and revising national insurance to consolidating the war-time system of nutritionally-monitored school meals.

Progressive though these policies were designed to be, it is hard today to grasp quite how radical this reversal from the 19th policy was. Nor did its proponents foresee some of the unintended consequences of their policies today. In particular, the focus on agricultural production gave the green light to the agro-food complex to unleash a formidable array of new techniques, both on and off the land, the results of which dominate consumer concerns about quality and health today. This strand of food policy has been called "productionism" (Lang, 1997a) but is more familiar to North American scholars as the production paradigm. With the Empire weakened and becoming a looser Commonwealth, national support for UK farmers was probably inevitable, but productionism went one step further. It institutionalized a drive for efficiency, opened the floodgates to "scientific farming" and the demise of "dog and stick" farming. Dairy herds and land-holdings became larger. Labor on the land declined. Support services introduced fertilizers and pesticides to increase crop yields. These changes were immense and borrowed extensively from technologies introduced in the USA.

Other features of post-war food policy were more constant. In particular, the close relationship forged in the war between food capital, notably food manufacturers, and government was to be continued. This policy enabled the scientific revolution to be more systematically applied, both on and off the farm. Intensification emerged as the theme, how to get more from capital, labor, animals.

The support for production has been enormously effective. Between 1950–90, national food expenditure dropped from around a third of domestic expenditure to a tenth. Half a century on, the question now is whether food is almost too cheap. The food system now squeezes costs to such an extent that the full health and environmental costs are being externalized to an unprecedented degree, and not reflected in prices at the checkout. By the 1980s, public awareness of a catalogue of ills was considerable. Media coverage was intense. Issues included: food poisoning (salmonella, campylobacter, and E. coli – all of which have risen dramatically over the last twenty years); residues from pesticides in food and water; fertilizer residues in water; adulteration of foods – both legal (e.g., additives) and illegal (e.g., adding excess water –

one 1980s trade advertisement asked "why sell weight when you can sell water?") (London Food Commission, 1988). No wonder a crisis over food quality and adulteration gripped late 20th century Britain as it had in the mid 19th (Paulus, 1974).

The counter-argument from industrial sources was that food had never been cheaper, more plentiful, in a wider range, with more laborsaving potential for the ubiquitous "busy housewife," and of better value. The ultimate proof, it argued, was that the British, once notoriously poor eaters, were living longer and could sample from an unparalleled choice of foods on the supermarket shelf. Throughout the 1980s, debate about productionism, particularly its impact on public health, intensified, with two policy concerns dominating attention: environmental and public health. Industry and the Thatcher Government both argued that critics were either politically motivated or scientifically illiterate or ill-informed. In particular, there was heated exchange over the food-relatedness of the degenerative diseases of coronary heart disease and certain cancers. Cannon (1987) and Mills (1992) document the tussle between proponents and opponents over these aspects of health. Shoard (1980) and Harvey (1997) have documented a not dissimilar tension over the impact of productionism on the countryside.

Efficient production and the costs to public and environmental health

The issue at stake, in public policy terms, was the problem of externalities. Efficient production had cheapened food at the point of sale, but costs in other budgetary "accounts" were rising. In particular, the cost of diet-related diseases were immense. Coronary heart disease, significantly affected by diet, costs the UK economy £10 billion a year in direct costs as well as intangibles such as lost working days (British Heart Foundation, 1998). In its 1996 report, *Burdens of Disease* (NHS Executive, 1996), the UK Department of Health calculated that: heart disease drugs cost the National Health Service £500m a year; bowel cancers cost £1.1bn; diseases of the circulatory system cost 12.1% of total health and social services budget.

Food poisoning is another illustration of externalized costs. Figures, whether reported or estimated, are rising inexorably. Roberts (1995) has estimated these costs as £1bn per year. The Communicable Diseases Surveillance Center, equivalent to the US Center for Disease Control in Atlanta, estimates considerable and mounting costs to the National Health Service (CDSC, 1995). According to a UK scrutiny body, the Parliamentary Office of Science and Technology (1997), restaurants account for by far the greatest number of outbreaks of food-borne poisoning incidents, over four times more than shops and retail outlets.

There is an interesting policy implication if blame is laid at the consumer's door, an argument often promoted by food industry interests understandably wishing to divest themselves of responsibility. What happens when it can be proven that the consumer was *not* responsible? In the USA, where this consumer culture is furthest advanced, the annual cost of food-borne illness from pathogens has been estimated as between $7.7bn–$8.4bn. Each case of *salmonellosis*, for instance, is $500–$1350, with a case of botulism working out at $322,000. Legal costs account for a heavy proportion of such costs (El-Gazzar and Marth, 1992).

Environmental externalities are also considerable. As a result of privatization of previously public bodies like water companies, new calculations of externalities are being made. On pesticides, for instance, the simplest calculation is the cost of clean-up. The water industries regulator, Ofwat, has calculated that the capital costs of installing activated carbon to reduce residues to permitted levels is £1 billion (Ofwat, 1997). The combined capital and running costs of reducing pesticide residues is currently being spread at an annual £100m.

The distance food travels within the food system before it is consumed, the so-called food miles issue, also illustrates externalities. According to the UK Department of Transport, despite approximately the same tonnage of food being consumed annually, over the last decade and a half the distance this tonnage is transported has gone up by a third (Paxton, 1994). Not only is the same amount of food being transported further, but British consumers are traveling further to get it. They use – almost have to use – cars to do so. The distance traveled for shopping in general rose by 60% between 1975/6 and 1989/91, but the travel taken by car more than doubled (Raven and Lang, 1995). Far from hypermarkets being convenient, they in fact generate more, not less, trips for food shopping. According to Whitelegg (1994), the mileage of trips to town center food shops are less than half those taken to edge-of-town stores.

Another environmental externality is the so-called "Ghost Acres" phenomenon. As Angela Paxton's pioneering work has shown, the UK's supposedly efficient food system in fact sucks in the food products of other people's land and seas; soya, citrus, fishmeal, maize, manioc are grown for Europe in huge aggregate quantities. One study has estimated the net import of hidden land into the UK as 4.1 million hectares in 1995 (MaClaren et al., 1998). Much of the produce is fed to animals, the fuel of intensive husbandry. "Cheap" meat is not cheap. Already questioned because of meat's

persistent role in food poisoning, the ghost acres argument also questions it in relation to sustainable development and global equity (Durning, 1992).

The emergence of opposition

In the course of this debate about public and environmental externalities, a new force emerged in the food system. This was what has been called a food movement, a loose collection of public health professionals, specialists, and a new generation of Non Governmental Organizations (Lang, 1997c). This became an extraordinarily effective lobby. Systematically, through crises in 1982–97, it promoted its arguments and achieved legislative and institutional reform on three key "fronts": the new food adulteration, the public health, and the reform of state institutions. On the first, the crisis over food adulteration and food poisoning came to its head in 1988–89 with food poisoning and the Conservative Government of Mrs. Thatcher, although strongly committed to de-regulation as part of its globalizing vision, was forced to introduce a Food Safety Act in 1990. This act set out to modernize regulations and procedures, but often relied on self-regulation introduced in consultation with industry. In theory, the new Act placed tough new demands on industry to prevent food ill-health, but food poisoning's continued rise suggests it has not worked – whether due to poor conception or enforcement or both is unclear.

When studies showed that between one and two thirds of poultry on sale was contaminated (Parliamentary Office of Science and Technology, 1997; London Food Commission, 1988), it was not surprising that the public quickly lost trust in the state system of regulation and protection. Which label declared such contamination levels? Why have regulation if it could turn a blind eye to this illegality? Alongside this microbiological concern was the rising toll of Bovine Spongiform Encephalopathy (BSE). First discovered in 1986, by the early 1990s it had essentially put the UK meat trade into quarantine. Regulatory liberalization was not an option.

If food safety became the high profile issue for the public, for medical science, the bigger issue was the toll of degenerative diseases, heart disease, cancers, and obesity. These had so troubled the Department of Health that a White Paper *The Health of the Nation* was produced that accepted the diet-health connection. This had been previously bitterly denied and successfully kept out of public policy by lobbying from the fats, sugar, and salt elements of the food industry (Cannon, 1987). By the early 1990s, politicians could see that the costs of ill health were rising and a burden on the welfare state, which the government was pledged to reduce. The White Paper even pledged to reduce "variations in health," a code for class inequalities (H. M. Government, 1992). Problems like poor access to food – food poverty – denied since the suppression of the Black Report, were once more acknowledged (LIPT, 1996) even if not addressed (Leather, 1996).

Public coverage of food issues was now considerable. The new food movement argued that state institutions were in urgent need for reform and that the Ministry of Agriculture, Fisheries and Food had lost public confidence due to excessive serving of commercial interests. This convinced the then Labor opposition by 1989 to promise a new Food Standards Agency. When Labor returned to office in May, 1997, wholesale reform of the Ministry of Agriculture, Fisheries and Food seemed inevitable once a new Food Agency with strong powers and a wide remit was mapped out (H. M. Government, 1998). A furious rearguard action, however, from elements of the food industry, almost definitely supported by senior civil servants determined not to see their empires carved up, put this on hold for at least three years (Willman and Parker, 1998). Some sections of industry do not want to see a strong interventionist agency, and if there is to be one, want it restricted to safe territory like microbiological safety rather than entering into "danger zones" such as nutrition and the ethics of genetic engineering.

Despite some setbacks, the UK food movement has been successful in questioning the New Right logic of *laissez-faire* and de-regulation (McKee et al., 1996) and in winning public support for sustainable agricultural goals (e.g., Eurobarometer survey in National Consumer Council, 1988). But public support is not being translated into policy change. The slowing of the Food Agency proposal suggests that the neo-liberal position has strong institutional support still. The UK government is strongly committed to reforming the Common Agricultural Policy to meet global markets – a *sine qua non* for the next round of the GATT. Preparation for the new GATT Round suggests that it intends to modernize the UK food system to fit the neo-liberal model of global markets with retention of farm support in the guise of social and environmental payments. Here, the UK's role in Europe is particularly sensitive.

Institutional change 1950–1998: Governance in flux

The neo-liberal political position argues that the UK's policies were fundamentally sound until accession into the EU, since which the food system has collapsed

into an absurd logic of farm support. All would be well, it is argued, if subsidies were removed and the UK left the EU and traded food on the world market (Body, 1982; Cottrell, 1987). A Left-Right fissure in politics quickly evolved into a pro- and anti-Europe dimension. Some separation of fact from fiction is in order. The UK's entry to the European Community, the former name for the European Union, has clearly been important, but in food policy has not been the seismic shift the euro-phobic New Right likes to portray it as. The agricultural support regime put in place by Labor in 1947 was characterized by deficiency payments – if prices fell below set targets, the gap was made good by government subsidy. This was replaced by the Common Agricultural Policy's system of price support through intervention buying and export restitution (i.e., dumping surpluses on world markets). There are important differences between these two approaches, but the production paradigm message to farmers stayed the same: intensify, get larger, or get out.

If UK post-war food policy has been relatively constant in its production paradigm, institutional change has been more dramatic. By joining the European Union (EU), the UK stopped being an island with first an Empire and then a Commonwealth. Since 1994, its food and agricultural system has come under the World Trade Organization's remit. In just six decades of the 20th century, there has been a rapid transition of its food framework from first an Empire to wartime island and thence to European region and finally to a new global food system. Of these, regionalism is currently salient.

The EU institutions are geared to coalitions, a tradition of working laid down in the Treaty of Rome of 1957 (Neville-Rolfe, 1984) under which a handful of states began to co-ordinate aspects of trade. As a result, the Common Agricultural Policy's evolution has been gradualist and tortuous in equal measure. Support for indigenous production was at the core. The first goal laid out in Article 39 stated that CAP's objectives should be "to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilization of the factors of production, in particular labor" (CEC, 1958). It should be noted that in 1957 when the Treaty was signed, but not by the UK at that juncture, only 4% of the UK population worked on the land, compared to 23% in the six countries who did sign (Neville-Rolfe, 1984). When it did eventually sign to join the Common Market in the 1970s, the UK was already the odd man out in food. Its agriculture, food culture, and history of support were markedly different. It still is, but there has been an immensely significant switch of food trade to within the EU, coupled with an astonishing concentration of taxpayer support for large farmers. Eighty percent (80%) of all farm support goes to the largest 20% of farmers (House of Lords, 1991).

Within Whitehall (the UK's street of government in Westminster), the Ministry has been more constant. The Ministry of Agriculture, Fisheries and Food (MAFF), inheritor of the original Department of Agriculture created in the 1870s, is still there. The UK had set up a Department of state concerned with Agriculture and Fisheries in 1875. Twice – in both World Wars – it instituted a crisis-led Ministry of Food (Beveridge, 1928). In 1919, this was quickly closed, only to be resuscitated for World War II. After that war, Labour's 1946–7 review proposed retaining the separate Ministry of Food, mainly to ensure rationing remained just and effective. It was finally closed in 1955, and its rump merged into a single Ministry covering the entire food chain from farm to shop, with "Food" coming symbolically last in the name MAFF (Lang et al., 1996; Lang et al., 1997). By closing the Ministry of Food, an intra-state counter-weight to production interests, then as now amply fulfilled by MAFF, meant that the principle of responsibility to ensure equity and health was once more subsumed to market forces. The crisis over food safety in 1988–96, culminating in the BSE-new variant Creutzfeld Jakob Disease, showed that this logic was flawed (Lacey, 1994; Dealler, 1996).

Even in social policy terms, post-war support for production without any social policy counterweight was a mistake. It was assumed, for instance, that rising living standards and wealth would ensure no diseases of deficiency or poverty would return. This was an unwarranted assumption. Summaries by Leather (1996) and Lang (1997d) testify to the systematic rediscovery of food poverty since the late 1970s. By 1996, even the Conservative Government had to acknowledge the return of food poverty (LIPT, 1996). The Nutrition Taskforce report on poverty represented a rare flexing of muscles by the Department of Health worried that inequalities in health were a worrying "drag" upon public costs (H. M. Government, 1992). Much of this was conducted in the face of stiff official denial from MAFF that there was even an issue.

The point being made here is that institutional structures have an impact on public policy. The strengths and weaknesses of different Ministries make a difference to how policies are played out. In the UK, there has been an imbalance of commitments by the state. Formally, they exist for both health and production. In practice, food policy supports the latter. As Raikes and others have shown, the age-old problem of hunger is a policy-led issue of maldistribution (Raikes, 1988). If the UK denied it had a problem, the EU

merely dumped its burgeoning surpluses on external markets such as the USSR – following public outcries about the "food mountains" in store via a Surplus Food Disposal Scheme, now a decade old. Not until the 1992 Maastricht Treaty did the EU have a framework for action on public health (CEC, 1993). Initially this ignored the problems of over-production.

In the UK, throughout the 1980s and 1990s, NGOs were particularly active. Consumer groups argued that government food committees did not reflect or explore consumer concerns because they lacked consumer representation. Political levers, by contrast, were amply supported by industry (Cannon, 1987). A steady stream of reports on a wide variety of issues – additives (Millstone, 1986), pesticides (Lees and McVeigh), health education (Cannon, 1992), labeling (Lang, 1995), children's food (Lobstein, 1988; Whiting and Lobstein, 1992), advertising (Dibb, 1993), etc., – all made the point either that Government committees were too friendly to production or that their membership was actually excessively drawn from industry or industry-funded interests (Lang, 1997c; Mills, 1992; Cannon, 1987; Millstone and Abraham, 1988). After much media coverage, gradually from the 1990s expert committees began to create places for a few consumer representatives, almost always safely chosen from government-funded consumer bodies.

Responsibility for food: The state, commerce, or consumer?

The Food Safety Act 1990, rushed onto the statute books after the salmonella crisis of 1988–90, brought UK food law into line with the EU by introducing the notion of "due diligence." This means that companies have to do their utmost to assure food safety and to be able to prove that they have done so. Within an enormous market such as the EU, border controls had been a major irritation to trading companies. "Due diligence" replaced national controls. In addition, food companies are now setting up elaborate and sophisticated systems of traceability, down to the farm and batch level. These can be policed globally due to the rapid spread of supply chain management approaches such as "efficient consumer response" (ECR) and the spread of strategic alliances between previously competing companies (Hughes, 1994).

Although traceability and ECR can rightly be viewed as just further twists of managerial control over the food system, this approach does have risks. The motives for companies to set up their own complete systems of regulations and monitoring is in part driven by cost cutting, but also a desire for control. Companies were shocked in 1988–96 by the rising tide of public concern over quality control. They saw that this could leave them very exposed. A downside of their massive power and concentration is that, with such controls in place, if something goes wrong, there is no-one else left to blame but them. It is a risky strategy for brands built on trust.

A twin track system of accountability is institutionalizing a tension at the core of contemporary food policy. Whom does the consumer believe to be responsible for his or her interests – the government or the company s/he buys from?

This is a vexatious question in public policy generally, not just in food policy. Does the onus for health, for example, lie with the individual, the supplier, or the state? If with the former, are food labeling and education sufficient to enable the individual consumer to act responsibly? Is the future for public policy self-protection or public protection? This is a global policy challenge as old as the emergence of an urban, dependent consuming class. Unlike some developed countries where access to land is still relatively easy, in Britain the rich long ago excluded the mass population from agricultural ownership. Struggles about access to land have tended to be restricted to access to smallholdings or allotments and gardens (Crouch and Ward, 1998).

In food, as Britain's crisis has exemplified over the last decade and a half, this debate about responsibility for feeding has become politically highly charged. In a complex food system, who has knowledge? Is it the consumer's fault food poisoning has risen or is this due to sloppy standards on the farm, in the abattoir, and in the factory? The evidence suggests that food poisoning can be traced more to what happens before the customer gets the food than afterwards (Parliamentary Office of Science and Technology, 1997), although lack of consumer skills in the home is now marked across all classes. Men, in particular, lack cooking skills.

Food standards are inevitably sensitive. Thompson (1971) and Paulus (1974) have documented the slow but methodical manner in which, from the 18th century, battles over food adulteration and the market economy symbolized the struggle for wider public rights within the process of marketization. The public demand for pure food was officially won in the UK with the Food Acts. Since 1875, the law has stipulated that "food shall be of the nature, substance and quality demanded." The formulation is precise; the balance of rights should lie with consumers, not producers, yet at the end of the 20th century, the battle to achieve this right is apparently being refought.

Another aspect of food governance in contemporary food systems is the considerable power acceded to supra-national bodies. With regionalization running

apace – the EU, APEC, Mercosur, NAFTA – agricultural and food trade is increasingly the subject of international diplomacy and new structures. Most obviously, this is witnessed in global trade negotiations over the General Agreement on Tariffs and Trade (GATT) but also in a "jostling for position" over food standards. Specific trade disputes are being arbitrated by the World Trade Organization or within the Codex Alimentarius Commission, itself given new powers of "influence" under the 1994 Uruguay Round GATT. While not all these conflicts postdate the GATT, the trades disputes system leads signatories to expect that their case will prevail. Tension points include hormones, bananas, labeling of genetically modified foods, bovine somatotrophin (BST) or bovine growth hormone (BGH).

One important feature of the 1994 Uruguay Round of the General Agreement on Tariffs and Trade (GATT) was the greater "influence" in trades disputes over food standards given to Codex Alimentarius Commission, the UN food standards body formalized in 1962. The GATT set up the World Trade Organization and made it responsible for implementing agreements on Sanitary and Phytosanitary Standards (SPS) and Technical Barriers to Trade (TBT). Codex was to arbitrate in difficult disputes on issues such as pesticides, veterinary residues (hormones), additives, and genetically engineered foods.

Research conducted in 1991–93, before the latest GATT round was signed, raised some new political problems with Codex (Avery et al., 1993). Codex is a large system of 20 committees, with a total of 2,758 participants, supposedly drawn from government but with a quarter of participants in fact from large international companies. Reviewing a full two-year cycle of Codex meetings, the study found that:

- 104 countries participated, as did over 100 of the largest multinational food and agrochemical companies.
- The vast majority (96%) of non-governmental participants represented industry.
- There were 26 representatives from public interest groups compared to 662 Industry representatives.
- Nestlé, the largest food company in the world, sent over 30 representatives to all Codex committee meetings combined, more than most countries.
- Most representation came from rich, Northern countries: over 60% came from Europe and North America with the poor countries of the South dramatically under represented – only 7% from Africa and 10% from Latin America.
- Of the participants on the working group on standards for food additives and contaminants, 39% represented Transnational Corporations or industry federations, including 61 representatives from the largest food and agrochemical companies in the world.
- Of the 374 participants on the committee on pesticide residue levels, 75 represented multinational agrochemical and food corporations – 34 from the world's top 20 agrochemical companies; only 80 participants represented the interests of developing countries.
- The USA sent more representatives to Codex than any other country (50% of them representing industry) and almost twice as many as the entire continent of Africa.

FAO officials and companies became sensitive to these criticisms, pursued by the consumers' movement. Some countries now hold tripartite pre-meetings with industry, consumers, and government officials. The UK Consumers' Association has reviewed practice at Codex and concluded that little has changed (McCrea, 1997). At the 1997 Codex food labelling committee, for instance, the US delegation comprised eight government officials, three from NGOs and ten from industry. Particularly sensitive is the issue of scientific judgment. The GATT stipulated that disputes would be arbitrated on grounds of "sound science," yet consumer groups argue that science is not the only salient feature, nor indeed is science quite the straightforward arbiter it is assumed to be (McCrea, 1997). Whose is the research? Who funded it? Is it publicly available? What questions framed the analysis? The argument between the USA and the EU over hormone use in meat fattening illustrates the sensitivity of the issue. Since the early 1980s, the EU has implemented a ban on use of hormones. This was contested by the US, keen to sell its beef in Europe's rich markets. The dispute was referred to Codex and the long awaited WTO decision was announced in early 1998. Both the US and EU claimed vindication of their positions (USTR, 1998; and EC, 1998), but the EU has *de facto* had to revise its ban.

Who is sovereign? Farmer, processor, retailer, or consumer?

The language of globalization always stresses the advantages for consumers of increased choice and keener prices from application of the neo-liberal package. Certainly, a hypermarket with 20,000 items is a cornucopia of choice and range, but questions about how important or superficial this advantage is have been a hallmark of the new food movement

almost everywhere. Critics have argued that choice at the cost of environmental, cultural, safety, and health considerations is a false choice (e.g., London Food Commission, 1988; Jacobson et al., 1991). This is an old consumerist critique, up-dated (Gabriel and Lang, 1995). The more delicate questions are not whether there is a downside to the new era of globalization or to the modern food revolution, but who benefits and is in control?

Most obviously, the poor are not winning. In the UK, despite the fact that since the 1950s the percentage of household expenditure on food has dropped from an average of about a quarter to a tenth of total household expenditure, gaps are great. The poorest tenth spend a quarter to a third of their incomes on food, while the richest spend nearer ten percent (Leather, 1996). The children of class D/E2, the poorest, eat less than half the fresh fruit and vegetables consumed by the children of class A, the richest. Post-war, the gap in fruit consumption between rich and poor was narrowing, but is now widening again.

Even within commerce, the picture is not all rosy. Although dominated by highly profitable companies, the food trade gap of the UK food sector is in fact in deficit with the rest of the world. According to Her Majesty's Customs figures, the total food and drink trade imbalance has risen from £5.5bn in 1989 to £7.7bn in 1996, i.e., the country imported £7.7bn more food than it exported (Food From Britain, 1997). The fruit and vegetables trade gap in 1989 was £2.5bn and by 1996 £3.84bn.

Consumer food culture has been dramatically altered in the post-war period by the arrival of more processed foods and by changes in retailing and in the role of women in the waged labor force (Mennell et al., 1992). In the EU as a whole, there has also been some convergence of food tastes and consumption patterns. Heilig (1993) has summarized these trends as simple traditional dishes, which used to be prepared from raw products in the household being replaced with refined, industrially processed food; food consumption patterns no longer following the seasonal cycle; and the take-up of "exotic" foods among certain groups of the population.

In the 1960s and 1970s, processed foods increased in both number and range in the UK, as in North America (Marks, 1984). By 1982 only a fifth of UK food was fresh with minimal packaging (ACARD, 1982). Critics have argued that a culture of dependency on pre-cooked food is in the making (Lang et al., 1996; Lang, 1998b). There is a public policy conundrum here. On the one hand, health educators argue that people should take more control of their diets to meet health targets such as obesity and heart disease reduction (H. M. Government, 1992). Yet on the other hand, one of the simple means for people controlling their diet, namely cooking their own, is made harder by skills deficiency. There are 18 hours of food programs on UK television but cooking is in decline (Caraher and Lang, 1998). Whatever the health promotion message, the reality is that cooking now occurs mainly in the factory or commercial kitchen. TV makes it a voyeuristic experience and the introduction of a new compulsory National Curriculum for schools in the 1990s gave no room to practical food skills.

In the UK, with the ending in 1965 of retail price maintenance – a system whereby food manufacturers could stipulate to retailers what price their goods would be sold at – power passed from manufacturers and farmers to retailers. By the mid 1990s, four chains accounted for at least half of all food sold (Raven and Lang, 1995). Fifteen multiples (defined as having 10 stores or more) owned 83 million square feet of sales area out of the national stock of 127 million square feet. Viewed by size of outlet, the sales area owned by these 15 multiples was in the form of just 7,250 shops, whereas the 44 million remaining square feet in the national sales area was provided by 51,324 other shops, almost all of them small independents and specialist shops (Myers, 1997).

The national food retail picture is of a small number of giant concerns dwarfing a large, but dwindling number of small shopkeepers. Retail analysts no longer debate whether there will be retail saturation, but when. Myers (1997), for instance, anticipates saturation in 2004 or 2005. Retailer power stems not just from market share, but from the retailer mediating between producer and consumer, setting standards through rigorous contract specifications and translating consumer lifestyle into food products. UK retailers have also developed "own label" markets, in which they subcontract to unbranded manufacturers for the production of their own brand of foods, which are then sold at prices lower than branded goods. Own-label products now account for 45% of all food sales in the UK (Corporate Intelligence on Retailing, 1998). With such scale, one can appreciate how retailers' specifications and contracts are so important to would-be providers. As own-label sales have grown, partly due to their higher profit levels for the retailers, conflicts have erupted with both farmers and giant global branded goods. This has been particularly strong over soft drinks (notably colas in the early 1990s), ice creams and other highly advertised goods, and over fresh meat. Following the price collapse after the BSE crisis of 1996, upland farmers saw their prices drop by about half in a year. Yet it was quickly noticed that meat prices to consumers did not drop similarly. Unprecedented conflicts emerged with

UK farmers blockading ports, demonstrating violently outside supermarkets, and putting great pressure on government to act. In mid 1998, an inquiry was set up by the Office of Fair Trading, the UK's anti-trust body, which has never issued a critical report on the supermarkets. The inquiry reports in 1999. Such episodes illustrate the tensions within the food system following the emergence of retail power. This dynamic presently dominates much of the UK and European food systems.

Although researchers into chain management suggest considerable integration (Hughes, 1994; Trienekens and Zuurbier, 1996), particularly in new product development, between retailers and manufacturers, few doubt which sector carries the cards. UK supermarket multiples are now the UK's largest private sector employers. Their employee numbers have risen, as independent shopkeepers have declined. Described as flagships for the service sector economy, modern supermarkets are in some respects purveyors of the self-service economy. The consumers travel more and service themselves. In latest technological "self-scanner" till developments, shoppers check themselves and make the low paid checkout operator redundant.

While there can be no doubt that there is considerable control over food on the part of state and particularly commercial interests, there are immense problems for those who dominate food systems. Even for today's giant food businesses, uncertainty rules. An estimated 10,000 new products are launched in the EU annually of which only 10% survive a year (Longfield, 1992). Ready-to-eat food is now the norm (Stitt et al., 1997).

The daily reality of tensions between manufacturers and retailers and the complexity of contracts and balancing margins and costs are considerable. Whole sectors like the liquid milk business are being changed radically in a matter of a few years. In the UK, doorstep delivery of milk has been a tradition since industrialization, but in a few years, consumers are switching to the US model of purchasing milk at the supermarket. Such tensions and changes are inevitable and pose genuine commercial risks for investors. On the horizon, there is also a completely new category of concerns creeping up that could de-stabilize world markets. Such issues include climate change and pressure on productive land (McMichael, 1993); the impact of population change (Dyson, 1996); the arrival of China as a buyer of commodities (Brown, 1996); the fragility of public trust (Lang, 1998c); the political outcome of reform of the Common Agricultural Policy (Dahlgren et al., 1997); turmoil in financial markets; and the perennial problem of over-production leading to price wars.

The current phase of globalization is characterized by concentration at national, regional, and international levels (Heasman, 1997). The UK food industry is one of the most concentrated in Europe. In 1995, three companies – Unilever, Cadbury Schweppes, and Associated British Foods – represented two-thirds of total capitalization in UK food manufacturing. Yet these companies compete on the world stage and their plant investment decisions involve comparisons between locations able to serve the whole European market. Of the top 50 European companies, 19 are British and British companies are second only to those of the US in the level of their foreign direct investment in other countries (Heasman, 1997). Although the UK is concentrated, half of the world's top 100 food sector companies are US owned. Currently, the top 200 groups worldwide have combined food and drink sales of £700 billion – broadly half the world's food market. Private estimates by industry anticipate that the global food industry will come to be dominated by up to 200 groups, which will account for around two-thirds of sales.

This process is already underway. Since the mid 1990s, there has been a worldwide wave of mergers and acquisitions in the food manufacturing sector. Between 1993 and 1995 there were almost 1,500 mergers and acquisitions (MandAs) within the food and drink industry reported worldwide – around 500 a year. The majority of MandAs are recorded within the dairy, bakery, beverage, meat, and ingredient sectors. Ice cream, fruit and vegetables, oils and fats, and beer were among the most active sectors in terms of number of deals recorded in 1995.

Despite this high concentration, it would be a mistake to describe the British as solely fed by corporate giants. UK and European food companies are highly segmented. Some are extremely large. According to Heasman, at the end of the 1980s there were in excess of 264,000 enterprises in the EU of which 92% employed less than 20 people. These small firms accounted for almost 30% of employment, but only 15% of turnover. At the other end of the scale, a mere 656 firms with 500+ employees, just 0.2% of the total number of enterprises, produced almost 40% of turnover and employed 27% of the food and drink sector workforce. In the UK, manufacturing units with fewer than 20 employees numbered less than 7500 in 1991, or 70% of the total, but only employed fewer than 8% of the sector's workforce. In 1991–95, the number of production units fell by 24% and jobs shrunk by 7%.

Table 1. Open futures?: tensions in the food system

Globalization	vs.	Localization
Urban/rural divisions	vs.	Urban-rural partnership
Long trade routes (food miles)	vs.	Short trade routes
Import/export model of food security	vs.	Food from own resources
Intensification	vs.	Extensification
Fast speed, pace & scale of change	vs.	Slow pace, speed, scale of change
Non-renewable energy	vs.	Re-usable energy
Few market players (concentration)	vs.	Multiple players per sector
Costs externalized	vs.	Costs internalized
Rural de-population	vs.	Vibrant rural population
Monoculture	vs.	Biodiversity
Science replacing labor	vs.	Science supporting nature
Agrochemicals	vs.	Organic/sustainable farming
Biotechnology	vs.	Indigenous knowledge
Processed (stored) food	vs.	Fresh (perishable) food
Food from factories	vs.	Food from the land
Hypermarkets	vs.	Markets
De-skilling	vs.	Skilling
Standardization	vs.	"Difference" & diversity
Niche markets on shelves	vs.	Real variety on field & plate
People to food	vs.	Food to people
Fragmented (diverse) culture	vs.	Common food culture
Created wants (advertising)	vs.	Real wants (learning thru' culture)
Burgerization	vs.	Local food specialties
Microwave re-heated food	vs.	Cooked food
Fast food	vs.	Slow food
Global decisions	vs.	Local decisions
Top-down controls	vs.	Bottom-up controls
Dependency culture	vs.	Self-reliance
Health inequalities widening	vs.	Health inequalities narrowing
Social polarization & exclusion	vs.	Social inclusion
Consumers	vs.	Citizens

Conclusion: Uncertain futures

This review of the UK food system and food policy in the context of globalization has suggested considerable complexity. Although the paper has taken a food systems approach, it argues that the future of food is open rather than closed. Schematically, this may be represented as tensions between different visions of the future, both being actively pursued and supported by different interests and "constituencies" (see Table 1). In the Table, the left-hand column broadly represents those characteristics pursued within the food system driven by globalization, whilst the right hand column represents counter trends associated with forces seeking the re-localization of food. The table suggests the complexity and subtlety with which the intellectual debate about food and globalization ought to be characterized.

This article has argued that the UK food system, operating in a new globalizing era but building upon centuries of colonialism and human history before, has now developed some features that are both common and peculiar. These include,

- a rapid concentration in all sectors, both through organic growth and mergers and acquisition;
- a fragmentation of markets;
- comparatively rapid, commercially driven changes in diet and taste;
- intensification both on and off the land;
- transformation of foods and food processes across sectors; not just the nature of farming and

storage has been transformed but even cooking;
- the growth of size and influence of the distributors and retailers within the food system, representing a transition from producer to retail power;
- an ideological tension over the state's role and responsibilities both in law enforcement and in public education;
- an unmanageability in the consumer body politic, with a growth of consumerism threatening predictability for dominant forces within the food system;
- new inequalities within and between countries creating modern forms of food poverty, even in rich countries;
- centralization of decision-making nationally, regionally, and internationally, with tensions between all levels;
- a pivotal battle for world markets between the European Union and USA.

A number of implications can be drawn. The battle over what direction the food system should go is coming center stage, driven by wider political forces such as the new GATT, European, and US trade enlargement, and global financial concerns (Lang, 1997a). The challenge of how to balance seemingly contrary policy imperatives – health, environment, consumer aspirations, commerce – and how to bridge tensions within the food system – land, industry, retailers, catering, domestic life – is formidable. To accord priority to the protection of the environment, health, consumers, and social justice will require considerable adjustment in policy and food practices, but can society and the environment afford not to do this? There is considerable room for academics to liaise with NGOs and others to analyze and tackle the strategic challenges faced by humanity and the natural world in the 21st century. The penalties for failing both to achieve a correct analysis and sound, appropriate policies could be immense.

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