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Session 3. Changing food lifestyles: challenges and opportunities for the food economy

FOOD POLICY AND MARKETS: STRUCTURAL CHALLENGES AND OPTIONS

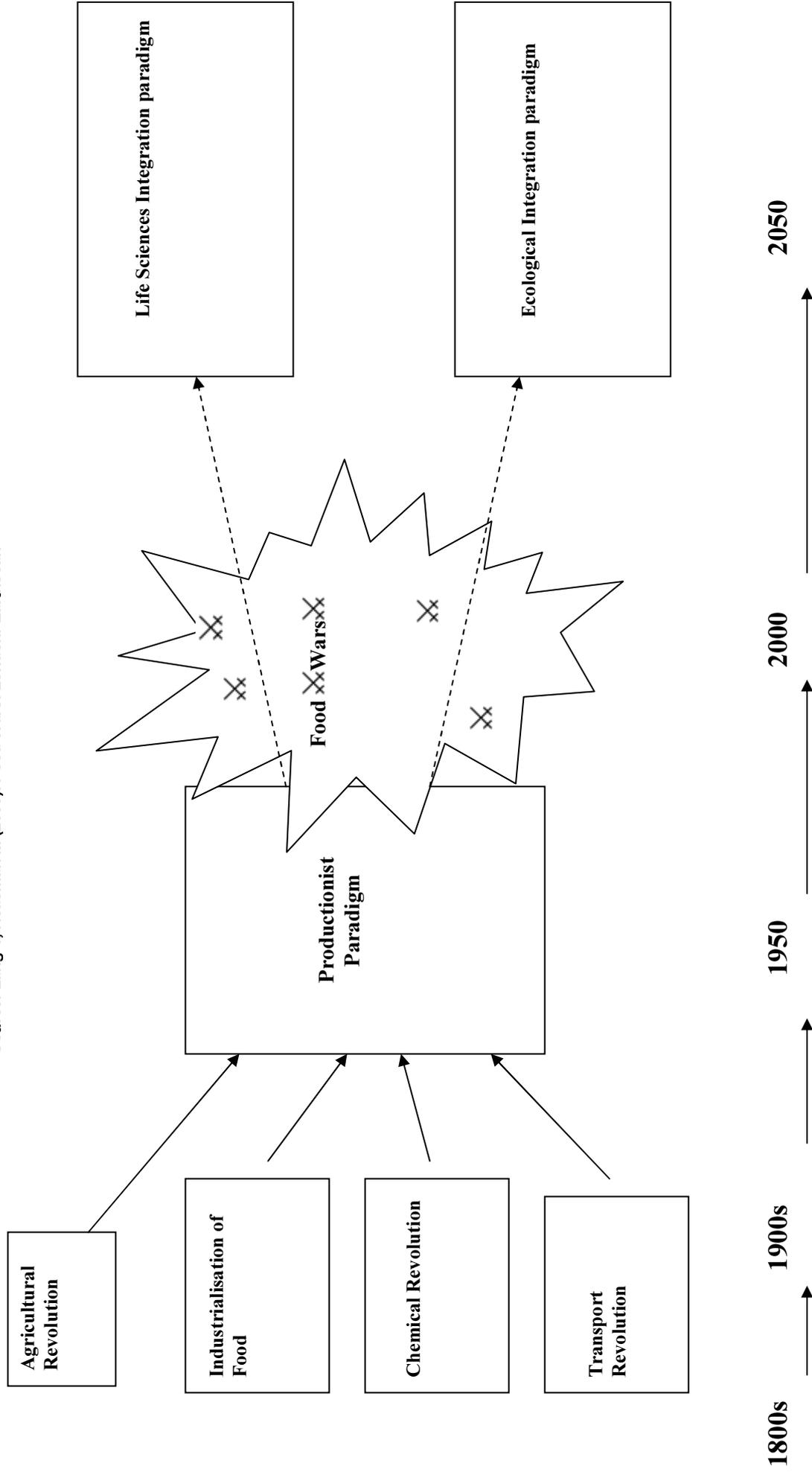
By Mr. Tim Lang

Abstract

The food system is in an era of flux and change, 'wars' about the future of food. There are many tensions about how to view food – just another commodity? technology? fuel? meaning? social glue? This paper explores tensions in the food system over the role of food, particularly over its impact on human, societal and environmental health, and over how to manage the food system in its state of transition. Issues of governance are being championed by increasingly articulate proponents of the public (as opposed to corporate) interest. The paper proposes that there are competing ideas for policy, business and science on what food and its policy framework should be. Within the food system, a period of experimentation is underway, in which new solutions to the crisis of governance are being proposed by the corporate sector, agriculture and NGOs. Social movements jostle alongside advocates of corporate responsibility as they try to win the battle for consumer culture and State attention in public policy. The paradigmatic approach offers a tool to explore various scenarios for the future. These divide on whether the prime emphasis is given to an individualised notion of food or one based on a population / societal approach. Food policy frameworks on offer vary from fragmented to integrated. Three scenarios are suggested for policy formulation and costing: 'business as usual', 'mix and match' and 'fully engaged'. The paper proposes that although food policy is contested space, there are clear and distinct bundles of policy options.

There is a fight going on over the future of food, which might properly be called an era of Food Wars (see figure 1). This era is itself the outcome of other revolutions in society, notably in agriculture, industry/technology, chemistry and transportation. Throughout the last century, at different times in different societies, a productionist paradigm came to dominate discourse and practical policy-making about food. Decisions, objectives and visions were refined and rolled out within an overall set of framing assumptions. These have themselves come under fire and been subject to intense criticism in the last two decades, to such an extent that the productionist paradigm is creaking at the seams.

Figure 1 The Era of Food Wars
 Source: Lang T, Heasman M (2003). *Food Wars*. London: Earthscan



LEGEND: X = Key Battlegrounds in the Food Wars. These include:

- Diet, health and disease prevention
- Environmental crisis
- Capturing the consumer
- Controlling food supply
- What sort of food business
- Competing visions and ideologies

In our forthcoming book, *Food Wars*, Michael Heasman and I argue (and please note that this is an argument in both the sense of an interpretation of events and a prognosis) that health is probably the key battle-front in these food wars and in the emerging differences over future paradigms for food policy.¹ We envisage two major contenders for the paradigmatic shift that is underway. The first we call the Life Sciences Integration paradigm. The second is the Ecological Integration paradigm. In the former, the drivers are biological reductionism – food is to be (re)made applying the advances in biological science and the unity of thinking between chemistry, biology, engineering and management control. The Ecological Integration paradigm, by contrast, also posits biology as the central science but argues that it has to be approached with a less dirigiste perspective. Working with ‘nature’, rather than on it, is its *leitmotiv*.

If this scenario is apt, it has profound implications for the entire food supply chain. It is not that one paradigm is hostile to industry and that the other favours it – or some such crude ‘for/against’ dichotomous thinking. On the contrary, our argument is that the paradigms offer different approaches to industry, to consumers, to health, to managing or relating with the environment, and so on. Terms such as ‘lifestyle’ and ‘choice’ that this conference addresses are all notions whose meaning varies according to which paradigm holds sway.

We outline three distinct paradigms. The first is the productionist paradigm, in which the policy emphasis and drivers have been focussed on unleashing productive capacity in the food supply chain (particularly the land) and to aim for quantity and efficiency of output, defined in terms of yield, throughput and profitability. The assumption of the productionist paradigm is that the public good requires sufficiency and, *vice versa*, that sufficiency will deliver public goods. In a world as scarred by hunger and maldistribution as it was in the 1920s and 1930s (i.e. prior to World War 2), this made both short-term and long-term sense. Productionism has been immensely successful. Output has risen dramatically. Even though hunger is persistent, it should be stressed that many more mouths are being fed. This is an heroic advance. So why is the productionist paradigm under some strain?

Firstly, evidence has mounted about its externalised health costs. While relative price of food might have dropped in many societies, health costs associated with diet have risen dramatically compared to the 1940s. Life expectancy has risen, of course, but so has evidence about the impact of degenerative disease on public health (morbidity and mortality). Food safety may have taken much of recent health and political attention in policy circles, but their load on the State or healthcare insurance, let alone human and familial suffering, is slight compared to the burden of degenerative disease. This argument used to be applicable only to affluent societies, such as the member states of the OECD. But they are now apparent in far poorer societies too. There is now a discernable double burden of disease, due to hunger and degenerative disease, under-consumption (famine, inequalities) and over- or mal-consumption (heart disease, cancers, diabetes, obesity, etc.).

Secondly, there has been a persistent thread of criticism as to productionism’s emphasis on quantity before quality. The environmental impact of intensive agricultural systems first centred on issues such as residues from pesticides, and then broadened to the external costs to wildlife, biodiversity (both on and off the farm), and diet itself. The environmental pressures on the infrastructure for food production range from water scarcity and falling fish stock to soil loss and climate change.

Thirdly, the policy emphasis of productionism has been upon the land whereas in reality the drivers of the modern food economy has shifted from the agricultural/rural sectors to what happens *off*

1. Lang T, Heasman M (2003 forthcoming). *Food Wars*. London: Earthscan.

the farm. Food processors, retailers and catering/foodservice sectors have in effect changed the food economy, with retailers currently being pre-eminent among these.

Fourthly, hypermarket and urban food culture both reflects and promotes changes in people's diet. The nutrition transition carries in its wake huge health implications and challenges. This is facilitated by trade liberalisation, but food culture is not, as some critics imply only 'pushing' consumer tastes. Consumer aspirations also 'pull' them; that is, there is both a push and a pull. Food, nutrition and health opportunities and challenges are global.

Fifthly, there is growing awareness that actions in one sector of the wider economy and food economy have impacts on others. Demand to increase production encourages growers to irrigate, yet this can deplete water tables or result in waste. Nutrition advice encourages consumers to eat fish yet stocks are perilous and fishing practices often unsustainable. Policy actions that make sense in one area undermine actions elsewhere. Overall policy coherence is as a result lacking.

Due to these difficulties, and others, the policy framework in place from the late 1940s to the early 1980s² is widely seen as in need of an overhaul. A new systemic approach is required. Clear demarcations have emerged in health, for instance, between an individualised medical model of food and nutrition's impact on health and a population or societal approach. These offer two very different approaches to diet and health and the prevention of patterns of disease and illness – one targeting 'at risk' individuals, the other developing 'population' based strategies.

Table 1. Some features of the Productionist paradigm under contest in the era of Food Wars

<i>Policy area</i>	<i>Feature being contested</i>
Technical	Transformation of nature (GM, seeds, land); impact of intensification; motives for investment and research (private/corporate financial returns or public goods?);
Commercial	Reliance on fossil fuels; trade liberalisation benefiting some rather than all; market concentration; coincidence of mass and niche markets;
Health	Individualisation; emphasis on safety rather than on degenerative diseases; externalised costs borne by society and families;
Food culture	Globalisation, branding and marketing framing choice; food mores affected by consciousness industries and rapidity of change;
Food in society	Inequalities; simultaneous under- and over-consumption; problems of access;
Environment	Unsustainability; externalised costs born by nature; dramatic fall in biodiversity;
Governance	Degree of regulation; delineation of the State's role; problems of multi-level governance; rise of NGOs and 'civil' society;

Questions emerge from civil society

After decades in which big government and big business have dominated food policy discourse, the last two decades of the 20th century witnessed a re-emergence of political and public involvement in food policy by social movements. These emerged often as apparently 'single issue' campaigns or

2. A highpoint being OECD (1981). *Food Policy*. Paris: Organisation for Economic Co-operation and Development.

foci, ranging across issues such as pesticides, animal welfare, organics, socially responsible investment, fair trade, labelling, cooking skills, genetic modification, and health conditions such as heart disease or diabetes. Increasingly a new worldview emerged, partly driven by awareness of the forces of globalisation but more powerfully driven by awareness of the restructuring of the national, regional and political 'map' through the Uruguay Round (1987-94). Although wider public awareness of the critique of the productionist paradigm by social movements emerged at the time of the WTO meeting in Seattle in December 1999, the intellectual acceptance that the productionist paradigm as it had hitherto been framed was in place well before that.³

These social movements have been both vocal and effective in offering legitimacy to the Ecologically Integrated Policy paradigm in confrontations over issues such as genetic modification of foods (a battle which began in the 1980s), the impact of trade rules on developing countries, the advertising of foods, labour conditions and ethical investment, environmental damage and animal welfare. These social movements have not, however, taken public health particularly seriously or seen it as central. They are often parodied as pursuing naïve views of health – thinking that 'natural' is somehow better (as though the natural exists) – and their views of health tend to focus on environmental pollutants more than on population health; concerns are more vociferous about food safety and contamination than about routine heart disease or diet-related cancers. But there are signs that this is changing, mainly due to public alarm about obesity and diabetes, two health indicators which are rising rapidly world-wide.⁴ These movements already fight over the paradigms, as they jostle for influence, struggle to gain the 'ear' of ministers and corporate planners, entice product developers to invest in new product lines, or simply run campaigns to win public and political support. The world of public policy is now heavily populated by different groups all conducting this routine work, as they fight over the key things in public policy:

- Resources: allocation of budgets and money;
- Institutions: access to committees, getting their ideas onto the agenda;
- Credibility: winning support for ideas and helping set the public policy agenda.

The collective contribution of these movements has been rich in bringing food, diet, health, the environment and culture into wider consciousness. In particular, the sustainable agriculture movement has gathered momentum, questioning the Productionist paradigm and providing scientific and social scientific evidence for the validity of the Ecologically Integrated paradigm. The experiments and the movement for agro-ecology, for instance, has been faithfully catalogued.⁵ These suggest that an ecological approach to delivering health through food might be possible.⁶ A country like Cuba has shown what is possible. Faced with the collapse of its long-term colonial mentor, the Soviet Union, and in the face of continued economic trade blockade from the USA, its neighbour, Cuba had rapidly to transform a large proportion of its agriculture to produce food directly for its people with less recourse to the costly inputs of fertilisers and pesticides used in the past and paid for by trade in sugar with the USSR. As a result, Cuba has developed a whole system of agro-ecology in a remarkably short

3. I have argued this in Lang T (1996). 'Going public: food campaigns during the 1980s and 1990s' in David Smith, ed (1996). *Nutrition Scientists and Nutrition Policy in the 20th Century*. London: Routledge. 238-260.

4. World Health Organisation (2002). *World Health Report 2002*. Geneva: WHO.

5. Altieri M (1996). *Agroecology: the science of sustainable agriculture*. Boulder: Westview Press.

6. Pretty J (2002). *AgriCulture*. London: Earthscan.

time.⁷ The Cuban approach was multi-level; central government encouraged community action and participation but provided research support and infrastructure on restricted budgets to do so. Cuba also provides some evidence that only when countries accept they are in a crisis will solutions outside the dominant paradigm be entertained.

In response to the success and failures of productionism, a period of experimentation is underway, characterised by increasing vehemence of the tussles between proponents of the two emerging paradigms. The challenge for public policy is how can it help support moves to integrate these diverse expressions of a different vision for the future of food. Health will be central to this process, driven in part by accruing evidence about externalised health costs of the ‘efficiencies’ of productionism. This was a key motive for President George W Bush’s 2002 speech on the dangers for the USA of its excessive obesity levels.

Financial costs and the fiscal challenge

The health toll of diet-related disease is a massive financial problem for affluent countries. Table 2 gives a breakdown of the direct and indirect costs for a number of key diseases related to diet in the USA. These costs are immense, even for a rich society like the USA. Table 3 shows how general healthcare costs are rising rapidly in many developed economies. In the developing world, where such diseases are growing, the costs of healthcare for degenerative diseases are now also looming as a serious concern. No wonder many finance Ministries are now secretly worried by health. The growth of health expenditure is sometimes higher than the growth of Gross Domestic Product (GDP).

Table 2. Economic costs of diet- and exercise-related health problems, USA

Disease	Direct costs US\$ billion (medical expenditures)	Indirect costs US\$ billion (productivity losses)	Total costs US\$ billion
Heart disease	97.9	77.4	175.3
Stroke	28.3	15.0	43.3
Arthritis	20.9	62.9	83.8
Osteoporosis	n.a.	14.9	14.9
Breast cancer	8.3	7.8	16.1
Colon cancer	8.1	n.a.	8.1
Prostate cancer	5.9	n.a.	5.9
Gall bladder disease	6.7	0.6	7.3
Diabetes	45.0	55.0	100.0
Obesity	55.7	51.4	107.1
		Total=	561.8

Sources: National Institutes of Health (1998) and Wolf and Colditz (1998).⁸

Note: Costs are expressed in constant 1998 US dollars, using the Consumer Price Index.

7. Funes F, Garcia L, Bourque M, Perez N, Rosset P (2002). *Sustainable Agriculture and Resistance: Transforming Food Production in Cuba*. Oakland CA: Food First Books.
8. Kenkel DS, Manning W (1999), ‘Economic Evaluation of Nutrition Policy Or There’s No Such Thing As a Free Lunch’, *Food Policy*, 24, pg. 148.

Table 3. Growth of expenditure on health, 1990-2000

	Real per capita growth					
	rates, 1990-2000 (in %)		Health spending as percent of GDP			
	Health Spending	GDP	1990	1998	2000	
Australia	3.1	2.4	7.8	8.5	8.3	
Austria	3.1	1.8	7.1	8.0	8.0	
Belgium	3.5	1.8	7.4	8.5	8.7	
Canada	1.8	1.7	9.0	9.1	9.1	
Czech Republic	3.9	0.1	5.0	7.1	7.2	
Denmark	1.7	1.9	8.5	8.4	8.3	
Finland	0.1	1.8	7.9	6.9	6.6	
France	2.3	1.4	8.6	9.3	9.5	
Germany	2.2	0.2	8.7	10.6	10.6	
Greece	2.8	1.9	7.5	8.7	8.3	
Hungary (a)	2.0	2.7	7.1	6.9	6.8	
Iceland	2.9	1.6	7.9	8.3	8.9	
Ireland	6.6	6.4	6.6	6.8	6.7	
Italy	1.4	1.4	8.0	7.7	8.1	
Japan	3.9	1.1	5.9	7.1	7.8	
Korea	7.4	5.1	4.8	5.1	5.9	
Luxembourg (b)	3.7	4.5	6.1	5.8	6.0	
Mexico	3.7	1.6	4.4	5.3	5.4	
Netherlands	2.4	2.3	8.0	8.1	8.1	
New Zealand	2.9	1.5	6.9	7.9	8.0	
Norway	3.5	2.8	7.8	8.5	7.5	
Poland (b)	4.8	3.5	5.3	6.4	6.2	
Portugal	5.3	2.4	6.2	8.3	8.2	
Slovak Republic	..	4.0..		5.9	5.9	
Spain	3.9	2.4	6.6	7.6	7.7	
Switzerland	2.5	0.2	8.5	10.6	10.7	
United Kingdom	3.8	1.9	6.0	6.8	7.3	
United States	3.2	2.3	11.9	12.9	13.0	
OECD Average (c,d)	3.3	2.2	7.2	8.0	8.0	
EU Average	3.1	2.3	7.4	8.0	8.0	

Source: OECD Health Data 2002, <http://www.oecd.org/pdf/M00031000/M00031130.pdf> (pg.1).

(a) Hungary: 1991-2000

(b) Luxembourg and Poland: 1990-1999

(c) OECD averages exclude the Slovak Republic because of missing 1990 estimates

(d) Unweighted averages

For Sweden and Turkey, no recent estimates are available.

Evidence such as this puts Health Ministries under some pressure to review their policy mindset. The dominant medical model tends to be curative and gives less emphasis to prevention. The UK healthcare system, for instance, costs £68 billion for a population of just under 60 million people, costs that are anticipated to rise to between £154 bn (\$231 bn) and £184 bn (\$276 bn) by 2022-23 in

2002 prices.⁹ At constant prices, the healthcare costs are doubling. The direct and indirect financial costs associated with this toll of ill-health could offer opportunities for positive policy intervention through a health-enhancing food supply chain. An estimate for the UK by the Oxford University British Heart Foundation Health Promotion Research Group has calculated that coronary heart disease (CHD) – constituting about half of cardiovascular disease - costs the UK £10 billion p.a.. These costs are made up of £1.6 billion in direct costs (primarily to the tax payer through the costs of treatment by the NHS) and £8.4 billion in indirect costs (to industry and to society as a whole, though loss of productivity due to death and disability).¹⁰ This is probably an underestimate of the direct costs to the UK's National Health Service as these costs do not include the cancer costs. A report chaired by Derek Wanless, a former head of the NatWest Bank, for the UK Chancellor of the Exchequer produced not dissimilar calculations.¹¹ It estimated that costs for the health service will rise considerably if targets are met to reduce CHD and cancers. For instance, to lower CHD costs using drugs like statins and surgical techniques like re-vascularisation would add an additional £2.4 billion a year by 2010-11. This would double expenditure on CHD.¹² The point made by the Wanless team is that CHD has been shown to be directly affected by dietary change.

Such calculations also remind us of the multi-headed nature of ill-health. Smoking, diet, physical activity, genetics, environment, and socio-economic background are all important to determining health outcomes. Wanless and his team were convinced by US scientific work that high cholesterol “which is mainly due to diet” accounts for 43% of CHD incidence, compared to 20% for smoking.¹³ With this sort of evidence and interpretative leap, it is clear that the costs of poor diet has such wide-ranging financial implications that it warrants higher political attention. These lessons need to be carried to the developing world.¹⁴

One might have thought this would be an incentive to reduce costs by prevention. In fact, for the last quarter century policy attention has been directed to cut costs, not by altering the food supply chain, but by neo-liberal inspired policies such as contracting out services and by privatisation. In the UK, less than £5 millions a year is spent on food-related health education. Meanwhile, drug companies and surgeons offer expensive but highly sophisticated solutions but not until the patient is sick. Bypass operations do not come cheap, even in non-profit healthcare systems such as exist in Western Europe. Even drug treatments can have substantial costs. A large controlled placebo trial on over 20,000 people with high risks for heart disease has showed that giving people a type of drug known as statins reduced the incidence of a first coronary event by a quarter. This dose of simvastatins costs £1

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9. Wanless D (2002). *Securing Our Future Health: Taking a Long-Term View. Final Report*. London: H M Treasury. April.
 10. Maniadakis N, Rayner M (1998). *Coronary heart disease statistics: economics supplement*. London: British Heart Foundation. (www.heartstats.org).
 11. Wanless D (2002). *Securing Our Future Health: Taking a Long-Term View. Final Report*. London: H M Treasury. April.
 12. Wanless D (2002). *Securing Our Future Health: Taking a Long-Term View. Final Report*. London: H M Treasury. April, para 2.38.
 13. Wanless D (2002). *Securing Our Future Health: Taking a Long-Term View. Final Report*. London: H M Treasury. April **para Box 2.3**.
 14. Cooper, R.S., Rotimi, C. (1993). 'Establishing the epidemiologic basis for prevention of cardiovascular diseases in Africa', *Ethnicity & Disease*, 3, Suppl: S13-22.

(\$1.5 or €1.5) a day.¹⁵ If, say, a twentieth of Britons were to be given this drug routinely to prevent coronaries, the bill would be £365 per person per year, cheap individually but another externalised cost of £1bn a year for the UK population as a whole.

A new era of corporate experimentation?

There are food companies too who see the need for change in how food is produced and framed. We have been critical of food business but it should, by no means, be perceived as a homogeneous sector. Similarly, within wider society, a period of experimentation is already underway, which is beginning to have an impact on, if not fully re-shape, food culture. There is an upsurge of responses to the environmental challenge by the food supply chain in particular but this still lacks a population-wide human health dimension. The area of food business with the highest profile in relation to environmental health is the organic sector, which was catapulted in the early 2000s into one of the top trends in consumer markets. But the business response to the paradigmatic challenge is more than organics. Icons of global branding such as Starbucks and McDonalds have attempted to integrate social responsibility into their everyday business practices. Starbucks has invested in fair traded coffee and in the USA to source milk used in its products from cows not being injected with the milk yield enhancing Bovine Somatotrophin (BST), a growth-promoting hormone. In the USA again, McDonald's has introduced animal welfare measures for its suppliers of eggs forcing them to adopt a range of measures including ending de-beaking, and increasing space for each animal. To critics, this may seem small but within such corporate colossi, they are significant. Only external auditing and time will discriminate whether such moves are token corporate social accountability, 'greenwash' or real transitions.

Competing models of the future

Questions remain about the role of government in this process. Different styles of governance fit with, and are espoused by, different approaches to the food economy. The Life Sciences Integration paradigm tends to favour a policy packaged centred on individual consumer responsibility and health education, while the Ecological Integration paradigm points to a new food citizenship and the need to reconfigure the entire supply chain. Both emerging paradigms offer new frameworks for food business; both require a coherent, open set of rules. If the rules are defined by the largest or the strongest lobby, hope for commercial diversity in a food supply chain diminishes. The paradigms espouse similarly diverse approaches to food education and prevention of ill-health. One sees it as the tool for individual responsibility, the other as the refinement of what is societally determined. Take the issue of cooking skills. Around the world, thousands of teachers are experimenting with food education, which should be reviewed. Instead, schools are tending to cut food skills from the curricula and the educational process is subject to sponsored commercial educational materials and cause-related marketing.¹⁶ Much as the distinction between advertising and TV programme content has been blurred by product sponsorship in programmes, so education is increasingly under pressure to open its doors to commercial messages offering health promotion. Some reassertion is in order. To know how to bake bread does not mean the person with that skill is chained to the oven.

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15. Heart Protection Study Collaborative Group (2002). 'MRC/BHF Heart Protection Study of cholesterol lowering with simvastatin in 20,536 high-risk individuals: a randomised placebo-controlled trial.' *The Lancet*. 360, 7-22.
 16. Lang T, Rayner G, eds (2002). *Why Health is the key to Farming and Food*. London: UK Public Health Association, Chartered Institute of Environmental Health, Faculty of Public Health Medicine, National Heart Forum and Health Development Agency p.30-34.

The challenges for food policy include working on the detail of how:

- to integrate public policy *across* sectors (health, environment, trade, transport, regulation, welfare, education, etc) and, at the same time, *between* levels of governance (global, regional, national, sub-national/local, etc.);
- to estimate and curtail currently externalised costs and encourage their re-internalisation so that consumer prices are fair and realistic and operate properly as a key instrument for market efficiencies;
- to take a long-term approach that can be delivered in incremental short-term and medium-term actions and via reasonable policy instruments;
- to deliver a rational sustainable food supply that links ecological and population health with citizens rights in an equitable manner;
- to harness existing beneficial trends while minimising the destabilising effects of obstacles and parochialism.

But what of the role of the State? One line of argument posits that the State is unable or unwilling to intervene as it might have in the past. This recently fashionable argument is once more in decline. Wars on terror are being unleashed alongside wars on obesity in a manner that suggests a re-energisation of the state's role as broker and facilitator. The thirty year neo-liberal project is changing direction. Today, there is more emphasis on harmonisation of regulation and enforcement between countries than on abolition; trade agreements such as NAFTA and the European Union's Single European Act facilitated this trend, which was accelerated by the creation of the World Trade Organisation and the signing of the Agreement on Agriculture, and agreements on Sanitary and Phytosanitary Standards and Technical Barriers to Trade under the 1994 GATT.

In nutrition terms, however, the consensus policy message from science is reasonably clear. Whether through national policies or individual choices, the public needs to be encouraged to eat a more plant-based diet, to move in a vegetarian direction, if not necessarily to become purely vegan or vegetarian. Such a diet has enormous benefits for health, and probably a considerable gain for the environment. Agricultural systems which produce meat on uplands which could not produce grains or vegetables or other plant crops would not, of course, be affected. But the intensity of their production might be. Their reliance on 'ghost acres' (land used to produce their hidden inputs) would be constrained. The consumerist goal of cheaper meat to be consumed daily rather than on special or infrequent occasions might recede. But there would be public gains to offset against this potentially unpopular message. If more consumers ate a more vegetarian diet, there would be less pressure to use such large quantities of pesticides and fertilizers to produce feed grains for meat consumption. Conservationists argue that this could release considerable amounts of land for parks, prairies or other purposes. The promise from epidemiologists is that the population gain from lowering consumption of saturated fat and cholesterol would lower rates of cardiovascular diseases; food poisoning rates – heavily associated with meat consumption - would also decline sharply. This nutrition-led scenario requires proper investigation.

Which set of ideas triumphs is hard to predict. As ever, it is a question of the balance of forces. There might be unforeseen crises, such as if the oil-dependency of the developed world's food economies were compromised by oil spot price volatility; or if BSE broke out seriously in the USA; or if there was some as yet unforeseen external pressure. Evidence of rapid destabilisation of climate, or the slowing down or reversal of the Gulf Stream Drift, that warm belt of water which renders north

west Europe's climate so benign and wet. Public imagination might also be captured by large scale and 'live' illustrations of viability of practical alternatives, such as if Australia responded to its continual bush fires and fragile soil and collapsed production by pledging a radically different agro-ecology. New Zealand, Sweden and Ireland might go down this route quickly too, valuing their 'green' and uncontaminated self-images. And suddenly, the Cuban experience might not seem so marginal. Or there might be a wholesale rejection of unnecessarily fatty processed foods by enough consumers to make a difference. Or one country might experiment with a fat tax on advertisements promoting products with hidden fats.¹⁷ With western food markets, like the wider economies, experiencing some retrenchment, marketers are alive to the influence of not just elite opinion-formers but the masses who already experiment with counter-intuitive ways of living or consuming; the cult of the new can rock well established corporate forces (consider the mass impact on 'old' record companies by the arrival of Napster and technologies that allow the downloading of music from a vast collective disc-collection on the internet). In the USA, for instance, one market research study suggested that there are 50 million 'cultural creatives' are poised and judged by those authors at least to be antithetical and autonomous in their consumption and thinking enough to tip the balance.¹⁸ Without over-romanticising such possibilities, it is safer to say 'who knows?'. It is already clear that there is a ferment of ideas and embryonic opportunities for mass change and for generating further knowledge; but there are also strong pressures for the *status quo*. It could be argued that the exposure of the corruption and frauds of Enron, the global energy company, probably did more to introduce tougher US regulations on corporate giants than any external campaigns by anti-corporate anti-globalisation demonstrations. But this would miss the point. Enron only became a scandal because it emerged as a living example of the argument made by the anti-globalisation campaigners, that corporate welfare was a drag on society more than social welfare, and raw economic neo-liberalism suited the already powerful. Critics can get very enthusiastic about the possibilities of change, but one has to be sober. Bookshelves in libraries are full of books promising and promoting radical change in corporate culture, food supply, societies, the arts, politics, which failed to happen. The shaping of the future is often more prosaic. Large shifts are made in both incremental and surprising ways.

Some of the key variables which are likely to determine the future of food include:

- the balance of forces in society and the relative strength of forces and ideologies in and beyond the State;
- whether public policy remains on a 'business as usual' or 'semi-engaged' or 'fully engaged' basis, a distinction which itself depends on political commitment and external pressure;
- how health is conceived – as an individual or population issue;
- whether the environment is seen as an infrastructure for health or as a separate policy 'box';
- public pressure, i.e. the preparedness of consumers to act, not just think, like citizens with a long-term commitment to ecological sustainability;

17. Hitchman C, Harrison M, Christie I, Lang T (2002). *Inconvenience Food*. London: Demos.

18. Ray P, Anderson SH (2000). *The Cultural Creatives: How 50 Million People Are Changing the World*. New York: Harmony Books.

- the degree of organisation and co-ordination among forces adhering to either paradigm, or backing courses of action which favour one or the other (or sit on the policy divide).

There are likely to be some more specific deciding factors, which could also include issues such as:

- the costs of ill health and healthcare as a fiscal burden;
- how urgent and personal environmental pressures such as climate change and water shortage are experienced by the middle classes. If they see no ‘escape’, they are likely to shift balance towards change, as they did over sanitation in the 19th century;
- the tolerance for levels of inequalities within and between societies;
- whether powerful, coherent alliances promoting food democracy emerge;
- the state of public confidence and trust in the food supply chain;
- political pressure on the State, intergovernmental forums and politicians to listen and lead;
- viability and credibility of options for the food supply chain’s future direction, and the relevance and validity of evidence for policy options;
- commercial responses such as greenwash and cynical manipulation of crisis fatigue;
- unforeseen crises and disasters arising from current food supply practices.

The public health literature still tends to celebrate great initiatives from the past such as Finland’s or that of Thailand,¹⁹ but these were intellectually and constitutionally framed in the 1970s and 1980s respectively. Today’s world is characterised by if not weaker then looser governance which restricts the levers available to *national* governments. This is not to say that elected governments are without influence, or that trans-national government bodies could not be subject to elections and tougher scrutiny (the EU is constitutionally an important experiment in this respect) but that there are external pressures over which their influence is limited or subject to bargaining in inter-governmental forums. Finland, for instance, would be unable to undertake its oft-cited North Karelia initiative, which required good integration of messages put out on national radio and television. That country now receives, as do almost all, hundreds of TV channels via satellite or cable. For these and other reasons, policy attention is once more focused on international bodies, both ‘new’ such as the WTO and ‘old’ such as the FAO and WHO. Approaches such as the WHO’s have considerable implications for national and local food supply chains, if followed through. And this is key. It is important to recognise that an ‘individualist’ as opposed to a ‘population’ approach to food and public health will have distinct characteristics. Examples of these are teased out and summarised in Table 4. The population approach to food and public health offers very different lines of thought and action to those which would be undertaken within an individualist framework.

19. Commission on the Nutrition Challenges of the 21st Century (2000). ‘Ending Malnutrition by 2020: An Agenda for Change in the Millennium. Final Report to the ACC/SCN’, *Food and Nutrition Bulletin*, 21, 3, Supplement, September. New York: United Nations University Press pg.19ff.

The individualist approach reinforces personal choice and individualised rights over social and cultural dietary patterns. In contrast the population approach argues that individuals are not primarily responsible for controlling their consumption of, for example, less fat or salt, and can do little to prevent high blood pressure or help implement major health behaviour change unless there is change in the food supply. The basis of the population approach is that greater individual change can be achieved by population by creating a societal shift, particularly where individuals have no choice or control over the content of diet.

Table 4. Different approaches to food and health policy, by paradigm

<i>Policy focus</i>	<i>BUSINESS AS USUAL (Productionist Paradigm)</i>	<i>MIX AND MATCH (Life Sciences Integration Paradigm)</i>	<i>FULL ENGAGEMENT WITH ECOLOGICAL POPULATION HEALTH (Ecologically Integrated Paradigm)</i>
Relationship to general economy	Trickle down theory; primacy of market solutions; inequality is inevitable	Corporation-led due to need for large private sector science budgets	Population approach via real stakeholder consultation; health as economic determinant; inequalities require societal action
Direction for health policy	Individual risk; reliance on charity; safety is prime concern	Public-private partnerships; personal insurance; safety and nutrition some concern but approached by risk management and hazards control	Social insurance including primary care, welfare and public health services;
Approach to diet, disease and health	Implicit acceptance of societal burden of disease; inability to act on problems of over- and under-nutrition	The right to be unhealthy; a medical problem; individual choice is key driver; demand will affect supply; niche markets	The right to be well; entire food supply geared to deliver health
Food Business	Commodity focus; industrial scale ingredients and processing; costs of ill-health not included in price of goods;	Commodity focus with niches; underpinned by public costs but subject to pressure to shift costs from public to private;	Costs internalised where possible; needs to develop more robust mass production controls; emphasis on 'natural' products and processing;
Environment	Tendency towards monoculture; limited consideration of costs; pressure on resources to produce food; <i>ad hoc</i> adjustment; industrial chemical dependency	Reinforces monocultural tendencies but some rhetorical concern about diversity; gradualist; acceptance of importance; hi-tech industrial approach to problems; tries to reduce industrial chemical dependency	Biodiversity at heart of thinking; works with ecological assumptions; development of robust ecological systems; minimised industrial chemical use
Consumer culture	Individual responsibility; self-protection; consumerism dependent on willingness to pay as consumer;	Access and benefits according to capacity to pay;	Societal responsibility based on a citizenship model; defined rights as citizenship; authentic stakeholder involvement
Role of the State	Minimal involvement; avoid 'nanny state' action; resources are best left to market forces	Balance of public and private sector; rhetoric of minimal state accompanied by strong state action in some sectors; enabling regulation	Sets common framework; provider of resources; corrective lever on the imbalance between individual and social forces