

The modern food industry and public health: A Galbraithian perspective

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Abstract

John Kenneth Galbraith famously argued that many of the health problems faced by modern advanced economies were as a result of the increased consumption, ushered in by the large corporation. Although attracting a degree of attention and notoriety around the time of publication, Galbraith's analysis of the large corporation has slipped somewhat from view. The article considers Galbraith's approach to the firm, highlighting how it characterizes the modern food industry. The article argues that Galbraith has much to contribute to the understanding of debates on the modern food governance, suggesting a range of regulatory responses.

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THE MODERN FOOD INDUSTRY AND PUBLIC HEALTH: A GALBRAITHIAN PERSPECTIVE

Virtually all of the increase in modern health hazards is the result of increased consumption. Obesity and associated disorders are the result of increased food consumption; cirrhosis and accidents are the result of increased alcohol consumption; lung cancer, heart disease, emphysema and numerous other disabilities are the result of increased tobacco consumption; accidents and resulting mortality and morbidity are caused by increased automobile use; hepatitis and numerous disabling assaults are often caused by increased drug consumption; nervous disorders and mental illness follow from efforts to increase income, observation of the greater success of others in increasing income, the fear of loss of income or the fear of the various foregoing physical consequences of high consumption. At the same time medical and hospital care is not part of the development which induces these disorders. It lags systematically behind - for a large part of the population, including many who are relatively affluent, its availability is uncertain and its cost alarming or prohibitive.

John Kenneth Galbraith (1973: 297)

INTRODUCTION

John Kenneth Galbraith (1908-2006) was one of the first economists to identify and explore the wider ramifications of the advent of the consumer society. Galbraith argued that individual tastes were not exogenous but learned and shaped by cultural, institutional, and socio-economic processes, and by particular influences such as advertising. Galbraith was also one of the first economists to highlight how large firms, as well as the wider economic superstructure, influence consumption and work patterns in a way that can run counter to the wider public interest. He highlighted how the large firms that dominate the food, tobacco, pharmaceutical, automobile, and alcohol industries, use sophisticated marketing techniques to increase sales and ensure what is produced is ultimately sold. The resulting augmented consumption patterns can have harmful health and environmental effects. Similarly social and economic pressures to increase working hours and augment incomes have been linked to the increase in psychological disorders. Indeed many modern health problems can be seen as consequences of the consumer society ushered in by the modern large corporation and the behaviors that they encourage.

Although attracting a degree of attention and notoriety around the time of publication, Galbraith's analysis of the large corporation has slipped somewhat from view (Dunn, 2010). This article considers Galbraith's approach to the firm, highlighting how it characterizes the modern food industry, identifying the basis for divergences between private and public interests, illuminating a range of contemporary public health and environmental anxieties, and begins to explore a range of regulatory responses (see also Dunn, 2006, 2010). In the next section I briefly review Galbraith's analysis of the nature of the modern firm. The following sections consider the nature of modern agriculture, the food industry and the food

retailing sector and how it generates a range of environmental and public health concerns. The technical sophistication of the large food corporation is highlighted and its ramifications for public health policy explored. The article concludes by suggesting that Galbraith has much to contribute to the understanding of contemporary debates on food governance and public health.

GALBRAITH AND THE MODERN FIRM

Today the firms that produce and sell the majority of the goods and services are large powerful bureaucracies, dominated by professional managers. Although markets have evolved beyond the mainstream competitive ideal, Galbraith (1952, 1967) argued that the standard predictions regarding the consequences of this shift – inefficiency and the ruthless exploitation of economic power – have not been supported by the facts. The modern firm has ushered in an era of tremendous affluence. Few customers of large corporations complain of exploitation, anti-trust laws are seldom invoked, and the instances of oligopoly are typically associated with the greatest output and the most robust growth (Galbraith, 1952, 1967, 1973). For Galbraith this required explanation.

Galbraith highlighted how the rise of the modern corporation facilitates tremendous technological change by insulating itself from, as well as mitigating, a variety of market uncertainties. *American Capitalism* introduced the idea that America's large and dominating corporations, though they had power to control their markets, also sustained the modern technological progress fundamental to economic growth (see Galbraith, 1952). The main argument of *American Capitalism* was, however, new restraints on private economic power

emerged on the other side of the market to limit the power of large firms – what Galbraith labeled countervailing power.

In *The New Industrial State* Galbraith (1967: 32-5) further identified the key dynamics that underpin the modern business enterprise. At its core his thesis was that advanced technology requires large dedicated commitments of capital, skilled labor and time.¹ As the firm grows and as production processes become increasingly complex and technologically more sophisticated, there is an increasing need for a team of dedicated bureaucratic specialists to administer the decisions of the modern business firm. Echoing the notion of bounded rationality (Simon, 1955, 1957, 1959; Williamson, 2004), Galbraith noted that the complexities of modern technology mean that one person can no longer be familiar with all the aspects of engineering, procurement, quality control, labor relations and marketing, which are necessary for doing business.

As group decision-making and technical expertise become more important, power passes from the individual owner to those people with the requisite knowledge of the production process – the technostructure. The technostructure represents a new class and a new factor of production. It is comprised of the diffuse decision-making structure of the large corporation, and it affects the use and promulgation of modern technology. It encompasses an array of managerial, technical, scientific, legal, engineering, accounting, and advertising expertise. And it underpins the expansion in the scientific and educational elite, which accommodates this need: “The industrial system by making trained and educated manpower the decisive factor of production, requires a developed educational system” (Galbraith, 1967: 364).

Organization is the manner by which the technostructure achieves co-ordination and makes decisions. Organization exists as a necessary response to the imperatives of complex technology and the diffusion of requisite knowledge that needs to be brought to bear in its

realization (cf. Simon, 1972, 1976, 1979). The technostructure selects products and chooses production techniques, including the number and type of workers to employ; they develop marketing and pricing policy; they conduct Research and Development, and; they are responsible for organizing access to finance (internally or externally). Its decision-making conventions and governance structures permit informed, reliable and coordinated decisions, and it enables the pursuit and alignment of common objectives across a range of specialists. The decisive factor in economic success is no longer the heroic individual, but organized intelligence: “It is not to individuals but to organizations that power in the business enterprise and power in society has passed” (Galbraith, 1967: 75).

As power passes to the technostructure, the behavior of the modern corporation will increasingly reflect its aims and objectives. The technostructure will choose those goals and strategies that facilitate its survival and reproduction, such as driving growth, controlling and dominating the supply chain, and lobbying governments and regulators – what Galbraith refers to as “the protective need” – and those that enhance its status and position, such as the pursuing technical virtuosity – what Galbraith refers to as “the affirmative need”. Focusing on growth and survival also directs attention to the various policies pursued by the technostructure to make the market more reliable and predictable. The market and the forces of competition generate considerable uncertainties for the large firm. Inflexibly making large investments over an extended period of time increases the firm’s vulnerability to outside threat. As the price of failure is great, it must be avoided at all costs. Of course: “The greatest source of insecurity ... [lies] in competition” (Galbraith, 1958: 108). Thus, avoiding failure means escaping the tyranny and hazards of competition and the market.

To thrive, firms seek to control the market rather than being subservient to it. For example, investment in new technology is costly; and firms wish to avoid the prospect that,

after expensive investment, there will be little or no demand for the goods they produce.

Large investments of time and money must be protected if the costs of technological change are to be recovered and its benefits realized:

Technology, with its companion commitment of time and capital, means that the needs of the consumer must be anticipated – by months or years. ... By the same token, while common labor and carbon steel will be forthcoming in response to a promise to pay, the specialized skills and arcane materials required by advanced technology cannot similarly be counted upon. The needed action in both instances is evident: in addition to deciding what the consumer will want and will pay, the firm must take every feasible step to see what it decides to produce is wanted by the consumer at the remunerative prices. And it must see that the labor, materials and equipment that it needs will be available at a cost consistent with the price it will receive. It must exercise control over what is sold. It must exercise control over what is supplied. (Galbraith, 1967: 41)

This, according to Galbraith, is a primary reason for the observed growth of the large firm and its nexus to the political apparatus. The technostructure, through the modern corporation, must lever its power to ensure its continued operation and, in so doing, reduce the uncertainties it is subject to. Galbraith outlined five main strategies which are utilized by the technostructure for managing uncertainties. The firm can either ignore market uncertainty or absorb it via diversification and agglomeration or, more typically, it can mitigate the impact of the market, by superseding it, controlling it, or suspending it via a network of contracts (Galbraith, 1967: 44-5). The consequence of such strategies, however, is that traditional

measures of concentration will under estimate the power and reach of the large firm (see Cowling and Sugden, 1998a, 1998b; Cowling, and Tomlinson, 2005; Dunn, 2001, 2008, 2010).

Perhaps the most contentious part of Galbraith's thesis, however, was that the modern corporation seeks to mitigate uncertainty in attempting to manage the response of the consumer (Anderson and Dunn, 2006; Dunn and Anderson, 2006). In the conventional wisdom the firm is subservient to the given preferences of consumers. According to Galbraith, consumer demand is not exogenous, but is shaped by institutional processes and by particular influences such as advertising (Dunn, 2010). It is the need to protect the investment of capital and time that creates a strong incentive to ensure what is produced gets sold. If large capital outlays on advanced technology are to be recouped, and if the technical virtuosity of the technostucture is to be maintained, then the response of the consumer must be managed (Galbraith, 1967: 208). This explains the huge growth in advertising and investment in brand management and development by the modern firm – see table 1 (cf. Dawson, 2003).

[Insert Table 1 around here]

In identifying the process of want management, Galbraith (1958) first articulated the notion of a dependence effect.² The dependence effect is a portmanteau concept and embodies passive and active aspects. The passive aspect is the process of emulation whereby social norms and localized cultural comparisons induce consumption patterns, i.e., the social pressure to “keep up with the Jones's”. The active aspect refers to the contriving of specific social wants and, equally important, the creation and reproduction of a consumer culture (cf.

Stanfield, 1996; Fine, 2002; Dawson, 2003). Galbraith accepts that advertising and other attempts at consumer manipulation may not be perfect, but its power, presence and influence must be acknowledged and analyzed (Anderson and Dunn, 2006; Dunn, 2010).

In *The New Industrial State* Galbraith (1967) linked the processes of managing the response of the consumer with the need to protect the upfront investment in technology as well as the interests of the technostructure. This management of the consumer by the firm is referred to by Galbraith as 'The Revised Sequence'. Rather than firms satisfying the wants and demands of the consumer, the modern firm "accommodates the consumer to the goals of the technostructure and provides a climate of social belief that is favorable to this result" (Galbraith, 1967: 235). The revised sequence is broader than just the management of specific consumer demand by the firm, encompassing the wider forces that reinforce consumerism. Consumers must be able to buy goods as well as desire them, so the technostructure has a vested interest in ensuring this: "Members seeks to adapt the goals of the corporation more closely with their own; by extension the corporation seeks to adapt social attitudes and goals to those of the members of its technostructure. So social belief originates at least in part with the producer. Thus the accommodation of the market behavior of the individual, as well as of social attitudes in general, to the needs of producers and the goals of the technostructure is an inherent feature of the system" (Galbraith, 1967: 217).

The organizations that are able to emancipate themselves from the uncertainties of the market, what Galbraith refers to as 'the planning system', account for around half of the total production in modern industrialized economies. Smaller firms populate the other half of the economy, what Galbraith refers to as 'the market system'. Together this comprises Galbraith's bimodal view of the modern economy. The resulting distribution of power, dominance and control of prices by the planning sector means that the terms of trade favor

the large corporation. For example it is clear that the large firm exploits its power for its own ends, seeking a relatively secure and favorable income.³ The consequence is that the market sector receives lower and less secure income (Galbraith, 1973: 65-66). Galbraith's bimodal view allows policy makers to understand the nature and extent of the planning system's influence. Accordingly, such knowledge may be marshaled to serve the development of policy, new institutional structures and meet broader social goals (Galbraith, 1973: chapters 21-31; Dunn, 2010).

THE CASE OF AGRICULTURE

Galbraith's analysis of large firms and their relationship with small firms is instructive in helping analyse the modern food industry. The twentieth century witnessed a technological revolution in the international food supply chain in an effort to manage and mitigate the uncertainties that surround both food production and consumption. There were unprecedented changes in how food is produced, distributed, consumed and controlled – and this was characterized by a politically-aided process of consolidation and concentration.⁴ At the turn of the twentieth century giant machinery: “began to replace human labor and ‘Fordist’ thinking was applied to both plant and animal production. Large-scale experimentation was expended on trying to reduce nature's unpredictability. Agrichemicals replaced the hoe; feedlots replaced grazing; monoculture replaced smallholdings (Lang and Heasman, 2004: 139).

Agriculture has been radically transformed and industrialized by large agrochemical and biotechnology firms, dominated by large technostructures, heavily investing in Research and

Development. The agrochemical industry, which controls the supply of seeds, fertilizers and pesticides, for example, has become extremely concentrated. As Lang and Clutterbuck (1991) point out, in the late 1980s, the top 20 firms worldwide accounted for around 90% of sales. By the late 1990s, the number of firms responsible for this level of sales had halved (Lang, 2004). And at the turn of the millennium seven were responsible for the same level (Table 2). In 2002 Biotech research was €11.4 billion in the U.S., and €5 billion in Europe (Lang and Heasman, 2004: 25). This research is heavily concentrated in the advanced industrial countries, with eight countries representing 83 per cent of the total funds spent on biotechnology, and, consistent with Galbraith's thesis, a significant proportion of this research is underwritten by Governments. Indeed a global science base has emerged to further the goals of increasing output, ranging from Universities, colleges of agriculture, extension services as well as a whole panoply of ancillary support functions (Lang and Heasman, 2004: 19).

[Insert Table 2 around here]

The large corporations undertaking such investments have ushered in a series of major revolutions in the growing of food, such as the mass use of agrochemicals, hybrid plant breeding and genetic modification. The rearing of animals has similarly been subject to a major revolution, with the introduction of factory farming, intensive livestock rearing and the prophylactic use of pharmaceuticals to increase weight gain.⁵ Food processing has also been subject to enormous technological advance, with the increased use of extrusion technology, fermentation, as well as the wholesale use of cosmetic additives to disguise products and yield consistency (Lang, 2004). This transformation has delivered tremendous productive

advance, resulting in a relative abundance of cheap, mass-produced food. Again consistent with Galbraith's thesis, it should be no surprise that this has also given rise to a range of contemporary concerns – which the theoretical framework of *The New Industrial State* helps explain, passing Galbraith's 'text of anxiety' (see Galbraith, 1973: chapter 20).

The obsession of the modern food industry in producing ever-higher yields and ever-larger quantities, has given rise to a variety of environmental and public health costs and concerns. The environmental impact of the rapid industrialization of the global food production chain, for example, has been significant, with the collapse of fish stocks, soil erosion, deforestation and falling water tables in areas of key agricultural production. There has been increased public concern regarding the impact of pesticide residues, antibiotics and veterinary drugs, food pathogens, environmental toxins such as lead and mercury, organic pollutants such as dioxins, on public health. Nutrigenomics, which aims to unlock the secrets of genes, diet and lifestyles, is also viewed by some Public Health specialists, as targeting rich consumers and the worried well, by preying on fears and desires. And there has been further concern over the impact of Genetically Modified crops and foodstuffs on the food chain. All these concerns call for decisive regulatory action.⁶

At the same time as agriculture has become increasingly technologically sophisticated, we have also seen the emergence of large firms dominating the global food supply chain (see Table 3). Galbraith was aware of such trends. As he pointed out in *American Capitalism*:

Those from whom the farmer buys and those to whom he sells do, characteristically have market power. The handful of manufactures of farm machinery, of accessible fertilizer manufacturers or mixers, of petroleum supplies, of insurance companies all exercise measurable control over the prices at which they sell. The farmer's market

for his products – the meat packing industry, the tobacco companies, the canneries, the fluid-milk distributors – is typically, although not universally, divided between a relatively small number of large companies. There is no more vigorously debated question in economics than that of the measure of jurisdiction that such companies exercise over their buying prices. (Galbraith, 1952: 159).

It would therefore be no surprise to Galbraith that, for example, in the United States, the market share of the top 20 food manufacturers has doubled since 1967 (Connor, 2003).

[Insert Table 3 around here]

Lyson and Raymer (2000) identify the power and control exhibited by the ten largest food and beverage corporations which control over half of the food sales in the United States. Such rise in concentration and power is, however, increasingly masked by traditional analyses (Cowling and Sugden, 1998a, 1998b; Cowling and Tomlinson, 2005; Dunn, 2008, 2010). As Heffernan, Hendrickson and Gronski (1999) highlight conventional measures of concentration do not reveal the extent of vertical integration in the food system in the United States, nor highlight the complex web of global interactions among the top food firms. As noted above, in the conventional wisdom the focus of economic power is usually the individual firm and its market share. The changing nature of the modern food industry, however, is driving a more complex set of hierarchical power relations between firms and across producers.⁷ As Galbraith argued the power of firms can also be exercised through the various relationships in which a firm is involved in, even if it does not hold a majority share. Although acquisition continues to be the dominant strategy for acquiring control of another

firm, mergers, joint ventures, partnerships, contracts, and less formalized relationships, such as agreements and side agreements, are also used in the modern food industry to consolidate control and market power (Heffernan, Hendrickson and Gronski, 1999).⁸

The result is that the modern food production system is dominated by large food conglomerates (see Table 2). The food supply chain is incredibly complex and technologically sophisticated, starting with involvement in biotechnology, extending through production, and ending with highly processed, heavily marketed, global food brands.⁹ Nestle, for example, produces a range of diverse products ranging from: soluble, roast and ground coffee, water and other beverages, dairy products, breakfast cereals infant food, chocolate and confectionary, food services, pet care, food flavors, and pharmaceutical products, among others. Similarly over the last forty years McDonalds, has emerged as a major global buyer of people, potatoes, beef, chicken and real estate, with a heavy investment in food science and consumer persuasion. As Eric Schlosser (2002: 4) highlights in *Fast Food Nation*:

The McDonald's Corporation has become a powerful symbol of America's service economy, which is now responsible for 90 percent of the country's new jobs. In 1968, McDonald's operated about one thousand restaurants. Today it has about twenty-eight thousand restaurants worldwide and opens almost two thousand new ones each year. An estimated one out of every eight workers in the United States has at some point been employed by McDonald's. The company annually hires about one million people, more than any other American organization, public or private. McDonald's is the nation's largest purchaser of beef, pork, and potatoes - and the second largest purchaser of chicken. The McDonald's Corporation is the largest owner of retail property in the world. Indeed, the company earns the majority of its profits not from

selling food but from collecting rent. McDonald's spends more money on advertising and marketing than any other brand. As a result it has replaced Coca-Cola as the world's most famous brand. McDonald's operates more playgrounds than any other private entity in the United States. It is one of the nation's largest distributors of toys. A survey of American schoolchildren found that 96 percent could identify Ronald McDonald. The only fictional character with a higher degree of recognition was Santa Claus.

Over the last twenty years, the large food firms have sought to further consolidate their brands and influence, increasing their market power.¹⁰ This 'consolidation of brands' more prosaically alludes to the heavy investment in the persuasion and management of the consumer. Given the technologically sophisticated nature of modern food production it should be no surprise that the large firms that control and dominate it, should seek to manage response of the consumer (cf. Fine, Heasman, and Wright, 1996).

To protect its large investments and market dominance the large food retailers, processors and agrichemical firms all undertake huge investments in advertising and brand development, targeting 'segmented' consumers, and drawing upon a sophisticated array of marketing techniques. The food industry's annual advertising budget, for example, is \$40 billion which is higher than the GDP of 70 per cent of the world's nations (Lang and Heasman, 2004: 206). The aim of such advertising and marketing budgets, which ranges from T.V. advertisements aimed at various market segments including children, to other marketing ploys such as 'super size' portions and distributing toys to children, is increased consumption. The global brands, which are marketed by such advertising, however, tend to be excessively refined – high in either salt, sugar and saturated fats, or all three combined (see Table 4).

It should be no surprise, therefore, that the increasing global dominance of Coca-Cola, McDonalds, Pizza Hut, KFC, Pepsi and the other the large food processing and producing corporations, is coinciding with a range of public health epidemics caused by an excessive consumption of salt, sugar and fats and an under-consumption of fruit and vegetables, i.e. the complete opposite of what is recommended as in the public interest by Public Health officials.¹¹ It is no surprise that the excessive consumption of energy dense, high fat, high salt foods, as well sugary and alcoholic beverages, is driving the contemporary health problems of obesity, alcohol abuse, high blood pressure, and the resultant rise in heart disease, liver disease, stroke and diabetes.¹² The social costs of this excess consumption, which are significant, are not borne by the food producers who induce it. For example, the US Center for Disease Control, for example, estimates that the cost of obesity and overweight in the USA is around \$117 billion (CDC, 2002). And it is no surprise that we are witnessing a epidemic with childhood obesity given: “in industrialized countries, food advertising accounts for around half of all advertising broadcast during children’s TV viewing times. Three-quarters of such food advertisements promote high calorie, low-nutrient foods” (Lang and Heasman, 2004: 206).

[Insert Table 4 around here]

Nevertheless the food industry has been slow to respond to the fact that the consumption of its products is driving a range of major public health epidemics.¹³ From a Galbraithian perspective it is unsurprising that the resultant information flow from large firms is uneven, that labeling is arbitrary or that marketing, advertising and sponsorship is designed to influence perceptions and mitigate the threat of public challenge. The large transnational firm

has a strong financial incentive to manage both the consumer, and the flow of information, protecting its investments and pursuing its own objectives, even if it diverges from the wider public health interest. But the large firm will not stop there. Instead it will seek to manipulate the public interest, so it aligns with its own interest.

It is therefore to be expected that the food industry will seek to lobby Governments and regulators to protect their interests – what contemporary economists refer to somewhat opaquely as ‘regulatory capture’.¹⁴ Meat and dairy producers in the U.S., for example, have extensively lobbied congress to protect its own interests and have succeeded in diluting the Surgeon General’s advice to eat less meat and dairy products (Lang and Heasman, 2004: 114). Similarly the food industry has successfully sought to fight off the threat of tobacco style litigation through the enactment of the 2004 Personal Responsibility in Food Consumption Act, which places responsibility for overeating and obesity firmly with the individual.¹⁵ Paul Krugman (2005a), the 2008 Nobel Prize winner in economics, highlights how the food industry, which promotes excess consumption, and is a key player in the obesity epidemic, is using more sophisticated strategies to mould public opinion and shape regulatory responses:

Public health activists were successful in taking on smoking in part because at the time corporations didn't know how to play the public opinion game. By today's standards, the political ineptitude of Big Tobacco was awe-inspiring. In a famous 1971 interview on ‘Face the Nation,’ the chairman of the board of Philip Morris, confronted with evidence that smoking by mothers leads to low birth weight, replied, ‘Some women would prefer having smaller babies.’ Today's food industry would never make that kind of mistake. In public, the industry's companies proclaim

themselves good guys, committed to healthier eating. Meanwhile, they outsource the campaigns against medical researchers and the dissemination of crude anti-anti-obesity propaganda to industry-financed advocacy groups like the Center for Consumer Freedom.

The resources available to organizations representing consumer interests against the barrage of firm advertising and influence is, however, limited. It is a prime example of social imbalance. As Lang (2004: 12-13) highlights: “The top 20 food brands in the UK spend over £105 million a year on marketing ... While the UK Government spends around £5 million on healthy eating advice, Coca-Cola alone spends £27 million in the UK yearly. It spends \$1.4 on advertising worldwide, as does McDonalds”. What is more although Public health programmes attempt to alert consumers to the health consequences of their consumption habits, receptiveness to such warnings tends to be contingent upon a mix of education and income (Fine, 2001).

Nevertheless after a period in which states in developed countries actively promoted the restructuring of supply chains in the name of efficiency and output maximization, adverse public reaction to these changes in the West is now forcing governments to respond differently, driving better food labeling and reductions in fat, salt and sugar levels in many products. Educated and informed consumers are increasingly forcing large corporations and retailers to improve product information, promote health conscious foodstuffs and increase the amount of organic food that is produced. Health foods are also increasingly big business. There are calls for new democratically accountable regulatory organizations to better understand and monitor the link between food safety, food security, nutrition, biotechnology and environment. There is a need for the more rigorous harmonization, enactment and

enforcement of international standards and more comprehensive independent research, monitoring and assessment. And there is recognition of the need to protect children from junk food advertising, and to follow the lead of both Sweden and Norway, who have banned food TV advertisements aimed at children under twelve.¹⁶

COUNTERVAILING POWER

The modern food retail industry also exhibits elements of both Galbraith's concept of countervailing power and his bimodal view. Where once food retail markets were highly fragmented, consisting mainly of small traditional independent retailers, they have since become highly consolidated, driven by a process of organic growth and mergers by leading retailers (see Table 5). The result has been the marginalization of small independent retailers, restricted to acting as convenience stores, and market domination by a limited number of large-format, multiple-store retailers that attract the majority of consumer spending.¹⁷ The largest retail corporations have also sought to extend their operations internationally, and in the process, increased the global concentration of power. Over the period 1993-9, for example, the aggregate concentration of the top 10 grocery retailers in the European Union grew by 24.9%, whereas the market share of the bottom 10 companies in the EU Top 50 fell by 72.2% (Dobson, 2003).

[Insert Table 5 around here]

Food retailers have consolidated their market position and emerged as main gateways to consumers, using contracts and specifications to gate-keep between primary producers and consumers (Blythman, 2005). This points to the large retailers using its buying power to control a dense, global supply chain to pursue its own ends (cf. Dobson and Waterson, 1999; Clarke et al., 2002).¹⁸ As table 6 points out in the European Union 110 buying desks control the dynamics of the supply and value chain that source food for nearly 250 million people across the European Union.

[Insert Table 6 around here]

It is therefore unsurprising that, consistent with the Galbraithian hypothesis, traditional measures of concentration are also likely to understate the global power of the large corporation in the food retailing industry (cf. Cowling and Sugden, 1998a, 1998b). As Lang (2004: 9-10) points out:

Concentration is strongly linked to power and the concentration of power over the food system is now remarkable, whether one looks nationally, regionally or globally. A web of contractual relationships turns the farmer into a contractor, providing the labor and often some capital, but never owning the product as it moves through the supply chain. Farmers never make the major management decisions.

Food retailers provide, however, a source of countervailing power that acts as a constraint on the power of large food manufacturers (Dobson and Waterson, 1997; Dobson et al., 2001). This can drive real benefits for the consumer. Within ten years of entering the food trade, for

example, WalMart drove down market prices by 13 per cent (Lang and Heasman, 2004: 160).¹⁹ Similarly Aldi and Lidl have pursued an aggressive policy of hard discounting quality products that has benefited consumers and underpinned their expansion (see Knorr and Arndt, 2003). And in response to government and social pressure food retailers are also driving down the salt, fat and sugar content of several of their product lines. But although large retailers have provided a countervailing response to the rise of large food and agribusinesses, their impact has not been wholly benign (Blythman, 2005; Lang and Heasman, 2004). It should be no surprise that the U.K. Government's Competition Commission inquiry in 2000 concluded that industry was 'securing a good deal' for the British consumer, but that also U.K. supermarkets engage in a variety of business practices that operate against the public interest by inducing a climate of fear amongst suppliers, distorting competition and promulgating consumer confusion (Competition Commission, 2000; see also Blythman, 2005). Similarly in 1999 the United Nations Development Program called for tougher rules on global food governance concerning labor standards, fair trade and environmental protection (UNDP, 1999). There have also been some unintended, adverse consequences.

The price of food reflects a mix of production, distribution and retailing costs – with the later ends receiving the greatest margins reflecting the dominance of the global retailers and fast food chains. Many of the social, economic and environmental costs associated with the complex food supply and retail chain – ranging from low pay and poor working conditions, to over fishing, over farming, over watering, excessive use of fertilizers and pesticides, as well as the well-documented contribution of the food industry to climate change, as reflected in the increase in 'food miles' – are not, however, reflected into the price that the consumer pays. And although large retailers and fast food chains have succeeded in making driving

down the relative price of food, this, when combined with the relentless chorus of advertising and marketing messages, also has driven greater consumption. But that fact that typically the dominant global brands are rich in either calories, salt or saturated fat (or all three) means that excess consumption of such processed food and beverage products is giving rise to a range of a range of health related problems and fueling an obesity epidemic.

Although food companies and retailers are responding to such concerns, at the present time they appear tokenistic, with little overhaul of the basic business model. The regulatory response so far has also been underwhelming, failing to adequately respond to the tsunami of advertising that drives brand loyalty and excess consumption. As Lang and Heasman (2004: 206) note: “for every dollar spent by the WHO on preventing the diseases caused by Western diets, more than \$500 is spent by the food industry promoting these diets”. What is more, much of this advertising is targeted at children and less educated and more gullible groups of consumers. Such anxieties have been raised by Eric Schlosser (2002: 243) in *Fast Food Nation* who noted that:

American children now get about one-quarter of their total vegetable servings in the form of potato chips or french fries. A survey of children's advertising in the European Union (EU) found that 95 percent of the food ads there encouraged kids to eat foods high in sugar, salt, and fat.

Similarly food advertising and labeling does not provide full product information to allow consumers to make real choice. In the European Union, for example, nutritional labeling is only mandatory if a health claim is made. All this calls for a more comprehensive and

globally coordinated response to the problems generated by the unquestionable productivity and technological virtuosity of the modern food industry.

CONCLUSION

In his analysis of the large corporation Galbraith was neither blind to its virtues, nor blind to its vices (Dunn, 2010). Future research in the Galbraithian tradition will therefore acknowledge the fact that the model of food production and agriculture that is associated with the emergence of the large agribusiness and food processors has been successful in raising output. But it will also acknowledge and analyze the underlying causes of major public health anxieties: “While successfully raising the calorific value of the world food supply, it has failed to address the issue of quality, and as a result, there is now a world wide legacy of externalized health costs” (Lang and Heasman, 2004: 47). And it will also explore the range of regulatory responses that will increase the alignment with the public interest.

For Galbraith the most appropriate policy response seeks to harness the productive capacity of large corporations but mitigating clear abuses of their economic and social power. This requires improving the regulation and oversight of the planning system: “This consists in disciplining its purposes – in making these serve, not define the public interest” (Galbraith, 1973: 240). Galbraith’s analysis underscores the need to place issues of corporate governance at the centre of food policy, public health debate and regulation. Galbraith’s analysis of the planning system points to the need to develop appropriate forms of regulation to fetter the abuses of corporate power, as well as exploring new ways of making the corporate form more responsive to social goals and public health needs.

NOTES

¹ The nexus between technology, time and the need to cover costs was also alluded to in Veblen (1904, p. 93) who noted that: “the capital invested in any given industrial venture is turned over within a certain, approximately definite, length of time. The length of time occupied by the turnover may vary from one establishment to another, but in any given case the length of the turnover is one of the important factors that determine the chances of gain for the business concern in question”.

² For a discussion of the various contemporary debates regarding Galbraith’s approach to the management of the consumer in *The Affluent Society* and *The New Industrial State* see Hession (1972: 98-106; 180-185) and Reisman (1980: 72-100).

³ Although the expression of this power will be mediated through the lens of trust and culture, which will differ across countries and continents (see Galbraith, 1973: 138-149, 180-194; Dunn, 2010; cf. Burchell and Wilkinson, 1997; Deakin, Lane and Wilkinson, 1994, 1997).

⁴ It is a massive industry. As Lang and Heasman (2004: 155) point out: “The food industry is the leading industrial sector in the European Union (with 15 member states), with production estimated at €572 billion accounting for 13 per cent of the total EU manufacturing sector”.

⁵ Gold (2003), for example, highlights how the Indian broiler industry, for example, has grown from 31 million birds a year in 1981 to 800 million two decades later.

⁶ Lang and Heasman (2004: 181) warn that: “Notwithstanding persistent consumer, environmentalist and (some) expert concerns, the biotechnology industry is quietly making sure that GM crops are almost a *fait accompli* in world food supply; their rapid spread is making it difficult for consumers to avoid them and the trend is possibly irreversible.”

⁷ As Lang (2004: 9-10) points out: “Concentration is strongly linked to power and the concentration of power over the food system is now remarkable, whether one looks nationally, regionally or globally. A web of contractual relationships turns the farmer into a contractor, providing the labor and often some capital, but never owning the product as it moves through the supply chain. Farmers never make the major management decisions.”

⁸ It is important to note, however, that the precise expression of this power will be mediated through the cultural and institutional context. As Deakin, Lane and Wilkinson (1994, 1997; see also Burchell and Wilkinson, 1997) point out, the way large Japanese companies operate, especially in relation to their supply chain is much less predatory than U.S. firms, and in Germany contract law, powerful trade associations and labor law mediate contractual and other relations within and between firms, and this contractual environment affect the precise balance of power between businesses of different sizes.

⁹ As Schlosser (2002: 121) highlights: “About 90 percent of the money that Americans spend on food is used to buy processed food. But the canning, freezing, and dehydrating techniques used to process food destroy most of its flavor. Since the end of World War II, a vast industry has arisen in the United States to make processed food palatable. Without this flavor industry, today's fast food industry could not exist.”

¹⁰ Unilever, for example, has reduced its brand portfolio down from 1200 to 400.

¹¹ Schlosser (2002: 3) highlights the growth of such brands and the impact on U.S. society: “In 1970, Americans spent about \$6 billion on fast food; in 2000, they spent more than \$110 billion. Americans now spend more money on fast food than on higher education, personal computers, computer software, or new cars. They spend more on fast food than on movies, books, magazines, newspapers, videos, and recorded music - combined.”

¹² Schlosser (2002: 240-241) argues, capturing many Galbraithian themes that although “the current rise in obesity has a number of complex causes, genetics is not one of them. The American gene pool has not changed radically in the past few decades. What has changed is the nation's way of eating and living. In simple terms: when people eat more and move less, they get fat. In the United States, people have become increasingly sedentary-driving to work instead of walking, performing little manual labor, driving to do errands, watching television, playing video games, and using a computer instead of exercising. Budget cuts have eliminated

physical education programs at many schools. And the growth of the fast food industry has made an abundance of high-fat, inexpensive meals widely available.”

¹³ It is also salient to note that Statins are a medicalized and Pharmaceutical response to the excessive consumption of cholesterol-inducing saturated fats from dairy and meat, as well as hydrogenated (trans) fats.

¹⁴ In the US: “the agricultural industry is seen as one of the more powerful lobby groups: in a three year period, the food sector contributed around \$25 million to President George W Bush’s and other politicians campaigns, and five of the top people running the US Department of Agriculture in 2002 were linked to the meat industry” (Lang and Heasman, 2004: 272). For such reasons Eric Schlosser (2002: 267), in *Fast Food Nation*, concludes that: “The political influence of the fast food industry and its agribusiness suppliers makes a discussion of what Congress should do largely academic. The fast food industry spends millions of dollar every year on lobbying and billions on mass marketing. The wealth and power of the major chains make them seem impossible to defeat.”

¹⁵ The Food industry appears to have learnt several lessons from the tobacco industry. As Lang and Heasman (2004: 263) highlight: “Often, in the face of emerging activism, the food industry’s strategy is to deny links between consumption and ill health, while agreeing to fund scientists to study their product’s risk, and to adopt new softer tactics such as corporate social responsibility when confronted with the evidence.”

¹⁶ It is salient to note that the Judge’s decision in the well publicized ‘McLibel’ case in the U.K. concluded that “McDonald’s did “exploit” children through its advertising, endanger the health of its regular customers, pay workers unreasonably low wages, and bear responsibility for the cruelty inflicted upon animals by many of its suppliers” (Schlosser, 2002: 247).

¹⁷ Galbraith’s analysis of countervailing power is extremely relevant for the analysis of individual retail markets. Many individual European countries exhibit highly consolidated and oligopolistic retail environments, which dominate the supply side (The Economist, 2001). In France the Top 5 (Carrefour/Promedès, Leclerc, Casino, Intermarché, Auchan) control 88 per cent of the market, compared with 70.4 per cent in the UK (Tesco, Sainsbury, Wal-Mart/ASDA, Safeway and Somerfield). On the smaller Dutch market (15 million inhabitants) the Top 2 Ahold and Laurus achieve 63 per cent. The German retail market is similarly extremely concentrated with the Top 10 now representing around 84 per cent of sales (Knorr and Arndt, 2003). The Top 5 alone – Metro (19.7 per cent), Rewe (13.6 per cent), Edeka/AVA (12.7 per cent), Aldi (10.1 per cent) and Tengelmann (7.6 per cent) – are accounting for a market share of 63 per cent.

¹⁸ As Eric Schlosser (2002: 149) points out in *Fast Food Nation*: “The industrialization of cattle-raising and meatpacking over the past two decades has completely altered how beef is produced-and the towns that produce it. Responding to the demands of the fast food and supermarket chains, the meatpacking giants have cut costs by cutting wages. They have turned one of the nation’s best-paying manufacturing jobs into one of the lowest-paying, created a migrant industrial workforce of poor immigrants, tolerated high injury rates, and spawned rural ghettos in the American heartland.”

¹⁹ As an anonymous referee has pointed out WalMart’s business model has not been an unprecedented success story, failing to successfully transfer into the German context (see Ewing, 2005; Hall, Bawden and Butler, 2006; Schaefer, 2006). It is important to note, however, that WalMart’s failure in Germany can nevertheless be explained by Galbraith’s theory of the multinational enterprise outlined in *Economics and the Public Purpose*. Galbraith’s analysis suggests, that the modern firm or multinational corporation should not be viewed as an optimal outcome from a collective choice process, as typified in the mainstream approach. A key contribution of Galbraith’s approach is that capitalist firms should not necessarily be conceived as omnisciently pursuing Pareto efficient decisions (Dunn, 2010). Strategic decision makers, such as the technostructure, operating across cultures and continents in an uncertain environment, have to make real decisions. And these decisions can turn out to be wrong, through either bad luck or cultural arrogance. Such considerations characterize WalMart’s unsuccessful foray into Germany. Wal Mart’s failure in Germany was a failure of its competitive strategy and its failure to understand the competitive and cultural environment (Hall, Bawden and Butler, 2006; Schaefer, 2006). Knorr and Arndt (2003) list four principal reasons for WalMart’s failure: a fundamentally flawed entry-by-acquisition strategy; a failure to appreciate the legal, cultural and institutional framework; a US centric view of customer services, and; poor publicity due to its repeated infringement of some important German laws and regulations. In order to enter the market, for example, WalMart pursued a Galbraithian strategy of mergers and acquisitions. It paid a high price for *Spar*, which was one of the weakest retail players with one of the most run

down real estate portfolios, in the German market (Knorr and Arndt, 2003). Likewise Wal-Mart made some monumental blunders in terms of misunderstanding the German consumer. For example when it tried to offer services such as grocery bagging, it turned out that Germans didn't 'want strangers handling their groceries'. And when clerks followed orders to smile at shoppers, male customers took it as a come-on! Similarly Wal-Mart repeatedly ignored German co-determination rules, which give employees a say in corporate decisions that affect working conditions.

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Tables

Table 1: The top 20 global brands

2008 Rank	Brand	2008 Brand Value (\$m)	Country of Ownership
1	Coca-Cola	66,667	U.S.
2	IBM	59,031	U.S.
3	Microsoft	59,007	U.S.
4	GE	53,086	U.S.
5	Nokia	35,942	Finland
6	Toyota	34,050	Japan
7	Intel	31,261	U.S.
8	McDonald's	31,049	U.S.
9	Disney	29,251	U.S.
10	Google	25,590	U.S.
11	Mercedes-Benz	25,577	Germany
12	Hewlett-Packard	23,509	U.S.
13	BMW	23,298	Germany
14	Gillette	22,069	U.S.
15	American Express	21,940	U.S.
16	Louis Vuitton	21,602	France
17	Cisco	21,306	U.S.
18	Marlboro	21,300	U.S.
19	Citi	20,174	U.S.
20	Honda	19,079	Japan

Source: BusinessWeek (2008)

Table 2: World top 7 agrochemical transnational companies, 2001

Rank	Company	AgChem Sales 2001 (US\$m)
1	Syngenta	5,385
2	Aventis	3,842
3	Monsanto	3,755
4	BASF	3,105
5	Dow	2,612
6	Bayer	2,418
7	DuPont	1,917

Source: Agrow (2002)

Table 3: World Top Food Producers in FT Global 500, 2008

Sector Rank	Global Rank	Company	Country	Market value (\$m)	Turnover (\$m)
1	14	Nestle	Switzerland	197,215.3	108,313.0
2	60	Unilever	Netherlands/UK	101,642.1	63,516.8
3	166	Kraft-Foods	US	47,548.1	37,241.0
4	172	Danone	France	46,027.4	20,192.9
5	341	Archer-Daniels-Midland	US	26,489.6	44,018.0
6	397	Cadbury-Schweppes	UK	23,228.5	15,996.2
7	462	Kellogg	US	20,443.4	11,776.0
8	474	General-Mills	US	20,062.0	12,442.0
9	498	Wilmar-International	Singapore	19,368.2	16,466.2

Source: FT500 (Financial Times, 2008)

Table 4: Food and Beverage Companies in the Top 100 Global Brands, 2008

2008 Rank	Brand	2008 Brand Value (\$m)	Country of Ownership
1	Coca-Cola	66,667	U.S.
8	McDonald's	31,049	U.S.
26	Pepsi	13,249	U.S.
28	Nescafe	13,055	Switzerland
33	Budweiser	11,438	U.S.
39	Kellogg's	9,710	U.S.
56	Heinz	6,646	U.S.
61	Wrigley's	6,105	U.S.
63	Nestle	5,592	Switzerland
64	KFC	5,582	U.S.
66	Danone	5,408	France
81	Pizza Hut	4,097	U.S.
83	Moet & Chandon	3,951	France
85	Starbucks	3,879	U.S.
89	Smirnoff	3,590	Britain
95	Hennessy	3,513	France

Source: BusinessWeek (2008)

Table 5: World Top 10 Food Retailers, 2005

Rank	Company	Country	2005 Retail Sales (\$m)	Countries of Operation
1	Wal-Mart Stores, Inc.	US	312,427	Argentina, Brazil, Canada, China, Germany, Japan, Mexico, Puerto Rico, S. Korea, UK, US
2	Carrefour S.A.	France	92,778	Argentina, Belgium, Brazil, China, Columbia, Dominican Republic, Egypt, France, French Polynesia, Greece, Guadeloupe, Indonesia, Italy, Malaysia, Martinique, Oman, Poland, Portugal, Qatar, Reunion, Romania, Saudi Arabia, Singapore, S. Korea, Spain, Switzerland, Taiwan, Thailand, Turkey, Tunisia, UAE
3	Metro AG	Germany	69,134	Austria, Belgium, Bulgaria, China, Croatia, Czech Rep., Denmark, France, Germany, Greece, Hungary, India, Italy, Japan, Luxembourg, Moldova, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Serbia and Montenegro, Slovakia, Spain, Switzerland, Turkey, Ukraine, UK, Vietnam
4	Tesco plc	UK	68,866	China, Czech Rep., Hungary, Japan, Rep. of Ireland, Malaysia, Poland, Slovakia, S. Korea, Taiwan, Thailand, Turkey, UK
5	Kroger	US	60,553	US
6	Aldi GmbH & Co. oHG	Germany	45,096	Australia, Austria, Belgium, Denmark, France, Germany, Rep. of Ireland, Luxembourg, Netherlands, Slovenia, Spain, Switzerland, UK, US
7	Rewe-Zentral AG	Germany	44,039	Austria, Bulgaria, Croatia, Czech Rep., France, Germany, Hungary, Italy, Poland, Romania, Russia, Slovakia, Switzerland, Ukraine
8	Albertsons Inc.	US	40,358	US
9	Edeka Zentrale AG & Co. KG	Germany	39,445	Austria, Czech Rep., Denmark, Germany, Russia
10	Safeway, Inc.	US	38,416	Canada, US

Source: Deloitte (2007)

Table 6: Food industry concentration in the European Union

Dimension	Size
Consumers	249 million
Outlets	170,000
Supermarket formats	600
Buying desks	110
Manufacturers	8,600
Semi-manufacturers	80,000
Suppliers	160,000
Farmers/producers	3.2 million

Source: Cap-Gemini quoted in Lang and Heasman (2004: 160-162)