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The 'Wellness' Phenomenon: Implications for Global Agri-food Systems

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ABSTRACT

The 'wellness' phenomenon is now apparent throughout the world and is associated, *inter alia*, with: the importance of a balanced diet; recognition of the need for regular exercise; the introduction of workplace fitness programs; and the introduction of new (and alternative) approaches to the treatment of medical ailments. What has gone seemingly unnoticed, however, have been the quite profound changes that are occurring within agri-food chains. The development and sale of health-enhancing (functional) foods is one example. The desire, by consumers, for purchase of 'clean and green' foods that come without traces of agri-chemicals, conform to raised standards of animal welfare, and are sourced from sustainable production systems, is another.

Two more remarkable changes - given the former power and dominance of the food manufacturing sector - have been the increased influence the supermarket sector has been able to exert along agri-food supply chains, and the growth of the food service sector. Supermarkets have deliberately moved to 'own branding' as a means of increasing profits - something that has 'squeezed' the traditional branded products out of market share. The burgeoning food service sector is providing a wide range of options to the traditional activity of home food preparation and consumption. The food manufacturing sector is therefore facing considerable pressure to reconfigure its operations so as to remain competitive within changing power relations up and down the agri-food supply chains. It is here that 'wellness' becomes significant: one of the most important responses on the part of established food companies has been to shift the focus of their core activities from the provision of 'traditional' branded products to those which profess to provide 'wellness' benefits. For example, Nestlé, the largest food company in the world, now markets itself as a 'wellness' company rather than a food manufacturer, with a clear strategy for future growth and development. This involves a wide range of initiatives but, most importantly, the development of strategic alliances between food companies and drug manufacturers, and a convergence in the R&D activities of both groups. This paper analyses the growth of 'wellness' firms within the global agri-food sector, highlighting the significance of this development for actors within agri-food chains, and outlining the contradictory tendencies at play in agri-food chain restructuring.

INTRODUCTION

Author of the not-so-subtly-named bestseller *God Wants you to be Rich*, Paul Zane Pilzer, has entitled his latest book *The New Wellness Revolution: How to Make a Fortune in the Next Trillion Dollar Industry*. Pilzer, described on the book's dust jacket as a 'world-renowned economist', 'multimillionaire software entrepreneur' and 'college professor' argues in *The New Wellness Revolution* that there are discernible trends to healthier living. These include:

- A strong desire by a growing number of people in western societies to take control of their health futures
- The growth of new (often alternative) types of medical assessments and treatments that 'confront' the current medical model based on pharmaceutical-based solutions to ill-health
- Thousands of new products coming on to the market to promote health (vitamins, diagnostic devices, nutritional supplements)
- Recognition that obesity is a national epidemic in many countries and that alternatives to fast foods will be at least part of the solution to an overweight society
- The movement of restaurants and retailers into the provision of 'wellness' foods. Examples are McDonald's introduction of salads in 2005, and Wal-Mart's opening of its organics 'Supercentre' in Plano, Texas, in 2006
- A repositioning by a number of major food companies into the provision of products with significant health claims (Pilzer 2007: vii-xviii).

Pilzer argues that citizens of the Twenty First Century are no longer content to enjoy the trappings of contemporary life (computers, automobiles, air travel, access to a wide variety of foods) while forsaking their health. They want to be fitter, to age more slowly, and seek to prevent the onset of disease. They are purchasing products that lead to enhanced health benefits, while employers – ever conscious of the impact of rising costs of ill-health - are responding by investing in programs that improve the physical and mental fitness of workers. Importantly, those in the wellness industry are coming to rely on science (biology and cellular biochemistry) to provide the breakthroughs necessary for innovation in the industry. And, of course, Pilzer enjoins his readers to come on board the 'wellness revolution' so as to create their own financial fortunes (Pilzer 2007).

Although Pilzer can readily be accused of boosterism, self-promotion, and for producing an over-exaggerated account of the importance of 'wellness', he nevertheless identifies some important changes in the ways industry is responding to the demands of consumers for a healthier lifestyle.

In a much more nuanced, critical, way Lang and Rayner (2001) and Lang and Heasman (2001) have written about the growing importance of health concerns for the agricultural and food industries. The argument is that while farming (in general), and of food manufacturing/processing (in particular) are expected to produce benefits to the public, to the environment, and to the economy, there is evidence that the current system of food supply benefits the agri-food sector at the expense of both citizens and the environment. Lang and Rayner (2001) argue that an integrated approach to food provision, which they term 'ecological public health' should be a major priority of governments. Such an approach would bring together sustainability of food production, with food safety, and food nutrition, to form the so-called 'three pillars' of future food policy. They argue that a new approach would require health improvements along the entire food chain. Lang and Heasman (2004) consider that the current productionist paradigm of agriculture, based on an industrial food production system which is reliant upon factory farming, the heavy use of chemicals to sustain plant and animal production, and the transportation of huge quantities of food around the globe, is both energy inefficient and polluting. While currently firmly ensconced, it is under challenge from two new approaches – the so-called Life Sciences Integrated paradigm (basically, the use of new bio- and nano technologies to 'fuse' farming and food manufacturing with bio-science), and an Ecologically Integrated paradigm (which puts a premium on organic and other forms of sustainable production, emphasises the importance of local based foods and is conscious of the importance of reducing 'food miles'). Their Life

Sciences Integrated paradigm is quite close to that being outlined by Pilzer as the future of agri-food industries. This is one in which novel products that carry new health claims are launched by companies eager to distinguish their foods from those currently in the marketplace. However, there remain considerable concerns as to the ability of the Life Sciences Integrated paradigm to create the best system of food production for the future.

As this paper argues, there appear to be profit-making opportunities for those companies that can convince consumers that the products they are selling are health-giving. We know of a variety of ways that this can occur: via the promotion of so-called health foods; the stocking of the shelves of supermarkets with organic and other 'health' products; the labelling of products highlighting their 'green' credentials; and, as suggested above, the creation and marketing of 'new' health products such as nutraceuticals (those products seeking to enhance 'nutrition' via pharmaceutical intervention).¹ In attempting to understand the 'wellness' phenomenon in the agri-food industries we will examine, in particular, the changing power relations occurring between supermarkets and food manufacturers. The argument is that, while in past decades, food manufacturers such as Nestlé, Kellogg, Heinz and Unilever have dominated market share in the sales of publicly-recognised branded food items, today the supermarkets are competing away profits by selling increasing volumes of their (well-known and well-promoted) 'own brand' products. Squeezed by success of supermarket own branding, and by developments in the food service sector (including the proliferation of cheap 'fast food' outlets that use generic food inputs rather than branded products) the manufacturing food sector is seeking new ways to generate consumer demand. One way of doing so is to distinguish its products as those possessing attributes that enhance health and wellbeing, and to reposition the companies, themselves, as forming part of a new 'wellness' industry.

THE ERA OF HEALTH-ENHANCING FOODS

So-called 'health foods' have been manufactured and sold for well over 100 years. In Australia, for example, Sanitarium ('The Health Food Company') began in Melbourne in 1898. The company's health food shops and vegetarian cafes began in 1902 – with customers being offered foods with high nutritional content, accompanied by various health claims. Organic products (those produced without the use of artificial chemicals and which rely, instead, on composting and biological control of pests) have also had a long history. Albert Howard's and Rudolf Steiner's experiments and writings date to the early part of the 20th Century. In more recent times organics has grown from a small oppositional agricultural movement to a commercially successful global business (Lockie, Lyons, Lawrence and Halpin 2006). There has been considerable interest in the purchase of organic products, with markets for certified organic products growing at between 20 and 40 percent per year, worldwide – strongly associated with the desire of consumers for foods that are 'clean' (no added chemicals) and 'green' (from sustainable production systems) (see Lockie et al. 2006). The decision by many major supermarkets to stock literally hundreds of organic products has been viewed as strong endorsement of the health claims of the industry (Lyons 2007) while, in a reciprocal sense, allowing supermarkets to make claims about their own authority as the providers of healthy products (Dixon 2007).

A 'counter' tendency to organics in the agri-food industry is the harnessing of biotechnology and nanotechnology to produce foods and food additives that have claim to positive health benefits. Here, products are not 'natural' but are bio-manipulated so as to possess new, and supposedly enhanced, characteristics. These so-called 'functional foods' (including nutraceuticals) are conventional foods re-worked by food scientists to produce a health benefit above that which might be associated with the generic food itself (see Lawrence and Germov 2008: 148). One example is that of the fortification of fruit juices with calcium – in the hope of increasing bone strength and so reducing the incidence of osteoporosis in the general population. A slightly different example is of Nestlé's funding biotechnological research in Dunedin and Switzerland. Scientists are conducting research to develop probiotics - beneficial bacteria that have built up immunity to pathogenic and disease-causing bacteria - for use in infant nutrition products. Infants often contract upper respiratory tract infections (URTIs) which are difficult to treat.

¹ In 2001 Nutraceuticals were considered to be one of the fastest growing segments of the beverage industry (Egan 2001).

If the projects are successful, Nestlé's baby foods would incorporate probiotics so that when the company's foods are ingested they help to prevent URIs in children (Nestlé Nutrition 2007).

Similarly, there are growing applications of nanotechnologies. Nano-scale biological and non-biological entities are less than 100 nanometres – a nanometre is one billionth of a metre - in size (Scrinis and Lyons 2007). They possess properties that are different from their larger, macro-scale, equivalents. They are being utilised in the food industry to detect food pathogens, to emulsify otherwise incompatible substances, to bond with foods to enhance quality, flavours and nutrient levels, and to create 'food friendly' packaging materials (which will prevent food spoilage) (see Tarver 2006). A readily-known example in Australia is that of the Omega 3 nanoparticles that have been added to Tip Top bread. Omega 3 oil, from the tuna fish, is known to help protect the cardio-vascular system. It is an essential oil that should be taken on a regular basis, but is often missing from diets low in fish products. When Tip Top bread is eaten, tasteless and flavourless Omega 3 nano-particles are released in the stomach, thereby providing consumers with an important polyunsaturated fatty acid. And there are other examples. It is being proposed that folate (folic acid) be added to staple foods to help prevent neural tube defects in babies, that psyllium be added to breakfast cereals in an attempt to reduce coronary heart disease, and that phytosterols be introduced to spreads like margarines in the hope of reducing cholesterol levels (Lawrence and Germov 2008).

Despite the purported benefits, critics have pointed to a number of concerns with the new functional foods. The first is that there is often conflicting evidence over the likely advantages of adding new ingredients to existing manufactured foods; the second, that the beneficial health effects are only likely with the consumption of very large amounts of the new products; and third, that the pursuit of the reductionist biomedical model targeting individual products ignores the wider sphere of public health where factors like overall dietary intake and risky behaviours (smoking, for example) are ignored (Lawrence and Germov 2008). Scrinis and Lyons (2007: 24) have made the important point, in relation to nanotechnologies, that while some health benefits are predicted, there remain major concerns about the potentially toxic effects as nano-particles pass into the bloodstream and organs of the human body.² In the words of Mark Lawrence and John Germov (2008: 156) 'the capacity of molecular nutrition to make [beneficial] impacts on public health nutrition is not immediately apparent'.

This aside, food companies such as Heinz, Nestlé, Kraft and Unilever are investing large amounts of money in the development of functional foods in the hope that they will produce more cost-effective, nutritionally-enhanced and/or cheaper foods tailored for particular lifestyle markets. The ability of nanotechnologies (in particular) to value add and to increasingly differentiate food choice is seen to be a key advantage for the food manufacturing sector, and for the supermarkets (Scrinis and Lyons 2007). The global market for health-enhancing (functional) foods is experiencing rapid growth. The market in five major European countries, the US, Japan and Australia for foods claiming health benefits was worth between \$10-24 Billion in 2003 (Armstrong, Farley, Gray and Durkin 2005: 707). In surveys in the UK, some 65% of survey respondents claimed they were willing to pay up to 20% more for health-enhancing foods (Armstrong et al. 2005: 711).

'WELLNESS' COMPANIES

Wellness - as the opposite of sickness or illness - is a positive term that is associated with vitality, fitness, and well-being. It signifies a disease-free state of good health. It is little wonder, then, that the term 'wellness' appeals to those companies interested in promoting sales through consumer identification with a healthy lifestyle. In the last five years many of the large food companies – Nestlé, Kraft, Campbell's and so forth – have sought to move from the 'defensive' approach of trying to explain and justify why their products might contain artificial ingredients to highlighting the ways their products can contribute to healthy living. According to an Executive from

² A survey of European consumers in 2007 revealed that the majority of respondents rejected the use of nanotechnologies in food, despite that fact that it is already being employed in food production (Food Navigator 2007a).

Campbell's, products must 'celebrate life', be 'balanced' and provide 'energy and vitality'. She identified 'wellness' as a mega trend and indicated that sales of wellness products would exceed over \$200 billion within a few years as companies try to reinvent themselves for health conscious consumers (see Wright 2007). Campbell's Australia has a Centre for Nutrition and Wellness described as 'an information resource to help people of all life-stages understand the role that balanced nutrition plays in a health, active lifestyle' (Campbell's Australia 2008). The company's website gives tips on diet, exercise and the nutritional value of foods.

Another Australian example of branding for health and wellness is Woolworths – the 'Fresh Food People'. Woolworths is Australia's market leader in grocery sales. It has over 700 supermarket outlets and serves up to 13 million customers each week. It aims to supply customers with 'fresh, healthy....foods' and by 'offering expert nutritional advice (and) useful food handling and safety advice' (Woolworths 2008). Another company that has explicitly used the term 'wellness' is Tesco - one of the leading private brand leaders in the world, with its home brands accounting for over 50% of its total branded and non-branded food sales (see O'Keefe 2005: 31). Tesco has differentiated its products to appeal to different markets, with 'Tesco' as the conventional brand, 'Tesco Finest' for the higher-priced market, and 'Tesco Value' as the discount brand. It is at this higher price level that Tesco is entering the 'health' area with premium brand such as 'Tesco Healthy Living', 'Tesco Fair Trade', and 'Tesco Organic' (Tesco 2008).

In an interesting move by the corporate giant Coca Cola, the company has funded a permanent research centre at the Academy of Chinese Medical Sciences in Beijing to 'promote Chinese wisdom in preventive holistic health through new and innovative beverages'. The aim is to use locally sourced herbs to produce new beverages that will provide health benefits to consumers. This is partly in response to falling demand for full-sugar, carbonated, drinks and is consistent with the company's decision to form its own 'Beverage Institute for Health and Wellness' (*Food Quality News* 2007). Another major firm, Unilever, aims to create products that can promote health and wellness. It is also looking to promote healthy lifestyles. As part of its 'Dirt is Good' campaign, for example, it exhorts children to play outside (Factiva 2007). Other companies – such as Heinz, Quaker Oats, ConAgra, General Mills, Kellogg's and Philip Morris - have moved into the health and wellness sector via strategic mergers and acquisitions (Harrison 2000). Proctor & Gamble, a leading producer of foods and food ingredients, has formed an alliance with Bunge, a major producer of bottled vegetable oils, to produce phytosterol ingredients to be used in foods and pharmaceuticals. Phytosterols have cholesterol-lowering powers and are now being regularly added to spreads and breakfast cereals (Bunge 2004). Similarly, Proctor and Gamble are seeking to reduce trans- and saturated- fats in their food products as a means of addressing the heart disease and weight problems that many consumers face: it has a line of functional ingredients that allow it to claim its products deliver health and 'wellness' (see Proctor and Gamble 2005).

Perhaps the most interesting example is that of Nestlé. Nestlé commenced its operations some 138 years ago and it is considered, today, to be one of the largest global food manufacturers. Its website describes it as 'the world's foremost Nutrition, Health and Wellness company' (Nestlé 2008). The company has a community investment strategy that seeks to build 'healthy' communities, has – as two of its business principles – corporate social responsibility and sustainable development, and has a commitment to better labour practices worldwide. It has assured customers in Ireland and the UK that its products sold there do not contain Genetically Modified Organisms (Nestlé 2007a). Along with a number of other companies (Cadbury, Schweppes, McDonald's, PepsiCo, Unilever and others) Nestlé agreed to stop advertising 'junk food' to under 12 year olds in the EU (*Food Navigator* 2007b). Nestlé is also making strategic moves to enhance its dietary claims – and its empire. In March 2007 it began funding the probiotics research into infant nutrition products (mentioned earlier); in April 2007 it acquired from Novartis the US baby-food brand Gerber for some US\$5.5 billion; and, in July 2007 it purchased the Novartis medical nutrition group (Nestlé 2007b), thereby confirming its status as the second biggest company in the healthcare nutrition industry. It had, at an earlier time, bought Jenny Craig - the diet firm. It now has a 'Nestlé Nutrition' division covering infant formula, baby food, medical nutrition, weight management and performance (sport) nutrition. It has a Strategic Wellness unit to 'drive' the idea of wellness throughout all of the

company's main divisions (Nestlé 2007b). And, despite widespread criticisms of its earlier attempts to promote its infant formula products, it is now on record as claiming 'breastfeeding is the best way to feed a baby and we always recommend that breastfeeding should be the first choice before using any of our products' (Nestlé 2007a).

Like Lang and Heasman (2004), Lawrence and Germov (2008) have predicted the growth of what they term a new medical-food-industrial complex which blends the interests of the food manufacturers with those of the pharmaceutical industry. Profits will come, they argue, from the development of sale of functional foods that do not directly compete with standard brands in the supermarkets. The 'wellness' label becomes important here, because the US Food and Drug Administration allows food manufacturers to make claims about, for example, the reduction of the risk of heart disease, or the lowering of cholesterol levels (Lawrence and Germov 2008).

EXPLAINING THE GROWTH OF 'WELLNESS' COMPANIES

There are many explanations for the development of the wellness companies. One has to do with the public health concerns of governments. Recognising that the costs of public health will increase with a more sedentary, obese, society many governments have either sought to regulate the extent to which companies promote unhealthy eating, or have expected companies to 'self regulate' to achieve the same outcome (see Dixon, 2007; Food Navigator 2007b; 2007c). Individual and family health concerns are just as important: it is clear that many consumers are turning to foods that have health claims (Wright 2007). Wright (2007: 10) has reported that more than three in ten new food products released in the US in 2006 carried nutritional claims about specific health benefits (Wright 2007: 10). At least one-third of shoppers in the US were conscious of particular health issues and were attempting, through better choice of foods, to limit their risk of developing particular diseases (see Wright 2007: 10). Since 2004, food industries in the UK have been lowering the levels of fat, sugar and salt in their foods – in line with calls by the EU to address the problem of obesity (Food Navigator 2007c). Consumer demand for healthier food options is, in other words, a driver for the industry.

It is not only health that is a motivator for consumers. There is a discernible 'greening' of many societies with consumers becoming more conscious of the nature of ingredients in foods, the packaging of foods, and the 'food miles' over which food travels. Greening basically refers to the incorporation of environmental concerns in decision-making by individuals and communities as they come to recognise the ecological impacts of the purchases they make (Burch et al. 1999). Many citizens recognise the need to reduce energy use, address pollution, avoid eating foods that might compromise biodiversity, reduce waste, and so forth. Green consumers are particularly interested in promoting and purchasing products from sustainable production systems (from systems that are less-polluting than conventional agriculture) (Lyons, Lockie and Lawrence 2001) and which are less processed ('fresh', 'safe' and 'natural') (Warde 1997). While it is true that green consumers tend to support organic options over bio-technological (GE) options (Lyons et al. 2001) this does not necessarily mean that they will turn against the 'wellness' options offered by the food manufacturers – particularly where the latter can make claims about the 'green' credentials of the foods they produce.

Associated with 'greening' has been the rise of what McMichael and Friedmann (2007) have termed an 'economy of quality'. Their argument is that branding by the supermarkets has emphasised the quality of the foods sold – particularly of their own brands. While quality is notoriously difficult to encapsulate, it appears to relate to several or more of the characteristics of foods being healthy, nutritious, unblemished, produced under ethical labour standards, and with animal welfare guarantees in place. While consumers in the North are being provided with more of these foods, the conditions of their production in the global South are seen to be deteriorating, with the displacement of peasant agriculture (for large, centralised, estates), the increasing use of migrant female labour and environmental degradation as just some of the consequences of food procurement by the transnational food corporations (McMichael and Friedmann 2007: 303-05). The point, though, is that the 'economy of quality' is at the heart of corporate claims about their 'wellness' credentials: they are producing quality foods which will give health benefits to consumers.

Another explanation is that of the opportunities for innovation in the food industry provided by modern technology. The bio-revolution has allowed for the production of novel products that can seemingly enhance existing foods. The bio-sciences are now able to employ molecular-level changes that have the chance to change what were once 'fixed' properties of foods, particularly the addition of new, health-giving, qualities. Without continuing innovation in technology, the food industry would find it difficult to explore new options. But why experiment, in the first place? It is here that a discussion of the competitive nature of the food industry and the somewhat fragile position of firms within that industry must be considered. Innovation is viewed as essential in the increasingly competitive world of global food provision.

Finally, it is important to consider the changes in relations between supermarkets and the food manufacturing industries. The market position of the branded products of manufacturing food industry firms like Kraft, Heinz, and Nestlé was once unassailable. The supermarkets stocked products that were in high demand, and were well known by, consumers – giving these products shelf prominence and, in many cases, promotional advantage. Today, in the era of 'own branding' the supermarkets carry and promote their own lines of breakfast foods, carbonated drinks, canned foods, and frozen and chilled foods and a host of other products. The 'own brands' products of earlier decades were viewed by the public, and indeed by the supermarkets, as cheap versions of the branded products – with a reputation for low or mediocre quality. This is not the case today. The supermarkets have invested heavily in own branding of quality food (and other) products which now compete in a direct way with the branded products on quality and price. Importantly, as 'own brands' they give a higher return to the supermarket than do sales from the competing brands of the food manufacturers (Burch and Lawrence 2007). There is a real incentive for the supermarkets to stack shelves with as much of their own products as possible leading, over time, to the marginalisation other brands.

This marginalisation is occurring in a number of ways. First, as mentioned above, the supermarkets are no longer dependent on the food manufacturers for products to market to customers – they can provide their own brands. Second, the supermarkets have the power to charge for shelf space of the branded products (these are the so-called 'slotting fees') helping to make the cost of marketing the branded products increasingly expensive, and so reducing profit margins, received by the food retailers, for those products. Third, the flexible sourcing arrangements now in place as part of global food supply arrangements allow supermarkets to bypass traditional food manufacturers and purchase a wide variety of products from abroad. Monopsony relations exist between (few) supermarket buyers and (many) food sellers – placing the manufacturing sector in a weak bargaining position. Fourth, companies in the food manufacturing sector have a strong investment in their well-known brand products and are reluctant to alter those products for fear of consumer backlash. They are literally 'trapped' – needing to be innovative to compete with the supermarkets, but fearing that change will lead to consumer rejection of the 'unfamiliar' in their branded food items. Fifth and finally, it is not only the supermarkets that are competing on stronger terms with the branded food manufacturers: it is also other players in the convenience foods (particularly chilled ready meal) sector. Firms involved in the supply of such things as snack foods, pizzas, salads, sandwiches and chilled meals are taking a large slice of the market that would, traditionally, have been occupied by the food manufacturers. The latter have been slow to innovate, while those in the convenience food sector are known for their flair in preparing and delivering a wide variety of fresh, packaged and chilled products (see Burch and Lawrence 2005; Burch and Lawrence 2007; Harvey, 2007).

In response to the gradual shift of power from the food manufacturing, to the retail (supermarket) sector (see Burch and Lawrence 2005; Busch and Bain 2004; Vorley, 2007), the food manufacturers have adopted two main approaches. They have begun to develop new lines of products – a natural response, but one (as mentioned above) constrained by their desire not to alter successful, popular, product brands. The second has been to seek to capture an area of the food industry that has not yet been colonised by the retailers: novel foods with health/wellness attributes.

As indicated earlier, it is the fusion of the food manufacturing sector with that of bio-science that is creating opportunities for the sorts of innovation that has previously been missing from the companies producing branded products. And it is here that the established food manufacturers might have the capacity of outcompeting the retail sector. Dietary frozen meals are an example, with products such as 'Healthy Choice' (ConAgra), 'Lean Cuisine' (Nestlé) and 'Weight Watchers' (Heinz) having made strong inroads into the marketplace for healthy foods.

THE FUTURE OF THE 'WELLNESS' COMPANIES

What will become of the wellness companies? Will they be the future of the food industry as people become more health conscious, or will consumers reject the very basis (platform) of the production of (many) of the new health/wellness products – that is, bio-science? It is here that we can point to a number of contradictory tendencies in the food industry, and along the agri-food chain. These are mentioned, briefly, below:

'Wellness'/Bio-science

As Lang and Heasman (2004) have noted, the bio-science paradigm is based upon reductionism. Scientists interested in the health of the human body work with the basic components of life (genes, DNA, molecules) and seek to identify such things as gene expression and metabolic function as contributing to either disease, or to good health. The aim is to identify those molecular/genetic features of the human genome that might be altered, or be acted upon, to improve the health of the individual. Scientists interested in nutrition also travel down the reductionist path, literally 'take apart' genes – in this case, of foods. They isolate the substances that promote positive health outcomes in the body in the hope of incorporating these in the foods, or food supplements, that people eat. The message here is that society must trust in science for the delivery of good health (Lang and Heasman 2004: 38). The life sciences' approach is one based upon the controlled manipulation of foods, and is led by science and big business – with the latter investing heavily in novel technologies in the hope of innovative discoveries that will increase profits for those companies who are able to demonstrate the novel health benefits of their food products.

There is evidence among a wide range of western consumers, however, that the use of genetic manipulation in foods is viewed with suspicion (see Lyons, Lockie and Lawrence 2004; Lockie et al. 2006). Consumers confirm in most food surveys that they are looking for products that are 'natural' – those that have not been genetically modified and those that do not contain added chemicals (Lockie et al. 2006). There is a 'tension' that remains as 'wellness' comes to be associated with natural products, but the food industry moves down a bio- and nano-technology line in the development of 'healthy' foods. Are the 'wellness' companies out of kilter with public demands for clean and green foods, or must the public simply catch up with the innovations of the life-sciences?

Individual/Public Health

The focus upon individual solutions to the health problems faced by society is also narrowly reductionist. As part of the 'wellness' revolution, nutrigenomics is a new science aiming to identify how food ingredients react with, and influence, bodily cellular performance. Hence, science might be able to determine how changes in an individual's diet might improve health/reduce disease – given the particular genetic makeup of those individuals. Once scientists know how dietary substances affect cells and genes, they can design particular foods and supplements to act on the body's molecular structure to produce certain health-based outcomes. It is easy to see the individualist trajectory at work, here. 'Wellness' will come to be associated with the health performance of the individual, not of the wider society. Those with the financial wherewithal to undertake the genetic screening, seek bio-medical advice, and purchase the beneficial nutrients, might be expected to have enhanced health outcomes. But this approach will do little to address wider health problems faced by society. As Lang and Heasman (2004: 23-4) suggest:

Nutrigenomics promises a targeted fix to the diet and health policy problem.....Even if some people are more likely to trigger degenerative diseases from eating....particular nutrients..., the population as a whole would benefit from attaining already known dietary goals such as restricting consumption of saturated and total fats and increasing intake of vitamins and trace elements from fruit and vegetables.

That is, in a world where the public health costs from poor diets, smoking and lack of physical exercise are at very high levels (Pierce 2005: xxiii), the focus of public research investment might be more beneficial (have wider positive benefits) if it looks at health in its broadest sense. And, for the food industry, this might mean examining the sources of foods - as well as food production and distribution practices - along the entire food chain with the aim of improving overall public health (Lang and Heasman 2004: 109-10).

Availability/Environmental and other Costs of Sourcing

Many of the companies involved in food production, along with the supermarkets selling both manufactured and fresh foods to consumers, are keen to ensure availability of products. The sourcing of these products has come in for criticism on many fronts. The first is that when foods are procured from distant locations so as to satisfy demands for consumers for products on a regular (year round) basis, there is an energy and pollution cost in such transactions. These are the so-called 'food miles' (Lang and Heasman 2004). In examining the distance travelled by foods in moving from the farmer to the consumer, it is possible to calculate the energy used by, and emissions that come from, transporting products around the globe. When these 'externalities' are measured, it appears that the environment is the victim of long-haul transportation practices of those sectors of the agri-food chain that rely on distant locations for food procurement. Here, then, some who see themselves as part of the 'wellness' industry are likely to be the same firms causing ill-health to the environment. Second, the processing and packaging of foods is another high energy cost (Leahy (2008), linked as it is to the use of (diminishing) petrochemicals. Third, there can be a heavy cost to farmers and farm workers in places supplying the global food industry. In what has become known as the 'race to the bottom', farmers may abandon traditional small-scale agriculture to supply food to the global market, only to find that the prices on the return of commodities impoverishes them, while reducing their own capacity to feed their families and villages (Blythman 2005; Patel 2007). This is seen to have resulted, in recent times, in food riots and other oppositional campaigns designed to oppose export-oriented agricultural policies (McMichael forthcoming). Also, with the use of agri-chemicals, fertilisers, and monocultural practices, the farming landscape of the global South comes to resemble that of the North – exhibiting the environmental problems that have accompanied the latter (Leahy 2008: 66).

Greening/Greenwash

In contrast to the notion that consumers are becoming 'green' in terms of their approach to food purchase, the large bulk of the products that are sold by the food manufacturers and supermarkets contain ingredients that can lead to ill health (Dixon 2007). The question could be asked, then, whether the 'wellness' branding is, in reality, a not-so-subtle form of greenwashing being undertaken by the corporations desirous of improving what is a deteriorating public image. Books such as *Fast Food Nation*, *Shopped* and *Not on the Label* and films like *Supersize Me* have exposed the manipulative and 'unhealthy' practices of the food industry to the general public. By continuing to manufacture and sell foods containing added chemicals, along with sugars and salts, the food manufacturers and supermarkets are contributing to poor health in the population (Dixon and Broom 2007). In particular, by selling products containing hydrogenated fats (trans-fatty acids) food companies and food sellers are implicated in the explosion of obesity rates in the developed world (see Germov and Williams 2008) – no matter how much they would like us to believe their 'wellness' story. Just as importantly, firms in the food industry are expanding their current trade brands into the Third World. Many of these brands are the chemical-, sugar-, and salt- containing products that have been implicated in declining public health outcomes in the developed world (Burch and Lawrence 2007). That is, the growing health concerns of people in the North might be helping to reconfigure the activities of the food corporations supplying the North, while those same companies continue to manufacture and sell products of dubious health benefit to the peoples of the South.

CONCLUSION

The argument in this paper is that as supermarkets and food manufacturers seek to increase their profits they are invoking the health and 'wellness' benefits of the products they sell. The supermarkets are stocking their shelves with organic produce, highlighting the 'clean and green' credentials of their own brand products, and limiting or removing foods of which consumers disapprove (such as those that are genetically modified, or where there are concerns over animal welfare). Furthermore, a number of the leading food manufacturers are now promoting themselves as 'wellness' companies – making claims that their entire operations are based on the provision of healthy, nutritious and safe foods. This has, in part, been a response to the concerns of a growing number of consumers that the foods they are eating are over-processed and chemically-manipulated, and that their ingestion/digestion is partly responsible for poor health. Industrialised foods have, for example, been implicated in the increase in obesity, stroke, heart disease and cancer (Lawrence 2004). By reinventing themselves as wellness firms, the food manufacturers (in particular) are seeking both to cash in on the supposed revolution in the attainment of personal health benefits among consumers in the North, and to promote their credentials as food authorities (thereby deflecting criticism about their activities as well as appearing to meet the aspirational claims in their corporate social responsibility documents).

Questions can be raised, however, about the trajectory and impacts of the so-called 'wellness revolution'. Bio-science is at the core of many of the new products about which wellness claims are being made. Yet, bio-manipulated foods are not 'natural' foods: Indeed, some of the actual processes (such as the use of nanoparticles) being employed in their manufacture have not been fully tested for their impacts on health. The very focus of the wellness industry upon the individual health of more wealthy Northern consumers might be viewed as distorting. What appears to be required in overcoming the health-related outcomes of poor eating habits is not the nutrigenomic promise of designer diets but, rather, a broader public health approach which would reduce the intake of junk foods. Another point of concern is that of the reconfiguration of agriculture in the South as the supermarkets and food companies seek to procure foods for consumers in the North. It is argued that the sort of agriculture being practiced is the very form that has been implicated in environmental degradation in the North, and that the displacement of small-scale farming is having detrimental effects on farmers, farm workers and rural communities. Finally, it can reasonably be argued that the 'wellness' tag is a greenwash by the larger companies which, while claiming to be virtuous in complying with high standards in the purchase and manufacture of foods, are continuing to sell products whose ingredients cause ill health.

The changes that are occurring to firms along the agri-food chain as the 'wellness' companies seek to improve their market position are still not well understood. It should be remembered that – despite the claims of people like Pilzer (2007) – 'wellness' products have a relatively small market that is vulnerable to direct competition from the supermarkets. In fact, as one author (Wright 2007) has been claimed, 'wellness' may no longer novel – it may, in fact, have become mainstream! What *can* be stated is that the current reconfiguration appears to be altering labour relations, impacting upon the environment, and reducing the overall power of a number of key players in the food industry. Obtaining a clearer understanding of the dimensions of such change will require a good deal of further research.

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