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Commentary. The Food System. Ultra-processed products

Product reformulation will not improve public health



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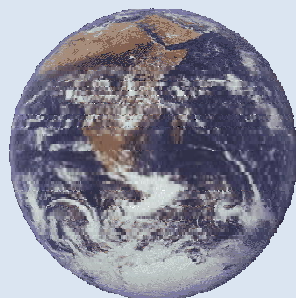
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Authors' note

THE FOOD SYSTEM

The big issue for nutrition



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This commentary continues the series begun in **World Nutrition** and elsewhere (1-10). The overall theme of the series is the global industrial food system, its significance, and its impact on dietary patterns, health and well-being, food culture, public policies, society, economies, the environment, and the biosphere, in the past, now, and for this century. Future contributions will be looking at various aspects of the food system as the big issue for nutrition (9-13).

Contributions published in *WN* so far (such as 2,5-8) have mostly been concerned with food processing, and what happens to food and to us as a result of different types of processing. We have focused on ultra-processed products, as we do here. We identify these as the main dietary cause and explanation of what is now uncontrolled pandemic obesity and related chronic non-communicable diseases.



Our thesis uses a wholly new simple food classification. This replaces all those that divide foods into conventional groups (such as cereals and cereal products, meat and meat products). Instead, we identify industrial processing as the crucial determinant of food and diet quality, the risk of disease, and prospects of good health and well-being. In our system, group 1 is of fresh and minimally processed foods, and group 2 is of processed culinary ingredients. These are combined and made into meals, as symbolised above by the full cooking pot. Group 3 is of ready-to-consume products, most of which are ultra-processed, as symbolised above by the cheese-bacon-burger.

Introduction

Reformulation of processed food and drink products, in order to prevent and control obesity and chronic non-communicable diseases, is a prime policy priority and an essential reason to partner with 'the private sector', and reformulation will significantly improve population health. This is the practically unanimous and consistently stated position of relevant national government legislators, UN and other international agency officials, and leaders of relevant influential organisations working in the public interest (14,15). It is also the stated position of the leading transnational corporations that manufacture such products, and their representative, associated and supportive organisations. These continue to initiate, fund, resource, and set agenda for 'public-private partnerships' designed to shape international food and nutrition policies (16,17).

This position is mistaken. As now used and in the absence of effective measures, product reformulation is not part of the public health solution. It is part of the problem. Our position is as stated in a previous commentary, developed and amplified here (5), and in our title above. Product reformulation will not improve public health. Here we say why.

The case for reformulation

There is a case for reformulation. When food products are reformulated with prevention and control of chronic non-communicable diseases in mind, their nutrient profiles tend to improve. If many customers buy reformulated products in place of 'standard' or 'classic' unreformulated products, and if this switch is substantial, and if harmful ingredients are not replaced by other harmful ingredients, and if they make no other change in their diet (note the 'if's), this may be of some benefit at personal and eventually even population level.

Advocates of reformulation have published impressive estimates of reductions in morbidity and mortality from various diseases that could result from reductions in *trans* fats, saturated fats, sugar or salt, in processed products and thus in food supplies. There is however no direct evidence that product reformulation alone is effectively reducing the prevalence of any disease. Indirect evidence is used instead. An example is the reduction of the volume of salt in the UK food supply that has taken place in recent years, as a result of a concerted campaign backed by the previous UK government in which reformulation has been one component. We think that the inference of benefit here for cardiovascular disease, but not for obesity, is reasonable. Whether really substantial changes in product composition or in public health are actually happening, is another matter.

The case against reformulation

The case against product reformulation, particularly when used, as it is, as a main strategy, is more convincing. Reformulation is not of healthy foods. It is of inherently unhealthy products. These are usually identified in dietary guidelines as products to be consumed only occasionally. They are made only somewhat less unhealthy by manipulation of their constituents. Reformulation of the type that is volunteered by manufacturers or suggested by government officials, usually results in relatively small and sometimes even trivial adjustments in the nutrient profiles of products that remain unhealthy (18,19).

Voluntary product reformulation is a distraction from public health actions that will certainly have much more significant benefits. As with tobacco and alcohol products, such actions include statutory regulations. These should include pricing and other statutory measures designed to promote healthy food, such as those that remove price support for unhealthy commodities, tax unhealthy products and restrict their advertising and availability especially to children, and thus protect the public interest and promote well-being. Such policies, analogous with those that control the use of toys, cars, guns and drugs – and use of tobacco and alcohol – are now being considered by a number of governments and have been enacted by others, including in Mexico, Chile, and New York City (20).

As things are now, voluntary guidelines on reformulation of inherently unhealthy ultra-processed food products are agreed or confirmed by ‘public-private partnerships’. In these, the public ‘partners’ include officials from UN and other international organisations, and politicians and officials from national governments, with a notional presence of public interest organisations. The private ‘partners’ are predominately executives of transnational corporations whose sales and profits derive mainly from unhealthy products, together with their hired, representative, associated, and supportive organisations, with practically no representation from any other industries. These ‘partnerships’ imply that the corporations are working in the public interest, notwithstanding their duty to maximise their bottom lines, share price, sales volume, and market presence (21).

Above all, the case against reformulation is that it triggers health claims that are sanctioned or tolerated by regulatory authorities. These enable reformulated products to be advertised as positively healthy foods, and thus yet more attractive than whole or minimally processed foods, even when sold at increased ‘premium’ prices. In the global North, especially in countries such as those of Southern Europe and the Middle East whose food supplies are not yet saturated with ultra-processed products, common sense suggests that the net effect will be overall increased purchase and consumption of these products, some without and some with health claims.

In the global South, the prospect is disastrous. Once reformulated with health claims, penetration of ultra-processed products into Asia, Latin America, Africa and other countries of the global South, already at the rate of ‘double-digit’ annual growth (22), will become deeper. The results are bound to include acceleration of displacement of the traditional and well-established food systems of these countries which, when they produce adequate and varied supplies of fresh and minimally processed foods, are the basis of economical, appropriate, and healthy dietary patterns.

Key issues

Policy-makers and decision-takers outside industry who think that product reformulation will lead to important protection and improvement of public health, seem to overlook some key issues or else not to be aware of them. As indicated here, these include the unhealthy nature of the products, the strategy of industry to evade regulation, and the positioning of reformulated products as healthy. Issues also include the impact not so much on privileged well-resourced and informed populations in the global North, as on the global South, and on impoverished, uninformed and generally vulnerable populations throughout the world. (And see Box 1).

Box 1

The duty of governments

As we have emphatically stated before (10), we are not critical of the food industry as a whole. Any such position would be absurd. Industry always has been or should be a driving force of society and civilisation, and a source of security and well-being. Our concern is with the damage done as a result of the commercial freedoms that have been recklessly ceded by elected governments since the 1980s to transnational industries of all types, whose activities are contributing to the fuel, finance and food crises that now beset us. The obesity pandemic, which is a crisis in itself, is also a sign of systemic failure, of world disorder. It is the nature of the private sector always to push for profits. The original fault here lies with legislators who have abandoned their duty to regulate industry in the public interest. Professional, health, and other civil society leaders, who have combined and pressed for rational and healthy policies and actions concerning tobacco, have not yet done so in the case of ultra-processed food products.

Reformulated products are unhealthy



Orlando, Florida. Reformulated products remain ultra-processed. Fatty salty snacks like chips (crisps) may be reformulated and marketed as if healthy

Much discussion about reformulation seems to assume or imply that manipulation of the ingredients of food products will make them healthy. This is not so. It is ultra-processed products that are reformulated (1,2). As such, reformulated products still contain little if any whole food. Their constituents, while modified or recombined in some way, are still almost all processed fats or oils, and/or sugars or syrups, and/or flour or starchy material, together with other processed ingredients, salt, preservatives, and other including cosmetic additives. When some reduction in the amounts of fats, saturated fats, sugars or salt is made, the products still contain little if any whole food. They remain energy-dense. They remain fatty, sugary or salty, are still formulated from cheap ingredients, and remain ultra-processed. (The same is true when synthetic or other micronutrients or bioactive compounds are added: this is not a topic of this commentary).

Before going any further, we should make clear that we are not suggesting that ultra-processed products should never be consumed. Not at all. Occasional consumption of any unhealthy product is normally harmless. The problem is largely (although not solely) one of quantity.

Not a lot changes

Discussion also often seems to assume that reformulations of the types now offered by industry and endorsed by government officials and regulatory agencies, will result

in food supplies dominated by products that are very different from previous versions. This is also not so. Many products, including lead lines, have been reformulated, but as stated, their basic nature does not change. Industry's voluntary reformulation strategy is also influenced by the determination of manufacturers to preserve the ultra-palatability and habit-forming qualities (23) provided by sophisticated combinations of additives, fats, sugars, and salt. Usually the changes made when products are reformulated are fairly small or even trivial, with the exception of sharp reduction or virtual elimination of *trans*-fats. (See Box 2).

In a trade journal, Joost Blankestijn explains why (24). He is business development manager of food innovations, for the Dutch company TNO (Organisation for Applied Science). Its mission is to convert research findings into profitable business. With 5,000 employees, it is the largest enterprise of its type in Europe. He says: 'Reformulating products is a key trend in the food industry. Manufacturers try to reduce the content of unhealthy ingredients like (saturated and *trans*) fat, sugar and salt. Omitting an ingredient is easier said than done. Lowering the salt content may diminish the taste, texture and shelf life. Less *trans* fatty acid in food often increases the content of the almost as unhealthy saturated fat in order to retain the product's properties. Moreover, reformulation generates higher costs for raw materials and processing, costs that manufacturers are trying to keep as low as possible'. It is also true that manufacturers are anxious that the ultra-palatability of their products is retained (23).

Box 2

Removal of *trans*-fatty acids

Trans-fatty acids, also known as *trans*-fats, are mostly generated by the hydrogenation process. This has been used since early in the 20th century by manufacturers and their suppliers to convert liquid oils into solid fats, so as to create stable fatty products with long shelf-lives. Any product that contains partially hydrogenated oils or fats, therefore contains *trans*-fats. These chemically created artificial substances are now reliably identified as intensely damaging to the cardiovascular system (25,26).

Regulatory authorities and industry have agreed to reduce industrially-generated *trans*-fats in ultra-processed products, and this measure is increasingly in force now. It could be counted as a reformulation that makes products less dangerous rather than less unhealthy. We see it more as removal of a toxic substance. This should have been the result of a worldwide statutory measure not requiring any 'partnership' involving negotiation with industry except on practical matters like timing. A more effective policy would be to prohibit use of the hydrogenation process in the manufacture of food and feed products (27).

The makers of reformulated products



‘The private sector’: transnationals like Coca-Cola, Pepsi-Co, Kraft, Mars, General Mills, Kellogg’s, Unilever, Nestlé, with some brands shown here

We now turn to discussion of the industries whose products may be reformulated. We have no specific criticism of any corporation or product. Our points are general. What we say of any corporation or product can be taken to apply to all. From the nutrition and health point of view, any fatty salty packaged snack, any sugared breakfast cereal, and any sweetened soft drink, is much the same as any other. Nor are we implying that manufacturers want their products to be unhealthy. Of course they do not. The fact is though, that it is the ready-to-consume energy-dense fatty, sugary or salty ultra-processed products with long shelf-lives, sold in every type of retail outlet from hypermarkets and convenience stores to filling stations and vending machines, now all over the world, that are the most profitable. In order to stay in business and to thrive, corporations are bound to push these products.

What is ‘the private sector’?

Discussion of food product modification is in (at least) one respect, very odd. In the context of ‘public-private partnerships’, and the overall context of prevention and control of chronic non-communicable diseases, constant reference is made to ‘the private sector’. Out of context the term could be inclusive of the travel industry, say, or the banking, electronics, travel or furniture industry. It isn’t. In context, common sense would suggest that it includes all sectors of for-profit enterprises engaged in some aspects of food systems. It doesn’t. Maybe in theory it does, but in practice producers, distributors, and retailers are excluded, as are caterers (unless corporations like McDonald’s and Yum! Brands count as caterers).

Where for example in this are representatives of farmers' co-operatives, or farm workers? After all, as the UN Food and Agriculture Organization points out, looking forward to its World Food Day on 16 October, 'It is estimated that one billion individuals are members of cooperatives worldwide, generating more than 100 million jobs around the world. In agriculture, forestry, fishing and livestock, members participate in production, profit-sharing, cost-saving, risk-sharing and income-generating activities' (28). The answer is that these billion people in the business of producing food are evidently not counted as part of the 'private sector' – or part of the 'public sector' either. They apparently don't count, period.

The 'private sector' is Big Snack

In practice, 'the private sector' engaged with the UN and its agencies, national governments, and selected science and policy experts, to shape world policy on the prevention and control of chronic non-communicable diseases, is just one sector of the food and drink industries. Sometimes termed Big Food, this sector is more precisely termed Big Snack (9,10). These are the colossal transnational purveyors of energy-dense fatty sugary or salty ultra-processed products and sugared or sweetened drinks. Each of them makes several or many \$US billions a year profit from the manufacture and sale of their branded ultra-processed products. (See Box 3).

Leading Big Snack corporations have pooled their common interest into the International Food and Beverage Alliance, with offices perhaps unsurprisingly in Washington DC. In its March 2011 *Five Commitments to Action* (29), as updated on its website by August 2012, the first commitment of the IFBA is to 'reformulate products and develop new products that support the goals of improving diets' and the fifth is to 'actively support public-private partnerships that support the WHO's Global Strategy'. IFBA members are Coca-Cola, Pepsi-Co, Kraft, Kellogg's, General Mills, Mars, Nestle, Unilever, together with the Mexican-based conglomerate Bimbo, and the Italian-based chocolate and confectionery manufacturer Ferrero.

Why is Big Snack accepted as the 'private partner' in policy-making at the highest level, designed to prevent obesity and related chronic diseases of which their products are a leading cause? In common with other colleagues, we have been asking representatives of the 'public sector' this question in print, meetings and conferences, since the beginning of this century. We are still waiting for an answer.

Box 3

Transnational corporations

'Transnational' means 'reaching beyond or transcending national boundaries'. Thus, transnational corporations, while usually headquartered in one country, have no special loyalty to any country or to anything else other than their own policies and ambitions. Their senior executives typically originate from various countries. They are different in nature from international or multinational corporations, which

at least traditionally retain special commitments to their country of origin. The transnational way of doing business is an aspect of economic globalisation and a result of deregulation (30,31).

Transnationals are more powerful than corporations that remain committed to a country of origin. The annual sales of the biggest transnational food and drink corporations are equivalent to the annual gross national product of middle-size countries. They go where the greatest commercial action is, and prefer countries whose governments offer them the most incentives. National governments are aware that transnationals will make investments and offer employment in those countries that give them most freedom and scope to do their business (including the country in which they happen to be headquartered).

The countries in which transnationals are most powerful, include those in which regulation is least effective and whose governments are impoverished or heavily indebted, and thus in special need of foreign investment even when this involves selling off public goods such as land, electricity and water. Transnational business includes predatory competition with and takeovers of smaller national companies. This in part explains the tendency for transnationals to become oligopolies.

What 'partnership' means



Davos. Heavy hitters from the UN, government, US-based philanthropy, transnational industry, branded by the World Economic Forum backdrop

Food and drink product reformulation is one rationale for 'public-private partnerships'. Much of the initiative and material support for these 'partnerships' has come from the transnationals, who seek to set agenda and establish priorities for policy discussions convened by UN agencies and national governments.

The effect has been to give the chief executives of transnational food and drink corporations a status on a level with that of the leaders of national governments and United Nations agencies. This can be seen as part of a general global process whereby the responsibility of elected governments to protect public health and public goods, is being ceded to the unelected executives of corporations whose responsibility is to their shareholders and to the money markets.

The commercial interests of the transnationals are powerfully served in meetings convened or organised by the World Economic Forum (WEF), and in policy initiatives involving the World Bank or the World Trade Organization. One illustration is the picture above, taken at the 2009 WEF meeting in Davos, Switzerland. From left to right, it shows Josette Sheeran, then head of the UN World Food Programme, Abhisit Vejjajiva, then Thai prime minister, and in the middle Kofi Annan, then UN secretary general. It also shows three global heavy hitters not subject to election who still hold the positions they had in 2009. These, on the right of the picture, are in the middle Bill Gates of the Bill and Melinda Gates Foundation, and two transnational industry senior executives, Irene Rosenfeld, chairman of Kraft Foods (not now owned by Big Tobacco corporation Philip Morris), and Michael Treschow, chairman of Unilever. Line-ups like these do not include representatives of farming cooperatives or public interest civil society organisations.

The transnational food and drink industries and their representative, associated and supportive organisations (17), are efficient and effective, and by definition operate globally. They hire the shrewdest public relations agencies with a global reach. They have vast amounts of disposable cash to spend. They have successfully asserted that their commercial interests need not conflict with those of public health. Consequently they are seen by the United Nations and its relevant agencies, and by the most powerful national governments, not as part of the public health problem, but as an indispensable part of its solution (32). Their own power and resources, most of all at a time when the UN and its agencies, and national governments, are stuck in financial crisis, makes them leading ‘partners’ in ‘public-private partnerships’.

Very remarkably, Big Drink, the transnational alcohol industry and its representative organisations, is now also identified as a ‘private partner’ in high-level UN and national government discussions designed to improve public health and to control consumption, despite alcohol certainly being carcinogenic and addictive (17,33, 34).

Reformulation is where the action is

The transnational food and drink corporations have in effect done a deal in ‘partnership’ with national governments and their regulatory agencies. This is that in return for voluntary reformulation of their products to their own specification, they may promote them with explicit or implicit health claims. This they may do even to the extent of using quasi-medical claims sanctioned or tolerated by government

agencies even in well-regulated countries, which are sometimes supported by on-pack endorsements from medical and health organisations.

This obviously troublesome arrangement is in part a damage limitation exercise designed to neutralise health professional, civil society and other public interest organisations, and to circumvent the duty of governments to regulate harmful commodities. But product reformulation, enabling health claims sanctioned by official regulatory agencies, and sometimes supported by health professional organisations, also amounts to a giant leap forward in new product development.

‘We are going through a revolution in food’ says Thomas Pirko, president of Bevmark Consulting, the Californian company who according to its website ‘advises governments, the chief executive officers and chief financial officers of the world’s top food and beverage companies’, which include Coca-Cola and Kraft. ‘It’s a whole new consciousness – every product has to be adding to your health or preventing you from getting sick’ (35).

Take the US, the leading ‘developed market economy’ whose food supplies may now be saturated with ultra-processed products. One example of others that could be given is the product reformulation policy of the US-based General Mills (GM), a lot of whose business is in ready-to-consume breakfast cereals, and whose range of products is similar to those manufactured by other corporations in that business (36-38).

A report in the trade journal *Food Navigator* (39) cites the strategy of GM, stating that two-thirds of its products by sales have been reformulated since 2005. These include its ready-to-consume ‘Big G’ breakfast cereal range, Honey Nut Cheerios®, Lucky Charms®, Cinnamon Toast Crunch®, and Cheerios®. Mark Belton, GM executive vice-president, global strategy, growth and marketing innovation, is quoted as saying: ‘Health improvements have increasingly become a primary driver of our innovation, so we are careful to balance strong health benefits and health improvements with great taste’. In common with other breakfast cereals, the GM range is ‘fortified’ with a lot of added minerals and synthetic vitamins.

Children and their parents are also taken into account. In 2009 GM agreed to reformulate cereals promoted to children under 12, so as to contain ‘single-digit’ grams of sugar per serving. This policy is also much the same as that of other corporations in the business of manufacturing breakfast cereals. Accordingly, this year in 2012, Cinnamon Toast Crunch®, Cookie Crisp® and Cookie Crisp Sprinkles® were reformulated to contain not 10 but 9 grams per serving. At either level roughly one-third of the weight of the products is added sugar.

The global North



New York. Muhtar Kent of Coca-Cola. Obesity: ‘an important complicated societal issue, that we all have to work together to provide a solution’

Almost all policy-makers with an interest in processed product reformulation come from the global North, or else work for institutions, organisations or corporations headquartered in the global North. (Here, ‘the North’ is taken to mean the high-income ‘mature market economies’ of North America, Europe and some other countries, and ‘the South’ is taken to mean the middle- and low-income ‘emerging market economies’ of Asia, Africa, Latin America and some other regions and countries). Correspondingly, almost all analysis of the significance of product reformulation is of its impact on the health of populations in the global North. Any such analysis assumes that what goes for the North applies also to the South.

This is a mistake. In this and the next section, we explain why.

In general, and almost by definition, the situation of most countries in the North is very different from those of most regions and countries in the South. High-income countries generally are those that became economically developed a long time ago. Of such countries, two outstanding examples are the US and the UK. As a result of industrialisation, urbanisation, and the displacement of indigenous and rural populations, previously long-established and traditional food systems and culinary and dietary traditions have been pushed into niches or have even practically vanished, to be evoked nostalgically at Thanksgiving, Christmas, and other feast-times.

Consequently, for generations now, a high proportion of the food purchased and consumed by most people has been in the form of products that are ready-to-consume. Preliminary research of food consumption trends indicates that the food

supplies of ‘mature market economies’ such as those of the US, Canada and the UK may now be saturated with these ultra-processed products, with little scope for further increase, at a consistent average national level of over 60 per cent of total energy (40,41). In such countries obesity was fairly common half a century ago, and rates have accelerated since the 1980s. In the US, population prevalence of obesity is around one-third, and of overweight and obesity combined is about two-thirds (42). In the UK and Canada, prevalence of obesity is close to one-quarter of the population, and of overweight and obesity combined, just over three-fifths (43,44).

Saturated markets in the North

In such circumstances, in countries with a fully industrialised food system and very high rates of obesity, the public health case for the reformulation of food products is apparently strongest.

If the market for ultra-processed products really is saturated, such that populations are literally filled up with them, consumers may tend to prefer new products positioned as ‘healthy’, instead of the ‘standard’ products. If they can afford such products even when more expensive, and if they do not overall increase their consumption of energy-dense fatty, sugary or salty ultra-processed products, then product reformulation, and also new ‘healthy’ products, should have some benefits, for those people who are able to make such choices, and actually do so.

This looks like being a trend in the US, where sales of sugared soft drinks have gone flat, and where sales of alternatives including ‘designer water’ are increasing (45-47). The change became evident about five years ago. Trade journals are sources of useful information. In one, Coca-Cola president Muhtar Kent (see picture above) said in 2007: ‘When we walk around the US market, it’s like we’ve lost the drive to create impulse, and we want to bring that back’. He added ‘In Latin America, Europe, Asia, North Africa, it says everywhere “Ice cold Coke served here”. Not in the US’ (48).

In June this year, he looked again at prospects. ‘With respect to Europe, we are observing ongoing macroeconomic uncertainty as 2012 unfolds’ he said. ‘Austerity measures implemented across the region are weighing on consumer confidence’ (49). The journal added ‘In the US, soft drink consumption in 2011 declined to its lowest level since 1996... as Americans continue to move towards healthier beverage options’. And on high-income countries generally, ‘investors will be looking for comments on whether these developed markets are stabilising or improving’.

In other words, there is not much fizz left in countries like the US or the UK. But for the transnationals there still is some scope for growth. More sales and profits can come from expanding waistlines, or predatory competition and takeovers, or purchase and exploitation of public goods such as water supplies – or products formulated or reformulated so as to enable health claims and higher prices.

In the same month, speaking to the *Wall Street Journal* (50), Muhtar Kent made clear that Coca-Cola is a strong supporter of ‘public-private partnerships’, and of reformulation and new product development. On obesity he said: ‘This is an important complicated societal issue, that we all have to work together to provide a solution. That’s why we are working with government, business and civil society to have active lifestyle programs in every country we operate by 2015’. On changed and new products he said: ‘We’ve gone from being a single-beverage, single-brand company to now 500-plus brands, 3,000 products. Eight hundred of these products we’ve introduced in the last four or five years are calorie-free or low-calorie’.

In the North, distraction

Thus in ‘mature market economies’ like the US and UK, where most of the energy in the food supply comes from energy-dense ultra-processed products, and where most people are overweight and obese and also have disposable incomes, product reformulation may have some health benefits. But given health claims some of which suggest quasi-medicinal benefits, common sense suggests that the net result, even in countries whose food supplies are practically saturated, may well be an even greater consumption of ultra-processed products, some positioned as enjoyable and even glamorous, and others as healthy or even as vital protection against disease.

The global South



Amazonia. Products for young children, formulated to enable health claims, are sold from ships penetrating into riverside communities in north Brazil

We now turn to the global South. Not all public officials feel easy about Big Food and Big Snack. Here is what WHO director-general Margaret Chan said in April 2011. She was speaking at a meeting in Moscow preliminary to that held at UN headquarters in New York the following September, whose purpose was to agree plans to prevent and control chronic non-communicable diseases. As a Chinese national she personally will be well aware of the impact of the transnationals on the global South.

She said: ‘Today, many of the threats to health that contribute to noncommunicable diseases come from corporations that are big, rich and powerful, driven by commercial interests, and far less friendly to health... Here is a question I would like to ask the food and beverage industries. Does it really serve your interests to produce, market, globally distribute, and aggressively advertise, especially to children, products that damage the health of your customers? Does this make sense in any mission statement with a social purpose?’ (51).

Booming business in the South

For transnational corporations, the global South is where the action is (45,48-50). Here is Coca-Cola president Muhtar Kent again: ‘China is a great growth story over the last two decades, and our business continues to do very well in China’. In June this year Coca-Cola announced that it was investing \$US 4 billion in China, and accelerating its investment in India to \$US 5 billion by 2020 (49). The *Wall Street Journal* report said that ‘Coke has invested heavily in fast-growing emerging markets such as China and Brazil with \$15 billion brands that include Sprite, Minute Maid, Powerade and its namesake cola’ (50). In the three years between 2008 and 2011, Coca-Cola profits doubled, from \$US 5.8 billion to \$US 11.8 billion. Currently sales are rising by an annual 2 per cent in the US, 9 per cent in China, and 20 per cent in India – 10 per cent or over being ‘double-digit’.

In March this year a Coca-Cola ‘press kit’ reported that Muhtar Kent had been inaugurating the biggest bottling plant in China, occupying 170,000 square metres (42 acres), with a capacity for 5 billion ‘servings’ a year. ‘China is a vast growth market for Coca-Cola’ he said: ‘As we work to double the size of our global business in this decade, China will play a critical role’ (52). The story continued ‘China is one of the fastest-growing markets...with volume...maintaining double-digit growth in nine of the last 10 years. Consumption of Coca-Cola products in China now represents approximately 8% of the company's global volume. Coca-Cola reported strong volume growth across its entire sparkling portfolio in 2011 with Coca-Cola, Sprite and Fanta each posting double-digit growth for both the fourth quarter and the full year. This growth is driven by a renewed focus on core brands’.

This is not a story just about the Coca-Cola corporation. As already stated, this commentary is in part about transnational food and drink corporations in general. As with the European colonial powers in the 19th century, now that the South is opened up, all the transnationals are determined to gain a share of the action. They are bound to do so. Any corporations slow to enter 'emerging market economies' would be liable to takeover by more energetic competitors. This is the nature of the business economy.

Another leading transnational is Nestlé. In the South, fastest growth is being achieved with its 'popularly positioned products'. These are mostly made up of its existing branded products in cheaper or smaller packages. Globally these are expanding at the spectacular rate of 27 per cent a year, with total sales of roughly \$US 6 billion, according to a 2011 corporation media release (53). Half of these sales were in Asia, Oceania and Africa.

Latin America is also a big market: Brazil, for instance. The release reported, of a factory in the North-Eastern state of Bahia: 'Nestlé's factory in Feira de Santana, produces Maggi instant noodles... The plant brings direct and indirect employment opportunities to an economically deprived region, while increasing local workforce skills and raising environmental standards. It also helps Nestlé to reach 50 million consumers in this part of the world. Maggi instant noodles are popular in many countries of Latin America, Asia, Oceania and Africa'.

The picture above shows a Nestlé 'popularly positioned product' initiative in Amazonia: a corporate 'floating supermarket' taking all-Nestlé branded products to impoverished rural communities (9). According to Nestlé, popularly positioned products include bottled water, and packaged soups, dried soup mixes, stock cubes, instant noodles, soy sauce, instant coffee, creamer, instant chocolate drink, Milo *Choco Blazx*® 'cereal pillows' fortified with iron, Koko Krunch® cereal, biscuits, chocolate, confectionery, infant formula, dried milk, and infant follow-on and weaning products. (54,55). Many packaged in sachets, these are cheaper per item than conventional equivalents of the same brands or types of product, but generally more expensive weight for weight.

Nestlé is doing well in the South. Its 2012 half-year report was released on 9 August.(56). In the zone Asia, Oceania and Africa in the half-year, sales of about \$US 9.5 billion are reported, with growth at an annual rate of 11.6 per cent. The report states: 'The Zone continued to post double-digit growth, building on a strong 2011... The main drivers of this performance were brand investment and product innovation, deeper and wider distribution with a multi-tier strategy from popularly positioned products to premiumisation, while investing in capacity and capabilities for future growth... The emerging markets delivered double-digit growth in almost all geographies and categories, most notably in Greater China, Africa, and the Middle East. In China there was a strong performance in ready-to-drink with *Nescafé*

Smoovlatté, in ambient culinary with *Totole*, and in confectionery with *Shark* wafer. Our new partnerships are enhancing significantly our footprint in China’.

In the South: exploitation

The account so far in this section may seem to be merely about aggressive commercial expansion, of the type that disturbs Margaret Chan. But there is more to it than that. As already stated, in general the situation in the global South is very different from that in the global North. Lower-income countries generally are those which are not yet fully industrially developed.

Of such countries, three outstanding examples are China, India and Brazil. In these and many other countries in the South, long-established and traditional food systems and culinary and dietary traditions have survived. While a rapidly increasing proportion of food purchased and consumed is in ultra-processed form, most is still fresh or minimally processed, or else are processed ingredients, with which to make meals. Preliminary research of food consumption trends indicates that the food supplies of ‘emerging market economies’ are a long way from being saturated with ultra-processed products. In Brazil for example, these currently supply just under 30 per cent of total energy (41). In such countries obesity was rare half a century ago, but rates have steadily risen. In Brazil, population prevalence of population obesity is close to one-seventh (15 per cent) although of overweight and obesity combined the figure is already one-half (4,57). Rates are increasing by around 1 per cent a year, which projects to the same level as the US and UK in around the year 2025 (57).

Throughout Asia, Africa and Latin America, traditional and long-established food systems, involving cultures in which meals, commensality, and family life, are valued and preserved, persist to varying extents. These countries are now the prime targets of transnational corporations. If these industries reformulate and consequently aggressively advertise and promote some of their less unhealthy products as healthy, sometimes even with quasi-medicinal claims, this is certain to accelerate the increase of consumption of ultra-processed products overall.

For the Big Food and Big Snack transnational corporations, the manufacturers of ultra-processed products, the bonanza lies in ‘mining’ the so-called ‘emerging market economies’ in the global South. While the transnationals are in some ways competitive with one another, they have the same strategy, and have combined into powerful pressure groups in order to achieve their ends. Their main initial competition is from relatively weak national and local companies in the countries they enter, which they often take over. They are displacing existing food systems that generate meals made with fresh and minimally processed foods and processed culinary ingredients (1-3,9,10), and replacing these with relatively expensive branded energy-dense fatty, sugary or salty ultra-processed ready-to-consume products. They want to teach the world to snack, from birth to death.

Their strategy is already eroding and eventually threatens to destroy appropriate, economical, sustainable dietary patterns in most parts of the world. Given this, rates of obesity, and diabetes and other chronic non-communicable diseases, are liable to accelerate. Unfortunately, the 'neoliberalism' devised in and for the benefit of the global North, is often embraced in the South notably by government departments of finance, trade and industry, and external affairs. The destructive effects of 'free trade' on health, economies and the environment are as yet not fully discerned. Until they are, the economies of lower-income nations will become more fragile, as they become increasingly dependent on foreign capital and on the fluctuations of the money and commodity markets. Indeed, deeper and deeper penetration of transnational corporations is liable eventually to destroy much of the social, cultural and other identity of countries in the global South. We are not saying that any of this is the intention of transnational corporations. We are saying that this is liable to be the effect of their activities. (See Box 4).

From a global perspective, we judge that reformulated products manufactured by huge transnational corporations, aggressively marketed with health claims, will cause increased harm to public health, and to public goods, throughout the world.

Box 4

Regulation in the public interest

Wise laws protect the public interest. The use of roads, for example, is usually tightly regulated. Traffic signals, vehicle and cycle lanes, road signs, speed limits, driving tests, penalties for reckless or drunk driving, requirement for seatbelts, subsidies for lead-free petrol, have all been welcomed by the public and accepted – sometimes after resistance – by industry. These have reduced injury and death of drivers, cyclists and pedestrians, and increase the pleasures and freedoms of travel. They have encouraged industry to be innovative and ingenious and to make safe cars.

All social and economic activity needs rules and regulations. Sport, for example, would be chaotic without rules, or with rules that were ignored. But the transnational food and drink product corporations have largely evaded regulation. This is probably because their rise after already becoming giant multinationals, coincided as from the 1980s with governments in the US, the UK and then elsewhere, whose leaders were ideologues committed to avoidance or abandonment of regulation of industry. In practice much regulation in place before that time has remained in force. But as from the 1980s industry has been enabled to become transnational at phenomenal speed, as a result of being given almost complete commercial freedoms. The theory was that the race should always be to the strong, and all would gain as a result. As we know now, this theory is mistaken.

After the 19th century it became well understood that careful regulation discourages ruthless business, and enables enterprise whose effects are more socially responsible. This is a lesson that needs to be learned for the 21st century.

Product reformulation: seven points

Here in summary are seven basic points about food and drink product reformulation, and why this will not improve public health. See also (5).

1 *Reformulated products remain unhealthy*

Reformulation is of formulated products. These are ultra-processed. They are energy-dense. They combine processed industrial ingredients such as fats and oils, sugars and syrups, starches and flours, salt, preservatives, and cosmetic and other additives, with small amounts if any of whole foods. There are no such things as healthy ultra-processed products. Modification of their nutrient profile, for example by adding a little less salt, or replacing fats by starches or sugars or artificial sweeteners, makes them only somewhat less and sometimes trivially less unhealthy. Removal of *trans*-fats makes products relatively safe but also does not make them healthy. Ultra-processed products to which some vitamins and minerals or other bioactive compounds are added (not discussed in this commentary) are also basically unhealthy. Constant snacking displaces cooking at home and emphasises private eating over commensality.

2 *Damage limitation exercise*

Much and perhaps most influential policy-making supposed to improve the state of public health nutrition, and to reduce and control obesity and chronic non-communicable diseases, is done in 'partnership' between high-level international and national officials, and representatives of transnational corporations whose profits derive from unhealthy ultra-processed products. As a prime part of these policies, the transnational and other giant ultra-processed product manufacturers, and their representative, associated and supportive organisations, devise product reformulation strategies that suit their business. These are then discussed and agreed in the 'partnerships' that include government and other senior officials as the main public 'partners'. One main purpose of these agreements is to evade statutory regulation of industry such as that which makes tobacco and alcohol products less available and affordable. In this respect they are a damage limitation exercise, designed to head off statutory rules for good practice that would restrict the freedom most of all of the more commercially aggressive corporations and that might result in significant reduction of potential sales and profits.

3 *'Healthy' product development*

Reformulation is also a massive new product development opportunity. Even when the changes of formulation are small or even trivial, it sanctions explicit or implicit claims on product labelling, advertising and promotion, accepted or tolerated by

regulatory authorities. Such claims state or imply that the reformulated products are healthy, in general or in some specific way. While legal, and indeed usually approved by regulatory authorities, the claims are deceptive. Health claims lead to increased sales often of 'premium priced' products by incautious, credulous or vulnerable customers, and often by parents concerned to protect the health of their children. This is all the more so when such claims are quasi-medicinal, and evidently endorsed by official government agencies or medical and health organisations. (See Box 5).

Box 5

The analogy with 'mild' or 'light' cigarettes



Cigarette manufacturers reformulated their products to stop smokers quitting. Food and drink transnationals are using comparable strategies

There is no sensible comparison between tobacco and food as a whole. We need food and should be able to enjoy it and retain good health and well-being. Cigarettes and other tobacco products are also different from unhealthy ultra-processed food and drink products. Tobacco is intensely toxic and addictive, and rational advice is not to smoke and to avoid exposure to smoke, whereas occasional or moderate consumption of ultra-processed products is usually harmless. There are though, some similarities between the strategies of ultra-processed food product and cigarette reformulation (58), in effect even if not in intention.

Starting in the 1950s, Big Tobacco (the industry leaders) was confronted by strong and then overwhelming evidence of the harm done by smoking, and also by increasingly militant health professional and civil society organisations. In response, tobacco corporations began to promote filtered cigarettes, which by the 1960s were the market leaders. They then formulated and heavily promoted 'low tar', 'light' or 'mild' cigarettes: between 1967 and 2005 the market share of these products rose from 2 to 83.5 per cent. Manufacturers insinuated in advertising and promotion, often using attractive models as shown above, that these reformulated

products were harmless. Evidence accepted as final proof that reformulation of cigarettes does not make them less harmful, was published a generation later, in 1991 (59).

The strategy of Big Food and Big Snack, to reformulate some of their ultra-processed products, and to claim that the new products are healthy, is a distraction from effective public health measures. In this and other respects it is comparable with the low-tar cigarette strategy.

4 *Small if any net benefits in ‘developed market economies’*

Almost all discussion of reformulation takes place in the context of ‘developed market economies’ such as the US, the UK, and other countries whose food supplies may be close to saturation with ultra-processed products. Reformulation may be of some limited benefit to human health in such countries. If reformulation results in lower consumption of fat, saturated fat, *trans*-fats, added sugars or salt, and if these reductions are not accompanied by increases in other unhealthy items, and if the only change customers make is from ‘old’ products to the newly developed products, it is likely to have some even if small public health benefits. But notice the ‘if’s’. Sales of reformulated products, once positioned as healthy, may be maintained or increase, or be additional to sales of the previous products. Besides which, reformulation distracts from much more effective statutory measures.

5 *Menace to ‘emerging markets’*

Transnational food and drink manufacturers are mainly in the ultra-processed product business. Some now have the declared intention of achieving ‘double-digit’ annual growth in the ‘emerging markets’ notably of Asia, and also of Africa, Latin America and elsewhere. These are a new product development bonanza.

Transnationals are now tending to reduce fat, sugar or salt content of many of their products, or to add synthetic micronutrients, and often make strong health claims for these ‘premium’ products, including in countries whose regulatory authorities are under-resourced. This will lead to an increased rate of displacement of traditional and long-established food systems and dietary patterns centred on meals throughout the global South, by ultra-processed snacks and drinks that remain energy-dense, fatty, sugary or salty. Given this, allowing reformulated products to make health claims will obviously cause a steeper increase in rates of overweight and obesity, and diabetes and other related diseases. This is of course not the intention of the manufacturers, whose business is to increase market share and to make more profits.

6 *Distraction from effective action*

Reformulation, especially when accompanied by spurious health claims, weakens the resolve of all concerned to protect public health, and to focus on really effective policies and programmes. From the transnational point of view, this diversionary tactic, similar to that which has been used by Big Tobacco, is part of corporate strategy. From the public health point of view, any possible beneficial changes consequent on product reformulation would be very small relative to what could be achieved by fiscal and other statutory regulation. This should promote much higher priority policies and actions. These should assure food supplies higher in fresh and minimally processed foods, preserve national agricultural ecosystems and biodiversity, make agriculture a viable social and economic activity, support local food traditions, promote cooking in urban settings starting in schools and limit availability of ultra-processed products.

7 *Rational policies are needed*

National governments, UN and other international organisations, and other independent actors, should develop rational policies and actions designed to prevent and control obesity and chronic non-communicable diseases and to promote positive health and well-being. Transnational and other corporations whose profits depend on the sale of unhealthy products should not be involved in the formulation of these policies and programmes. Overall public health strategies should include very substantial investment in healthy food systems and supplies, and an end to the promotion of any type of ultra-processed products as if they were healthy. Explicit or suggested health claims for reformulated products should be prohibited.

Conclusion

Suppose that most people in most countries were overweight and obese. Suppose that practically all regions and countries were fully industrialised, with food systems concentrated in the hands of huge industrial corporations. Suppose that transnational manufacturers made big changes in the formulation of their products, in the context of general diversification to fresh and minimally processed foods. Suppose that most people in most countries were willing and able to afford new formulations and products, and chose these products, even when they were more expensive. Suppose that all the most powerful institutions, governments and corporations in the world were genuinely committed to the preservation, development and creation of food systems based on fresh and minimally processed foods, and that reformulation of processed products was just one aspect of such a grand plan. If all this was true, product reformulation would make a real difference. But of course none of these suppositions is true.

Food and drink product reformulation will not improve public health. It is relatively harmful when, as now, it is a distraction, used in place of more effective strategies involving the rational use of statutory regulations. It is absolutely harmful when it is a new form of exploitation, where advertising and marketing of reformulated branded snack and other 'convenience' products that make or imply health claims, accelerate the erosion and displacement of established appropriate and economical food systems and dietary patterns based on meals.

In the South, long-established traditional food systems result in dietary patterns that are culturally appropriate, environmentally sound, economically sensible, climatically rational, able to sustain rural populations, and which are well understood by settled populations. These are now in danger of being wiped out by the incursion of ultra-processed products. This catastrophe can only be made worse by products marketed as if they are healthy.

Everybody professionally or personally concerned with the preservation and protection of public health, including leaders in government and public interest organisations, should give first and foremost priority to the promotion of healthy food systems and supplies, to include recognition and support of healthy meals, dishes and foods. This should include close collaboration and partnership with representatives of those sectors of industry that now or potentially are in the business of healthy food which is also good for society and the environment. These do not include Big Food or Big Snack, the transnational manufacturers of ultra-processed products. Their overall strategy is in effect to teach the world to snack their branded ready-to-consume products, throughout life (9). This process is being accelerated by the formulation and promotion of ultra-processed products that make or imply health claims.

Lessons of history

The food and drink product transnationals are the modern equivalents of the West and East India and other companies that flourished within Europe centuries ago, 'opening up' Asia, Africa and Latin America for trade and profit for the companies, their shareholders, and their governments.

Adam Smith is generally regarded as the founding father of what, despite continuing proofs of its failure, remains the dominant global economic and political ideology. This gives transnational industry rationally indefensible freedom of commercial action. Here is what he actually thought about concentration of power and its consequences. In his *Inquiry into the Nature and Causes of the Wealth of Nations*, he made what is now a well-known observation, saying: 'People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices?.'

The next part of this passage, less often quoted, points at the associations that have been made by transnational corporations, which prove that they have the same main interests. It also is a comment on 'public-private partnerships'. He says: 'It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice. But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies; much less to render them necessary' (60).

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