

May blog

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This month's column offers some thoughts about marketing of food to children, and especially to young children age 6 and under. My focus is not food products that could be called 'junk' – far from it – for they contain dietary fibre and lots of added vitamins and minerals. Yes, I refer to ready-to-eat breakfast cereals.

Epistemology. Spirals

The shape of progress



But! First – for the monument above does not commemorate John Harvey or Will K Kellogg – I sketch a theory of knowledge that I believe should shape our thinking.

As often as not, you can expect to see a spiral shape inserted into my columns. The multi-dimensional social, economic and environmental as well as behavioural and biological *New Nutrition Science* uses a spiral as its symbol. The reason is not merely decorative.

Fibonacci and his sequence

The image above is an expression of the *Fibonacci Sequence*, named after the 13th century Pisan mathematical genius who, having been raised in north Africa, brought the Hindu-Arabic numbering system to Europe, was patronised by the Holy Roman Emperor Frederick II (*Stupor Mundi*) Hohenstaufen, enabled accounting on paper, and who therefore was the founding father of the Italian banking system that originated capitalism and financed the Renaissance (1). The picture that begins this column is of his monument in the *Piazza dei Miracoli* in Pisa.

The Fibonacci numbering system (used by Dan Brown in *The Da Vinci Code*) is not linear. It begins with the Arabic-Hindu zero, and then 1, and then continues as the sum of the last two numbers, thus: 0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610. As the successive numbers become bigger they approach the ‘golden’ or ‘divine’ proportion of 1.618. This proportion is everywhere in nature as, for example, the diameter of the successive spirals in a shell, and throughout nature.

Cyclical progress

The sequence suggests an approach to science that is curved. This is conceptually as well as practically different from the ‘straight arrow’ approach now almost universally assumed to be the only rational way to depict reality, and among other things to denote progress, by those followers of the antiquated notion derived from Isaac Newton and Francis Bacon that nature should be annihilated in favour of quasi-religious mathematics.

By contrast the philosophy that takes the spiral, not the line, as its foundation concept, and which respects nature including human nature, is that we do not make progress by moving in a straight line further and further away from where we started. No! Instead, we progress cyclically, returning to whence we came but with more knowledge and insight, and therefore ‘further out’ and enlarged. (The reverse process, of the vortex, is that of returning but diminished – ‘going down the drain’, as is said of depressed people). This surely is our human experience.

Here follows an example of the significance of the spiral approach to knowledge. Most scientists, if asked, may agree that much essential work in their discipline has been done before the creation of electronic databases and, in the biological sciences, Medline. But many and I guess most seem not to act and work as if this was the case.

By contrast, an implication of the spiral approach is that history is vitally important. We always need to know where we have come from. Thus, one of the principles of the *New Nutrition Science* concerns history. It is: 'Food and nutrition practices consistently followed in different cultures in history are probably valid, though not necessarily for the reasons given at the time. They do not require proof to be accepted; they require disproof to be rejected'. This principle has been discussed at five workshops, at Giessen, Barcelona, Hangzhou, Hobart, and Santiago, and while gradually modified from its original phrasing, has been accepted every time. The implications for policy and practice, particularly in parts of the world where food supplies have become inadequate and insecure, are profound.

Reference

- 1 Swetz F. *Capitalism and Arithmetic. The New Math of the 15th Century*. Chicago, Ill: Open Court, 1987.

Promotion of food products to children. Glamour foods

Monster whoppers



The rest of my column this month is about food and children. Our 5 year-old Gabriel was off school one day recently. In his room, he went quiet for a couple of hours. He then let me in, indicating as kids do, that he had done something rather wonderful but wasn't going to tell or show me what. He expected me to do the discovering and boasting. Which I did, and do here.

Above are his *obras-primas* (masterpieces) made from plasticine. (For new readers, I live in Brazil, and Gabriel's first language is therefore Portuguese). Starting top left clockwise, is a chocolate birthday cake on a tray ('like waiters use' he explained, with his hand spread behind his right shoulder) complete with candle, and underneath a Hint for his next birthday. Next to this is a bowl of *brigadeiros* (big balls of chocolate confectionery). The tower is a monster whopper burger with two layers of meat and one of cheese. Gabriel has two explanations for the red ball on top. One is that it's an olive but he had run out of olive-coloured plasticine. Two, which appeals to me because of its irony, is that it's a *glacé* cherry. Below that in the middle is a bowl of burgers (note the tomatoes and lettuce) and then, on the right, a single burger. In front is a bowl of *biscoitos* (biscuits, or cookies). The big model is of course of a crispy crusted pizza, with *linguiça* (sliced sausage), on a tray.

Still lives of pop art

Cute, eh? As *maquettes* for sculpture made of stuffed cushions scaled up 100 times, in the style of Claes Oldenburg, they could be worth \$US 000,000s. Or if we had some points in a project that resulted in man-size sculptures made of precious metal, we could be talking a percentage of \$US 0,000,000s. Every male parent dreams about his children becoming the main breadwinners. Or I should say, of them bringing home the *linguiça*. Well, I do.

From the nutritional point of view you can see where this is leading. Suppose these were real food products, and they were slung into an industrial mixer, turned into khaki slurry, and chemically analysed. As percentages of energy, the result would come out at maybe a bit under 50 per cent fat, and maybe nudging 40 per cent sugar and white flour (identified as carbohydrates), with maybe somewhat more than 10 per cent protein, and a dirty great dollop of salt. Dietary fibre? Almost zilch. Folate? Potassium? Traces only. Chemical additives? A zoo.

No, this is not what Gabriel eats every day. His staples include what Raquel his mother calls 'holy' (whole) rice and beans, with lots of vegetables, as well as chicken or fish. At the beginning of the day he has a banana and a holy bread sandwich. The household is now purged of margarine. He enjoys all sorts of fruits, as well as fruit juices. Our favoured takeaway food is from the Lebanese chain Habibs, whose *kibbeh* and *sfihas* are tasty. But these aren't the foods he dreams about. Could I encourage him to make models of pineapples, papaya, passion fruit, carrots, cabbage and celery? Maybe, but I doubt it. Chocolate cake with a candle means parties, and parties mean fun and presents. And burgers and pizza – well, they are advertised everywhere, on television, in children's books and games, and outside as well as inside supermarkets. What Gabriel thinks about, and therefore can turn into art, is glamorised food.

Marketing of food to children. Breakfast cereals

Where and what are the limits?



This month ministers of health and their teams from the member states of the World Health Organization, meet at the WHO World Health Assembly in Geneva. This item here is meant as a contribution to their deliberations on the prevention of chronic diseases, including childhood overweight and obesity, now a pandemic that is out of control. It is written in the spirit of modest enquiry, and does not suggest that any breakfast cereal company or executive is acting in bad faith. We are all learning.

What I look at here, is some aspects of the marketing to children of ready-to-eat breakfast cereals, which contain various nutrients, which could not possibly be seen as 'junk food', which most parents would think of as nourishing, and whose manufacturers vigorously promote as health-giving. The examples given are of products manufactured by Kellogg's, which has over one-third of the global market for ready-to-eat breakfast cereals, and by Nestlé, who with their partners General Mills have about one-quarter of the global market. Other big players include Kraft (Post) and PepsiCo (Quaker). Then there are a lot of smaller and 'own-label' manufacturers.

The points made and the questions posed here are about sugared ready-to-eat breakfast cereals. In particular, they are addressed to manufacturers that have the muscle to make an impression on television, websites, retail outlets, and elsewhere, in partnership with big multi-media businesses specialising in kids' fantasy entertainments, and in school playgrounds and other places.

The monster market

Datamonitor says the overall global market for all types of breakfast cereal is projected to amount in 2013 to consumption of around 4,000 million kilograms, which works out at around 25 serving sizes of 30 grams (or 1 ounce) a year per person on the planet. Put like this, industry strategists may feel that saturation coverage will be around 50,000 million kilograms a year. Given that most people,

children included, consume quite a lot more than the suggested serving size, the actual total might be 75,000 million kilograms. Association founding member Marion Nestle reckons that in the USA alone, the total spend on all forms of advertising and marketing of ready-to-eat breakfast cereals by the 'big four' companies mentioned above, amounted in 2005 to around \$US 2 billion a year (1). Sales in the USA are fairly flat. Sales in Asia, especially China, in Africa, and in Latin America, are booming.

The advertising and marketing of sugared ready-to-eat breakfast cereals to children, including small children under the age of 6, interests me for a number of reasons. When I was chair of the UK National Food Alliance (now Sustain) in the 1990s, Sue Dibb was responsible for the first carefully reasoned reports about advertising and marketing of food and drink products to children (2), and breakfast cereals figured high on the lists. Also I am interested because my little boy Gabriel, when he was 4 last year, pestered us to buy a specific brand of breakfast cereal for reasons I took some time to latch on to. He now is out of the habit only after a parental pact never to buy any ready-to-eat breakfast cereal, never ever.

The third reason I am interested, is because I have become involved in discussions about public-private-people partnerships with bigshots in meetings convened by UN agencies, in which industry representatives celebrate self-regulations that, they say, are limiting the advertising and marketing of fatty, salty – and sugary – products to children. Staying with ready-to-eat breakfast cereals, my problem here, as a resident and citizen living outside the USA and Europe, is that I am not at all clear about what if any real restraint is being exercised. So I am inviting explanation from those people, including industry representatives, who are closer to what goes on than I am.

What is 'sugary'?

Take Kellogg's Frosted Flakes. These first appeared in the shops in 1952, with their 'mascot' Tony the Tiger and his line 'G-r-r-r-eat!' An early packet is shown above, with its original name 'Sugar Frosted Flakes'. Isn't it charming? The graphics are a bit like those used on pinball machines of that period. Maybe that's how I now feel because of having had them on the breakfast table at home in London when I was a child, though I don't remember this. Then in 1984 Kellogg's dropped the word 'sugar' and as you can see, the product became Frosted Flakes, as it is now in English-speaking markets.

The current formulation includes 12 grams of added sugar in a helping/serving of 30 grams: this represents about 40 per cent of the 114 calories of cereal in each serving, the rest being almost all supplied by starch. The mouth-feel is somewhat glutinous and even sticky, so – well, let's say that Frosted Flakes would not be identified as protection against the decay of young teeth. At around 350 calories per 100 grams, dry Frosted Flakes weigh in at about the same energy density as sausages or doughnuts. This is perhaps not a fair comparison, since the calories in breakfast

cereals are normally 'diluted' with milk. But perhaps not entirely unfair: sausages may be eaten with tomatoes, and doughnuts may be accompanied by fruit juice. Manufacturers will also point out that their ready-to-eat cereals contain significant amounts of dietary fibre and a lot of added synthetic vitamins and minerals, which processed meats and jammy munchies do not.

Kellogg's has pledged to limit the advertising and marketing of its sugary breakfast cereals to children (3). This is in the context of general voluntary agreements made by a number of transnational food and drink industries. These agreements are according to rules, guidelines and cut-offs devised and agreed by industry. According to this code, I understand that Frosted Flakes do not count as a sugary cereal. This seems a bit lenient (4,5). So for my first question: is this true? And my second question: are these industry voluntary agreements global in scope, or do they apply only in the USA and Europe?

The monster packets

My third, fourth and fifth questions are as a result of browsing supermarket shelves in Chile and Brazil. Below is the big surprise I found in Santiago last December. The first picture is of a new-style packet of Zucaritas®, the Latin (Spanish) version of Frosted Flakes. Tony, a Kellogg's-owned character, has been restyled and given a lot more zip, and now resembles a multi-media computer-generated cartoon animal of the type that now inhabit the imaginative lives of kids all over the world. Isn't it beautiful. Following my Claes Oldenberg thought, 100 of these packets, which also come in a vertical format, stacked 10 by 10, could become one of the pop icons of 2010, to be sold by Sothebys International in 2050 for \$US 10 million. Now look at the splash headline. Translated into English, it says: 'Family pack' and 'Bigger than ever!' And it weighs in at 900 grams, more than three times the volume of what at the moment remains the standard size weighing around 250-300 grams. The pack is enormous; you could get a netbook inside it.



Now here below is another example, a picture also taken in Santiago last December, this time of a Nestlé product, Chocapix®, promoted on the label with the words 'The fantastic experience of chocolate'. This too as you can see, weighs in at 900 grams. This packet also advertises a free 'Intergalactic' toy



You can get a sense of just how big these new packets are from the picture below, of Sucrilos®, the Brazilian version of Frosted Flakes. This picture was taken in my home city of Juiz de Fora in March. On the lower shelf is the standard packet, which

in Brazil is of 300 grams – 10 standard servings. On the higher shelf is one of the ‘economy’ packets, of 730 grams – 24 standard servings.



So my third, fourth fifth and sixth questions are as follows. Are these new ‘family’ or ‘economy’ size packets of breakfast cereal here to stay? And where? Are they being rolled out globally, or only in emerging markets, such as in Latin America? Does the industry have projections of the proportion of cereal in these big packets that will be discarded as a result of becoming stale? And do people, children included, consume bigger portion sizes from these enormous ‘economy’ packs?

Brands like these are not niche products. In Latin America they are big-time. Manufacturers who invest in new or reformulated products spend a lot of money advertising and promoting them, and promotion costs include the renting of prime shelf space in supermarkets. Here below is a result; this picture was taken in Santiago.

With a wide-angle lens you would have seen that the space taken up by the standard size Chocapic® was even greater than that shown. My seventh question is: what is the total investment of Kellogg's and of Cereal Partners (Nestlé/ General Mills) in renting supermarket shelf space, say globally, in the USA, and in Latin America? Is it possible to know?



Finally, I come to a Nestlé product whose packets marketed in Brazil were, in early 2009, as pictured below. This is Nescau® Radical. Its ingredients as listed on the label are, in order, cornmeal, of which about half is wholemeal, enriched with iron and folic acid; sugar, starch, glucose syrup, cocoa powder, palm oil, salt, more added vitamins and minerals, and an array of additives designed to preserve the product and to keep it dry and smelling and looking as well as tasting nice.

As you can see, the main character on the packet looks rather like Kellogg's Tony the Tiger, but is in fact a rendering of Alex the lion, one of four multi-media characters devised by Dreamworks® in their Madagascar™ series of movies, which have been big hits with kids. A little plastic model of Alex and other Madagascar™ animals was offered per packet. Since you never know which *Desliza-louco* ('crazy slider') will be in the packet that is purchased, this encourages playground swap sessions.



My interest was and is not primarily about the nutritional quality of this product. It is completely reconstituted, made with a technology which, as you can see from the top right-hand corner, results in brown pellets that may remind you of pet chow.

However, its overall contents, from the chemical point of view, are fairly similar to those of the other products mentioned here. What did concern me, was that the product was advertised on the packet as suitable for children above the age of 18 months, and was 'cross-promoted' with powerful multi-media entertainments projected at children of primary school age and also pre-school children. One recent survey done in the USA has shown that the use of cross-promotions on food packages targeted at children increased by 78 per cent in two years between 2006 and 2008 (6). Of these, one-fifth targeted pre-school age children.

What's the deal?

The Nescau® Radical package seemed to me to be going too far. At a session of the World Congress of Public Health held in Istanbul in April and May last year, I asked a senior Nestlé executive, after his presentation celebrating his company's contribution to population health and well-being, what he thought about this. Now in 2010 I find that Nescau® Radical as displayed in my local Brazilian supermarket no longer uses multi-media cross-promotions.

Was this in response to my Istanbul enquiry? It would be nice to think so, but I am sure there is another reason. Is it simply that there is no Dreamworks™ show on the road right now? Or what? So my eighth question here is: what is the current policy of breakfast cereal manufacturers concerning the advertising and promotion of their products to children, globally and in emerging markets? And finally and specifically,

does this policy still include multi-media cross-promotions that include merchandising of super-heroes and other characters designed to appeal to children of school-age and even younger? Here for convenience are the questions in order.

- 1 Is it true that the marketing of breakfast cereals containing 12 per cent by weight of added sugar is exempt from industry- devised voluntary codes, that are designed to limit such advertising and promotion to children?
- 2 Are these industry codes global in scope, or do they apply only in the USA and Europe, and not in the ‘emerging markets’ of Asia, Africa and Latin America?
- 3 Are the new ‘family’ or ‘economy’ size packets containing 750-900 grams of breakfast cereal product, here to stay?
- 4 If so, are they being rolled out globally, or only in emerging markets?
- 5 Does the industry have projections of the proportion of cereal in these big packets that will be discarded as a result of becoming stale?
- 6 When people buy ‘family’ size packets of breakfast cereals, do they consume bigger portions?
- 7 What is the total investment of Kellogg’s and of Cereal Partners (Nestlé/ General Mills) in renting supermarket shelf space, globally, in the USA, and in emerging markets?
- 8 What is the current policy of breakfast cereal manufacturers concerning the advertising and promotion of their products to children, globally and in emerging markets?
- 9 Does this policy still include multi-media tie-ins that include merchandising of super-heroes and other characters designed to appeal to young children of school age and even pre-school age children?

I pause, for a response. Please use the facility at the foot of the column.

References

- 1 Nestle M. *What To Eat*. New York: Farrar, Straus, Giroux, 2006
- 2 Sustain. Children’s Food Campaign. Obtainable at: www.sustainweb.org
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- 5 De Vries L. Kellogg won’t market sugary cereal to kids. CBS News, 14 June 2007.
- 6 Harris J, Schwartz M, Brownell K. Marketing foods to children and adolescents: licensed characters and other promotions on packaged food in the supermarket. *Public Health Nutrition* 2010, 13(3): 409-417.

Request and acknowledgement

You are invited please to respond, comment, disagree, as you wish. Please use the response facility below. You are free to make use of the material in this column, provided you acknowledge the Association, and me please, and cite the Association's website.

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