

Out of the Box



Who doubts that sugared drinks make children fat? What are the origins of the English Breakfast? Who rules Romania? Why is the toxicity of food contaminants a mystery? What's the problem with 'overweight'? Read on!

Sweet nothings

First, some scuttlebutt. As you know, sugared soft drinks cause weight gain, overweight and obesity. I don't need to tell you the metabolic reason, but I will: 'free' sugars, consumed in sodas, colas, squashes and other soft drinks, 'fool' the body's satiety mechanisms, triggered not just by energy consumed but also by bulk. Whole fruits are satisfying as well as nourishing; sugared drinks are neither. This commonsense view is now illuminated by reviews of unequivocal results from interventions and observational studies^{1–3}. These sadden the manufacturers of soft drinks.

So why don't soft drinks carry health warnings, why aren't they taxed, and why are they still stocked in school vending machines? Over the *menu gourmand* at the Orrery restaurant in London's Marylebone High Street, my host, a distinguished professor of nutrition, told me that a number of other distinguished professors are paid by the sugars and associated industries to attend international conferences. 'Every time there's a session on sugar there's one of those guys standing up, asking supercilious questions and creating confusion' he said, as after our *amuses-bouche* we tucked into roasted Scottish sea scallops made more piquant by 2005 Pinot Gris from Akarua, Central Otago.

No, I am not going to name names. But here is a tip. Any time you are at a nutrition conference in a session discussing energy density, fast food, sugared soft drinks and such-like, and weight gain and obesity, and somebody says 'a calorie is a calorie', stand up and ask who paid for his (or her) travel and accommodation.

Myths to feed by

Now for some philosophy. When travelling (with a clear conscience of course) have you ever wondered about the gut-busting 'English Breakfast' still on offer in hotels throughout the world, complete with bacon, sausage, fried egg and bread, grilled tomatoes and mushrooms, and sometimes black pudding? Where does it come from?

The French philosopher Jean Beaudrillard, who died earlier this year, had a lot in common with the Canadian sage Marshall McLuhan. Both thought about the ways in which our perceptions and mentality are mediated, and

both were often thought to be visionary, demented, or both. Jean Beaudrillard is perhaps best known for asserting that the US invasion of Iraq, and the attack attributed to 'Al Qaeda' on the USA, are fictions. This is an elaboration of Marshall McLuhan's motto 'the medium is the message'. Sure, there were events 'out there' in Iraq (and Afghanistan) and in Manhattan and elsewhere in the USA, and yes, many people were killed (and outside the USA are still being killed, big-time). But what does this mean? 'Reality' and 'truth', both of which are meant to answer 'why?' as well as 'what?' questions, are no more than points of view. That's the idea.

In the Orrery it was my turn to talk while my host savoured *tarte fine* of artichokes and aged Parmesan, their acidity tempered by 2005 Tokaji from Istvan Szepsy, Hungary. (I think that's what the wine waiter said; I am not used to gourmet lingo.) The more we think about such concepts, the more elusive they become, I said. Thus, we refer to 'El Qaeda' because we believe that this exists, rather as we accept that 'Che' Guevara, William Shakespeare and Jesus of Nazareth lived. What they mean to us though is not their physical existence, but the stories told about them, which when repeated and accepted become their myths. What is most famous is most mythical, because fame is fabricated and amplified by the media of communication.

Yes, this brings me to the 'English Breakfast'. It became an institution because of 'Mrs Beeton'. This is the monumental *Book of Household Management* first published in 1861, which by 1868 had sold two million copies and became a standard perennial wedding gift for middle-class housewives, reissued in regular updated editions from then to now. Its recipes and plans for home cookery, adapted in manuals by other authors, have had an immense influence on the food British women have purchased and prepared for their families.

The latest biography of Isabella Beeton⁴ shows her to be an example of Jean Beaudrillard's take on reality. She was in life an energetic journalist, occasional cook and haphazard housekeeper, whose recipes and methods were mostly purloined or adapted from other books, with advice from trophy chefs flaunted by the aristocracy before restaurants were established in Britain. Having compiled the first edition of her book, initially in the form of instalments in *The Englishwoman's Domestic Magazine* published by her husband Samuel, she died in childbirth aged 28. After her death Sam turned Mrs Beeton into 'Mrs Beeton', and published new editions compiled by another

woman with whom he lived in a *ménage à trois* together with her husband.

After Sam went mad and died, probably from syphilis contracted before he married Isabella, the brand image was perpetuated by the publishing firm that took over his business. 'Mrs Beeton' guided housewives through the first demographic transition, as Britain changed from a rural to an urban country. The mechanisation of the British food supply, and the first surge of globalisation, made home-produced and imported meat and 'white food' – flour, fat, sugar, salt – ever more available, and 'Mrs Beeton' taught successive generations of women to transform the burgeoning inventions of food science and technology into 'the traditional British diet'. As you know, this is heavy with meat, pastries, puddings, cakes, cookies and desserts, combined and permuted into four meals a day including afternoon tea, with as its apotheosis the Sunday Roast, the leftovers of which during the week become cold cuts, pies, stews, soups and broths. And to begin the day, the artery-clogging cooked breakfast.

So there you have it. The 'English Breakfast' was invented by a journalist and perpetuated by an enterprising mid-Victorian magazine publisher who transformed his dead wife into a trade mark. In the Orrery we were ready for our best end of new season lamb. My host complained that the Barolo from Piedmont, Italy, was of the wrong vintage. Rather muddy, I said – it was, too.

Who runs Romania?

Now for a confession. A few minutes of googling plus some currency conversion will tell you that Unilever turns over roughly \$US 55 billion a year and makes an annual profit of about \$US 8 billion. Coca-Cola's net operating revenue is just over \$US 24 billion a year, its annual profit just under \$US 16 billion. Nestlé turns over about \$US 75 billion a year, and makes an annual profit of roughly \$US 6.5 billion. (These are 2005 figures). So together these three firms recently turned over roughly \$US 155 billion a year, give or take \$US 10 billion or so.

The revenue of any of these firms is more than the GNP of some African countries. Together they match up to some European countries. For example, the GNP of Romania is \$US 171.5 billion a year (2004 figures). Being a country, Romania does not make a profit. Indeed, if the national debts of the USA and the UK, and the needs of politicians in the free market for votes, are anything to go by, the government of Romania is short of readies with which to woo its citizens. So if transnational companies wanted to make their presence felt and their voice heard in the 'development' of Romania, newly admitted into the EU, the local politicians might well be chuffed.

And lo, I find in *The Economist* a full-page advertisement issued jointly by the government of Romania (Ministry of European Integration), Coca-Cola® and Unilever⁵. No doubt it has appeared in other financial

journals. In it the Romanian government says that the World Bank's 2007 *Doing Business* report ranks Romania number 2 in the world for investor-friendliness.

Coca-Cola says: 'our company depends on the health and sustainability of our planet', and 'we promote active and healthy lifestyles through a comprehensive strategy of responsible marketing', and perhaps more to the point 'we share with the Romanian government a determination to achieve a prosperous society in which people and businesses can develop and grow'. Unilever says that it has invested more than €100 million in Romania since 1995, and is now the leader in the Romanian household cleaner, deodorant, soap, mustard, seasoning and margarine markets, and says 'consumption... is growing strongly, fuelled by the steady increase of consumer income over the last five years and the rapid expansion of modern trade'. Not to mention a flat tax rate of 16% for personal income and also corporate profits, and a commitment from the EU of €30 billion between 2007 and 2013, both of which should keep Romania a safe haven for transnational businesses.

The advertisement continues to intrigue me. It feels a step beyond McDonald's sponsoring events at Labour Party conferences, or one of the English football leagues being known as the Coca-Cola Championship. In those cases you can tell the difference – well, sort of. Whereas in the case of *The Economist* advertisement and the story it tells, national government and transnational industry seem to shimmer and merge. Obviously Cola-Cola and Unilever footed their share of the bill. What next? After all, Romania as a brand image is hardly up to scratch, being associated with gypsies, vampires and dictators. So, how about Cocacolonias? Or Transnatsylvania? Or, following discussions with a consortium including Nestlé, Endensia?

The more I know, the less I know, about the ways of the world. That's my confession. Rulers become powerful by controlling food systems. The British Empire was made possible by privateers and plunderers who paved the way for officially sanctioned invasions in the name of civilisation. Who are the masters now?

Off of the trolley

Now for some back pages. Once I was interested in by-ways of food, nutrition and health. Neural tube defects as a folate deficiency disease? Even before the UK MRC trial messed up the distinction between folate (from food, therefore in physiological amounts) and folic acid (from supplements, in pharmacological amounts) the idea seemed well supported⁶. Sugared energy-dense 'rocket fuel' foods and drinks as a cause of mood swings and disruptive behaviour among children and prisoners? The biochemistry, and the testimony of sensible people including an ex-governor of Wormwood Scrubs, was impressive⁷. Anorexia 'nervosa' as a zinc deficiency disease? Notwithstanding the support of the professor of

organic chemistry at Reading University, and various types of evidence pointing in the same direction, this was far out⁸. Feeding of cows with remains of sheep a likely cause of zoonoses and not a good idea anyway? I learned much from renegade official advisor Richard Lacey, the microbiologist who blew the whistle on the mad cow disease scandal⁹.

In the 1980s I wrote on these and such-like topics for UK newspapers, women's magazines, and in books¹⁰. What struck me was that while there was evidence in the literature if you knew where to hunt for it, and usually also a group of professionally qualified champions, the basic ideas were rarely mentioned in current peer-reviewed learned journals, except in occasional dismissive or even derisive asides. Nowadays the established response is to insist on randomised controlled trials, without which all is anecdote and conjecture. Or so it is said.

One story that made me nervous was the zinc–anorexia connection. The story still seems plausible to me, as long as you stay with zinc deficiency being *not the* cause, but one cause. Anorexia and also loss of the sense of taste are 'classic' symptoms of zinc deficiency. Young women who eat little and avoid animal foods are particularly likely to be short of zinc. Incessant physical activity, part of the anorexia 'nervosa' syndrome, liberates zinc from muscle, enabling the body to feed on itself, a reason why anorexia is dangerous. General practitioners who gave their anorectic patients solutions of zinc sulphate found that in the early stages they recovered normal appetite and gained weight.

In the case of anorexia there is a special reason why such ideas are not mentioned in nutrition journals. The field has been staked out by psychologists. Sir William Gull, physician to Queen Victoria who also had a special interest in young women (a reason why he is on lists of Jack the Ripper suspects), tried out all the potions and nostrums in his pharmacopoeia. None worked, so he put the condition down to hysteria and then, remembering that young servant lads also sometimes suffered the syndrome, proposed 'anorexia nervosa' – and there it was, and here it is¹¹. But at the time I felt that this was a loony tunes story too far. Certainly if I had stayed with this stuff, this column – if this journal's august editors-in-chief had been rash enough to commission it – might for many readers be more like *Off of the Trolley*.

The toxic tar-pit

Thus it was in a mood of self-protection that, many years ago, I vowed I would never ever get stuck into six topics. Three are chlorination and fluoridation of and the addition of aluminium to water supplies. Four is mercury in dental fillings. Five is heavy metal contamination of food systems. And the sixth is pesticides.

These are all about toxicity. Armies of toxicologists are employed by governments to agree limits of safety-in-use

of additives and accidental or on-purpose contaminants using models and methodologies designed to buttress regulations that protect the food, agriculture, chemical and other industries. But anybody determined to make a case for or against indictment of the effects of contaminants on human health using conventional science would waste their time. Human trials are impossible on ethical grounds. True, assays of samples may find that levels of contaminants A or B in foods Y or Z are above agreed safe limits, and organisations like Friends of the Earth do so occasionally. But official responses bat such findings away, saying that safe limits are super-safe, or that offending samples are super-unusual, or that the trouble is confined to a batch of imported comestibles.

Toxicity of food is a tar-pit. This is why expert reports on food, nutrition and health usually steer clear of contaminants. In most cases all that can be said is that there are regulations; that the toxic effect of accumulation and combination of contaminants cannot be ruled out; and that accidents, overuse and abuse are another matter.

This approach tends to breed an 'Oh, that's all right, then' feeling. Cadmium in fish? Pesticides in vegetables? Hormones in meat and milk? Fiddlesticks – dingbat issues. This is how statements like 'any theoretical problems posed by trace amounts of [toxic compound A and B] in [food Y and Z] are almost certainly outweighed by the nutritional benefits of [foods Y and Z]'. I have drafted such statements myself. They may be conscientious, but they are evidence-innocent guesses. We have no idea how dangerous contamination of food supplies may be. Claims that most, half, some, a few, or no diseases and disabilities are affected or even caused by industrial contaminants and pollutants as contained in food have no real basis in evidence. We just don't know.

And how could we ever know? How could you build an evidence basis, should you be zealous enough to try? First you would need to lead a team in a recognised centre of research excellence. Second you would need reasonable assurance of regular truck-loads of cash to fund your research. Third your results would have to be published in high-impact peer-reviewed scientific journals. Fourth all this would need backing by results published from other centres of excellence. Fifth your findings and the pooled conclusions would need to gain traction with the government of your country and official funding agencies resourced with tax-payers' money. Can you see this process resulting in any general agreement that pesticides, say, are a serious public health concern? In whose interest is it to come to any such conclusion?

My industrial accident

As you might guess, something happened to provoke these reflections. I have suffered something common among rural workers, but no doubt rare among public health nutritionists. I have had an Industrial Accident. It was my fault.

In Brazil, some weeks ago as I write, the exterminator we hired showed up with the mission to zap the termites chomping through the internal woodwork of our house on the Rio de Janeiro littoral. He said he could also spifflicate cockroaches and other *bichinhos* (little creatures). He kitted up in his white coveralls, mask, tank and spray, zipped himself up and, looking like a moonwalker, did the business in a couple of rooms. The rest of the family left. He sprayed, I stayed.

In the next week (feeling better now, thank you) I experienced most of what the US EPA www.site lists as effects of mild and moderate organophosphorus (chlorpiriphos in my case) poisoning. Gut contents turned to water, headache, guts ache; dizziness, loss of balance, memory, appetite; bizarre thoughts and dreams; ultra-sensitivity to light, smells, touch; and general exhaustion. This is tra-la-la if transient, but it all squares with symptoms of chronic fatigue syndrome, not to mention gulf war syndrome. Is my brain and nervous system now permanently zapped? Will my cholinesterase regenerate? Last month I was celebrating the Soul of the White Ant; so am I now a case of Termite Karma? Watch this space.

Meanwhile yes, this has sensitised me professionally. What is the difference between me suffering an acute overdose, and you and me and populations taking in chronic low doses? I have no idea. Do you?

The overweight business

Finally, some gossip. Back in the Orrery we were on our *sélection* of *chèvres* washed down with 1994 Marsala from Cantini Florio, Sicily. My host was reflecting on the moves to bring down the lower limit of the 'healthy' BMI range from 25 to 23. This would mean for example that somebody 180 cm (5 ft 11) in height would be classified as 'overweight' not at around 82 kg (~180 lb) but at around 75 kg (~165 lb). That's a lot of people. Sounds good, I said, bearing in mind the evidence on diabetes in Asian populations.

Think again, said my host. Has it occurred to you that chronic diseases are big business? Well yes, I said. And that some chronic diseases are bigger business than others? Cancer is not particularly good business, because most people don't get cancer until they are relatively old. But diabetes is booming and is a potential bonanza: the most money can be made when people without evidence of clinical disease are identified as suitable cases for treatment that may continue for half a century. Do the Indian and Chinese, Brazilian, US or UK middle classes want to lose weight? Or would they prefer to take medicine to keep them symptom-free? Go on, I said.

You are making a mistake, he said, if you think that food manufacturers are the main issue. In general, disease is a drag on the food industry. Sure, sectors of the food

industry whose activities or products make people ill will, when challenged, cover up and subvert the evidence, but they don't make money from disease. There are big exceptions – hence the boom in 'functional foods' and junk food 'fortified' with synthetic vitamins and minerals, so as to trigger 'nutraceutical' health claims. But on the whole, the food industry would prefer people to be healthy, with hearty appetites – hence the McDonald's Olympic Games, etc. Whereas. . .

You mean the drug industry? I asked. Are you saying that drug manufacturers are behind the drive massively to increase the number of people defined as 'overweight'? Well, said my host, if you ever feel that some nutrition scientists have strongly held but eccentric views about chronic diseases, especially obesity and diabetes, don't assume they are coming from the food industry. Maybe they are, but that's not the area of common interest. Drugs, that's the connection.

Gosh, I said, I hadn't thought of that. We knocked back our Ramos Pinto Quinta da Evramoira 10-year-old Tawny Port, he scolded the wine waiter, and we walked back to the hotel. Next day the choice of English Breakfast included black pudding.

Geoffrey Cannon
GeoffreyCannon@aol.com

References

- 1 Uauy R, Diaz E. Consequences of food energy excess and positive energy balance. *Public Health Nutrition* 2005; **8**(5A): 1077–99.
- 2 Swinburn B, Caterson J, Seidell J, James WPT. Diet, nutrition, and the prevention of excess weight gain and obesity. *Public Health Nutrition* 2004; **7**(1A): 123–46.
- 3 Lobstein T, Baur L, Uauy R. Obesity in children and young people: a crisis in public health. *Obesity Reviews* 2004; **5**(Suppl.): 4–104.
- 4 Hughes K. *The Short Life and Long Times of Mrs Beeton*. London: Harper Collins, 2006.
- 5 Ministry of European Integration of Romania. Coca-Cola®, Unilever. A fresh look at Romania. *The Economist*, 3 March 2007.
- 6 Wynn M, Wynn A. *Prevention of Handicap and the Health of Women*. London: Routledge and Kegan Paul, 1977.
- 7 Cannon G. Does sugar cause bad behaviour? *The Sunday Times*, 5 June 1983.
- 8 Bryce-Smith D, Hodgkinson L. *The Zinc Solution*. London: Century, 1986.
- 9 Lacey R. *Mad Cow Disease. The History of BSE in Britain*. Guernsey: Cypsela Books, 1995.
- 10 Cannon G. *The Politics of Food*. London: Century, 1987.
- 11 Cannon G. The zinc solution. *The Observer*, 2 September 1984.