WN Columns

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What do you think?

Geoffrey Cannon



Cabo Frio, Juiz de Fora. Ten years ago to the month as I write, my friend and colleague Claus Leitzmann organised a three-day workshop meeting in Giessen, Germany. At this meeting the *New Nutrition Science* project was created, as expressed in *The Giessen Declaration*, and in a whole special issue of *Public Health Nutrition.*

For me the project has two great outcomes. One is now the practically universal acceptance that nutrition is – or should be – a social, economic and environmental as well as a biological and behavioural science. The other is in the shape of the project's 'brand', the spiral shown above (left) designed for us in Beijing by the calligrapher Ying Huang Bi. The spiral shape next to it is formed by Australian citizens raising consciousness of climate disruption, sticking their heads in the sand on Bondi beach. Next is one of the great hurricanes that may result from climate disruption, with the *Fibonacci spiral sequence* superimposed. This can remind us that words alone have their limits, and images have a separate power, and also that while words and machinery typically are arranged in straight lines, the forces of nature and life are curved.

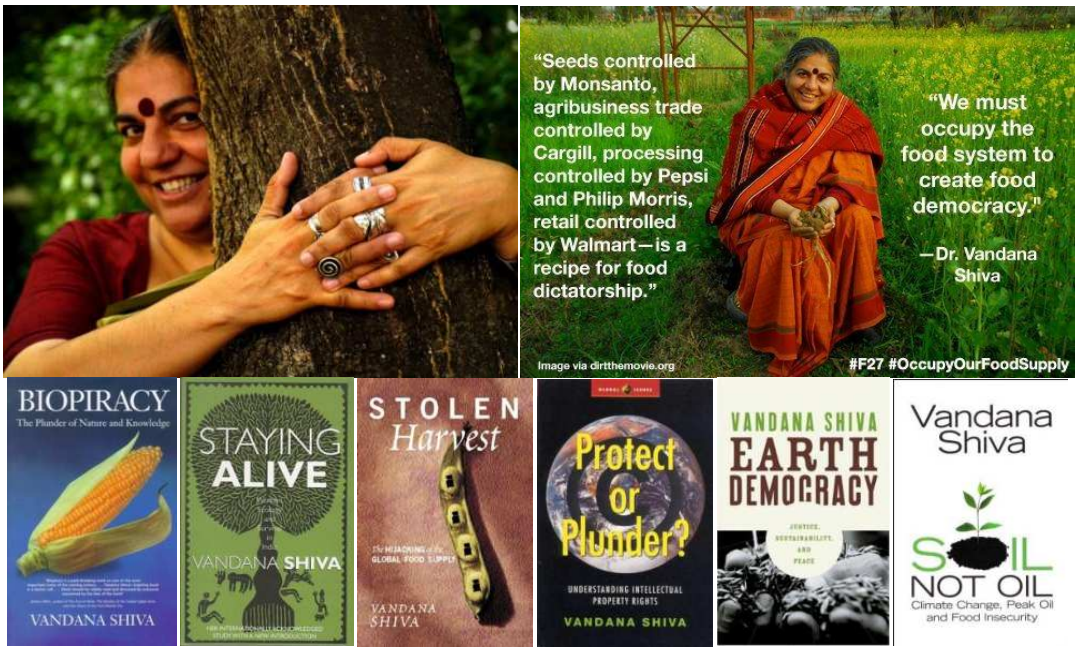
My hero this month is a force of nature. This is Vandana Shiva, whose impact on India and the world now has similarities with that of Mohandas Gandhi. Both express a philosophy resonant in the East which is alien to those in the West whose religion is technology. Time and circumstance is on her side. She may prevail.

Then I riff on conversations with my son Gabriel on chocolate flavour milk drinks, as owned in Brazil by Nestlé and Pepsi-Co, their contents, packaging and promotion, and implications for the entire conventional nutrition science enterprise. Is modern nutrition now mainly for the benefit of ultra-processed product manufacturers?

Eduardo Galeano died last month. Next month he will be my hero. This month I celebrate him as the man who renewed politics of and for the people of Spanish Latin America, with his sayings on burgers, life at home now, and shopping centres.

Food and nutrition, health and well-being

What they believe: 17. Vandana Shiva
Ecology warrior



'Earth Mother', 'the eco-feminist Gandhi' or else 'that Indian eco-terrorist', or 'scourge of biotech' or 'anti-science Luddite' or 'post-capitalist visionary' – Vandana Shiva (herself above and some of her books below) is labelled in such ways and many more. Champion of nature, she is a awesome woman

In the Mahabharata, the Sanskrit epic of ancient India, Shiva is the god who is the standard of invincibility, might, and terror, and also the figure of honour, delight, and brilliance. Duality and ambiguity confuses and is alien to those educated in the 'cut and dried' Western convention, but is normal and natural for those whose way of being is sinuous in the traditions of Eastern philosophies of life and nature.

Vandana Shiva (1952 -) is well named. It does not work well to label her just as an ecologist or activist or author or leader. She is all of these and other things. She is concrete, in her actions as shown above, happy to be photographed hugging a tree in solidarity with the Chipko eco-feminists, and naming transnational corporations who she sees wrecking agriculture and thus the planet. The titles and themes of her many books, six shown above, confront extremely troublesome phenomena. An example is the disaster of Bhopal in the state of Madya Pradesh in December 1984, when a vast leak of toxic gas from a pesticide plant owned by the US corporation Union Carbide (which later became a subsidiary of Dow Chemical) killed thousands and injured tens of thousands of people. The implications of this event, from which the local communities still suffer, have shaped Shiva Vandana's thinking and that of her elder sister Mira, as have the uprisings of the Chipko 'tree-hugger' women whose direct actions, following Mohandas Gandhi's teaching, protect trees from loggers.

Box 1

Rights of Nature

Edited extract from Vandana Shiva's closing declaration as chair of the Rights of Nature Ethics Tribunal, *Lima, Peru, 6 December 2014.*

We know that the fossil fuel age is over, and yet those who can make quick money by mining the last reserves of gas or coal or oil are making their last, desperate attempt, because the mining itself, the extraction itself, the drilling itself, is really intended just to extend ways of organising human life in such a way that we are dependent on non-renewables.

We are talking of lives being lost today. I come from the Himalayas. I was born there and grew up there. Last summer in the state of Uttarakhand we had the most extreme climate event. Over four days we received extremely heavy rainfall, about 375 percent more than during a normal monsoon. The glacial lakes were melting and those lakes burst. The floods that were caused took 20,000 lives. Homes are gone, roads are gone, schools are gone, bridges are gone and it is going to take a minimum of 50 years to rebuild the lives of those who survived. Every person in those beautiful valleys of our mountains is saying that it is human action, it is human greed, it is human sin and stupidity that is making Mother Nature react. That's the reading of all communities that are related to the Earth and have not separated themselves. We have also perpetuated a war against our human bodies, which are made of the Earth. All the disease epidemics that were mentioned again and again and again, in every case are reflections of that war against the Earth, against human beings and against human bodies.

Fake productivity

The fossil fuel age allowed the belief that human beings, creative work, skills, knowledge that comes from relationship to Mother Earth, can all be discarded. And that's what allowed it to be said that indigenous people don't have knowledge – they are primitive. That's what allowed it to be said that when you get rid of people from the land, for example, in agriculture, you have a more productive agricultural system. The calculations of more food are done on the basis of false productivity, which only counts labour as input. The more people displaced from the land, the more peasants destroyed, the more food sovereign communities devastated, by definition the more productive the agriculture. What is not counted is the fossil fuels. What is not counted is the chemicals. What is not counted is the water. What is not counted is the financial inputs. What is called a productive agricultural system is actually a negative economy, using 10 units of input to produce 1 unit of food. Together with violations of the Rights of Mother Earth, we have deepening poverty and hunger.

This tribunal was called a Seed Tribunal. It is a seed sown. The creativity we derive from the Earth cannot be stopped. It cannot be extinguished. And it is from this that we need to go beyond the culture of fear that has been created, by attacks and criminalisation on defenders of the Earth. You know that corporations are criminalising savers of seeds, and we having to deal with making people confident that they can continue to save seeds. And work with seeds according to the laws of the Earth, not the corporate laws that create a monopoly.

A time to rejoice

Let us celebrate this year, the World Food Day, 16 October, as the day of the Rights of Mother Earth and her giving us food, and turn it into a day of thanksgiving, turn it into a day of gratitude, and turn it into a day of commitment to refusing to allow the destruction of potential and capacity. I think we have started on a beautiful, exciting journey of finding new paths collectively. This is a small seed that I can see growing into a magnificent tree with many branches. Let's nourish it, water it and hug it.

Attacked in the New Yorker

In August last year, *she was attacked in the New Yorker* by staff writer Michael Specter. His main substantive assault in 'Seeds of doubt', an 8,000+ word profile, was on her belief that genetically modified seeds are an abomination. He made clear that he is in favour of biotechnology for the usual reasons – more food for the world, in the context of molecular biology being a scientific wonder of the world. He also got personal, indicating that she has inflated her academic credentials and wilfully exaggerated the number of Indian farmers whose suicides are a result of debt caused by being dependent on genetically modified seeds.

His own views are indicated by those he quotes. Gordon Conway, a former president of the Rockefeller Foundation, said 'It is absolutely remarkable to me how Vandana Shiva is able to get away with saying whatever people want to hear. She is lionised, particularly in the West, because she presents the romantic view of the farm. Truth be damned. People in the rich world love to dabble in a past they were lucky enough to avoid – you know, a couple of chickens running around with the children in the back yard'. Mark Lynas, the writer who was against genetic modfication and then changed his mind, said 'She is blinded by her ideology and her political beliefs. That is why she is so effective and so dangerous. She is very canny about how she uses her power. But on a fundamental level she is a demagogue who opposes the universal values of the Enlightenment'.

He also cites economists from the US and Germany who have calculated that the failure to market the genetically modified Golden Rice Two 'in the past decade has caused the loss of at least 1,424,680 life years in India alone'. He himself says 'Her statements are rarely supported by data, and her positions often seem more like those of an end-of-days mystic than like those of a scientist'. He summarises a lot of what people who hate Vandana Shiva think about her views, the way she expresses them, and her influence particularly on people who are hostile to transnational corporate power and in particular to biotechnology.

Her counterblast

She is a few-holds-barred activist, for sure. A week after the *New Yorker's* date of issue, she released 'Seeds of truth', a 5,000+ *word counterblast.* 'I wonder why a journalist who has been bureau chief in Moscow for *The New York Times* and bureau chief in New York for the *Washington Post*… would submit such a misleading piece. Or why *The New Yorker* would allow it to be published as honest reporting, with so many fraudulent assertions and deliberate attempts to skew reality', she began.

' "Seeds of doubt" contains many lies and inaccuracies that range from the mundane … to grave fallacies that affect people's lives. The piece has now become fodder for the social media supporting the biotech industry. Could it be that rather than serious journalism, the article was intended as a means to strengthen the biotechnology industry's push to "engage consumers"?'



Farmers, students and activists protesting in Chennai, India, 2013. A representative was quoted in The Hindu. 'Monsanto is the poster child of corporate greed and corporate crimes against citizens and the environment. Our governments project it as a corporation which will save our farmers and farming. But Monsanto has not hesitated to sue and jail farmers in the name of intellectual property rights'.

Her response does not address all of Michael Spector's assault, but on genetically modified seeds in India, his main focus, she is impressive:

> Monsanto entered the Indian market illegally in 1998. We sued them on 6th Jan in 1999. Before Monsanto's entry to the market, local seeds cost farmers between Rs5 and Rs10 per kg. After Bt Cotton was allowed into the market Monsanto started to strengthen its monopoly through (i) 'Seed Replacement', in which Monsanto would swap out farmers seeds with their own, claiming superiority of their 'product', and (ii) 'Licensing Agreements' with the 60 companies that were providing seeds in the Indian market at the time. Monsanto ensured a monopoly on cotton seeds in India and priced the seeds at Rs1,600 for a package of 450 gms (Rs 3555.55 per kg, out of which the royalty component was Rs 1,200). Rs 3555.55 is approximately 711 times Rs5, the pre-Bt price…
>
> I do say Monsanto's patents prevent poor people from saving seeds…This is true in most parts of the world. Specter makes it appear as though Indian farmers are protected and have always been, merely by mentioning The Farmers' Rights Act of 2001. I happen to have been a member of the expert group appointed by our Agriculture Ministry to draft that very act. We have worked very hard to make this happen and I am very proud of the fact that India has built Farmers Rights into its laws. But the farmers are not completely protected since Monsanto has found clever ways around the laws…This issue has many pending cases in Indian courts.
>
> This section in Specter's piece is designed to… mislead his readers to echo Monsanto's attempt to hide the catastrophic implications of a seed monopoly and Bt-Cotton's failure in India as it tries to enter new markets in Africa proclaiming its success in India. Indian farmers can't choose to buy genetically modified or hybrid varieties. Choosing would require choice, an alternative. Monsanto has systematically dismantled all alternatives for

> the cotton farmer. Monsanto's hold on corn, soya and canola is almost as strong as their monopoly on cotton. About $10 billion is collected annually from US farmers by Monsanto, as royalty payments. Monsanto has been sued for $ 2.2 billion by Brazilian farmers for collecting royalty on farm-saved seeds. The seed market is no longer governed by market forces. The element of choice is missing. The farmer can only choose if he has an option.

Crash bang wallop! She ends by saying 'The spirit of service inspired by the truth, conscience and compassion cannot be stopped by threats or media attacks. For me, science has always been about service, not servitude. My life of science is about creativity and seeing connections, not about mechanistic thought and manipulated facts'. Finally, she quotes Albert Einstein.

> The intuitive mind is a sacred gift and the rational mind is a faithful servant.
> We have created a society that honours the servant and has forgotten the gift.

Or does she? Anybody checking on the internet will find that sleuths say that yes, Einstein did believe and write something rather like this, but not the words that Vandana Shiva quotes.

Enemies – she has plenty of these – may cite this as an example of 'there she goes again', roping in great thinkers as if they are fans of hers from beyond the grave. Fans – she has plenty of these too – may say that the statement is more or less what Einstein believed and wrote, except that he was not into the sacred. Thus he certainly did say 'I prefer an attitude of humility corresponding to the weakness of our intellectual understanding of nature and of our own being'.

The reaction, as with investigation of the exact nature of her PhD degree, depends on what and whose side you are on. Her hint that Michael Specter has been disingenuous in representing himself just as a seeker after truth, is given weight by his piece in the *New Yorker* published on 10 April, 'Roundup and risk assessment', which supports Monsanto and criticised the WHO International Agency for Research on Cancer for classifying glyphosate, the active ingredient in Roundup, of which around 750,000 tonnes are used worldwide every year, as a probable human carcinogen.

The Gandhi comparison

In interviews, *like one with Scott London* in 1998, she says that her parents were followers of Gandhi, and that she is also. Her father, a forester, inspired her to work with the Chipko 'tree-hugging' women at first in the Himalayan state of Uttarakhand where she was born, who put their bodies in the way of chainsaws, stopped some logging, and changed the hearts and minds of politicians up to and including Indian prime minister Indira Gandhi. She still identifies with the Chipko movement, which has analogies with Mohandas Gandhi's 'salt march' to expose and fight against the British Raj monopolising salt, which resulted in headlines the world over.

There are other analogies. Both were educated in the West, Mohandas Gandhi in London as a barrister, Vandana Shiva in Canada in nuclear physics. Using the present tense, both are fully able to discuss and debate in Western style, while having a view

of European civilisation – including 'the Enlightenment', as shallow and destructive, and being more interested in action. In that and other senses they are both leaders of popular political movements, with all the rhetorical implications. Neither has a great interest in being 'reasonable'. Both have lifelong links with like minds, as for him the theosophist Annie Besant and vegetarian Henry Salt, and for her the 'deep green' Edward Goldsmith and Jerry Mander. He made a point of wearing Indian peasant clothes on formal occasions, including a visit to the British prime minister at 10 Downing Street. She wears a sari like many Indian women, and also has a prominent *tilak* on her forehead, the Hindu mark to preserve the energy of that *chakra*.

Both, while usually cheerful, have no attachment to the philosophy, politics and economics of materialism, and as Hinduism does, put human affairs in a cosmic context, as she makes clear in her contribution to the book *Vedic Ecology*. She clearly is sure that there is a world war being waged right now, between might and right, and that the time to hesitate is ended. She will agree with Jiddu Krishnamurti's observation that 'it is no measure of health to be well adjusted to a profoundly sick society'. She ends the 1998 interview with Scott London by saying

> I'm absolutely confident that things will change. I believe that we will see a lot of destruction, but if we can see the right patterns and draw the right lessons from that destruction, we might be able to rebuild before it's too late… Even if we can't, life will rebuild itself. The global economy might collapse, but Gaia won't, and people's ingenuity won't. We will rebuild society, we will rebuild local economies, we will rebuild human aspirations. The kind of global monoculture in which everyone feels as if they have to run faster than they are running to stay in the same place cannot continue. I think we will become disenchanted with the glamour of globalisation.

Box 3

Books by Vandana Shiva

Social Economic and Ecological Impact of Social Forestry in Kolar (co-author), 1981. *Chipko movement: India's Civilisational Response to the Forest Crisis* (co-author), 1986. *Staying Alive: Women, Ecology and Survival in India*, 1988. *Ecology and the Politics of Survival: Conflicts Over Natural Resources in India*, 1991. *The Violence of the Green Revolution: Ecological Degradation and Political Conflict in Punjab*. 1992. *Biodiversity: Social and Ecological Perspectives* (editor), 1992. *Monocultures of the Mind: Biodiversity, Biotechnology and Agriculture*, 1993. *Ecofeminism* (co-author), 1993. *Close to Home: Women Reconnect Ecology, Health and Development*, 1994. *Biopolitics* (co-author), 1995. *Biopiracy: the Plunder of Nature and Knowledge*, 1997. *Stolen Harvest: The Hijacking of the Global Food Supply*, 2000. *Tomorrows Biodiversity*, 2000. *Seeds of Suicide: The Ecological and Human Costs of the Globalization of Agriculture*, 2000. *Patents, Myths and Reality*, 2001. *Water Wars; Privatization, Pollution, and Profit*, 2002. *India Divided*, 2005. *Globalization's New Wars: Seed, Water and Life Forms,* 2005. *Earth Democracy; Justice, Sustainability, and Peace*, 2005. *Manifestos on the Future of Food and Seed* (editor), 2007. *Democratizing Biology: Reinventing Biology from a Feminist, Ecological and Third World Perspective*, 2007. *Soil Not Oil*, 2008. *Staying Alive*, 2010. *Making Peace With The Earth, 2013.*




WN *Hot Stuff. Big Food Watch*

Nutrition as a tool of Big Food






Two Brazilian cocoa drinks (left and right) competing in supermarkets (centre). Except that they are not Brazilian. Toddy® (left) is now owned by Pepsi-Co. Nescau® is of course a Nestlé product. Their profits boost corporate share prices and market value, and executive salaries and pension pots

Today as I write, I had an epiphany. This is a Eureka! moment with its sense of wonder, of the type when you think 'but of course, why did I never see this before, everything makes sense now'. It can be seen as a personal 'tipping point', or revelation of a secret of the universe. The catalyst is cocoa drinks. There is lots of cocoa in Brazil. After the riff that follows here, I cautiously reveal the epiphany.

Gabriel's joke

This early morning my 11 year-old son Gabriel and I had a rap while I made him breakfast. He poured himself some Toddy® made by his mum. This is a Brazilian drink made with sweetened cocoa powder branded with that name for 80 years (see the logo and rustic image above, left). It now also comes pre-mixed as a 'chocolate' milk shake (after the brand Toddy® was taken over by Pepsi-Co in 2001, I note with gloom), but generally people make it themselves by mixing the powder from the container into a mug or jug of hot or more usually cold milk. Parents drink coffee; their children drink cocoa, for energy and height. (These days most parents give children soft drinks, for energy and width, but that is not my story here).

Gabriel had a Nescau® 'chocolate favour' container with him. Seeing me scowl, he explained that it contained water. Well, it does now, I thought. He takes it and other beautiful containers with him to school, usually filled with water. He knows what I think about Nestlé, and I explained about the difficulty of getting bottled water in supermarkets that is not owned by Nestlé, Coca-Cola or Danone. Then he told me a joke. On the internet a father spells out the name of the product on the left, above, T,O,D,D,Y, and asks his daughter what that spells and she says 'Nescau!'. Gabriel laughed but I did not laugh. I am coming to the epiphany, patience please.



The original Disney characters – Mickey, Donald and the rest, here at Disney World in Florida, are now transformed into promotion for Nestlé's Nescau® choc milk drink pushed at children

Seduction of children

One of the squillion reasons I am not going to take Gabriel to Walt Disney World is the vast cost. There are better things to see in our garden. Another reason is the advice of George Bush II to the US people after the fall of the Twin Towers in September 2001, to 'get down to Disney World in Florida, take your families and enjoy life, the way we want it to be enjoyed'. Note 'we'. A further reason is the struggle against homogenised 'world cultures', which with food are called 'cocacolonisation' and with fables 'mickeymousification', of which the strangest example is people wearing gear more expensive because of being advertisements for the name of a corporate brand.

Another is my commitment as a parent to keep Gabriel grounded in reality. Two days ago he pressed me to go with him to the new shiny local shopping centre to spend some of his birthday money. As soon as I was inside, my brain was buzz-bombed by brands, most the same as in malls in Los Angeles, Seoul, Moscow, London or Johannesburg. Where was I? So I got firm with Gabriel, limited his spend, and told him please to save some of his money. OK, he said. At home I had specified his present for my birthday, which is two days after his. My choice was *The Hobbit,* and we found a paperback version with the original lovely cover designed by JRR Tolkien himself. But *The Lord of the Rings* and all that, is unreal also. Was I pressing my childhood fantasies on Gabriel, while rejecting the multi-media fantasies that grip him? Do I have the dreaded 'In My Day' (it was all different and better) disease?

Maybe I do and maybe it was. Yet another reason for no go to Disney World is that trips there are offered in promotions for Nescau®, as seen at the top of this item, right. All the stuff that transnationals put out about restricting propaganda of their products to children, is horse-feathers – fiction. Maybe they have reduced television advertising. But on the internet, on social media, in schools, as in-store promotions, and as marketing linked with multi-media billion dollar fantasy packages? Gear in sixth, pedal to the metal! Associating ultra-processed and other energy-dense fatty, sugary or salty products aimed at children with super-hero, animal, cartoon and other multi-media billion dollar characters loved by children, should be illegal, as child abuse punished by fines, denunciation and prison. But I have not yet got to my epiphany, for I have known all this ever since Gabriel was a little boy with his mum in supermarkets.



The original Toddy powder (left) features a rustic cow, but the Pepsico Toddynho® drink version for children (centre) kicks out the cow in favour of a character a bit like SpongeBob SquarePants®, in cardboard packs or plastic containers. But (right) the essential accessory for every child in the world of superheroes, Nescau®! Kids, take this to school in your lunchbox and transport to outer galaxies!

Insta sugared milk 'shakes'

Now I am examining Gabriel's Nescau® shake container (a section of it is above, right) which he has lent to me in the interests of science. The emptiness inside is rancid. 'NESCAU® Shake' is the biggest words, with a yellow flash. Its graphics are very Marvel Comics. 'Novo' at the top is 'New'. 'Activ-Go®' at the bottom is described on the Nescau website as 'a perfect combination of Vitamins, Iron and Calcium, ideal to start the day with the nutrients important for balanced nutrition'.

Underneath (not shown above) is the description 'Chocolate flavour UHT milk drink'. Its stated 'best by' life is six months. The nutrition information lists vitamins, commonly found in sugared breakfast cereals targeted at children – A, and most of the Bs – B1, B2, B3, B6, B12, pantothenic acid, biotin – all in doses per the whole drink of 25 per cent or more of the 'daily value'. About 40 per cent of its energy is from sugar, the rest mostly from milk. It has 23 stated ingredients, of which 10 are micronutrients, including salt, and 7 are declared additives – stabilisers, gums, a sweetener, plus also an unstated number of flavours. Maybe the actual number of ingredients is 50, only the corporate food technologists know. The nutrition label does not say what percentage of the 'daily value' is from sugar, because in common with the US, 'no daily value is established', which has been helpful to Big Sugar. If the adult energy value of 2,000 kilocalories a day was used, the figure would be 7-8 per cent.

The nutrient story for the Pepsicoed Toddy® (above left) in powder form is much the same, except that practically all its energy is from sugar, less when milk is added. Also PepsiCo does not have its version of the ActivGo® package. Absent is what my dear friend the direct marketing genius Sylvester Stein calls 'sizzle'. Gabriel is not going to take a container of Toddy® sugared cocoa powder with him to school, or associate himself with rustic images of cows. For city kids cows are bad moos.

So as you can see above (centre) PepsiCo has marketed a Toddy shake for children, branded as Toddynho® The rustic cow is replaced by a chocolate-coloured character looking rather like the bizarre kids' cartoon SpongeBob SquarePants®. It contains

hydrogenated plant oil but declares a *trans* fat content of 0. It is intensely sweet, 60 per cent of its energy being from sugar. It comes in the form of 200ml cardboard containers tetrapak-style with a sealed hole through which to poke a straw (centre, left), or the 270ml version (centre, right) pricey version in a screw-top container.

If I had been the creative product design consultant on $US 10,000 a day advising Pepsi Brazil, asked to advise on mock-ups of the packs above, I would have warned that they have a fatal flaw. The colour! Dung and diarrhoea are sort-of chocolate colour. Small kids no problem, but schoolkids taking a Toddynho container featuring a brown SquarePants® character out of their lunchbox will get joked in the playground. Avoid brown like cholera! I would have said.

Booming business

You may now suppose that chocolate flavour sugared milk shakes are not very big business, or are a Brazilian fad. If so, you would be mistaken. The trade journal *Dairy Reporter* states that in Brazil in 2011, close to half a billion litres of milk-mix drinks were produced, up 12 per cent on 2010, with double-digit (10 per cent plus) annual growth projected. An industry source said 'the flavoured milk market is booming in Brazil', and that Toddynho® has 'created a revolution in the Brazilian market, kick-starting the entry to a new product segment, ready-to-drink UHT milk mix drinks'.

Indeed so – this was said before the tetrapak-style cardboard container Toddynho product was zapped by the super-hero-style screw-top plastic bottled Nescau® shake (right, above). This uses the same brilliant red as Coke, whose lawyers evidently have not been able to secure copyright on a primary colour. Globally Toddynho is nothing. By contrast, Nescau® is like the Star Wars® franchise, a global super-brand for many Nestlé chocolate flavour products beamed at mothers for their children, designed to induce loyalty to Nestlé life-long including in the children when they become parents. Nestlé is here to stay. 'Free trade' has seen to that.

Moreover, the industry source said, 'the market for aseptically filled liquid dairy products will see substantial growth in the coming years, first and foremost in China'. She projected double-digit growth also in Vietnam and Indonesia. These days modern kids don't drink a lot of milk as such, so much as sweetened milk products. What they are drinking is sugar for the hit, synthetic micronutrients which makes their mothers think the product is healthy, and chemical additives which put the ultra-processed show on the road, all dissolved in a long-life milk base. Alternatively, with the Nescau® container as an example, what they are drinking is dreams.

This riff started with breakfast and Gabriel. The best I can do is give him another talk about the trouble caused by baby formula (which he accepts) and by transnational hegemony (harder work), and as a fall-back ask him please to use the Nescau® container for water from our rustic earthenware filter or better, set a trend with a really supercool container that has no logo. But he is not yet ready for Naomi Klein. What I hope you are ready for now, after this riff on cocoa drinks, is my epiphany.

The function of nutrition

Epiphanies are big ideas. Like all ideas, and like beliefs and principles and other guides to work and life, they do not derive from data, and can always be contested. What my contemplation of the Nescau® container has made me realise, is that nutrition in its modern form as the science of nutrients always was, is, and will be, largely or mostly the tool of industry. That is, its main job has always been to increase corporate power and wealth. After all, in its golden days over half a century ago, nutrition in the service of industry was seen as a generator of all sorts of well-being. Few people think like that these days. But what I see now is that business always came first.

Justus von Liebig, the German founder of modern nutrition science, around the mid-19th century devised artificial growth promoters for crops and infants in the forms of artificial fertiliser, and of baby formula, which with his meat extract were the first modern ultra-processed products. Robert McCance and Elsie Widdowson, the creators of *The Composition of Foods,* convinced the postwar UK government that white bread 'fortified' with some B vitamins, calcium and iron, is just as good as wholegrain bread. It now seems to me that these coups typify modern nutrition science.

Nutrition, inasmuch as it sees food as a receptacle of nutrients – proteins, fats, carbohydrates, vitamins, minerals – is a science. But together with food technology, it has enabled Big Food. This transnational industrial empire manufactures unhealthy products masquerading as healthy food because of containing some apparently desirable content or balance of energy and nutrients, and in particular of the micronutrients supposed to have special health properties – thus the A and most of the Bs – B1, B2, B3, B6, B12, pantothenic acid, biotin. These are featured on packs to make parents think that countless ultra-processed products are great for child health.

We all would like to believe that modern nutrition as a profession and as practiced is principally a force for great good. And of course clinical nutrition used quasi-medically, personally or on populations, restores health and saves lives, sometimes on a grand scale, as with iodine and goitre. But overall, modern nutrition science – and modern food technology – has surely created a bewildering illusion of food seen as bags of nutrients, in which products like Nescau® – hundreds of other examples can be given – persuade parents to replace real food with ultra-processed products.

Before my epiphany I felt that all this amounted to unfortunate exceptions, by analogy like the adverse effects listed in tiny type slipped into packets of drugs. Likewise I have assumed that nutrition professionals who in some way support or are supported by industries whose products are displacing healthy food systems and supplies are unfortunate exceptions. But now I fear that I have been mistaken. Now it occurs to me that it is usual for nutrition professionals – with or without material reward – directly or indirectly to support corporations many of whose products harm human health and are socially, culturally and environmentally disastrous. This was perhaps never the intention, but – as I fear now – this has been and continues to be the effect.

Please now show me why I am wrong.

Eduardo Galeano
Latin titan



No history is mute. No matter how much they own it, break it, and lie about it, human history refuses to shut its mouth. Despite deafness and ignorance, the time that was continues to tick inside the time that is.

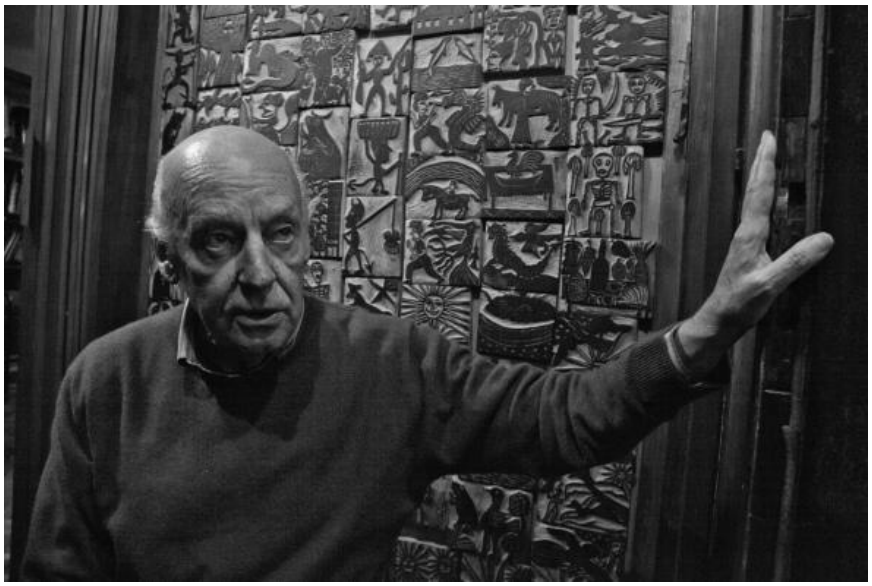
Hugo Chavez gives *The Open Veins of Latin America* to Barack Obama

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Eduardo Galeano has inspired the rise and establishment of democratic socialism in Latin America. He died in his home town of Montevideo this month of April as I write. He was old for many years, like a carving of himself, from so much lived experience, as if marinaded or fermented. He would have enjoyed these images – he says 'we are all mortal until the first kiss and the second glass of wine'. His work was done, he was worn out, used up. Even more than Pablo Neruda, he is the supreme witness to and participant in the significance of Spanish Latin America.

Sometimes it is no use trying to explain. All you can do is say 'go see' – or 'read the book'. Thus above, Hugo Chavez, president of Venezuela, in 2009 giving a copy of Eduardo Galeano's 1971 book *The Open Veins of Latin America,* which has sold over a million copies, to Barack Obama at the Summit of the Americas in Port of Spain, Trinidad. The next day sales zoomed to # 2 in the US charts. At his death Evo Morales, Rafael Correa, Nicolás Maduro, Raul Castro, Dilma Rousseff and José Mujica, current and recent presidents of Bolivia, Ecuador, Venezuela, Cuba, Brazil and his native Uruguay, countries emerged from dictatorships some of which banned his books, acknowledged his influence on them and on the citizens of their countries.

He is a reason why I moved to be in Brazil. In 1999 in Guatemala City I gave a presentation at INCAP, the Institute of Nutrition of Central America and Panama. I started by showing a list of writers who influenced me, and spoke about why Eduardo Galeano. Afterwards the translator quietly asked me 'how did you get in here? You know that INCAP is funded by the US Agency for International Development?'



An old sugar worker told me, the people have a great love for martyrs, but only after they're dead. Before, there's nothing but complaints

2013. At home in Montevideo with a sculpture forged from ancient metals

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Galeano on the burger

In what follows now, Eduardo Galeano testifies to the entire experience and meaning of life on earth. The edited selections are from his notes about junk food, life at home, and shopping malls.

The mouth is the door of the soul. But now though, garbage is disguised as food. The modern manufacturers are shattering the traditions of local cuisine. The habits of eating well in some countries have thousands of years of refinement and diversity, a collective heritage contained in the kitchens of all, not only on the tables of the rich. These traditions are being overwhelmed by chemical knowledge, by the globalised hamburger, the dictatorship of fast food. Plasticisation – McDonald's and Burger King and the rest – violates the right to self-determination.

In the US, McDonald's employs more people than the steel industry. Its sales are greater than the total exports of Argentina and Hungary combined. Its star product, the Big Mac, is so very important that in several countries its price is used as a unit of value for international financial transactions: virtual food orienting the virtual economy. According to McDonald's advertising in Brazil, the Big Mac is like love. Two bodies, aroused by cheese and pickle, embrace and kiss, oozing special sauce, while their hearts of onion thrill to the green hope of lettuce.

Cheap prices, quick service. The human machine gasses up and goes right back to work. The German writer Günter Wallraff worked in a McDonald's in the city of Hamburg, innocent of the things being done in its name. He found himself toiling at a feverish pace without a break, spattered with boiling oil. Once thawed, the hamburgers stink after ten minutes to live. You've got to get them on the stove right away.



I don't believe in charity. I believe in solidarity. Charity is so vertical.
It goes from the top to the bottom. Solidarity is horizontal.
It respects the other person. I have a lot to learn from other people.

2013. Outside his favourite restaurant the Café Brasilero, the oldest in Montevideo

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The fries, the vegetables, the meat, the fish, the chicken, all have the same taste, an artificial flavour created by the chemical industry, which also supplies the colourants that hide the meat's 25 per cent fat content. This garbage is the most successful millennial meal. Its chefs study at Hamburger University in Elk Grove, Illinois.

The owners of the businesses, according to well-informed sources, prefer elegant restaurants serving the finest dishes of what has come to be called 'ethnic food': Japanese, Thai, Persian, Javanese, Indian, Mexican. Democracy is nothing to laugh at.

Galeano on life at home

Invisible market violence. Diversity is the enemy of profitability, and consistency rules. The mass production everywhere imposes compulsory consumption. This dictatorship of the compulsory uniform is more devastating than any one-party dictatorship. It requires in the world, a way of life that humans reproduce as photocopies of the consumer copy.

This civilisation confuses quantity with quality. According to *The Lancet*, in the last decade 'severe obesity' has grown nearly 30 per cent among young people. Among US children, obesity increased by 40 per cent in the last 16 years, according to research from the Center of Health Sciences at the University of Colorado.

The country that invented light meals and drinks, diet foods and fat-free foods, has the largest amount of body fat per person in the world. The consumers drive their cars to work and at home look at television. They spend four hours a day staring and the small screen in between eating plastic food. The explosion in consumption in today's world gets louder than all weapon and wars and the commotion of all carnivals.

Galeano on shopping centres

According to historian Eric Hobsbawm, the twentieth century brought an end to seven thousand years of human life centred on agriculture begun in the late Palaeolithic. With urbanisation, farmers become proletariat. In Latin America there are now vistas of empty fields and huge urban ant-heaps. Driven by the export of their produce and the erosion of their land, peasants invade suburbs. The cities seem to promise work, prosperity, a future for their children. In the fields they see life pass them by, and die yawning. In cities, life is vivid and aflame. Or so they think. Then in overcrowded slums, the first thing new arrivals find is that work is scarce, that nothing is free, and that the most valuable luxuries are fresh air and silence.

In the fourteenth century, Friar Giordano da Rivalto delivered in Florence his praise of cities. He said the cities grow 'because people have the pleasure of living in society'. But in cities now, who really lives with whom, and are people really people? Human relations are reduced to relations between things.

The world becomes a flat screen television. The goods on offer invade and privatise public spaces. The bus and train, until recently meeting spaces for people, are now commercial exhibition spaces. The shopping centre or shopping mall is the new cathedral stained glass window, imposing its overwhelming presence. The crowds flock in pilgrimage to these temples of mass consumption. The devotees acquire in ecstasy, things they cannot afford and do not value, and are subjected to bombardment of relentless and exhausting supplies. The crowd moves up and down mechanical stairs. Tourists from small towns, or cities that have not gained these blessings of happiness, pose for a photo in front of advertisements for international brands, as once they rested at the foot of the statue of the hero in the city square.

Status

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