

WN Columns

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WN *Here I stand*

The Keynes of our times *and other stories*



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Rio de Janeiro, São Paulo, Tiradentes, Cabo Frio, Cape Town, New York City, Juiz de Fora.

Yes, I have been around the world, it's true, since my last column. As editor of *WN* as well as a contributor, this explains why this column and issue are late in publication. Apologies. *Demais!* Too much to do.

Also as you see here and on other pages, the editorial team has agreed changes in *WN* as from this issue. One is our new columnist, Brooke Aksnes, whose first column precedes this one. Another is to change the overall title of my column, as you see above. But I will persist in commitment to spiral thinking and so to images like that the one above, from a church in the Brazilian colonial town of Tiradentes, named after the martyr-hero of national independence from Portuguese rule.

This month I start by celebrating former Greek finance minister Yanis Varoufakis, as the thinker with clearest insight into the state of world politics and economics which, yes, drive food systems. Hence the specific title of the column. Then two more items. One reflects on 'food addiction' – what does this mean, and addiction exactly to what? The other speculates on how what we write and think is shaped by technology we use – like, here and now, computers with direct access to the world wide web.



WN *Development*

What they believe: 20. Yanis Varoufakis The Keynes of our times



Yanis Varoufakis when Greek finance minister, with prime minister Alexis Tsipras; and then with International Monetary fund chief Christine Lagarde; and with his wife installation artist Danae Stratou (above); and (below) a typical Varoufakis blast against the idiocy of the central European politicians and bankers; and covers of four of his books. The Global Minotaur is now updated

My first sighting of Yanis Varoufakis was a couple of years ago. He is the author, with the UK politician and economist Stuart Holland, of reports on the nature and future of Europe. Stuart was one of my friends at school and then university, who later helped to shape the beginnings of Europe as the super-state it now is. So I accessed Yanis's regular blog [Thoughts for the Post-2008 World](#), found that they hum with radical logical ideas, assertions, gossip and quips, and have read them ever since.

He shares qualities with the immensely eminent and influential economist, philosopher and statesman John Maynard Keynes (1883-1946). Keynes's insistence on the responsibilities of governments, interventionist policies, and devotion to equity and decency in public affairs, came to dominate political and economic policies in most capitalist countries between the 1940s and 1970s. Yanis has similar views, and like Keynes he makes sense, is stylish, reads widely, and on European, US and world affairs is committed to speaking and writing his mind in plain words whose meaning can be grasped by any attentive reader, as in a [TED talk given in 2011](#). See Box 1, below.

Trained in economics in the UK, then a lecturer and later professor of economics in the UK, Australia, Greece and the US, and between 2004 and 2006 economic advisor

Box 1

Yanis comes up red roses

Extracts from a long [speech by Yanis Varoufakis](#) given on 23 August 2015 at the Festival of the Rose, Frangy-en-Bresse, Saône-et-Loire, organised by the French Socialist Party.

A spectre is haunting Europe – the spectre of democracy. All the powers of old Europe have entered into an unholy alliance to exorcise this spectre: the state-sponsored bankers and the Eurogroup, the Troika and German finance minister Dr Wolfgang Schäuble, Spain's heirs of Franco, and the Social Democratic Party (SPD) of Germany's Berlin leadership, and now also Greece's resurgent oligarchy of plutocrats. I am here because a small nation chose to oppose this alliance, and say: 'Our liberty is not for sale. Our dignity is not for auction. If we give up liberty and dignity, as you demand that we do, Europe will lose its integrity and forfeit its soul'.

Not tanks but banks

I am here because our Athens Spring was crushed, just like the Prague Spring before it. Of course it was not crushed using the tanks. It was crushed using the banks. As Berthold Brecht once said, 'Why send out murderers when we can employ bailiffs?' Why send troops in when you can have monthly Troika visits for the explicit purpose of taking over every branch of government and writing each and every piece of a nation's legislation?

Our creditors are not interested in getting their money back. Nor do they want to see Greece reformed. If they were, they would have discussed seriously our proposals for restructuring Greece's public debt so as to ensure that they get most of it back. But they could not care less. They instead insisted on our surrender. It was the only thing they cared about. They cared uniquely about one thing: to confirm Dr Schäuble's dictum that elections cannot be allowed to change anything in Europe. That democracy ends where insolvency begins. That proud nations facing debt issues must be condemned to a debt prison within which it is impossible to produce the wealth necessary to repay their debts and get out of jail. And so it is that Europe is turning from our common home to our shared iron cage.

Lessons of history

The 1919 Versailles Treaty condemned Germans to unspeakable misery, humiliated the proud German nation, and prepared it to be taken over by Nazi thugs. The Nazis would have remained a historical footnote if it were not for the impossible reparations of the Versailles Treaty. In 1929 a crash in Wall Street began the process that dismantled the common currency of that era – the Gold Standard. In 2008 another crash in Wall Street began the process of fragmentation of the Eurozone. On both occasions, in the 1930s and now, the only beneficiaries were the bigots, the nationalists, the xenophobes, the misanthropes. The serpent's egg did not take long to hatch in the resulting circumstances. When I return home tonight, I will find myself in a Parliament in which the third largest party is a Nazi one.

Our continent has ended up divided by a common currency. We let our rulers try to do something that cannot be done: to de-politicise money, to turn Brussels, the Eurogroup, the ECB, into politics-free zones. When politics and money are de-politicised, democracy dies. And when democracy dies, prosperity is confined to the very few who cannot even enjoy it behind the gates and the fences they need to build to protect themselves from their victims. To counter this dystopia the people of Europe must believe again that democracy is not a luxury afforded to creditors and declined to debtors.

to the initially socialist government of Andreas Papandreou, he is bold and brave. He identifies himself as a 'reluctant Marxist' (the taboo M word, as he says). One reason he gives, in his own words in a speech published in [*The Guardian*](#), is:

When called upon to comment on the world we live in, I had no alternative but to fall back on the Marxist tradition which had shaped my thinking ever since my metallurgist father impressed upon me, when I was still a child, the effect of technological innovation on the historical process. How, for instance, the passage from the Bronze Age to the Iron Age speeded up history; how the discovery of steel greatly accelerated historical time; and how silicon-based IT technologies fast-track socioeconomic and historical discontinuities.

He is also glamorous, by marriage and in himself. His second wife Danae Stratou (in the picture with him above) is a painter, and an installation artist on a Pharaonic scale. She has co-created *Desert Breath*, a masterwork over an area of 25 acres (10 hectares) in the Egyptian Sahara, whose double-spiral shape featured at the head of one of my columns a year ago. Yanis himself is in the prime of professional life at the age of 54, and is super-fit. As anybody who has been watching television news or reading newspapers this year will know, he shaves his head, sometimes dresses in leather, rides a heavy-duty motorbike, rarely if ever wears a tie, and is extremely charming, as his political adversary International Monetary Fund managing director Christine Lagarde has been often happy to acknowledge.

The price of fame

Few readers would already have known who Yanis Varoufakis was, had I profiled him a year ago. But between January and July this year, he became blazing famous one of the most loved and hated people in the world, and he still is. Having been elected a member of the Greek government after the stunning victory of the Syriza radical socialist party, new prime minister 43-year old Alexis Tsipras made him minister of finance, with the task of lifting the colossal burden of debt to the European banks that had made Greece effectively bankrupt since 2010.

What projected him into the lead broadcast and print news stories was a combination of three factors. One, he emphasised the policies on which Syriza was elected, insisting that Greece's debt was odious, absurd, toxic and impossible. He rejected the 'neo-liberal' dogma by which a nation's debts continue to be 'serviced' on condition that publicly owned industries and institutions are sold and social protection of citizens such as health services and pensions are slashed. Two, he declared this and much more when face to face at summits with European heads of state, finance ministers and Eurocrats, in direct language, displaying his superior intellect and knowledge of the European system and international economic policy. Three, we know all this because he did not keep quiet. He used his personality, energy and eloquence to maximum effect, in constant vivid blogs, tweets, articles and speeches, and interviews for stories that led broadcast and print news coverage, sizzling with sound-bites for headlines, and anecdotes and indiscretions as well as analyses and warnings.

Box 2

The Greek country tradition

Extracted from an article by Alexis Adams in the Washington Post, 24 July 2015.

As the world watches to see whether new bailout talks will prevent collapse of the Greek economy, my neighbors in rural Greece carry on with their lives as they have for centuries. Invisible to most economists, they subsist in ways that cannot be measured easily by typical economic yardsticks. Nonetheless, they will survive the current crisis and offer a lesson in resilience for all of us. Here on the southeastern Peloponnese Peninsula, life is pared to the essentials: food, family and tradition. And whether the country's currency is the euro, the drachma or, as it was before Christ, the obol, this is the way it has always been.

Abundant food

Take my friend Thomae Kattei. A compact, strong woman in her late 70s, Thomae lives with her husband, Theodoros, on a small farm near the village of Vaskina. Perched on a mountain plateau above the Myrtoan Sea, Vaskina is a shepherds' community, producing cheese and other products hand-crafted from the milk of sheep and goats. Since the couple married during the lean years after World War II, they have risen before dawn to milk their ewes and does. Theodoros then leads the herd into the mountains to feed on wild grasses and herbs, and Thomae makes cheese, butter, yogurt and *trahana*, a fermented blend of milk and wheat. The couple tend a vegetable garden and chickens for eggs and meat. Once a week Thomae bakes large batches of bread and *paximadia*, the twice-baked rusks that have been a staple in Greek cuisine since antiquity, in the farm's outdoor wood-fired oven.

Every time I visit the couple, their kitchen table is crowded with seasonal culinary projects: berries to be made into preserves; wild greens, herbs or chamomile foraged from nearby meadows; walnuts and almonds from the trees in their yard. Apart from the bag of coffee sitting on the kitchen counter, there is no evidence of the global economy. With help from their ten children and their grandchildren, most of whom live nearby, Thomae and Theodoros consume the fruits of their labor. The cheese Thomae crafts is an exception. Some she shares with her family. The rest she sells or trades with friends and relatives for the goods they cultivate on their own land, such as grapes, olives and wheat milled at Vaskina's centuries-old mill.

Rooted and resilient

This way of living is not a museum piece in Greece. It is common on the southeastern Peloponnese. Thomae is not a 'locavore' bucking the trend of corporate, global food-ways. She is one of hundreds of thousands of people in rural Greece who live this way and always have. Some describe this economy as 'peasant-based.' I prefer to call it 'human-scale,' 'rooted,' 'resilient' and 'durable.' For it is this very way of living — one that is based in tradition, one that is modest in scale but rich in flavor, one that is handmade, one that is local — that has allowed Thomae and our neighbors a certain sense of security and well-being, even as the country is starved by austerity, even as its economy teeters on collapse.

The conventional analysis of Greece's economic problems has overlooked this traditional economy, both its size — about 39 percent of the country's population — and more important its time-tested ability to weather upheaval. We shouldn't. People like the Katteis will have much to say about Greece's future and may even offer examples for all of us

Box 3

Books by Yanis Varoukakis

Conflict in Economics (with David Young), 1990. Rational Conflict, 1991. Foundation of Economics: a Beginner's Companion, 1998. Game Theory: Critical Perspectives (5 volumes. editor), 2001. Modern Political Economics: Making Sense of the Post-2008 World (with Joseph Halevi, Nicholas Theocarakis), 2011. The Global Minotaur: America, the True Origins of the Financial Crisis and the Future of the World Economy (2011, updated 2015). Economic Indeterminacy: a Personal Encounter with the Economists' Most Peculiar Nemesis, 2013. Talking to my Daughter about the Economy, 2014. Europe After the Minotaur: Greece and the Future of the Global Economy, 2015. And the Weak Suffer What They Must. Europe's Crisis and America's Economic Future, 2016.

The story as from July we also know. Despite the mandate of a referendum result in which the Greek people backed defiance of the dominant European creditors, Alexis Tsipras accepted the outrageous terms demanded, and so in return for more loans, Greek public assets are now being stripped. Yanis resigned as finance minister, as he tells in a [Late Night Live radio interview](#) with his friend Phillip Adams. End of story?

Not at all. He now influences political parties and social movements throughout the world, whose views on global politics and economics have become more radical and more ardent. He states that the master-plan of the most powerful governments is in effect, to imprison and enslave all other countries. He shows that the Greek debt is so huge that it cannot and will not ever be paid, and states that the true intention of the creditors is to wreck Greece. His calculations are backed by economics Nobel prizewinners Joseph Stiglitz and Paul Krugman, and by Jeffrey Sachs, Thomas Piketty, and JK Galbraith's son James Galbraith. He concludes that current dominant global political and economic dogma in which money is used and abused as a commodity, is a catastrophe. The then Greek government did not act in the national interest when it brought Greece into the Eurozone in 2001. Much of the Greek economy is not and should not be posited on money, as illustrated in Box 2, above.

History is repeated

Now I come to the reason why Yanis is celebrated here. John Maynard Keynes was financial advisor to the British government at the time of the Versailles Treaty of 1919, which determined the fate of defeated Germany. His scorching eye-witness book *The Economic Consequences of the Peace* includes a horrible prophecy. He proves that the debt of reparations that Germany was forced to accept would have the effect of destroying Germany's ability to pay. He states that the true purpose of the debt was to humiliate and crush Germany. He predicts four consequences: the destruction of democracy in Germany; economic chaos; the rise of totalitarian nationalism; and another war. This all happened. Yanis's analysis of the reasons and consequences of Greece's debt is identical, though he stops short of prophesying war on a world scale. Yanis Varoufakis is the John Maynard Keynes of our times.

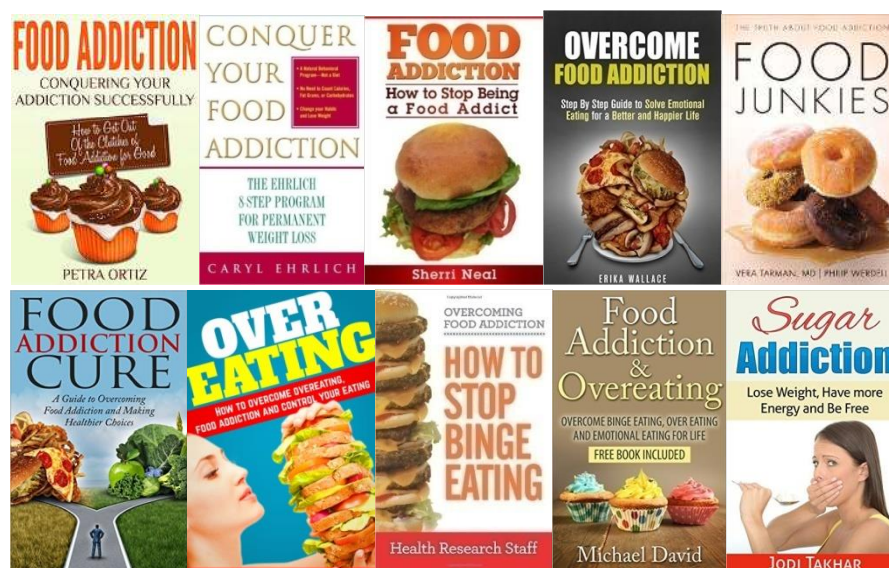


WN *Ultra-processed products. Flavours* **Addictives**

[Access September 2012 Editorial on Food on the brain here](#)

[Access December 2012 The Food System position paper on ultra-processing here](#)

[Access April 2013 Update on food product addiction here](#)



Stores and internet sources are now crammed with books and blogs on obsessive and binge eating, now usually known as 'food addiction'. There is a big issue here, for sure, but it is not about real food

As you see from the line-up of book covers above, 'food addiction' is now the big thing, for everybody professionally or personally in the business of body fat reduction.

This is not merely a blogosphere bubble, a new craze that is good for slimming businesses. Food addiction is for real. Two previous *WN* contributions accessible above attest to the fact of 'food addiction', with the backing of a big book edited by Kelly Brownell and Mark Gold; the testimony of Nora Volkow, director of the US National Institute for Drug Abuse; and the investigations of Michael Moss for his book *Salt Sugar Fat*. It is literally true that people can and do become addicted to what they eat, in the same ways as people become addicted to drugs. Nora Volkow, whose job gives her the greatest authority in the US, states emphatically, in scientific journals and in presentations round the world, that food can be as addictive as crack cocaine. When people declare that 'I am desperate for a Danish', or talk about their favourite morning snack 'hit', they mean what they say. When morbidly obese young people are hoisted out of their apartments with heavy lifting machines for delivery to radical surgery, and say 'I can't help myself', they are telling the truth. They are food junkies.



People who say they are ‘gagging’ for a soft drink, or who raid the pantry or refrigerator after midnight for cookies or ice-cream, are showing the signs of appetite that is out of control or broken

This is a crucially important insight into understanding the causes of obesity. It is obviously true that consuming more dietary energy than the body requires in order to remain in energy balance, causes increase in body weight – or more accurately, in body fat. But what induces people to go on and on consuming far more than they need? One answer for sure, is that what they are eating – and drinking – can be addictive, in the literal sense of the term that applies to drugs.

The myth of choice

Understanding and accepting the reality of ‘food addiction’ should be fundamental in determining public policies to prevent and control obesity. It implies a whole perception of the significance of food. But it is still generally assumed that people who habitually eat far more food than they need to stay in energy balance, and who therefore became obese, are greedy or, if they worry about the impact on their body shape and size, are weak-willed, or else misinformed.

The conventional answer, approved and endorsed by governments and UN agencies, and welcomed by food product manufacturers, is information and education. This assumes that once people know what are the healthy choices, they will either respond, eat less, and regain a healthy weight, or else will not respond, continue to eat too much, become fatter, and have only themselves to blame. Some exceptional people are identified as having ‘inborn errors of metabolism’, which is to say, they are genetically doomed to be obese. According to the conventional view, obese children, who are too young to know how to eat well, are the responsibility and fault of their parents.

The notion that what and how much you eat is simply a matter of personal choice remains the basis of official nutrition policy in most countries. It justifies the propaganda of food product corporations, and is still commonly believed by health professionals including nutritionists and dietitians, and indeed – to their shame, disgust

and misery – by many if not most of the people who continually overeat, become obese, and also become increasingly depressed and demoralised. People who cannot stop themselves becoming more and more obese, whose bodies have become out of their control and that of any professional apart from the specialists with scalpels, commonly come to hate themselves, just as other junkies do.

What is ‘addiction’? I suggest that there is no hard and fast difference between the impact of products that are habit-forming, those that induce cravings, and those that are addictive. Different people are more or less able to break habits or overcome addiction. The most vulnerable groups of any population include children. Products that induce craving and even addiction are liable to debauch natural appetite and sense of satiety, and may then damage or wreck the body’s natural appetite control mechanisms. Anybody whose food and drink consumption is out of natural control will not only gain body fat, but also will suffer mentally and emotionally.

Food is not addictive

So far then, there are two reasons why ‘food addiction’ is not driving public policies and actions to prevent and control obesity. One is that this would cramp the style of food product manufacturing and catering corporations, and governments committed to the deregulation of industry, which all powerful governments are, want industry to be free to do whatever it wants, within the law – and sometimes outside the law, too. Two is the persistence of the dogma of personal responsibility and individual free choice, which asserts that people who overeat and become obese, whatever their circumstances, need to read labels, and brace up and get a grip on themselves.

There is a third reason also, which explains the quote marks around ‘food addiction’ used here. Food is not a drug. While it may be hard to do so, it is feasible to stop using drugs; but everybody needs to eat. So this seems to imply that ‘food addiction’ is an affliction of an unfortunate vulnerable section of populations irrespective of what they eat and drink.

But such a conclusion is plainly not true, because pandemic obesity, and high and fast rising prevalence of gross obesity, is a new phenomenon. Until recently obesity was uncommon, rare or almost unknown in practically all countries and classes, with exceptions such as in some African societies where wives of wealthy husbands are force-fed food in order to embody material prosperity, and among upper class Europeans who constantly feasted on ‘rich’ food, as typified by King Henry VIII.

So, what is addictive?

This proves that it is not food that is addictive, and I suggest that the term ‘food addiction’ should be abolished. The issue is not food. It is some aspects of what is consumed. So the question now is, what are these?



Traditional feasts such as those devoured at Christmas like this one here, are usually fatty and sugary, crammed with dietary energy, and are likely to cause increases in body fat. But they are not addictive

Commonly given answers to this question, are dietary fat, or sugar – or both. A lot of the contributions to the book on addiction edited by Kelly Brownell and Mark Gold identify fatty or sugary foods as the problem, as do Nora Volkow and her colleagues and associates. This is beginning to point in the right direction, but is not correct. It is true that dietary fat in isolation is more energy-dense than other macronutrients, but eaten as such and as part of meals, fatty meat, meat products such as bacon and ham, and milk, butter and cheese, are not addictive. People may of course fancy a second helping of delectably roasted beef, say, but do not constantly crave such foods.

Comparably, while sugar itself is edible, it is rarely eaten as such. Does anybody raid the pantry in the middle of the night and eat spoonfuls of sugar? Unlikely. Another clue is extended feasts such as those devoured at the end of December holiday season. People then typically consume far more food than their body needs, increase their body weight, and may repent and prepare resolutions for the new year.

But the feasts, traditionally made mostly of home-prepared meat or poultry, vegetables, pies, pastries and cakes, fruits, nuts, and all sorts of preserved foods, do not normally induce cravings for more and more feasting. Over-sated revellers who creep into the kitchen at night and raid the refrigerator to consume yet more, devour specific items such as mass-produced and shop-supplied ice-cream, iced cakes like the one shown in the picture above, chocolate or biscuits. They surely do not pig out on pork or ham. Nor do they become desperate for a fix of fruits.

You can of course see where this line of observation and argument is leading. More clues are supplied by the pictures on the covers above of some of the books on ‘food addiction’. They show mass-produced cakes, pastries, candies, and burgers, which are all sugary or fatty or both. What these all have in common, is that they are ultra-processed food products, as defined in a [recent WN position paper](#).

This suggests that the term 'food' should be reserved for natural foods (fresh or minimally processed) and for processed foods (such as simple breads and cheeses made with the addition of salt and other culinary ingredients), and for freshly-prepared dishes and meals made from such foods plus culinary ingredients. Many of these dishes and meals are or should be delicious, and as part of feasts may be over-eaten, but they are not addictive. The great traditional home-prepared cuisines of the world are made up from dishes and meals whose aromas, textures, flavours and colours are memorable delights for all the senses, most of all when enjoyed in good company. But they satisfy appetite naturally. They do not induce compulsive consumption.

Ultra-processed product addiction

So the problem for advocates, policy-makers and regulators who are aware of 'food addiction' as a public health crisis, is solved. It is not foods or freshly-prepared dishes and meals that are addictive. The target is ultra-processed products. These are formulations of industrial ingredients which, besides fats, oils, sugars, syrups or salt, include a variety of substances derived or synthesised from foods or other organic sources, which are not used in culinary preparations. Examples are hydrolysed proteins, modified starches, hydrogenated oils, and a vast number of additives that imitate attributes of real foods, dishes and meals, such as texture, colour, taste, and flavour. Real foods usually are a tiny proportion of the ingredients listed in the labels of ultra-processed products. The amounts of fats, oils, sugars, syrups or salt they contain are calculated to achieve what food technologists call 'bliss points', and such-like revealing terms. The entire addictive quality of ultra-processed products is achieved by manipulation and combination of all their ingredients.

Therefore I here propose a general theory of the cause of 'food addiction'. A defining quality of all foods that are not ultra-processed, as such and as made into dishes and meals, is that they are not habit-forming, at least not in the sense of inducing over-consumption after a natural appetite is satisfied, let alone craving or addiction. By contrast, a defining quality of ultra-processed products is that they are typically formulated to be habit-forming.

Of course they are! It would be odd if, given that there are a lot of industrial ingredients, mostly chemicals, that cleverly formulated and combined are habit-forming, manufacturers chose to avoid making their products 'more-ish' when it was technically feasible to do so. This would be bad for repeat sales and thus business.

Increase of 'market share' as between transnational corporations jostling for advantage, meaning more sales and higher profits, for what are essentially much the same products – whether packaged snacks, cookies, burgers, breakfast cereals, pre-prepared pizzas, for instance – involves vast sums spent on advertising and promotion. But the essential factor is the products themselves. The top selling packaged snacks are those that induce their consumers, children and young people especially, to gobble the lot and then, after a short while, to crave another packet, and another.

Thus, the point about the dietary energy content of ultra-processed food or drink products is not just their energy density, but the fact that they are formulated to induce desire for another energy-dense item, and then another, and another.

Flavours and other addictives

Are some of the ingredients of ultra-processed products most likely to induce constant consumption, and actual addiction? Yes, I think so. These are some of the ingredients that enable the combination and permutation of fats and oils, sugars and syrups, starches and salt – which is to say, additives. Discourse about food additives almost always focuses on issues of contamination, and some, usually now prohibited, are acutely toxic, or else of adulteration, and cosmetics and other classes of additive do transform degraded and disgusting ingredients into attractive and delicious products.

But I suggest that the most noxious use of certain classes of additive, singly, in combination with others in the same class, or permuted with other classes of additive, is to induce craving for and effective addiction to ultra-processed products.

This is no longer speculation. Repentant corporate food technologists and marketing executives after retirement or career switch, have confessed and testified to Michael Moss, as published in his book and articles, that products for which they were responsible were deliberately formulated to be ‘more-ish’, ‘alluring’, habit-forming, and – the word whose use industry representatives resist and denounce – addictive. In this context, and as I discovered at an international conference not so long ago, university and research centre departments specialising in the science of appetite and allied topics, get a lot of support from food product corporations, and researchers in these fields may use definitions of ‘addiction’ that are remarkably narrow and restrictive.

Be that as it may, I think it is not likely that any specific additive or other ingredient in any type of ultra-processed product is addictive. The impact is caused by the ‘cocktail effect’ in particular of additives which, in ingenious and secret combination, are most addictive. Do I think one specific class of additive should above all be indicted? Yes, I do. Flavours. Failing the ‘smoking gun’ of industry testimony, internal memoranda and results of trade secret tests on animals and humans corroborating what Michael Moss has found, my proposal is a conjecture. All the more so, because flavours do not have to be and are not declared on product labels. One reason for this is that there are thousands of chemical and other food flavours, so usually there would be no room on the label. Another reason is that it is their mix with other flavours and other additives and ingredients that is most likely to induce constant consumption and craving.

It is I think reasonable to be suspicious of any ingredients in food products that are trade secrets, not declared on labels, and whose safety and wholesomeness is attested by the manufacturers themselves and not subject to any regulatory oversight, as is the case with flavours. Buyer and consumer, beware! Pending sworn statements made by a

series of penitent executives, I end here with a riff which I published 30 years ago in the UK, in my chapter for *Additives. Your Complete Survival Guide*, edited by Felicity Lawrence, now of *The Guardian*.

Consider the following scenario (totally fictitious, of course). Suppose that sales of Hope&Glory plc's *Froo-Tee Krunch* were slumping, and that a market newcomer, *Olde Mother Maggie May Country-Fresh Instant Bliss* fruit flavour snacks, made by Sunshine Foods, was booming. Would the boffins in the white coats at H&G Organoleptics Division sit on their hands? Of course not. A task force would be set up, with a mission: find the secret of Instant Bliss. Batches of the snacks would be taken apart, analysed chemical by chemical, and fed to rats. What did the Sunshine boys know that Professor FK Brown, head of research at Hope and Glory (nicknamed Kipper by his colleagues) did not know?

Suppose then that Kipper cracked it, and an 'eyes only' memorandum went to the H&G Board. Suppose the Sunshine File said 'tests reveal significant steep-peak monophagic sequences correlated with esters of ethyl 2, 4-hexadienoate' and that Dr Brown turned up at the Board meeting with a test-tube full of Ingestion Preference Factor, a passion fruit analogue. Eyes bulging with anticipation, Bill Glop, H&G CEO, would say 'Kipper, what does the Sunshine File mean?' The Professor would say 'Well Bill, the rats we feed IPF to, can't get enough of it. They gobble it up, gorge it, won't eat anything else, tear each other apart fighting over it'. Whereupon Ron Dull, the cautious President of H&G, might say 'But Kipper, doesn't that mean that IPF is *addictive*?

What would happen then? Would Glop and Dull instruct H&G Organoleptics to lock up the Sunshine File and refer IPF to the national official regulatory authorities? Or would Glop say 'Don't be dull, Ron. People want IPF. Our shareholders need it. It isn't addictive. It's *more-ish*', and markey Hope&Glory *Instant Passion Flavour Froo-Tees* with the jingle 'Passion is now and forever with Froo-Tees'?

Well, what do you think? Meanwhile, people who starve and gorge themselves obsessively are told that they are suffering from behaviour disorders, and referred to psychiatrists. And the flavours in the products they consume, remain a secret.

To conclude. Food, as defined here, is not addictive. By contrast, ultra-processed products are formulated to be habit-forming, and often to induce cravings and even to be addictive. The ingredients in ultra-processed products that supply dietary energy are not in themselves addictive. What creates addictive qualities is the formulation of the products, made possible by the sophisticated use of a number of types of food additive. Of these, the class of additive that is most likely to have addictive qualities, in combination with other additives in the same and other classes, and with the ingredients that supply dietary energy, is flavours.

If this hypothesis is correct, the solution to 'food addiction', and a successful way to prevent and control obesity, is statutory regulation that prohibits the use of any added flavours in food. Short of that, regulators should require that all ingredients in ultra-processed products, including added flavours, be listed on nutrition labels.

Writing

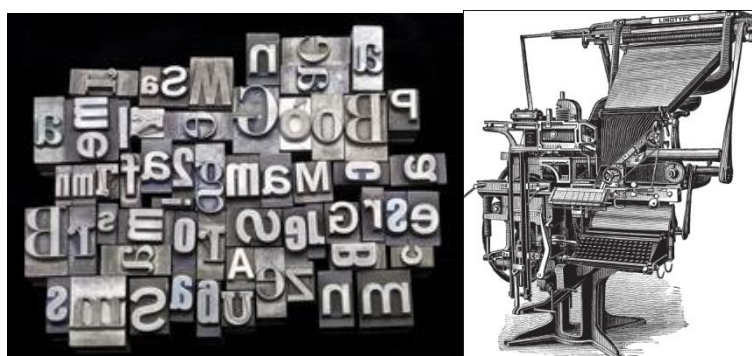
The messages and the media



School desks as they were for hundreds of years (at left). Note the ink-wells on the right hand side. Steel dip pens of the type I used as a small boy school (at right). Thus 'blotting your copy book'

While I was writing this column, I had to apologise to a young colleague who was showing me how to use a simple computer programme, which I did not understand. So I explained that my training in writing is obsolete and is a barrier to learning now. When I was a small boy, in the period long ago before reliable ball-point pens, writing was done at school at desks with ink-wells, using steel-tipped dip pens (see above). The big worry was ink blots on our exercise books. This made me remember the inside of the middle finger of my right hand, permanently bruised and stained, and the class monitor who filled the ink-wells from vessels looking like miniature watering cans who spilled ink on your desk accidentally on purpose, and some of us using rulers to flick pellets of ink-soaked paper at the backs of necks of boys in front. The technology, and the bad behaviour of the boys in the back desks, were much the same as 300 years previously, except that then the instruments of writing were quills.

After school I started to work with printers. The basic resource of moveable type (left, below) had not changed for nearly 500 years. Typesetting was done with Monotype (and, below) Linotype machines, very ingenious developments of the manual



Printers' fonts as they were for hundreds of years (at left). Linotype machine, casting molten lead alloy, that enabled mass production of newspapers in the 20th century (at right). Thus 'hot metal printing'.

typewriters I started to use as an older boy at school, invented in the second half of the 19th century as one of the central developments of the later stages of the Industrial Revolution.

Then, accelerating exponentially since the 1980s, came the electronic revolution, of which one product is the machine on which I compose this story, which is linked with the worldwide web, enabling me to send drafts to colleagues anywhere in the world, and enabling you, wherever you are, to read what I write, and to respond.

Linear and mosaic writing

So what? Well, musing after my apology to my young colleague, it seems to be that writing – and editing – using computers, is at least to some extent an example of Marshall McLuhan's resonant dictum 'the medium is the message'. Which, being interpreted, is to say that the significance of any human activity is shaped and maybe even defined by the technology that enables or restricts it.

With pen and ink – and typewriters, whose ink is embedded in a ribbon – in contrast with computers, there is one obvious example. Pre-electronic writing requires paper, and its composition is linear. If you make a mistake you blot your copy book, or scratch it out or try to erase it. Being fussy, I would throw the page away and start again. In those days I had huge waste-paper baskets. By contrast, writing on a computer, which does not need paper, as we all know eliminates correction as a problem.

There is another aspect of electronic writing which I sense is more significant. The finished result is linear, as you see here. But there is no need to compose the writing on page 1, and then 2, and so on. Habitually, I draft pieces mosaic-style. Thus, I may start writing towards the end of a piece, usually move passages around, often insert quotes, headings and internet research gems at any stage, take in suggestions from colleagues, and then finally edit for flow, logic, and elimination of repetition, muddle, and boring bits. You probably work rather like this, too.

Is the significance and meaning of writing shaped and changed by these processes of electronic composition? Yes, I think so. You must have noticed that friends and colleagues with whom you communicate by letter, email, and skype texts and also calls, seem to change the nature of what they say and show different aspects of who they are according to which medium they are using, and this is a clue. To what extent, and in what ways? Well, I am writing this to ask you as well as myself this question.

No jokes

One idea I offer, is I sense that writing on paper tends to produce a more rational and controlled result, whereas writing on a computer uses the more intuitive and

imaginative aspects of human intelligence. If you are old enough to have written using a pen or typewriter for say a decade or more, and now use a computer, you may therefore have noticed that pre-electronic writing was more like work, and that electronic writing is more like play – at least, when the computer is glitch-free and you have mastered the necessary basics plus helpful new programmes.

If you agree – and this is my own felt experience – I suggest this reflects the difference between the linear and mosaic way of composition. As a provocation, I suggest it also explains why academic journals that continue to publish as hard copy on paper for sales to libraries, insist on rigid structures for papers submitted for publication. This typically takes the form of abstract, introduction, method, discussion, results, limitations, conclusion, all dressed in uniform austere type styles, and even imposition of a style of objectivity by which the authors are required almost to seem to be absent. And of course, there must be no exuberance – no anecdotes, speculations, diversions, or jokes. The reason, I suggest, is to fight against the natural tendency of writing done electronically to be playful, and to eliminate any sense that serious investigation can also be adventurous, stimulating or fun, to read as well as to write.

Well, I think this is rather plausible. Scientific journals published in the epoch of pen and ink, and typewriting, tend to be better written and are often a pleasure to read. This, I suggest, is because in those days editors were more inclined to give contributors some release and relief from the bonds imposed by writing on paper, and to encourage the free flow of ideas. It follows from this theory that on-line journals that do not have a printed version, or for whom hard copies have become incidental, are by their nature more reader-friendly. Well, I think this is true. We at *WN* like to think that this journal is an example – but then, while we are usually serious, and not in the game of flicking e-ink pellets, we never set out to be solemn.

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