

## Out of the Box



Yes, by popular demand it's me again, now with Agneta Yngve as my new editor-in-chief. As already advertised, from now on this column will revert to its original brief, meaning fewer intensely referenced disquisitions on the philosophy of nutrition science and more snippets of news, views and gossip, and reviews, interviews, enthusiasms, stories of conferences and other events, description and revelation of overt and covert agendas, and outlines of the shape of things to come.

This month's roving reports come from Hangzhou and London: specifically, from a joint International Union of Nutritional Sciences/Asia-Pacific Clinical Nutrition Society conference; a joint Letten Foundation/McCarrison Society symposium on epigenetics in brain function master-minded by my friend Michael Crawford the DHA avatar; and the 19th Caroline Walker Trust Evening of Celebration. A theme emerges: the vital role of nutrition in mental and emotional health.

### Where to find snacks

Pass by the shop of master flautist Chen Dongbau in Hefang Street in Hangzhou and to one side you will find the Alley of Snacks, which on the visit of your reporter was doing a roaring trade. In its midst are tables for eight, which on the warm moist day of my visit were crammed with couples often with their one child, filling their faces. Two facing rows of stalls offer endless possibilities, for each has its own cook preparing crabs, prawns, clams, scallops, jellyfish, pork ribs and jointed chicken in their own styles, and also mysterious seafoods and organ meats, varieties of succulent greens, and the sticky black rice for which Zhejiang Province is famous. I chose one of the many seafood congees which, together with a whole round crisp loaf shaped like a great fat coin fresh from the oven, set me back 5 Yuan (about 60 US cents or 35 UK pence) and was plenty for lunch.

I am also pleased to report that the branch of McDonald's now fouling Hefang Street had few customers on the day I was there. Outside, a gloomy student thrust 15 flyers featuring the slogan 'I'm lovin' it' into my hand, each offering 3.50 Yuan off a burger and hash brownies, 'normally' 8.50, and 4.50 off a burger and Coke™, 'normally' 10.50. For price, taste or ambience there was no competition. Did this mean that if I presented all 15 flyers I would get 15 brownies and 44 Yuan? Having vowed never to enter a fast-food joint even in the interests of investigation, I do not know...

In China burgers and brownies are positioned not so much as cheap convenient fuel, but as chic eats, part of the

Good Life beckoning from the West, like rollerblades, big boobs, round eyes, Mickey Mouse, drugs and rock'n'roll. On the main drag of Yan'an Road I counted three branches of KFC™ and three of McDonald's; and everywhere Coke™ machines. The US-based transnational food and drink companies are in China for the long haul, and they have multi \$US billion budgets<sup>1</sup> to promote the American Way, including their uniform sterile products.

China is in crisis in the Chinese sense: at a crossroads. In conversation at the Caroline Walker Trust Evening of Celebration – of which more below – Phil James, our global nutrition Batman (with Neville Rigby as Robin), told me he was about to jet off to Beijing for consultations with the public health authorities. We agreed that previous attempts to prove that China was about to suffer uncontrollable epidemics of chronic diseases<sup>2</sup>, and current attempts to demonstrate that such predictions had come to pass<sup>3</sup>, were evidently futile. The general view of the Chinese authorities seems to be that like atmospheric pollution, chronic diseases come with the new economic territories.

And true, cash spent in fast food 'restaurants', then in pharmacies, then on drugs and surgery, all contributes to 'development'. Yes folks, a society in which most people are medicated for chronic diseases from early middle age, and cower within fortresses with guards armed against hopped-up gangsters, is well 'developed'. Many centuries ago the Chinese authorities banned weapons of increasing mass destruction on the grounds that these were unfair. Maybe the Yuan will drop now, if the warnings are broader and are against the threat of destruction of the unique Chinese identity and civilisation, now faced with awesome national and international responsibilities<sup>4</sup>.

### How to make tea

The literal eye-opener for me in Hangzhou was green tea. Conference veterans who make sure of a hotel with a gym and sauna, and who keep going all evenings and nights plotting, schmoozing, fielding flurries of email attachments and polishing off PowerPoint presentations, bring with them their own tricks of the trade. Mine is *guaraná*, made from the fruit of an Amazonian palm.

You can find *guaraná* in larger 'health food' shops, usually as the ingredient with oomph in some 'energy' drinks. In Brazil you can buy *guaraná* powder in small tins for around 4 reais (about \$US 1.50 or just under £1), or in sealed packs of up to a kilo, or loose from bins in markets. Stirred into a drink it looks and tastes like mud. If you have six hours to go before it is time to speak, and slides that need sourcing, composing, revising, swapping

around, tidying and backing up onto a memory stick, and want to be sure that you don't press the wrong button as a result of which your 66 slides suddenly go pfft, *guaraná* is the business. One teaspoon concentrates the mind for up to eight hours. I am told the active ingredient is caffeine. I think not. Using current methods it may analyse out that way, but it does not induce tremors or hangover. Yes, an upper without a downer!

But what kept me going for an average of three or four hours' sleep a night at Hangzhou was the local green tea. After a flight from London which with the drive from Shanghai to Hangzhou was 21 sleepless hours door-to-door, I arrived at the Lakeview Hotel which, if you wheedle for them, does have rooms with views of the West Lake, a peaceful and cherished haven. In my room positioned near the kettle was a box, which I opened to find dried green leaves and twigs that smelled somewhat like tea and slightly like marijuana. (Yes, I too have passed by hippies in the street.) I guessed that the Chinese characters on the label said DRINK ME, so I sprinkled some in a cup and poured on boiling water.

Oh! The leaves swelled up to the texture of seaweed! I drank the potion, which had about the same degree of bitterness as *guaraná* and a full, oily savour only vaguely similar to that from the sachets of green tea you can buy anywhere. But what an impact! Instead of having to make my excuses and crash out, I walked with a light step to an exquisite teahouse on the West Lake with conference secretary-general Duo Li of the University of Zhejiang at Hangzhou, conference co-chair Mark Wahlqvist and his wife Meei-Shyuan Lee, Andrew Sinclair of Deakin University (another DHA pundit) and his wife Gay, and many others; enjoyed a glorious buffet, and on return worked on my slides.

This made me think, in more ways. Of the over 100 presentations and over 200 posters at the four-day conference, several were on the functional benefits of substances in green tea; and according to Dr CM Chen of the Tea Research Institute of the Chinese Academy of Agricultural Sciences, up to 500 studies on the functional goodies to be found in tea are now published every year, all together showing – as he averred – ‘many miraculous medicinal functions’.

Be that as it may – and at some sessions the line between scientific investigation and product promotion was a little fuzzy – my thought was, what is tea? Are we to believe that the green tea roasted or fermented in Zhejiang Province, by artisans using methods developed over more than 4000 years of continuous history, is in health and all other terms no different from the sachets of fannings and dust sold in supermarkets? It seems unlikely, and as a line of anecdotal evidence-basis I offer the lift given to me by the Long Jing Cha in room 731 of the Lakeview. Now as I write in room 486 of Jury's Clifton Ford Hotel in London's Welbeck Street, I adjust for the potential confounder of water source by infusing another cuppa. Yes, the effect is replicated.

So, from the perspective of the new nutrition science, concerned not just with prevention of physical disease but with positive physical, mental, emotional and yes spiritual well-being<sup>4</sup>, what is tea? While Typhoo and Lipton may cheer and not inebriate, and while all tea plants are in the same botanical family and may be chemically practically identical, there is no real similarity between them and what is on sale in the Chinese National Tea Museum by the West Lake and in the speciality shops on Hefang Street. The same can be said of Uncle Ben, in contrast to the great range of species and varieties of rice prepared in many different ways in Hangzhou.

### The hyping of deficiencies

Fruits are another example. The bananas, mangoes and papayas and other tropical fruits on sale in the USA and Europe taste like cardboard; the more so, once you have enjoyed them in the countries where they grow. Are the artificially ripened fruits shipped to other continents really the same, from the nutritional or functional point of view, as fruits fresh from the trees? There is no comparison from the sensory and emotional point of view.

You might suppose that the comparative amounts of vitamins, minerals and other goodies – including essential fats – in foods identified as the same but from different parts of the world are well-known. You would be wrong. Yes, the governments of some larger or richer countries in the South undertake their own analyses of some constituents of foods and drinks, and the FAO is gradually compiling chemical composition tables of foods from different parts of the world. But national food composition tables for many countries often simply lift the figures published in the official US or UK compilations. This shapes the food supplies of smaller and poorer countries. It also boosts guesstimates of the prevalence of ‘preclinical’ vitamin and mineral deficiencies which, in tropical countries where people eat fruits sun-ripe from the tree, and also native plant foods that often don't figure in national food composition tables, must be exaggerated, and may be grossly so<sup>5</sup>.

So do generalisations about bread, wine and fish, or any other types of food and drink, really make sense? If the comparison is between those industrialised products eaten and drunk in those rich countries where most studies are funded and conducted, maybe. But any comparison between the products consumed in such countries, and the real things reared or grown and then savoured in the countries of their origin, seems doubtful to me. So when you read a claim of any kind made for green tea, ask: what green tea?

### How to get smart (1)

One of the two outstanding presentations at Hangzhou was by Bing Wang of Sydney University<sup>6</sup> on the qualities of sialic acid, also known as *N*-acetylneuraminic acid or

NANA for short, not to be found in food composition tables but in the brain. It promotes the growth, regeneration and flexibility of neural pathways. Rats and piglets given sialic acid supplements solve problems faster and remember how to solve problems for longer.

Yes, sialic acid is found in breastmilk, but only in trace amounts in infant formulas<sup>7</sup>. In Bing Wang's words, it 'contributes to the known neurological and intellectual benefits of breastfeeding over formula feeding'. This boosts my belief that the current problems in the Middle East have been made worse by premature weaning of those in charge of US foreign policy.

Like that of Bing Wang, a large number of the more specialised presentations at the Hangzhou conference were on foods and nutrients rarely if at all featured in conventional nutrition textbooks: black rice, bamboo leaves, fried bread sticks, Omani breads, Thai plants, pollen, Laiju extract, mulberry leaves, jade perch, *cassiae* seeds, *Astragalus*, chitosan and exopolysaccharides for example. These were signs of the exponential increase at first in Japan and now throughout Asia of food science and technology studies designed to find new functional ingredients in foods that may eventually make investigators famous and patent-holders rich. This reminded me that nutrition science is still snared in the frameworks and ideologies of Europe and North America<sup>8</sup>.

### How to get organised

Can nutrition congresses wrestle free from the armlock of the food manufacturing and other industries, whose commercial interests conflict with public health? One way is to reduce costs while maintaining quality. In my last column I scorned the proposal of Michael Latham that congresses should be held within universities. The Hangzhou congress was held on one of the vast and impressive campuses of Zhejiang University, more than half an hour by bus away from the swish hotels, and was staffed mostly by student volunteers, whose patience was strained by the imperative demands of sweaty visiting occidental speakers. But I now think that Michael Latham may well be right. As well as bringing costs down, the student body becomes part of the process. The convention whereby senior faculty swan off to professionally organised conferences at super-expensive venues, leaving junior colleagues to crunch the numbers and apply for more research grants in the hope that one day they might aspire to be 7th, 8th and 15th authors, is intrinsically objectionable. Plus Hangzhou had scope and style, with delegates from over 30 countries and a splendid gala dinner.

Hangzhou also made me think again about conference presentations. My son Ben, who has spoken many times at business meetings in Hong Kong, advised me that because the nature of Chinese is so different from that of Western languages, Chinese people accustomed to speak and read English nevertheless need mentally to translate English

into Chinese before they know what an English speaker is saying. Solution: speak slowly. I was due to present on days 2 and 3 of the congress. On day 1 I listened to successive English speakers storming through 66 slides in 25 minutes, and watched the Chinese audience yawning, scratching and chatting.

The seed Ben had sown in my mind germinated. I asked a fellow speaker originally from the USA, now working in Australia, what about the idea that I should ask a Chinese speaker to paraphrase my main points, for courtesy as well as comprehension? He said no need, because the senior people in the audience would understand me and the junior people didn't matter. This made up my mind: Meei-Shyuan Lee kindly agreed to do the business, the presentation was collaborative and collegiate, and in future when I present in countries whose professionals usually speak and read not in English, I will have my slides translated into their own language. Good idea, said Phil James.

### How to get smart (2)

Such is the dedication of your roving reporter that, three hours after my next sleepless flight back from Shanghai landed at Heathrow, I was devouring a palaeolithic feast at the house of Michael Crawford. No, we were not offered braised sabre-tooth tiger, or even roasted lion, despite Michael's long tenure as a professor of brain chemistry at the Zoological Society in Regents Park. For him and a steadily growing band of devotees, the story of *H. sap sap* does begin in Africa, not however on the savannah or in the forests, but within estuaries and on the littoral; for Michael says that the driving forces of human intelligence, which account for the complexity of the human brain, are omega-3 fatty acids.

So his board groaned with docosahexaenoic acid (DHA)-rich fish and seafood fresh from Billingsgate; together with good wine, which we revellers decided must have been invented by stone agers whose ingenuity was made brilliant by DHA. Among the company were a bunch of Michael's disciples and other DHA heavy hitters, including Tom Brenna from Cornell, Stephen Cunnane now at Sherbrooke University in Canada, Fernando Gomez-Pinilla from UCLA, and Pierre-Marie Lledo of the Pasteur Institute in Paris, who presented the next day on DHA and its contribution to human intelligence at the Novartis (formerly CIBA) Foundation in Portland Place. Take-home messages were that we need DHA for mental function, the chief source is fish, that after the time of breastfeeding there is no effective substitute for seafood (which includes algae) and that industrialised food systems and therefore diets are short of DHA.

### How to get funded

To City University then I came, to a lively and well attended 19th Caroline Walker Trust Evening of Celebration.

The CWT<sup>9</sup> has persevered down the years with its awards and also student awards to those organisations and people who have done most to improve public health by means of good food; and now, with Helen Crawley as its science director, continues to produce reports and guidelines on healthy eating and nutritional standards more economically and effectively than the government departments that might be expected to do this job.

I declare an interest, as Caroline's husband until her death in 1988<sup>10</sup>. My one quarrel with the CWT is that despite modern realities – globalisation and all that – its work remains national and therefore insular. There is a world outside. Not many decisions that affect the UK food system, and so what is supplied to its supermarkets, are made in the UK. This year's CWT lecturer, George Davey Smith<sup>11</sup>, wittily advertised the enthusiasm of his group at Bristol University for Mendelian randomisation as another epidemiological nostrum. Perhaps also bewitched by Little England, he averred that coronary heart disease is fast disappearing (in China?), that breastfeeding is largely a middle-class practice (tell that to rural communities in India), and that public health is improving across the board (in Iraq, Afghanistan, former USSR, sub-Saharan Africa, and other looted and pillaged countries?).

I declare another interest: as director of the World Cancer Research Fund Diet and Cancer Project responsible to WCRF for the current report on food, nutrition and the prevention of cancer<sup>12</sup>, and also the then CWT Trustee responsible for inviting John Potter, chairman of the expert panel responsible for the report, to give the 5th CWT lecture in 1994<sup>13</sup>.

For after heaping praise on John Potter as an icon of the BGDS era, the beef in George's presentation was an attack against the judgement that vitamins, minerals and other bioactive substances notably in vegetables and fruits protect against chronic diseases, as stated in the WCRF report and in John Potter's CWT lecture. His justification was the impressive evidence from statistically powerful trials that synthetic versions of these micronutrients, singly and in combination, are not protective and in some circumstances apparently even increase the risk of disease. Indeed so; and such evidence was cited in the WCRF report as a basis for the judgement of its panel that what protects against cancer, heart disease and other chronic diseases is not pills, which is to say pharmacological doses of synthetic micronutrients, but vegetables and fruits and other good food. It may be best not to wonder why

George ignored this fundamental point, but I note his belief that more research, ship-shape and Mendelianly randomised Bristol fashion, is needed.

Next stop Amsterdam. On my last day in London the headline in *The Daily Telegraph* was 'All seafood will run out in 2050, say scientists'<sup>14</sup>.

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