

## Out of the Box



After spending some time in London, I have the impression that the British are now even more fascinated by and confused about food than they were a quarter of a century ago. By contrast, Australians have a concentrated sense of the value of their food and drink, as the Murray–Darling basin dries up. Also this month, I have second thoughts about nutrition as a biological science, and see good reasons to shoot pork.

### Britain: stuffed

In the early 1980s I was a journalist working for *The Sunday Times*, which until its muzzling and dumbing by Rupert Murdoch was a serious newspaper that set national agenda. My one scoop was headlined ‘Censored: a Diet for Life and Death’. This revealed that the findings of an expert report, commissioned by the Thatcher government<sup>1</sup>, had been suppressed for two years by government<sup>2</sup>. The reason was because it stated – in plain language – that, along with smoking, the typical British diet is the main single cause of the diseases that disable and kill most British people. There was reason to believe that the Prime Minister herself, who as a young food chemist working for J Lyons in Hammersmith invented the Mr Whippy ice-cream (and wrote a thesis ‘on the elasticity of ice-cream’) and devised Swiss roll fillings<sup>3</sup>, had ordered the suppression or at least had personally approved it.

As soon as the chief night news sub-editor chose my story as the front page headline exclusive, nutrition in Britain was destined to be no longer about meals on wheels, the F-Plan Diet and scorbutic drunks, but about Whitehall and Westminster skullduggery. For the next few weeks, *The Sunday Times* received more readers’ letters on this and follow-up stories than on all other topics. Frank Giles the editor stepped in. ‘This newspaper is not about to become *The Nutrition Gazette*’ he ruled, and told the news editor to spike my stuff. But the genie was out of the bottle, and every type of journal in the country, from the *Lancet* and *New Scientist* to the *Sun* and *She*, splashed the story of the food scandal.

It was much the same the next year, when Caroline Walker’s book on the same topic, which I co-wrote, was serialised in *The Times*. The letters editor had to take on extra staff to cope with the flood of correspondence. The year after that, the BBC mounted a concerted Food and Health Campaign, including six television series including over 40 programmes, some of whose audience figures broke records, accompanied by booklets ordered by over half a million viewers.

Now for the big But. Did all this viewing, listening and reading – and indeed writing and campaigning – make much difference to British public health? I think not. True, two decades later the patterns of diseases caused by the foods and drinks produced for and purchased and consumed by the British have changed. Rates of coronary heart disease have dropped; one reason maybe being that Unilever has changed the formulation of its margarines and now leads on products higher in unsaturated fats. But rates of obesity have more than doubled since the early 1980s, and the British are now the podgiest people in Western Europe. Early-life diabetes is rocketing, and rates of breast, colorectal and other cancers are increasing. Perhaps most ominous, rates of heavy alcohol consumption, alcoholism, and crimes and crashes in which alcohol is implicated, are all rising, especially among the young.

On this visit to London it seemed to me that Aldous Huxley’s dystopia *Brave New World* has come true, while not quite in the form he imagined. As a visitor I now see Britain as two nations. I snapshot two West End shopping streets. Marylebone High Street includes a Starbucks and a Tesco Metro 18/7 store, but its big food retailer is the super-upmarket Waitrose, and the street is full of *soigné* hangouts like Paul, Maison Sagne, Orrery, and Fishworks. Some of the passers-by have gone to seed, but the general impression is of a sample of the maybe 15% of the population who are doing well and who take care of themselves and their families.

Two hundred yards away, Oxford Street is a different world. Despite Selfridges, John Lewis, and the flagship Marks and Spencer, I get an impression of a sample of the maybe 50% of the population who have lost out, who have become receptacles. Not all of course. But what’s new, is so many young white and black women who are obese, quite often with very overweight children, many eating or drinking as they walk or are pushed, as well as the number of people who are smoking. For them the on-street eateries include McDonald’s, Garfunkels, Zeynah Lebanese fish’n’chips, and Ben and Jerry’s. Pish, said a patriotic friend when I mentioned this contrast; Oxford Street is all foreign tourists, she said. I think not.

But the British are still viewing food, and how. These days the people who control what goes on television are interested only in viewing figures. Here are some of the programmes screened on the five main terrestrial channels on Wednesday 11 April. BBC1: 7.30–8.00, ‘Shopping the Supermarkets’ in which Sue Dibb, lately of the Food Commission, shows two families how to shop and eat green. 10.45–11.25: ‘Dog House’, in which unruly teens

are sent to a dog-training school. BBC2: 4.30–5.15, 'Ready Steady Cook', in which amateurs have to make a meal in record time. 6.30–7.00: 'Great British Menu'. 7.30–8.00: 'Rick Stein's Food Heroes', in which this celebrity chef visits a seafood market in Cornwall. 8.00–8.30: 'Dish it Up', in which two celebrities make party food. 8.30–9.00: 'Sweet Baby James', in which another celebrity chef visits chocolate makers. Channel 4: 11.05–12.10: 'Gordon Ramsay's F Word', in which a further celebrity chef Gordon Ramsay and TV presenter Dermot O'Leary make Irish stew. Channel 5: 8.00–9.00: 'I Know What You Ate Last Summer', in which obese teens are filmed on a fat farm. 'Can they control themselves in an all-you-can-eat restaurant?' asks one blurb. Can the Brits control themselves in a more-than-you-can-eat world? It seems not. Meanwhile, their electronic circuses show their virtual bread.

### **Australia: parched**

By the time you read this I will have returned from the 25th annual conference of the Dietitians' Association of Australia (DAA), held in Hobart. Having chosen the theme of 'Crunch Time', Judy Seal and her DAA colleagues invited Tony McMichael and me to present on the new nutrition science. Also, John Coveney and his Australian Public Health Nutrition Academic Collaboration (APHNAC) colleagues have organised a two-day think-in on the relevance of the three-dimensional biological, social and environmental approach to nutrition and food policy.

The invitations were all too well-timed. In London, enjoying the warmest April on record, I read of the impact of climate change on Australia in a front page lead in *The Independent*. Over 400 000 Australians depend on the agriculture industry. The story claimed that unless plenty of rain has by now soaked into the Murray–Darling basin, where 40% of Australia's food is grown, irrigation will be banned and crops such as rice and grapes will fail, 'with potentially catastrophic implications for the national economy'<sup>4</sup>.

Judy and her colleagues did not expect me to pack a rain-making stick. Indeed, I have been expecting to learn rather than preach. In Australia, and New Zealand, the three-dimensional approach has been taught and practised for years before the term 'new nutrition science' gained currency.

Thus, the seventh and most imaginative edition of the textbook *Human Nutrition and Dietetics* includes an introduction obviously written by Stewart Truswell of Sydney University, in which evolutionary, historical and environmental aspects of nutrition are considered<sup>5</sup>. Mark Wahlqvist of Monash University has filled the *Asia Pacific Journal of Clinical Nutrition*, of which he is chief editor, with papers celebrating food systems, biodiversity and food culture. Boyd Swinburn of Deakin University has enlarged UN and other recommendations to prevent chronic diseases by means of his concept of 'the

obesogenic environment'<sup>6</sup>. Tony McMichael of the Australian National University sees nutrition as one aspect of the big ecospherical picture<sup>7</sup>. And so on. My Australian presentations have been prepared with all due nutritional cringe.

### **Formula for public health**

'The most important issues confronting food and nutrition scientists in the twenty-first century are beyond the scope of conventionally defined human biology'. This is Basil Hetzel, in an admirable new compendium on public health nutrition<sup>8</sup>, being launched in Sydney during my visit. How should food scandals be addressed? 'People power' he rightly says. For example: 'Parents have to band together in increasing numbers in voluntary organisations to oppose the TV advertising of foods of high sugar and fat content'. In this, public health nutritionists should take a lead. Right on, Basil!

In the first chapter on concepts and guiding principles, the book's masterminds, APHNAC stalwarts Mark Lawrence and Tony Worsley of Deakin University, contrast 'the reductionist paradigm of so-called "molecular nutrition" and the holistic paradigm of what is termed "the New Nutrition Science"'. This may perhaps seem to imply that biological nutrition by its nature tends to be atomistic, whereas social and environmental nutrition tends to be integrative. Indeed, *The Giessen Declaration*<sup>9</sup>, the founding document of *The New Nutrition Science project*, may itself inadvertently have given the impression that nutrition as a biological science is necessarily narrow.

This is not so. One great task for this decade is to apply systems thinking to nutrition's biological dimension, as indicated by Lynn Margulis<sup>10</sup> and Fritjof Capra<sup>11</sup>, originally trained as a zoologist and physicist respectively. 'Classic' nutrition science which, as Mark Lawrence and Tony Worsley say, has been 'pursued particularly within biochemistry as a sub-branch of medicine', has tended to perpetrate an archaic mechanical notion of biology. I take from my shelves three recent textbooks together totalling over 2100 pages, and look up their detailed indexes. I find 'European Union' and 'excess post-exercise oxygen consumption'; 'European Cancer Prevention Organization Study' and 'exercise'; 'European youth heart survey' and 'excessive alcohol consumption'. But no 'evolution', which only now, and rather suddenly, is being perceived as central – or even relevant – to nutrition. Ways to go!

### **India: stuffed**

Occasionally I come across a paper in a learned journal whose conventional approach and style – abstract, introduction, methods, results, discussion, acknowledgements, references, written in that deadpan opaque manner designed to give an impression of infallibility – seems to me to obscure a point of real importance. (By the way,

who invented the current convention for contributions to journals? Is it the product of a consensus conference on how to turn the findings of science into polysyllabic lullabies? But this is another riff.)

The paper I highlight here comes from a team at the Nutrition Foundation of India, guided by that Napoleon of Indian and indeed Asian public health nutrition, Foundation president Dr C Gopalan<sup>12</sup>, published this year in this journal<sup>13</sup>. Its theme is obesity in India. It was prompted by the discoveries that around one in seven slum-dwellers in northern India are obese<sup>14</sup>, and that among affluent families in Delhi, around one-third of men and one-half of women are obese<sup>15</sup>. Well, I say 'are': the studies were published in 2001 and 1999 respectively. The conclusion is: 'It is therefore imperative that the rising incidence of obesity is controlled before it emerges as the single most important public health problem in India'.

Yes, but how? I am coming to the point. The original information in the 2007 paper comes from a study of roughly 2500 boys and 2000 girls aged between 4 and 17 from affluent families in Delhi. Their weights and heights were measured and compared with two standard growth charts used in India, as were their arm skinfolds and body mass indices. The growth charts are first, those of the US National Center for Health Statistics (NCHS) based on measurements of US children almost all fed formula and then typical US diets; and second, those of the Indian National Nutrition Monitoring Bureau (NNMB) based on measurements of children from 13 500 households in seven Indian states.

As the paper says, 'the NCHS data... are currently used widely... in many countries, including India'. Indeed, Dr Gopalan himself stated in 1989 that the NCHS standards 'may be considered as appropriate for use as an international reference'. Referring to measurements of children from families of affluence comparable with North America and Western Europe, he celebrated the finding that 'the levels of growth performance, which we have observed in children in Delhi and Punjab, is almost identical to those of NCHS'<sup>16</sup>.

The weights and heights of the rich Indian kids measured for the 2007 paper matched those of the US kids whose measurements were the basis for the NCHS charts, and were way above those of the NNMB charts. Why, is a no-brainer. Indian paediatric health professionals have encouraged mothers to achieve the NCHS growth curves. This can be done only with US-style diets – formula feeds as soon as the infant 'fails to thrive' if not before – and early weaning on to energy-dense diets – which affluent Indian families are told will fulfil their children's 'genetic potential', and which they can afford; whereas average Indian mothers continue to breastfeed their children, do not have the money for bottled kiddiglop, and (certainly until recently) have served plant-based meals low in energy density to all their families.

So are the NCHS growth charts 'appropriate'? Evidently not, as I guess Dr Gopalan now agrees. The 2007 paper shows that as indicated by arm skinfold measurements, on average Indian girls from affluent families are fatter, and boys much fatter, than specified even on the NCHS charts. Over 22% of the children are overweight, and nearly 6.5% are obese.

I now come to the point. Typical US diets make infants and children fat, in India as well as the USA. And as the 2007 paper observes: 'An overweight adolescent has a 70% chance of becoming an obese adult'.

In February this year India officially adopted the new WHO growth charts based on measurements of children who began life exclusively breastfed<sup>17,18</sup>. Hooray. These incorporate the findings that energy requirements of breastfed infants up to 12 months are 10–32% lower than those reflected in the NCHS growth charts<sup>19</sup>, and for children between 1 and 7 years old are 18% lower<sup>20</sup>.

The team from the Indian National Institute of Nutrition should now compare these new standards with the measurements of the growth of Indian children recorded by the Indian National Nutrition Monitoring Bureau. The NNMB curves are bound to be quite a lot lower, because they include measurements of children born very light, and also who suffered infection and infestation in early life, as well as food insecurity and shortages. But how much lower? It will be good to know.

### Formula for fat kids

Editorials written for this journal are discussed by colleagues on the editorial board before publication, which is why I have seen that written for this issue<sup>21</sup>. On the subject of whether breastfeeding protects against overweight and obesity in childhood and adult life, our editor-in-chief says that prospective cohort studies are required, and quotes with approval a claim that 'the jury is still out'.

With utmost respect and in apprehension of the strappado and bastinado, I disagree. The metaphor implies that no judgement has been made and so no action can yet be taken. But the systematic literature reviews cited in the editorial and here<sup>22,23</sup> are adequate evidence. There is no serious doubt that breastfeeding protects against, and that formula feeds are a cause of, childhood overweight and obesity. The epidemiological evidence simply reflects what we all know: breastmilk is uniquely low in growth-promoting protein because humans are evolved to grow slowly<sup>24</sup>. There is also no doubt that childhood overweight and obesity tracks into adult life; the only question here is by how much, which I guess in the metaphor is equivalent to the severity of the charge and the length of the sentence.

My take is that the jury filed in and gave its verdict some time ago. Formula feeding: guilty on all counts m'lud, with no recommendation for mercy. And what should public health nutritionists do? Take the tip from Basil Hetzel, raise

your heads above the parapets of regression analyses and coefficient variables, and organise.

### First shoot your pig

On my arrival in London, my thoughtful colleague Martin Wiseman gave me a copy of an essay written by Michael Pollan<sup>25</sup>, professor of journalism at the University of California at Berkeley. One of its themes is: what happened to food? Nutritionism, that's what happened, he opines, whose forerunner was William Prout, who in the 1830s identified protein, fat and carbohydrate. Whizzing forward 150 years to the 1982 National Academy of Sciences cancer report<sup>26</sup>: this 'codified the official new dietary language. Industry and media followed suit, and terms like polyunsaturated, cholesterol, monounsaturated, carbohydrate, fiber, polyphenols, amino acids and carotenes soon colonized much of the cultural space previously occupied by the tangible substance formerly known as food. The Age of Nutritionism had arrived'.

Michael Pollan's latest book *The Omnivore's Dilemma*<sup>27</sup> is to new journalism what Eric Schlosser's *Fast Food Nation* is to gonzo journalism. It tells the story of his determination 'to eat with a full consciousness of all that is at stake' for "Eating is an agricultural act" as Wendell Berry famously said. It is also an ecological act, and a political act, too... how and what we eat determines to a great extent the use we make of the world – and what is to become of it'. He researches and examines three food systems: industrial, organic and hunter. He ends by shooting a pig, then cooking it together with foraged salt, yeast and mushrooms, and home-grown beans, vegetables and salads, and serving and eating it at his feast for friends.

This lets him know 'that however we choose to feed ourselves, we eat by the grace of nature, not industry; and that what we're eating is never anything more or less than the body of the world'. Buy this book and give it as a gift to the most inquisitive teenager in your life.

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