

July blog

Geoffrey Cannon



When you browse the columns on our site, you'll see that they are all developing their own personal styles. Reggie Annan until this month has started with pictures of lakes and rivers, not because he walks on water, but because elemental dawns and sunsets give him a sense of perspective. The sensual Fabio Gomes likes to use pictures of himself enjoying Brazilian food and good times. Claudio Schuftan, whose first column appears this month, has a unique graphic style which we have decided, with admiration, to preserve. As for me, I like to think I am philosophical, and so I infuse the mood of my columns with pictures of and reference to great characters, whose work or style occur to me as relevant to ours.

Professional status

Blogs, columns, referencing and review

You'll also notice that this column is labelled 'blog', and that this blog in its text is called a 'column'. Further, that whereas editorials, commentaries, short communications and letters, are now all enshrined within our on-line journal **World Nutrition**, together with the currently free pdf facility, the columns, or blogs, are hunkered up with Association members' profiles, news about why every sane person in the whole wide world who is concerned about public health or with nutrition will join the Association, and such-like. My feeling is that as soon as these blogs are called 'columns' they belong within *WN*. But for as long as these columns are called 'blogs' we the contributors should feel free to write some items that are flights of fancy, ideas in progress that invite discussion, or that indicate a line of argument without any need to reference every point made. Bloggers can have more fun. The discipline, I suggest, is that the nature of what is said in a blog should be made clear. There again, we have all read some pretty wacky notions aired in papers published in august externally peer-reviewed journals.

Theory of knowledge

Good idea!

What follows is not a flight of fancy. Scroll back up, please. This column is headed by a singular because plural portrait of the original *eminence rouge*, Cardinal and Duke Richelieu, above all the creator of the pre-revolutionary French nation-state, the first prime minister, who was adept at looking at both sides and ahead all at the same time. Why him, this month? Wikipedia says he 'sought to consolidate royal power, and to crush domestic factions'. No, no, that's not the reason.

This portrait suggests – I think correctly – that there is never one right way to characterise phenomena, and that even within the same culture or society there

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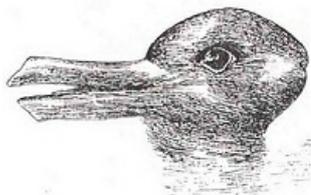
WN

June commentary
Harriet Kuhnlein



are different points of view on what counts as evidence (1) in every aspect of life, including public health nutrition. The same information can be used to support different conclusions, what are the relevant sets of facts is a matter of opinion, and there is no such thing as a totality of evidence. This is why there is always a need for courts of law. We all know this, don't we? The most we can do, is to make judgements that are (as far as we can see) the best fit with what we can study, observe or deduce, to encourage or to take actions derived from such choices, to see what then happens, and to remain open-minded.

We cannot even always be sure of what is what. Take the drawing below. In a world like ours but without rabbits, we would all identify it as that of a duck. In a world without ducks, we would immediately see a rabbit. But in our world as it is, which is it? Out of context there is no way to say (2). In the context of a pond, say, or a grassy field, we would not be in doubt. When children are shown this famous 'puzzle-picture' at Easter time, they usually 'see' a rabbit. What the drawing suggests is another uncomfortable observation: what's right, including what we say is 'true', depends on circumstances.



Truth, in any final or absolute sense, is a mathematical or religious notion – truth by definition or by revelation. Probably all of us brought up in the rationalist, empirical convention tend to talk and think in terms of 'the facts' accumulating to 'the conclusion', which we take, not necessarily using the term, to be 'the truth'.

In science, 'the truth' is an illusion

But this approach is muddled and mistaken. A fair analogy is architecture. Facts are rather like bricks. The idea that an accumulation of bricks, however carefully selected, leads to a house, is obviously absurd. Bricks are one essential building material, but until they are used to give shape to a design they are just heaps. The same applies in science. Facts have meaning inasmuch as they are driven by ideas, and by their nature all ideas can be challenged – some more readily than others. To take the analogy further, we do not normally think of buildings as 'true'. Buildings may be practical, beautiful or durable, but it would be rather fanciful to call a building 'truthful'. A more appropriate term is 'sound'.

So it is with any structure of knowledge. Appropriate questions for any judgement include not 'is it the truth?' but 'does it follow from agreed principles?', 'does it explain most if not all information agreed to be relevant evidence?', and 'does it work well?' Judgements are good and sound rather than true – except in a loose sense of 'true' which really means 'good and sound'. After that, questions to ask include 'can the principles be developed?' and 'can the judgement be refined?' and 'is there a different way is seeing things and therefore a superior judgement?'

This is challenging, certainly. In his day, Richelieu very likely was perceived as a puzzle rather like the picture above: people who had to deal with him, up to the king of France and the Pope in Rome, might well have never been sure where he was coming from. And as for the man himself, Duke Richelieu may have been more comfortable seeing things from different points of view than Cardinal Richelieu, but there again, in those days princes of the Church were less bothered with certainties than most scientists are today. In the beginning is the idea, ideas are what make humans special, and this sentence is an example of a good idea.

Footnotes

1. Feyerabend P. Notes on relativism. [Chapter 1]. In: *Farewell to Reason*. London: Verso, 1987. As you see, this started as a reference, because I believe it's right to indicate sources of opinions as well as of information. But the idea that everything is relative and that the absolute is an illusion, goes back 2,500 years to the Greek philosopher Heraclitus and his idea of flow. This does not imply that 'anything goes'. Some conclusions have proved to be sound over a long period of time, and can in a loose ordinary language sense be said to be 'true', which is very different from saying that they are 'the truth'. Many others though, including some with mounds of data that apparently support them, at best are provisional transitional, and



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quite often crumble or collapse when pressed or pushed. This is notoriously the case with nutrition science.

2. Wittgenstein L. *Philosophical Investigations* II, ix. Oxford: Basil Blackwell, 1953. Except that Wittgenstein's name 'duck-rabbit' evades the issue. In no sense is the picture that of a hyphenated 'mythical beast', a combination of one creature with another, such as a centaur or a mermaid. It is that of a duck, or a rabbit, depending on context – your point of view.

Food and drink classification. Alcoholic drinks.

Degree of proof

Readers of this column can be assured that I am not a fruitarian, nor am I in my everyday life a follower of all dietary guidelines (any more than you are). For instance, since my youth I have been enjoying wine, and began to buy Chianti in straw-wrapped bottles in London's Soho to import to secret school parties over half a century ago.

But prompted by syrupy taste, early-onset fuzzy brain-waves, and examination of the small print on the labels, how come wine now seems usually to come at 13 proof, even ascending to a previously unknown Port-approaching 14.5, whereas not so long ago it was more or less 12? This change has, in effect, produced different products.

Is there some trade-off being discussed behind closed doors, analogous to the 'low-tar' cigarette deals between governments and Big Tobacco? Is the plan that in due course, labels will carry some mild advice not to get drunk too often (as they do in Brazil), in return for the manufacturers boosting the ethanol content of any type of alcoholic drink? Investigative journalist readers, get to it!

Stunting. Wasting

What's wrong with being small?



What follows is a view that contradicts the current consensus, is highly contentious, and I think is correct. Here is another puzzle-picture, though I need to explain why it's similar to the drawing of a duck that may be a rabbit, or a rabbit that may be a duck. On the one hand, it's the bust of another great Frenchman, François-Marie Arouet, universally known as Voltaire, a founding father of modern thought, who died in full possession of his faculties at the age of 83, and is entombed in the Pantheon in Paris.

The introductory reason to introduce Voltaire here is that he is best known as a champion of free-thinking and of tolerance. He is supposed to have said 'I detest your opinions, but I will defend to the death your right to express them'. In this spirit, a large part of the purpose of the original contributions to this website, and also to the Association's journal **World Nutrition**, is to encourage discussion and debate and, sometimes, to express minority views which may turn out to have more cogency than is generally supposed. The only way to find out, it seems to me, is to air the views and to ask for responses. So here goes.

People great – and small

My main reason to show Voltaire here, is that he was small, even for his time (1). At around 155 centimetres, or 5 foot 1 inches, he was shorter than the current Queen Elizabeth of the UK now is in old age. (If you saw pictures of the

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reception by the Queen and Philip of President and Michele Obama, both practically a head taller than their counterparts, you may have had the sense that these were almost different species). If epidemiology had existed as a science in his time, and if an epidemiologist from the foreign land of *les ros-bifs* (England) had checked out British average stature, taken this to be 'the norm' and done some statistical abracadabra, Voltaire would have been classified as 'stunted'. So on the other hand, it's the bust of a stunted man.

Many other remarkable people, some from long ago, some who lived more recently, were small and by current definitions were 'stunted'. For example Benito Juarez, the first native president of Mexico, featured on the current Mexican 20 centavo banknote – here he is – was around 4 foot 6 inches, or less than 140 centimetres.

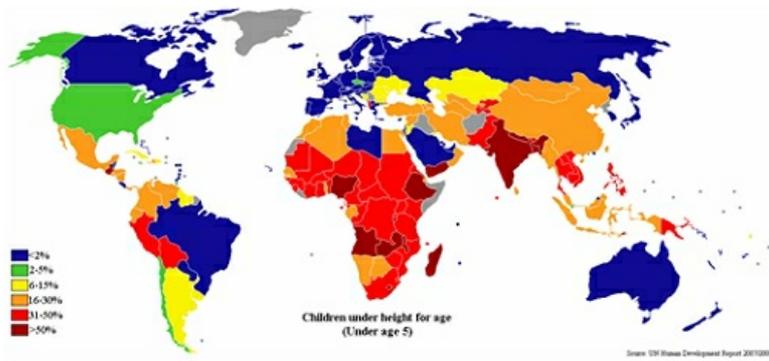


Of very many other examples of great 'stunted' people, Genghis Khan and the former Chinese premier Deng Xiao-ping were more or less 5 foot, or around 152 centimetres Immanuel Kant, David Ben-Gurion, Milton Friedman, and Isambard Kingdom Brunel, may have been a couple of centimetres taller. The picture below is of the civil engineer Brunel, recently voted the second greatest English person ever, chomping a stogie.



Like 'lift' shoes, big hats give an impression of height only if you are the only person wearing one. In her younger life Queen Victoria, who presided over the British Empire for over 60 years and who had nine children, was 5 foot, shrinking in old age to 4 foot 8 or 142 centimetres. William Wilberforce and Ho Chi Minh were maybe a couple of inches taller than Voltaire. James Madison, Josef Stalin, Mohandas Gandhi and Pablo Picasso were around 5 foot 4, or 162 centimetres, and Nicholas Sarkozy of France and Vladimir Putin of Russia are probably both around 5 foot 5 (165 centimetres), though their use of 'lifts' makes this a guess.

But famous people don't get classified as 'stunted'. The term refers to all people who are two standard deviations below the height deemed to be desirable, which, being interpreted a different way, means people below the 5th percentile of height of people measured and recorded at a specific time in the USA. It is applied generally to anonymous percentages of populations and in particular children under the age of 5 in 'the developing world', irrespective of the reasons why they are short. Thus in the map below, 31-50 per cent of under 5s in the countries coloured red, and over half in the countries coloured brown, are classified as 'stunted'.



Likewise 'wasted' refers to all people who are two standard deviations lighter than the weight deemed to be desirable, determined by the same criteria. The general idea is that we, who are OK, have the responsibility to feed them, who because of being liable to be two standards of height or weight or more below what we define as being OK, are therefore not OK, in order that they approximate to our height and weight, and thereby 'fulfil their human potential', and – or so it is claimed – gain higher marks in class, get better paid jobs, and generally make more contribution to society.

Benefits of being small

In my opinion this is a bad use of science, horrible public health, and in its effects already an obvious contributor to the collapse of public health and the destruction of the world. This said, I will sketch some of the stages of argument.

An immediate response to the mention of Benito Juarez, Deng Xiao-Ping, Nicholas Sarkozy etc, is to say that these and other remarkable short people are exceptions that prove nothing, and that almost all remarkable people are tall. Well, I wonder if this is true. Obviously it will become true in societies like our own now, that promote people simply because they are tall.

But in general is this true, throughout history? In the absence of systematic records I beg leave to doubt this. It surely would have depended on circumstances. In pastoral societies without money where wealth was embodied, as sometimes in Africa, enormous tall men would tend to be the chiefs, and the husbands of fat women. In societies whose success and survival depended on vast migrations and invasions on horseback, as in mediaeval Mongolia, the model of manhood was like that of a jockey, small and light.



And in modern times? Here is a photograph taken during the invasion of Vietnam by the USA, by the great Magnum photographer Philip Jones Griffiths, a dear friend of mine who died recently. What you see is a US grunt looking at an old lady who is comforting an injured baby, perhaps her grandchild. Philip confirmed to me that the GIs were generally around 6 foot or more (say, 185 centimetres) and, being fit, maybe around 185 pounds (say, 85 kilos), whereas the average male Vietnamese peasant was around 5 foot 3 (160 centimetres) and perhaps 132 pounds (say, 60 kilos). Women were correspondingly smaller and lighter; old ladies, more so. The same is true of rural people in pre-industrial societies all over India and China and elsewhere in East Asia.

Since the 1950s a high proportion of these populations have been defined by

United Nations agencies, official and unofficial aid and development organisations, the governments of their own countries, and almost all scientists who make normative recommendations, as ‘malnourished’ – meaning undernourished – simply because they are small.

When I present on this topic, as I sometimes do, and show this picture, I explain that it tells a dark story. Half an hour later, the GIs, and Philip, had taken off and were above the village in helicopter fire-ships, and everybody in the village had been bombed, shot or incinerated, except perhaps some who fled into deeper tunnels in time. The caption to the picture, in the spirit of the captions Goya wrote for his ‘Disasters of War’ series, is: ‘Who won the war?’

John Waterlow, one of the few living nutrition scientists surely seen as one of the all-time greats, has been brooding on the issues of height and weight for many years. In the 1985 UN report *Energy and Protein Requirements*, which he chaired, and much of which he drafted, and in other writing, he points out that physically active light, small people such as Nepalese porters, Indian miners and even African pygmies, may be stronger and have more stamina than bigger, taller people (2,3). He concludes, cautiously: ‘I am inclined to think that except when there is a demand for heavy and continuous physical work, it is no great physical handicap to be small’ He then makes a more profound point. ‘If everyone was to achieve the height now common in industrialised countries, this height explosion would be almost as disastrous as the population explosion, carrying with it the need not only for more food, but for more clothing, more space, more natural resources of all kinds’ (3).

Markers are not causes

Now, I propose what is the correct approach to human height. First and foremost, there is nothing wrong *as such* in being short. The issue is the causes of shortness. Some causes of shortness are benign. Among these, I suggest, are relatively frugal while adequate (5) and nourishing diets consumed by mothers before and during pregnancy, followed by extended breastfeeding and similarly frugal while adequate and nourishing diets during weaning and then childhood. Within populations the general result will be small, light children and adults. These populations can be, and often have been, active and healthy (5).

Shortness, even when it can be defined as ‘stunting’, is not the public health issue. The issue is factors which make children short, and which also make them in some sense physically or mentally backward or even retarded. These include repeated infections and infestations, diets that are inadequate sources of energy even for small people, and also are poor or deficient in various micronutrients and other bioactive substances. They also include broader determinants of ill-health such as unsafe water supplies, inadequate primary health care, poor schooling, and all the other manifestations of poverty and misery.

In practice, many and even probably most children who by the standards of people in materially rich countries are decidedly short, do suffer the results of poverty and misery. Consequently, shortness defined as ‘stunting’ is a rough and ready, fairly reliable *marker* for malnutrition – and also for other manifestations of deprivation. To put this another way, children in Asia, Africa and elsewhere who are by the standards of visiting health professionals very short, are probably suffering the effects of infection, infestation, and other deprivations of their rights and entitlements. But this does not mean that shortness is itself a cause of their suffering. It is not.

This point is extremely important, because it indicates the right, and the wrong, public health approaches to impoverished populations. The wrong approach is to feed infants and small children with lots of energy-dense foods, in order to make them bigger than they otherwise would be. To repeat, size in itself is not the issue. Plus as we all know now, with the Chile experiment as an outstanding example, the result of overfeeding small infants, is rocketing rates of fat children and obese adults, with all that implies (6).

The right approach is the classic primary health care combination. This includes ensuring that the food supplies and therefore diets of women of child-bearing age are adequate and nourishing; that mothers breastfeed their children exclusively until six months and beyond; that water supplies are clean; and that children are free from infections and infestations. Broader approaches are also essential. These, like the cessation of invasion, dislocation and civil wars, are often beyond the capacity of health professionals except inasmuch as they can be effective citizens.

There is very much more to be said here. As always, responses are encouraged.

Footnotes and references

1. Fogel R. The persistence of misery in Europe and America before 1900. [Chapter 1] In: *The Escape from Hunger and Premature Death, 1700-2100*. Cambridge: Cambridge University Press, 2004. From various sources, Robert Fogel reckons that the averages height of men in Britain towards the end of the 18th century was around 5 foot 6 (168 centimetres) and of Frenchmen around 5 foot 4 (164 centimetres). No doubt upper-class men were on average relatively tall. Robert Fogel comments: 'During the eighteenth and nineteenth centuries, Europeans were severely stunted by modern standards'.
2. World Health Organization. Energy and Protein Requirements. Report of a joint FAO/WHO/UNU expert consultation. Technical report series 724. Geneva: WHO, 1985
3. Waterlow J. Needs for food. Are we asking too much? [Chapter 1]. In:
4. Waterlow J, Armstrong D, Fowden L, Riley R (eds). *Feeding a World Population of More Than Eight Billion People. A Challenge to Science*. New York: Oxford University Press, 1998.
5. Yes, I realise that 'adequate' begs a lot of questions. And yes, I am referring here to what has been the furious controversy epitomised as the 'small but healthy' debate, associated with the Indian nutrition scientist PV Sukhatme and his sympathisers.
6. Chilean experiment? Readers of this column from Chile will know what I mean. Otherwise, google 'Fernando Mönckeberg' and follow where this leads. It is a long, winding and dark story. More in future columns.

Hunger **Getting it wrong**

You might imagine that the points made in the previous item above, while interesting and even convincing, are not especially important. If so you would be wrong. Here I illustrate why, using two photographs taken in Brazil.

The first picture shows the current Brazilian president 'Lula' on stage. Born into poverty, and sometimes seen as the Brazilian equivalent of Abraham Lincoln, Lula knows himself what it means when a family is hungry much of the time. This was his own experience as a child. This fire burning in him has ignited the Brazilian *Fome Zero* (Zero Hunger) programme, a flagship initiative based in the president's own office. Lula believes that any food that satisfies hunger is good. Meaning, for quick effects, readily available, energy-dense, fatty or sugary (and often also salty) processed products, are the goods.

So here is Lula with a couple of his ministers (who look glum) on a Nestlé platform in Brazil, together with company executives, in effect puffing their products and their propaganda. He believes, because of his own experience, and also because of what he has been told, that any microbiologically safe product that efficiently delivers calories, contributes to the protection of public health and the welfare of impoverished people. Plus he evidently has no problem with the incursion of any transnational food and drink company into Brazil. Alas.



And the result? The next picture shows Nestlé delivering its products to the poor people of Brazil on a big river in Amazonia, with a floating supermarket of its branded products. Will this imprint in the minds of impoverished communities and families, the idea that Nestlé purveys health? Yes, it will. Can these families and communities readily afford branded processed products, including artificial formula and weaning foods? No, they cannot. Will these massively marketed campaigns, with evident presidential support, erode commitment to sustainable, appropriate food systems that give employment to local communities? Yes, they will.



Has Lula got it wrong? In this case yes, big time. Brazilian readers of this column, prepare to enlighten the next president, who takes office next year, in 2011. And once he is out of office, watch Lula's waistline.

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This column is reviewed by Fabio Gomes. My partner in the New Nutrition Science project is

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