# *2013 February column* Geoffrey Cannon



São Paulo. This month I begin with a celestial hero, a solace for many millions of Brazilians. This is Santo Expedito. Above are two versions, one a woodcut by J Borges from Pernambuco, and the other in a form found in the thousands of shops in Brazil that sell icons, angels, saints, ex-votos and the like, as syncretic-Christian equivalents of lotteries. He appears to have been a Roman centurion before he became a Santo – if he is, because the Catholic church is iffy about his sainthood so, as you see, he may or may not have a halo. Logically enough, he is the patron saint of small traders who want their bills expedited. But more to the point here, in Brazil he is also the preferred patron saint of hopeless cases and impossible causes, and is therefore much venerated. Desperate? Pray to Santo Expedito. He was the hero of my first column on this website, published in March 2010.

## Food and nutrition, health and well-being What I believe

This is my 35th of my columns here, all of which you can now access from the 'previous months' archive feature on the home page of the Association's website. Previously I have written 65 columns for *Public Health Nutrition*, beginning ten years ago in early 2003. Thanks to *PHN's* august status, you can access all of these on PubMed (1). So like Santo Expedito I am now a centurion. I am grateful for the space and the scope, and most of all to Barrie Margetts and Agneta Yngve, Claus Leitzmann and Carlos Monteiro, Fabio Gomes and Claudio Schuftan, and to scores of other colleagues and contacts. Keep 'em coming!

Last month, for the beginning of the year, I summarised reasons why I chose my monthly 'heroes' in 2012, from Michael Pollan to Rudolf Virchow, and from Claudia Roden to Lynn Margulis. Here I am more ambitious. Drawing on what I have published, below are my first two examples of what I now believe about a web of topics: nutrition, food and meals; disease, health and well-being; personal, public and planetary – from experience, experiment, writing, thinking, and discussion.

#### What's relevant

'Hope helpful' is how sometimes I end emails to colleagues. What can I offer? Once I felt defensive about not having an academic training in nutrition science. But nor do most senior academics in the field, who have come to commit to nutrition having been formally trained in for example dietetics, epidemiology, biochemistry, or medicine. Public health is a whole different ball-game, as is well-being.

After a couple of decades of being an 'expert', in the sense of having a fair grasp of nutrition as now conventionally delineated, I came to realise that my contribution should be informed by some of my special interests. These include communication theory (Marshall McLuhan, left in the first row of pictures below), history (Frederick II 'Stupor Mundi' Hofenstaufen, next to the left, less of a stretch than you might think), philosophy of science (Karl Popper, centre), hippie days (Robert Pirsig, second from right), and literature (Marcel Proust, who else, on the right). Besides, once we admit public health and also well-being into nutrition, a great casket of jewels opens to us. It is almost as if (to misquote the philosopher of science Paul Feyerabend) 'anything goes'. It is also I believe legitimate to be playful.

Nutrition in its full sense in the service of humanity now and in future, and in the service of the living and physical world and of the biosphere, is challenging, interesting, thrilling. Fasten your seat-belt.

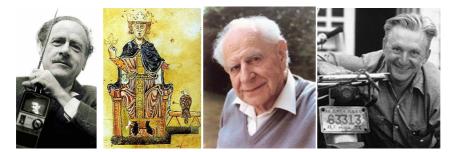
Method

The items below elaborate themes I have written about or touched on in previous columns. Each item gives access to pdfs of these columns. The items are introduced by pictures of people who have influenced me, for we are not alone. The first two themes here are as follows. First, on the leading role of ideas, theories and quality in science and all other serious human endeavour, and the subsidiary role of facts, numbers and quantity. Second, on how art can show us what to eat.

### Reference and note

1 Except the first two from early 2003. But the other source is Cambridge University Press, whose archive is free. Access: http://journals.cambridge.org/action/displayJournal?jid=phn and then dig into the back issues, which are clearly catalogued. A brilliant service.

## *Epistemology* In the beginning is the idea





### Ideas always come first. From left to right: Marshall McLuhan, Frederick II ('Stupor Mundi') Hohenstaufen, Karl Popper, Robert Pirsig, Marcel Proust

To start with, here is a story. The Canadian sage Marshall McLuhan was a mentor and a friend to me in his last decade. (Here he is, above left). In my mind's eye I can see him now at a lunch in London with his wife and one of his daughters, who

were somewhat aghast at the verbal jousting in which our guest Michael Kustow took part. Afterwards Marshall and I went for a stroll. He turned to me, conveying serious concern, and touched my arm. 'Tell me' he said (or words to this effect). 'People always assume that I agree with what I say. Why is this?'

Why indeed? Marshall's genius was in having ideas which he offered as gifts, to be unwrapped and adopted, or discarded, or enjoyed for a while, or to be stored and then discovered, understood and valued decades later. It was Marshall after all, who coined the terms 'the global village' and 'the medium is the message', as the prophet of electronic communication (1).

### Ideas come first

So here is a thought about thought. It applies to public health and to nutrition. It also applies to much if not all serious structured human endeavour. This is that ideas come first. Facts are significant only inasmuch as they serve ideas. There is a good analogy with buildings. In the analogy, stones are facts. Obviously it is not possible to create a cathedral without stones, and other material. But stones by themselves are rubble, or at most piles. The quarriers, the hewers, the carvers, the masons, are all essential in the construction of the cathedral. But the edifice itself is the creation of the architect, the visionary (2).

You see the analogy. The master mason consults the blueprints in order to find out where every bit fits within the grand scheme. The engineering must be sound and the materials must be suitable and strong to uphold the structure, and if they are not, it will fall. But what comes first, and what is expressed in the final creation, is the vision, the theory, the idea.

This is true of cathedrals. It is also true of Lego. My 8 year-old son Gabriel has boxes full of bits, and also kits from which he builds pre-designed constructions by following instructions. What I like much more, as I feel he does, is like when after two late evenings with 'The Lord of the Rings' he rummages in his boxes and in a while shows me Frodo, Gandalf, Gimli, and a Black Rider, made with a few cleverly configured bits of Lego out of his imagination. The objects, the Lego pieces, are transformed into characters, the mythical beings.

What is true of cathedrals (and Lego) is also true of factories, apartment blocks, and cities. It is also true of empires. For example, Frederick II 'Stupor Mundi' ('the wonder of the world') Hohenstaufen (next to left, above), in his reign between 1198 and 1250 CE, expanded his hereditary territory of Southern Italy and Sicily to include what is now all of Italy, Austria and Germany, and France east of Lyons. This Empire was not just territory and possessions. It was the expression of Frederick's idea to recreate the Roman Empire, whose time came again for a while because of his visionary genius. The achievement needed armies of men and horses, swords, food, and cash, and so forth, but the driving force was the idea. Ideas are an aspect of what singles out humans from other species.

### We work by deduction

What is here is not new. Thus the philosopher of science Karl Popper (centre, above): 'The empirical sciences are systems of theories. The logic of scientific knowledge can therefore be described as a theory of theories... Theories are nets cast to catch what we call "the world": to rationalise, to explain, and to master it' (3).

In general, practitioners of nutrition as it is now conventionally positioned, seem to assume that the inductive method, which is to say the accumulation and ordering of facts – data – into evidence, using increasingly sophisticated statistical techniques, will of itself generate objective findings. This is just plain wrong. For a start, the very ordering of facts, the equivalent of bricklaying, implies a plan – an idea. But in any case, the purpose of evidence is to support or refute a theory. The theory comes first. This is the deductive method. True, the theory may emerge or be refined in the course of the organisation of facts, just as a master mason may change the architect's mind, or as with mediaeval cathedrals may also be the architect (4).

Induction is comfortable. It implies that information will generate objective measured quantified conclusions. Job done! These days the inductive method is mostly worked out by computers and is becoming increasing detached from thought. By contrast, deductive processes require constant thought. By their nature theories, and indeed ideologies – systems of ideas –

can be and indeed should be challenged, as needs arise and circumstances require (5).

Going back to Marshall McLuhan's observation after lunch, ideas are not about quantity, but quality. Facts are positioned as objective and quantifiable. Ideas cannot be measured. They always might be proved wrong – some less likely than others, but you never quite know which for sure – and are certainly liable to be superseded. Ideas may be taken as true in an ordinary sense, but they cannot be 'the truth'. Yes, it is possible to have two or more different ideas at the same time, and the one best accepted is that which is agreed to be most useful or fruitful in the light of knowledge, at the time and for the forseeable future. This all feels relative and dangerous. Indeed, for this is the way of the real world. It also explains why new ideas are resisted.

### The limits of science

If science was concerned only with what can be measured, science surely does have severe limitations, because quality by its nature cannot be measured. Ideas – like these being expressed here – have all sorts of biochemical, neurological and other correlates, but these are not the ideas themselves. For instance, I once again pick up a small glazed bowl on my desk marked 'Sahorre' on its back. I sense when I last did this mindfully, and also as I now write this, I sense the sunny French Catalonian day when I bought it, and I see Susie its maker in her workshop. All sorts of electrical impulses are happening in my brain; but these are the pathways and not the cause of my memories. Decisions, choices, thoughts, actions, have measurable correlates but are essentially immeasurable, even mysterious (6). This is also true of all forms of art.

Here is a reason for the stunning impact of the book Zen and the Art of Motorcycle Maintenance (7). Trained as a chemist, its author Robert Pirsig (next to right, above) wrestled with issues like this. He admitted quality. He wrote, in some agony because of his quantity training: 'Quality... you know what it is, yet you don't know what it is. But that's selfcontradictory. But some things *are* better than others, that is, they have more quality. But when you try to say what the quality

is... it all goes *poof*!' What it is, lies above and beyond biological and chemical science as now conventionally circumscribed.

### Thinking of meals

Now I make my big morning salad, and think about it, and this, and nutrition. Lettuce, cucumber, pepper and tomato make the base, but that's just the start. Also included are fruits – banana and over-ripe mango today – and fresh ginger, chopped and mixed with olive oil and apple vinegar, almonds and sesame seeds, and a small chunk of tahini. On waking and getting up and taking four turns round the condominium, I am more energetic and productive than I am at times when I neglect my big salads. Some slight aches have gone. The world feels a better place. The salads are a necessary reason.

But what is it about them that may be contributing to this sense of well-being? For sure, nutrition in its usual sense is part of the story: the nutrients within the fresh and minimally processed foods I am eating, and the absence of what I would have been consuming if I were not satisfied by my salads. We've all known about some of the goodies in salad vegetables and fruits ever since the discovery of the functions of vitamins. Ginger? Like many herbs and spices, this is intensely rich in all sorts of bioactive compounds, many of which are no doubt off the conventional nutrition science map, although understood by herbalists and naturopaths.

Nutrients have a context – the foods in which they are contained. Foods also have a context – dishes and meals, and more besides. What I am eating now is not just nutrients and not just foods, but a meal. And there is more! The act of preparing the salads has brought with it a sense of participation and creativity. The use of a knife brought from London evokes meals prepared, some long ago, and in my mind's eye and ear I see faces and hear voices, as we may do when engaged in convivial tasks, and as I wash and chop and cut and slice and squeeze and peel and chop some more and pour and mix, I choose one of these times that has swirled into mind, and meditate on it while continuing to prepare the meal. Now the melody within me is like that of Marcel Proust (right, above) describing how the aroma of a little cake, a *madeleine*, evokes remembrance of

times past. Is this all part of nutrition? It is certainly part of nourishment.

Can nutrition be properly understood in terms of numbers? I suggest that the answer is: only to some extent, only in its less significant aspects, and only in ways that reduce its meaning. A meal can be characterised and classified countlessly. But none of these amount to the meal itself, and the savour and relishing of it which is also part of its nourishment, any more than an anatomised body amounts to the living being. Being alive and conscious remains a mystery. Life has no number.

My further idea here, also not new, is that a proper understanding of nutrition will also fully take into account society, the environment, future generations, and the biosphere. This is what the team at the University of São Paulo of which I am a member is now doing, with *The Food System* series in *World Nutrition*. But the implication of the ideas here goes further yet. It is that nutrition is – or should be – also concerned with matters of the mind, heart and spirit, which after all are defining characteristics of our species. This would make it an art as well as a science. Would this be so strange? Medicine, after all, is also an art.

### Notes and references

1 Manuel Castells pays tribute to Marshall McLuhan as 'the great visionary' in his epic trilogy. Castells M. The culture of real virtuality: The integration of electronic communication. [Part 5]. *The Rise of the Network Society.* Oxford: Blackwell, 2000.

2 The analogy with music, contrasting the roles of the composer and of the players, is also useful.

3 Popper K. Theories. [Chapter III]. *The Logic of Scientific Discovery*. London: Hutchinson, 1959. (First published in German, 1934).

4 Erlande-Brandenberg E. *The Cathedral Builders of the Middle Ages.* London: Thames and Hudson, 1995. (First published in French, 1993).

5 The deductive approach a real sense implies that there is no such thing as objective fact, or 'truth', but rather, different ways of perceiving, ordering and explaining what we commonly call 'reality'. This thought can cause a sense of vertigo. But let's not go there now.

6 Hampshire S. *Thought and Action.* London: Chatto and Windus, 1959.

7 Pirsig R, Zen and the Art of Motorcycle Maintenance. An Inquiry into Values. London: The Bodley Head, 1975.

## *Nourishment* Good meals can be celebrated in odes



### Reflections on food and art. Left to right: Michael Pollan, Carlos Drummond de Andrade, Pablo Neruda, Gabriel Bittar Cannon aged 5, Renata Bomfim

'Eat animals that have themselves eaten well'. 'Don't eat breakfast cereals that change the color of the milk'. 'Eat meals'. 'Don't get your fuel from the same place your car does'. These are some of Michael Pollan's intelligent *Food Rules* (1,2). (Here he is above, left). He also has 'Eat only foods that will eventually rot' though as he knows I prefer my own snappier version, 'Good food goes bad'. There is a general guiding principle here, of being mindful about what we eat and drink, and also of trusting what our senses tell us (while knowing that they can be fooled) (3). In other words, good advice about food is part of good advice about life. Michael Pollan's pithy tips are an incentive to think of more.

Let's take these thoughts further out. What about the immeasurable concept of quality, which we grasp only by experiencing examples? A main domain of quality is art. So

what can be discovered about nourishment in arts such as painting, novels, songs and poetry?

Ten years ago, in my first 'Out of the Box' column for *Public Health Nutrition*, (4) I wrote: 'In his poem "The Table" (5) Carlos Drummond de Andrade (above, next to left) celebrates *comida mineira*, the everyday cuisine of the Brazilian state of Minas Gerais, including the thick dark bean dish *tutu*, and *farofa*, toasted manioc flour sprinkled over meals. And an anthem of Chico Buarque, one of the four Brazilian male popular composers and singers in the Bob Dylan league, is to *feijoada*, a stew of beans and meat enjoyed at weekends and on feast-days, the Brazilian *cassoulet'*. Then I continued: 'Food and its place in life is a constant theme for Latin writers and singers. But I cannot think of any modern poems or songs written in English about food and how it nourishes us'; and I challenged readers to cite some. Answer came there none. Ever since then I have looked for some. No joy.

The thought about verse recurred to me on reading the *Elemental Odes* of the Chilean poet Pablo Neruda (6). (Above he is central). He has written odes to an artichoke, tomatoes, wine, a tuna, the lemon, salt – and to conger chowder, which includes:

Hasta que en el caldillo/ se calienten/ las esencias de Chile,/ y a la mesa /lleguen recién casados/ los sabores/del mar y de la tierra/

para que em esse plato/ tu conozcás el cielo.

Until in the chowder/are warmed/the essences of Chile,/ and to the table/come, newly wed,/the savours/of land and sea/ that in this dish/you may know heaven.

An ode is a poem of recognition or celebration. It is affirmative, and was originally sung. This made me feel that I was on the trail of a good idea. But there again, for good reasons of Chilean economic history, there is also an ode to salt... and to wine, which by all accounts, together with whisky made Pablo Neruda himself a marinaded man... So no, it certainly would not work to suggest that any food (or ingredient) that is somewhere mentioned in a poem (or song), is for this reason nourishing. Besides, there is also the issue of the attitude and quality of the

poem itself. 'Candy is dandy but liquor is quicker', Ogden Nash's observation, as well as being sardonic, falls short of poetry.

### Gabriel's soft sculpture

So what about another type of art – sculpture? (7). This came to mind three years ago. My son Gabriel, then 5 (above, next to right), was off school one day. In his room, he went quiet for a couple of hours. He then let me in, indicating as children do, that he had done something rather wonderful but wasn't going to tell or show me what. This is what I found



### Gabriel's plasticine masterpieces. Here are pizza, a whopper burger (with tomato and lettuce), mini-burgers, cake, chocolate, cookies, confectionery

Above are his *obras-primas* (masterpieces) made from plasticine. Starting top left clockwise, is a chocolate birthday cake on a tray ('like waiters use' he explained, with his hand spread behind his right shoulder) complete with candle, on top of a Hint for his next birthday. Next to this is a bowl of *brigadeiros* (big balls of chocolate confectionery). The tower is a whopper burger with two layers of meat and one of cheese. Gabriel has two ideas for the red ball on top. One is that it's an olive but he had run out of olive-coloured plasticine. Two, which appeals to me because of its irony, is that it's a *glacé* cherry. Below that in the middle is a bowl of burgers (note the tomatoes and lettuce) and then, on the right, a single burger. In front is a Cannon G. Food, nutrition, health and well-being. What I believe, and other stories [Column]. *World Nutrition* 2013, **4**, 2. bowl of *biscoitos* (biscuits, or cookies). The big model is of course of a crispy crusted pizza, with *linguiça* (sliced sausage), on a tray.

Cute, eh? As *maquettes* for sculpture made of stuffed cushions scaled up 100 times, in the style of Claes Oldenberg (below, left) they could be worth \$US 000,000s. Every male parent dreams about his children becoming the main breadwinners. Or I should say, of them bringing home the *bacom*. Well, I do.



### Claes Oldenberg's 'soft' French fries and ketchup (left) and (right) one of the Andy Warhol series of Campbell's soup cans, are similarly sardonic

From the nutritional point of view you can see where this is leading. Suppose these were real food products, and they were slung into an industrial mixer, turned into khaki slurry, and chemically analysed. As percentages of energy, the result would come out at maybe a bit under 50 per cent fat, and maybe nudging 40 per cent sugar and white flour (identified as carbohydrates), with maybe somewhat more than 10 per cent protein, and a dirty great dollop of salt. Dietary fibre? Almost zilch. Folate? Potassium? Traces only. Chemical additives? A zoo.

No no, promise, this is not what Gabriel eats every day. His staples include what Raquel his mother calls 'holy' (whole) rice and beans, with lots of vegetables, as well as chicken or fish. For breakfast he has a banana and a holy bread toasted sandwich. The household is purged of margarine. He enjoys all sorts of fruits, as well as fruit juices. But these aren't the foods he dreams about. Might he make models of pineapples, papaya, passion fruit, carrots, cabbage and celery? Maybe, but I doubt it. Chocolate cake with a candle means parties, and parties mean fun and presents. And burgers and pizza – well, they are advertised everywhere, on television, in children's books and games, and outside as well as inside supermarkets. What Gabriel thinks about, and therefore can turn into art, are products that have been glamorised and formulated to be ultra-yummy. As I have said, manufacturers and their satraps know how to fool our senses and appetites.

All in all though, whether the artist be Andy Warhol, Claes Oldenberg or Gabriel Bittar Cannon, sculpture of itself does not indicate good food. Here is the same point as with the Ogden Nash ditty. The issue is attitude.

### The bliss of moqueca



Now let me tell you about *moqueca*. This is the Brazilian equivalent of Provencal *bouillabaisse* – fish (or also seafood) stew, gives you a rough idea. To explain *moqueca* I quote my colleague and friend Fabio Gomes (7). For me he says it all: childhood, family life, local custom, engagement with earth for the cooking pots and water (ocean, sea, river) for the fish that are the main ingredient. Here he writes about the type of *moqueca* he grew up with. And now coming to the crescendo of this item, he also moves into the world of all the senses, with an ode written by Renata Bomfim (above right), the beautiful young poet from his State, which evokes the aromas and all they may mean. He writes: 'I spent a great part of my childhood and adolescence living in Vila Velha. This, once a little town, became the centre of what is today the state of Espírito Santo, surrounded by the states of Minas Gerais, Rio de Janeiro, Bahia and the great Atlantic Ocean. You can imagine the great mixture that has emerged from this combination. Although Espírito Santo is known for innumerable beauties and delights, such as its coffee, its greatest treat is the *Moqueca Capixaba* (which you see in the picture above) served accompanied with rice, and with *pirão*, the sauce made with the fish juices and manioc (cassava) flour.

'Moqueca Capixaba ("capixaba" simply means "from Espírito Santo") is more than a culinary delight. With its preparation, it is part of the culture of these parts. The authentic dish is prepared in a special mud pot, designed by the potters of *Goiabeiras*. By mixing their sweat, their joy, the mud, and pigments from the red mangrove tree, these women create unique, resistant and long lasting pots. The work of the *Goiabeiras* potters is recognised by UNESCO as 'an intangible cultural heritage' of Brazil. Yes, it is possible to make a *Moqueca Capixaba* in any earthenware pot, but cooked in a *Goiabeiras* mud pot it tastes intangibly better!'

### The ingredients

'In the North-Eastern states of Brazil there are also fish stews that are called *moqueca*. But the *Moqueca Capixaba* is special. Besides its mud pot, its secret is its simplicity. You just need (very) fresh fish, coriander, chives, tomatoes, onions, garlic, salt, limes, and olive oil. The North-Eastern fish stews are 'richer' – they include pepper, eggs, potatoes, carrots, palm oil and/or coconut milk. They are good, but they are not the *Moqueca* I love'. And then finally: 'So many Brazilian poets mingle the sensuality of food and the sexuality of love. Here, above and below, is the young brilliant *Capixaba* writer Renata Bomfim'. She writes:

### Moqueca Capixaba

She becomes hot so slowly, (*Ela vai sendo aquecida, lenta e*)

gently, on a low flame, (*delicadamente, em fogo brando.*) At the table, the loved one, (*Sobre a mesa, o namorado,*) warmed and amorous, awaits. (*temperado com amor, espera.*)

Daughter of black native earth, (Pretinha de barro, filha de indio) In your lap, the fruit of the sea (seu colo acolhe o fruto do mar) is bubbling now, heavy with aroma. (fervilhante, emana seu odor.) And all of us wait, eager. (Esperam-na todos, deleitantes.)

Now, a good table wine, (*Um bom vinho, à mesa,*) then a time of silence (*um silêncio respeitoso,*) while mouths moisten (*as bocas anseiam e marejam*) like sails, experiencing the sea. (*como velas errantes ao mar.*)

Now it is the loved one that (*E o namorado vai sendo devorado*,) is devoured, transubstantiated. (*transubstanciação*) With Holy Spirit in our mouths, (*Espírito Santo no ceu da boca*.) *Moqueca capixaba* is divine. (*Divina moqueca capixaba*!) There may be mention of all sorts of products and foods in

poetry (though not I think, margarine). But the issue is first attitude, second type of poem, and third, topic. The poem must be affirmative, and will celebrate not nutrients, not foods, but meals: that is, foods prepared, combined and served for people to enjoy in company. And so, bingo! The triumphant conclusion:

Good meals can be celebrated in odes.

### References and note

1 Pollan M. *Food Rules. An Eater's Manual.* London: Penguin, 2009.

2 Pollan M. Kalman M. *Food Rules. An Eater's Manual. Illustrated edition*. New York:

Penguin, 2011

3 But only rarely by whole foods. By contrast, one job of the food scientists and technicians who work for manufacturers and for the flavour and other 'houses' that service manufacturers, is to use chemicals as ingredients of ultra-

processed products, designed to debauch our senses of vision, smell and taste.

4 Cannon G. My mango, and other stories. *Public Health Nutrition* 2003, **6**,2, 129-130. Obtainable for free by accessing *PHN* as follows

http://journals.cambridge.org/action/displayJournal? jid=phn

and then by digging into the archive. It works! The other way in is:

DOI:\_http://dx.doi.org/10.1017/S1368980009990875, but all you get that way is the first page, pah.

5 Andrade C. 'The table'. In: Bishop E, Brasil E (eds). An Anthology of Twentieth Century Brazilian Poetry. Hanover, NH: Wesleyan University Press, 1972

6 Neruda P. Ode to conger chowder. In: *Elemental Odes*. London: Libris, 1990.

7 Gomes F. Mud, sweat and inspiration, and other items. [Column] Website of the World Public Health Nutrition Association, June 2011. Obtainable at www.wphna.org.

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