

Perspective

A newsletter for widening your point of view

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Richard Bach, in his book *Illusions*, states a handy aphorism: **Perspective – use it or lose it.** This periodical – distributed by Rob Greenaway & Associates – shares amongst recreation and tourism management professionals, and others, several tools and concepts which will help exercise your perspective.

This issue reviews some Latin terms which are sure to fire up post-prandial conversation.

A priori, post hoc

The opposite of *a priori* is *a posteriori*, which, to my mind, is a far more aesthetic term. Both have a variety of definitions, from the abstruse Kantian to the more simple ones you can find in a dictionary. Mine suggests that *a posteriori* refers to knowledge gained from experience, from empirical study beginning with the effect and seeking the cause (this occurred, I wonder why?). An *a priori* understanding refers to something for which study (bar reference to a dictionary) is not necessary – such as unequivocal statements like ‘all spinsters are unmarried’ – or for reasoning which begins with the cause and seeks the effect (if I do this, I wonder what happens?). Both terms refer to how knowledge is acquired.

A good friend of *a priori* is *post hoc*, which is Latin for ‘after the event’, and is an abbreviation of *post hoc ergo propter hoc* – ‘after this, therefore because of this’. This is the logical fallacy of assuming that sequential events are causally related – B followed A, therefore A caused B. Of course, we all know that correlation does not imply causation.

Nassim Taleb referred to an incorrect *a priori* judgement in his book *The Black Swan*.¹ In the 1st Century, all known swans were white, even the albinos. The *a priori* wisdom of the time was that swans are white by definition. That bit of knowledge didn’t require testing. Similarly, I’ve never checked to see if hens have teeth, but I have been bitten by quite a few gannets and you’d be forgiven for thinking that they have them. Of course, we need to understand whether our knowledge about something is in fact *a posteriori*, and not a weak *post hoc* assessment carried out by someone in an *a priori* frame of mind.

Someone once proselytised to me that microwave cooking is a terrible thing because of a report that radish seeds would not germinate in water that had been boiled in a microwave. Tossing your microwave out because of this information would be a very cautious thing to do. But, one just has to ask, how was that knowledge gained? *Post hoc*, *a priori*? Regardless, I can report, *a posteriori*, that radish seeds do grow in: unboiled tap water, conductively boiled water (from a kettle), and in microwaved water. You can even microwave the seeds for a while and they’ll sprout – just not as many. I never tested to see if heating the seeds in a conventional oven would have the same effect. What do you reckon, *a priori*?

From an *a priori* perspective, did I really need to test this? No. Water is water, a compound of hydrogen and oxygen. This might be a very

boring view, but what fundamental quality could change as water is heated and cooled, if its atomic weight remains the same? And if there is nothing in it but water? Read on. ❖

Placebo

Our modern use of the word placebo dates back to the 13th Century when hired mourners at funerals would chant a misinterpreted bit of the bible in Latin: *Placebo Domino in regione vivorum* (I will please the Lord in the land of the living). Their fake behaviour earned them the nickname, Placebos.²

The old mariner Baldick in Patrick O’Brian’s *Master & Commander* refused to believe that his favourite cure-all of the 18th Century was a placebo:



Ward’s pill and Ward’s drop [mixtures of antimony and balsam] are no good – quite exploded we hear: but they saw me through the West Indies in the last war, when we lost two-thirds of the larboard watch in ten days from the yellow jack [yellow fever]. They preserved me from that, sir, to say nothing of scurvy, and sciatica, and rheumatism, and the bloody flux [dysentery]; but they are no use we are told. Well, they may say what they please, these jumped-up young fellows from the Surgeon’s Hall with the ink scarcely dry on

their warrants, but I put my faith in Ward’s drop.... And the carpenter for amputations.

And those jumped-up surgeons are still at it. A 2005 study reported in *Lancet* compared 110 studies of the effects of homeopathy with 110 studies of conventional medicine (where they actually add something to the water). The outcome – conclusive I think – was that the effects of homeopathy were the same as a placebo.³

But, what’s wrong with placebo? It obviously has *some* effect. The 2005 *Lancet* study concluded that, “Practitioners of homeopathy can form powerful alliances with their patients, because patients and carers commonly share strong beliefs about the treatment’s effectiveness, and other cultural beliefs, which might be both empowering and restorative.... Clearly, rather than doing further placebo-controlled trials of homeopathy, future research efforts should focus on the nature of context effects and on the place of homeopathy in health-care systems.”

¹ Taleb, NN. 2007. *The Black Swan*. Random House

² Finniss DG, Kaptchuk TJ, Miller F, Benedetti F. Biological, clinical, and ethical advances of placebo effects. *Lancet* 2010; 375: 686–95.

³ Shang A, Huwiler-Müntener K, Nartey L, Jüni P, Dörig S, Sterne JAC, Pewsner D, Egger M. Are the clinical effects of homeopathy placebo effects? Comparative study of placebo-controlled trials of homeopathy and allopathy. *Lancet* 2005; 366: 726–32.

In 2010, another study reported in *Lancet* did just that. The researchers looked into how a 'context effect' actually has a real outcome. A 'context effect' relates to *how* something is delivered, rather than what is in the package. For example, one medical test used different means of administering the same medication. In one group, a pain killer was injected by a clinician who chatted and explained the deal. In other patients, the same analgesic was infused via a computerised pump. Although these patients knew they'd be getting the drug at some stage, there was no 'psychosocial interaction'. Those on the secretive pump needed a 50% increase in their dose for the same level of pain reduction as those getting the human interaction.⁴

The 2010 *Lancet* study identified several medical and physiological conditions where known physiological mechanisms triggered by a placebo have been shown to have some real effect, including Parkinson's and Alzheimer's disease, addiction, pain, depression and anxiety. The mechanisms involve the activation of dopamine and natural opioids, the release of various hormones with vaguely familiar names, the activation of parts of the brain and changes in metabolic rate.

Placebo acupuncture (where needles don't penetrate the skin) plus a supportive patient-clinician relationship was shown to have a 62% success rate in producing a 'clinically significant' improvement in a test group of sufferers of irritable bowel syndrome, compared with 28% for those who had no treatment. Of those who got the placebo acupuncture, but not the "attention, warmth, confidence, and thoughtful silence" of the clinician, only 44% reported the same level of improvement. The top score – 62% – was similar to the gains made by a conventional drug treatment.⁴

Here's the tricky question: is delivering a placebo ethical? Some studies show that the more expensive a treatment, the better the placebo effect. A Stanford neuroeconomist (there is such a thing) sold a branded sugary drink to one group at full price and to another at a discount, having told the study participants that the liquid would affect their levels of energy and alertness. Those on the cheap but otherwise identical drink solved 30% fewer puzzles than the big spenders.⁵ So an expensive clinician is going to do better than a cheap one, just so long as they don't let on that they're making it all up, albeit very empathetically.

I wonder if more expensive consultants are better? A senior lawyer once told me about almost doubling his hourly rate – from jaw-dropping to eye-watering – to reduce his work-load, only to discover that the size of his fee and his level of popularity were strongly positively correlated.

Then there's the *nocebo* effect, which is the reverse of a placebo, and is also Latin, meaning 'I will harm'. If I believe that my microwave is killing my radishes, then maybe it *will* have an adverse health effect. Should we ban these devices because of unfounded but effective fears

in some? Should we be happy relativists and accept that there is no universal reality, only perception and context?

I had an interesting chat with my GP about this last year. I mentioned my father's medical mantra, which is, "If you take it to a doctor, it'll be better in a fortnight. But if you leave it alone, it'll heal in two weeks." Shaun looked a bit worried and then quipped, "I agree, but you must promise that this information is to never leave this room." He was worried about shrinking his waiting list. We then moved on to a more serious discussion about the role of diagnosis, which is the doctor's core task. If I know what I've got, then giving it two weeks is fine. If I don't, then waiting to see what happens is perhaps not such a great idea. And neither is, as a first step, taking it to some nutsy snake oil peddler. Shaun is not out of a job yet, and he's also very good at 'thoughtful silence' (I could learn something there). Two weeks is probably long enough for most placebo treatments to work too, or not.

Because I'm a bit of a sceptic when it comes to: treating ailments with pure water (because it is just H₂O); being maltreated by chiropractors (vertebral subluxations, my *gluteus maximus*); or being stuck with needles located according to astrological calculations, I find the trick of placebo fascinating. Why do our bodies need to be cajoled and conned into doing a little of what is good? It's like raising children – although, considering not only personal experience, chiropractic gets to sit in the naughty chair.⁶

Disprins stop colds in their early stages. Most of them. I'm sure of it. Works for me, which is the most one can say about clinical treatments which have no medical basis beyond the psychosocial. I will brook no debate. ❖



Lalalalalalala

If we don't want to hear some conflicting information, what do we do? Stick our hands over our ears and shout Lalalalalala. It's very effective.

My dictionary describes *a priori* to also mean, *arguing from pre-existing knowledge, or even cherished prejudices*. Lalalalalala is a great way of holding onto those prejudices, and it's a proven default tool.

In the 1960s a couple of cognitive psychologists ran a test on two groups: regular churchgoers and committed atheists. They played a recording critical of Christianity to individual members of each, but they added an annoying level of static over the message, making it hard to hear. By pressing a button the listeners could reduce the white noise. Almost predictably, all the atheists turned down the static, but not the Christians. The same outcome worked for smokers and non-smokers listening to a speech about cancer and tobacco. Other studies reported the same for political pundits.⁵

We hold onto our precepts, not just by gathering data to support them, but by consciously choosing to ignore conflicting information. How many homeopaths have read this far? ❖

For Your Interest

I've had a very busy year. Wind farms, road stoppings, hydro, mining, irrigation schemes and other recreation and tourism review work for consent hearings and feasibility assessments have been a large part of the load. I am constantly in awe of the project teams that I get to work with – from dedicated and effective community teams like the South Head Action Group (relating to a road stopping proposal on the Kaipara) to the large and small teams of consultants convened to work on development proposals. Even though we're almost all working for different companies, and even on different sides of the fence for some projects, I have consistently encountered a strong sense of mutual support, information sharing, the provision of timely advice, a quiet camaraderie and a keen desire to seek a professional and constructive output. Clients have been the same. It makes the work seem so much less-so.

I've had a couple of colds so far this winter. I get to sit beside Mr Sneezy on most flights. Not sure why the Disprins didn't work.

⁴ Finniss DG, Kaptchuk TJ, Miller F, Benedetti F. Biological, clinical, and ethical advances of placebo effects. *Lancet* 2010; 375: 686–95.

⁵ Lehrer J. 2009. *The Decisive Moment – how the brain makes up its mind*. Canongate
⁶ Shapiro, R. 2008. *Suckers*. Harvill Secker