

# THE SKEPTIC

Vol. 31, No 1. March 2011



## DEGREES of WOO

**Do our universities  
teach pseudoscience?**

**Health, Cults,  
Conspiracies**

**What Queenslanders  
BELIEVE**





# Skeptical Groups in Australia

## **Australian Skeptics Inc – Eran Segev**

[www.skeptics.com.au](http://www.skeptics.com.au)

PO Box 20, Beecroft, NSW 2119

Tel: 02 8094 1894; Mob: 0432 713 195; Fax: (02) 8088 4735

[president@skeptics.com.au](mailto:president@skeptics.com.au)

Sydney Skeptics in the Pub – 6pm first Thursday of each month at the Macquarie Hotel, corner of Goulburn & Wentworth King Streets in the city (meeting upstairs)

Dinner meetings are held on a regular basis

**Next dinner: March 19** - guest speaker Choice tester Chris Barnes. Bookings online or contact [nsw@skeptics.com.au](mailto:nsw@skeptics.com.au)

## **Hunter Skeptics Inc – John Turner**

Tel: (02) 4959 6286 [johnaturner@westnet.com.au](mailto:johnaturner@westnet.com.au)

We produce a 4-page e-newsletter six times a year; contact the newsletter editor ([kevinmcdonald379@bigpond.com](mailto:kevinmcdonald379@bigpond.com)) to add your email address to receive the e-newsletter.

Meetings are held upstairs at The Cricketers Arms Hotel, Cooks Hill on the first Monday of each even-numbered month, commencing 7.00pm, with a guest speaker on an interesting topic.

## **Australian Skeptics (Vic) Inc – Terry Kelly**

GPO Box 5166, Melbourne VIC 3001

Tel: 1 800 666 996 [vic@skeptics.com.au](mailto:vic@skeptics.com.au)

Skeptics' Café – Third Monday of every month, with guest speaker. La Notte, 140 Lygon St. Meal from 6pm, speaker at 8pm sharp.

More details on our web site [www.skeptics.com.au/vic](http://www.skeptics.com.au/vic)

## **Borderline Skeptics Inc – Russell Kelly**

PO Box 17, Mitta Mitta, Victoria 3701

Tel: (02) 6072 3632 [skeptics@wombatgully.com.au](mailto:skeptics@wombatgully.com.au)

Meetings are held quarterly on second Tuesday at Albury/Wodonga on pre-announced dates and venues.

## **Gold Coast Skeptics – Lilian Derrick**

PO Box 8348, GCMC Bundall, QLD 9726

Tel: (07) 5593 1882; Fax: (07) 5593 2776

[lderrick@bigpond.net.au](mailto:lderrick@bigpond.net.au)

Contact Lilian to find out news of more events.

## **Queensland Skeptics Association Inc – Bob Bruce**

PO Box 1388 Coorparoo DC 4151

Tel: (07) 3255 0499 Mob: 0419 778 308 [qskeptic@uq.net.au](mailto:qskeptic@uq.net.au)

Hear Bob on 4BC Paranormal Panel - 9-10pm Tuesdays

Meeting with guest speaker on the last Monday of every month at the Red Brick Hotel, 81 Annerley Road, South Brisbane. Dinner from 6pm, speaker at 7.30pm.

See our web site for details: [www.qldskeptics.com](http://www.qldskeptics.com)

## **Canberra Skeptics – Michael O'Rourke & Pierre Le Count**

PO Box 555, Civic Square, ACT 2608

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[mail@canberraskeptics.org.au](mailto:mail@canberraskeptics.org.au) (general inquiries),

[arthwollipot@gmail.com](mailto:arthwollipot@gmail.com) (Canberra Skeptics in the Pub).

Monthly talks usually take place on the 13th of each month at the Innovations Theatre at the ANU. Dates and topics are subject to change. Canberra Skeptics in the Pub gather from time to time at King O'Malleys Pub in Civic. For up-to-date details, visit our web site at: [www.meetup.com/SocialSkepticsCanberra/](http://www.meetup.com/SocialSkepticsCanberra/)

## **Skeptics SA – Laurie Eddie**

52B Miller St Unley, SA 5061

Tel: (08) 8272 5881 [laurieeddie@adam.com.au](mailto:laurieeddie@adam.com.au)

Thinking and Drinking - Skeptics in the Pub, on the third Friday of every month. Contact [nigeldk@adam.com.au](mailto:nigeldk@adam.com.au)  
[www.meetup.com/Thinking-and-Drinking-Skeptics-in-the-Pub/calendar/10205558](http://www.meetup.com/Thinking-and-Drinking-Skeptics-in-the-Pub/calendar/10205558) or <http://tinyurl.com/loqdr>

## **WA Skeptics – Dr John Happs**

PO Box 466, Subiaco, WA 6904

Tel: (08) 9448 8458 [info@undeceivingourselves.com](mailto:info@undeceivingourselves.com)

All meetings start at 7:30 pm at Grace Vaughan House, 227 Stubbs Terrace, Shenton Park

Further details of all our meetings and speakers are on our website at [www.undeceivingourselves.com](http://www.undeceivingourselves.com)

## **Australian Skeptics in Tasmania – Leyon Parker**

PO Box 582, North Hobart TAS 7002

Tel: 03 6238 2834 BH, 0418 128713 [parkerley@yahoo.com.au](mailto:parkerley@yahoo.com.au)

Skeptics in the Pub - 2nd Monday each month, 6.30pm, Ball and Chain restaurant, Salamanca Place, Hobart

## **Darwin Skeptics – Brian de Kretser**

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# THE SKEPTIC

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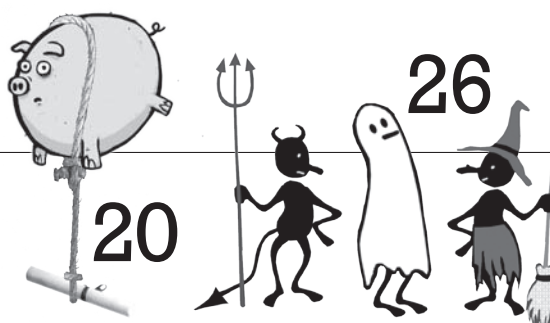
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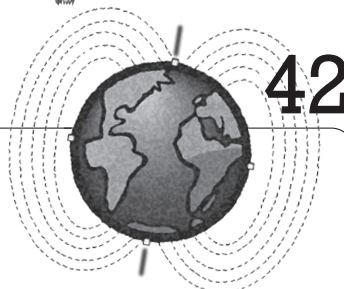
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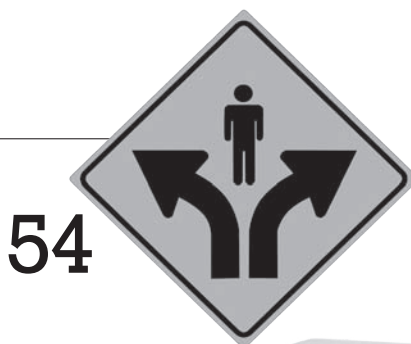
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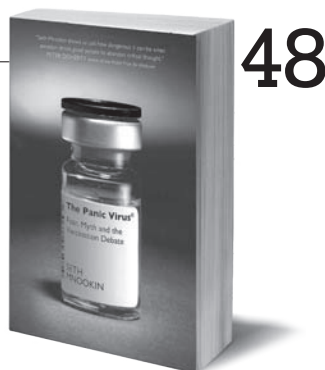
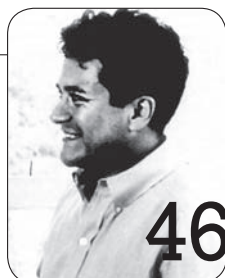
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# Keeping active

Last issue I wrote that we could be proud of the Skeptics' achievements over the last 30 years, one of which was just being around for that long.

But no organisation lasts that long if they don't do anything. In fact, many organisations don't last a tenth of that period, largely because of apathy – they simply disappear through inaction, lack of interest, lack of drive and lack of drivers.

To be frank, at times some have suggested that the Skeptics looked like we were spinning our wheels, or that our investigations were those of 'armchair skeptics'. We consider those accusations unfounded, and noting such areas as creationism, dowsing, unsupported energy generation and power improvement technologies (including Peter Brock's infamous Energy Polariser) indicates that the Skeptics have been active and in some cases successful in combating the 'woo' that surrounds us. On the more positive side, Skeptics have been involved in education on critical thinking, and have bankrolled research, supported institutions and rewarded individuals (often monetarily) for good works, most of which has been through funding from the Australian Skeptics Science & Education Foundation.

Admittedly, there are times when investigators can feel the proverbial brick wall fast approaching. But (perhaps using an inappropriate analogy in view of recent events) even brick walls collapse eventually.

Actually, one of the key roles of the Skeptics is not to knock down every wall – in some (many?) instances this is damn near impossible. UFOnuts still gather to wait for the aliens to land, creationists are still seeking for the killer blow in Biblical interpretation, psychics keep on in business despite never predicting what really happens, and purveyors of junk medicines and unsupported medical theories continue to fleece and harm the public. But perhaps the most important and successful role for

Skeptics is to keep wall-builders from overextending themselves in their varied claims – putting a capping stone on those walls, so to speak. If we can make proponents of pseudoscience and the paranormal less prone or able to make outlandish statements, and receive less unquestioning media support, then that is a role very much worth doing. As every parent knows, nipping naughtiness in the bud before it becomes wickedness is a very effective and fruitful activity.

Over the years, we've done a lot of capping and nipping.

Apart from those listed above – and there are many more large and small over the years – this issue of *The Skeptic* alone highlights many such proactive activities (if that's not a tautology): countering the fatuous claims of the Power Balance promoters; the increasing presence of unsupported areas into our universities; and, perhaps most dramatically, challenging the long-running, spurious, misguided, misinformed and downright dangerous activities of the Australian [anti] Vaccination Network. Campaigns re Power Balance and AVN have had particular success and media attention.

Not all of these have been the activities solely of Australian Skeptics as a formal organisation. Many individuals have put themselves forward, and through personal effort and no little cost have waged active and successful campaigns. The Stop the AVN group is one such, and rightly recognised at the recent TAM Australia convention. But in many if not all cases, the Australian Skeptics body has, at the very least, played a supportive, co-operative, and linking role, if not always a leading one.

Of course, we cannot rest on any laurels that we may have won. We must continue to cap and nip as best and effectively as we can. And long may we remain active. ■

- Tim Mendham, editor

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**Editorial submission deadline for the next issue:**  
May 15, 2011





# Around the traps...

## Power unbalanced

If it weren't bad enough that famous sports stars like Shaquille O'Neal, David Beckham and Rubens Barrichello, film stars like Robert de Niro and celebrities like Kate Middleton sported the miraculous Power Balance wristbands, but they're now joined by politicians, including ex-President Bill Clinton and NZ Prime Minister John Key.

All was looking very rosy for the purveyors of this placebo-driven product.

But, in case you've missed the news, the Power Balance people have faced a bevy of set-backs in Australia, and the news has gone global.

As described in the last issue of *The Skeptic* [p37], first there was the demonstration by Richard Saunders, Skeptics vice-president, on TV that even the distributor couldn't tell if someone was wearing a 'real' one or not. Then consumer advocates CHOICE followed up, awarding it a Shonky Award. And the Therapeutics Goods Administration continued the bad news, saying claims made in support of the bands were false and should be publically retracted.

Early this year came the latest and heaviest blow. The Australian

Competition and Consumer Commission decided that Power Balances were no more effective than a rubber band, that the local distributor should publicise the fact that there was no scientific evidence to support its claims, and should offer refunds to anyone who asked for them.

This decision was picked up by newspapers and websites around the world, leading to a class action in the US for millions in compensation.

But the distribution of this officially shonky product continues, though the Australian distributor has been dropped off the official list of global suppliers.

Australian Skeptics has issued a challenge to these distributors, especially those in the UK, to either put up the evidence or admit their products are a con. (See the challenge document on page 5 of this issue.)

## Wakefield faked results

The prime instigator of claims that the measles-mumps-rubella (MMR) vaccine is linked with autism has been accused of falsifying his research.

In an editorial published in the *British Medical Journal* on January 7, 2011, editor in chief Fiona Goodlee says that "Clear evidence of falsification of data should now close the door on this damaging vaccine scare."

"Few people could deny that [Wakefield's research] was fatally flawed both scientifically and ethically. But it has taken the diligent scepticism of one man, standing outside medicine and science, to show that the paper was in fact an elaborate fraud."

That "one man" is British journalist Brian Deer.

The original paper by Wakefield et al was published in *The Lancet* in 1998. Ten of the paper's co-authors later withdrew their names from it, and early last year *The Lancet* itself issued a full retraction of the paper, stating that "It has become clear that several elements

of the 1998 paper by Wakefield et al are incorrect."

This was soon followed by the results of an investigation by the British General Medical Council, which found Wakefield to be "dishonest", "irresponsible" and guilty of putting children through painful and unnecessary tests.

Deer says that "The [GMC] regulator's main focus was whether the research was ethical. Mine was whether it was true. So I compared the records with what was published in the journal."

What he found was that "*The Lancet* paper was a case series of 12 child patients; it reported a proposed 'new syndrome' of enterocolitis and regressive autism and associated this with MMR as an 'apparent precipitating event'." But in fact:

- Three of nine children reported with regressive autism did not have autism diagnosed at all. Only one child clearly had regressive autism.
- Despite the paper claiming that all 12 children were "previously normal", five had documented pre-existing developmental concerns.
- Some children were reported to have experienced first behavioural symptoms within days of MMR, but the records documented these as starting some months after vaccination.
- In nine cases, unremarkable colonic histopathology results - noting no or minimal fluctuations in inflammatory cell populations - were changed after a medical school "research review" to "non-specific colitis".
- The parents of eight children were reported as blaming MMR, but 11 families made this allegation at the hospital. The exclusion of three allegations, which all giving times to the onset of problems in months, helped to create the appearance of a 14 day temporal link.
- Patients were recruited through anti-MMR campaigners, and the study was commissioned and funded for planned litigation "So that is ... the foundation of



## Wakefield faked results

Continued...

the vaccine scare,” Deer says. “No case was free of misreporting or alteration. Taken together, NHS records cannot be reconciled with what was published, to such devastating effect, in the journal.”

Goodlee asks: “Who perpetrated this fraud? There is no doubt that it was Wakefield. Is it possible that he was wrong, but not dishonest: that he was so incompetent that he was unable to fairly describe the project, or to report even one of the 12 children’s cases accurately? No.

“A great deal of thought and effort must have gone into drafting the paper to achieve the results he wanted: the discrepancies all led in one direction; misreporting was gross.”

(See also the report “Wakefield in the Room” and book review “In the Wake of Wakefield” in this issue.)

## Psychic predictions

Every year, the self-professed ‘psychics’ of Australia make their predictions for the coming twelve months, and every year those who bother to check back will realise that they almost inevitably get it wrong.

The predictions for 2010 were wrong in the high 90 per cent range. Those that were ‘correct’ were generally vague, with one or two close calls. That success rate is not very reassuring. We’re glad they’re not brain surgeons.

For this year, there are predictions by 22 ‘psychics’ published in the *Psychics Directory 2011*. Most revolve around celebrities, and many are presaged with “may” or “likely” and other such weasel words. (Kate Middleton might have twins, by the way.)

One from Jade-Sky on major flooding in the eastern seaboard looks good, until you realise the Queensland floods weren’t on the seaboard (tides, perhaps), and such major floods happen inland every year. What a shame none of the ‘psychics’ found time to mention the Christchurch earthquake. Not as important or as prediction-worthy as celebrity pregnancies, no doubt.

## Double double financial trouble

Perhaps taking a lead from the UK Druids who last year achieved ‘religion’ status [*The Skeptic*, 30:4, p3], the Adelaide Community Church of Inclusive Wicca is in talks with the Australian Taxation Office to be granted tax concessions for any income the incorporated body might receive from membership fees or even donations.

However, the request by the organisation of witches is moot because, as reported by *The Sun Herald*, the church’s income is nil. Community spokeswitch, Amethyst Trelvan, explained in an internet post that while income “is squat ... it’s the principle of the thing”.

She told *The Sun-Herald* her application was “a preparatory measure for when and if we had sufficient funds”.

There was a suggestion that members of the community were being urged to



send “positive energy” to the ATO for a positive decision. So far the ATO seems to have been less than bewitched.

## Obituary – Denis Dutton

With sadness, we report the death of Denis Dutton, a founder-member of New Zealand Skeptics. For many years he was the face of organised skepticism in New Zealand..

In 2004, *Time* magazine named him one of the most influential media personalities in the world. Denis was originally from Los Angeles, and taught at several American universities before emigrating to New Zealand. His activities included being an academic, a web entrepreneur and libertarian media commentator/activist. He was a professor of philosophy at the University of Canterbury in Christchurch. He was also a co-founder and co-



editor of the websites *Arts & Letters Daily*, *ClimateDebateDaily.com* and *cybereditions.com*.

Vicki Hyde, media spokesperson for the NZ Skeptics, said: “I’ll always associate Denis with laughter - not scornful, nor dismissive, but rather his genuine delight in the wonder and absurdity of the human condition, and his joy in discovery and debate.

“Denis had a deeply moral sense in

that he abhorred the exploitation we so often see underpinning skeptical issues. He spent year after year fielding calls about everything from alien abductions to moa sightings, and managed to retain a sense of humour throughout.”

Denis died of cancer on December 28, last year. ■

# Power Balance – put up or shut up

**W**e want the Power Balance distributors of the world to come clean – to admit not only that there is no evidence that the wristbands work, but also that the distributors have been lying about how the product supposedly works, and that all they're selling is an over-priced rubber band.

We know there is no scientific evidence for any medical or other claim of the Power Balance wristbands. Even the Australian distributor has said so (with a little prompting from the Australian Competition and Consumer Commission, the Therapeutic Goods Association, Choice and the Australian Skeptics):

"We admit that there is no credible scientific evidence that supports our claims and therefore we engaged in misleading conduct in breach of s52 of the Trade Practices Act 1974," the local company says on its website. <http://www.powerbalance.com/australia/CA>

This outcome has been a real kick in the head for Power Balance distributors worldwide as the news has spread globally, to everywhere the wristband is sold and in every language.

But that hasn't stopped the Power Balance's UK distributor from coming to the product's defence. In reference to the Australian distributor's statement, the UK website says: "Power Balance did not make any claims that its product does not perform, and has always been totally transparent as to the benefits of the product. Moreover, Power Balance does not, and has never, made any scientific or medical claims about its products."

<http://www.powerbalanceuk.com/news/statement/>

The first statement is correct – the Australian statement doesn't say it doesn't work; it just says that there is absolutely no evidence that it does work and that its advertising has been misleading. The UK statement is a legalistic nicety that is nit-picking to the n'th degree, and in no way represents the spirit (at least) of the Australian message. The UK statement also suggests that it is only with regard to ACCC requirements – and not those with "the real world" – that Power Balance was found wanting. More attempts at nitpicking, but totally ignoring the fact that the distributor admits that there is no scientific evidence supporting its claims – that's not just in terms of the ACCC's requirements, but that no repeatable evidence whatsoever. So much for being tested in "the real world".

The second statement, that the company has always been transparent about the benefits, is technically classed as "bullshit". Considering there is no evidence, how can they possibly reconcile that with claims about how it supposedly works? It has not "always" been transparent, as it is only since the release of findings by the TGA and ACCC that it has ever made any admission that it has been making false claims. Power Balance has been on sale since 2007; misrepresentations were only admitted at the end of 2010.

And the third statement, that Power Balance has not made any scientific or medical claims, is classed as "extreme bullshit" – in fact, we'd call it lying.

In an interview on national TV in 2009, the Australian distributor Tom O'Dowd said the Power Balance could "improve wellness" and that it interacted with "the body's electrical field". Inanities and vagueness populate Power Balance's claims throughout the world.

On a more specific level, a class action law suit taken out against Power Balance in the USA (<http://www.businesswire.com/news/home/20110105007269/en/Panish-Shea-Boyle-Announces-Filing-Class-Action-Lawsuit>) "alleges that Power Balance advertised that 'Mylar holograms' at the center of their bracelets were 'embedded with frequencies that react positively with a body's natural energy field'. Power Balance touted that their bracelets would produce 'faster synaptic response (brain function), enhanced muscle response (in both fast and slow twitch tissues), increased stamina (better oxygen uptake and recovery), more flexibility (faster recovery) and very improved gravitational balance'."

If those aren't scientific and medical claims, then we just don't know what is.

The current US site discounts the scientific claims above with a disingenuous: "Apparently, some previous claims in our marketing ads in Australia were not up to ACCC standards." Again the resorting to ACCC findings, suggesting that the real world has a different view.

The current US site also limits its citing of a scientific basis to its claims with: "Our products are based on the idea of optimizing the body's natural energy flow, similar to concepts behind many holistic and Eastern philosophies. The hologram in Power Balance is designed to resonate with and respond to the natural energy field of the body." Meaningless, to say the least.

**So, we challenge the Australian and other Power Balance distributors around the world to admit that not only is there no scientific evidence for the Power Balance's supposed effectiveness, but also that all claims made about the wristband are false, misleading and misrepresentative lies.**

**Admit that the product doesn't perform. Admit it's just a placebo.  
Admit it's a con. ... Or prove us wrong. ... We dare you.**

**AUSTRALIAN SKEPTICS INC**



# The AVN, OLGR & Rape

Under pressure? Heat of the moment? Rachael Dunlop reports on Meryl Dorey's desperate resorting to tasteless and hurtful jibes.



The Australian anti-Vaccination Network (AVN) in Australia has not been having a good time of late.

First, it was smacked down by the Health Care Complaints Commission. Following a 12 month investigation into the information provided on the AVN's website, the HCCC issued a public warning stating the AVN "pose(s) a risk to public health and safety".

The AVN was then investigated by the charity watchdog in New South Wales, the Office of Liquor Gaming and Racing, which found that the AVN had "breached charitable fundraising laws and potentially misled the public". This was largely as a result of its collecting funds for one purpose and then spending the money elsewhere - something you're not allowed to do as a charity.

For example, in 2008 the AVN collected \$11,810 for a 'fighting fund', an appeal set-up to raise money to support a family allegedly on the run from a court order to immunise a child. But the OLGR reported none of the funds raised was spent on this cause.

In addition, in March 2009 the AVN was seeking funds to run a Generation Rescue autism ad in the Australian press and raised \$11,910 for the cause. The ad was never run - the publishers of the intended baby-oriented magazine were alerted to the AVN's approach and subsequently knocked it back. The money raised was spent elsewhere.

For many years the AVN was asking for funds to place its literature into Bounty Bags - the information packs for new mums - and to have vaccines independently tested for toxins and heavy metals. The money was collected, but the makers of Bounty Bags claimed they never had an agreement with the AVN. And the vaccine testing? Well, that never went ahead either.

In an e-newsletter, Meryl Dorey described the OLGR's initial findings as

"from the very minor such as the fact that our collection box was the wrong size and didn't have a lock and our receipt books were not numbered or kept in an assets register...."

Umm, methinks you have to do much more than have the wrong size cash box to lose your charity licence.

But even more incredible is that the AVN operated for approximately two years without a valid charity licence. Of this breach, Dorey explained: "For one year, we were unable to find an auditor .... We finally found a firm who performed our audit but ... since we were paying them a discounted rate, we were not really in a position to rush them along."

The end result was the AVN's authority to fundraise was revoked on October 20, 2010 meaning it can no longer conduct public fundraising appeals. Rather it can only ask existing members (of which it claims to have 2500) for money. This outcome is a savage blow for the AVN financially. Indeed, even before its ability to publicly fundraise was revoked, auditors examining the financial report for the year ending December 31, 2009 stated "there is an inherent uncertainty whether the association will be able to continue as a going concern, without the ability to continue to generate external funding from donations and sponsorships." This on the back of the financial statement for December 31, 2008 where the AVN posted a loss of A\$58,696.65.

In fact, the AVN has been haemorrhaging money in the last few years. Just 12 months earlier (year ending December 2007) it posted a profit of A\$88,007.97, meaning in the space of two years, it had reversed its position by A\$146,704.62.

As is its right, the AVN has appealed this decision and a hearing was set for Feb 14th 2011, but this has been postponed

so the AVN can "re-frame their case". Although its media spokesperson and sometimes president Meryl Dorey claims the audit conducted by the OLGR "found no evidence of fraud in the breaches they discovered in our operations - (just) breaches of a purely administrative nature" the case has been referred higher up the bureaucratic chain to the Department of Justice and the Attorney General's Department and to the Crown Solicitor. This is because the AVN is now being investigated for breaches of the Charitable Fundraising Act and, if found guilty, will incur fines totalling \$25,000 and 12 months jail. The findings of these departments are expected to be handed down any day.

So it appears that the "wrong size cash box" or "breaches of a purely administrative nature" may lead to much more than just loss of its charity licence. Referral to the DoJ and Crown Solicitor are serious.

## STRESS, VACCINATION AND RAPE

And it seems the stress is beginning to show on Meryl Dorey. Let's go back to January, when a family court matter in NSW was successful in getting the child of divorced parents vaccinated - Mum didn't want the child vaccinated, but Dad did.

According to an article in the *Sun Herald* newspaper, the father said that if the girl remained unvaccinated, she would be forced to withdraw from school during outbreaks of some diseases, and that she would also be unable to spend time with any new babies he had, given she was not immunised against whooping cough.

The mother produced opposing evidence that the vaccinations were unnecessary, but was criticised in the judgment for submitting evidence from an "immunisation sceptic", who made what the magistrate described as "outlandish statements unsupported by

any empirical evidence”.

Meryl Dorey naturally wasn't happy about this (it is unknown if she was the “immunisation sceptic”) and made it clear in a most distasteful post on the AVN Facebook page, where she said this after a link to the story: “Court orders rape of a child. Think this is an exaggeration? Think again. This is assault without consent and with full penetration too.”

Rape of a child is akin to vaccination? Wow. I don't think anyone who has been subject to this type of sexual assault would agree with you, Meryl. And as the post was discussed, it turned out that indeed, a few people did not agree with Meryl's assessment of the situation.

Another administrator of the AVN page, “SB” said: “I disagree with the rape analogy, but the forcible administration of a vaccine? Vaccines are not compulsory - yet.” And then another: “I disagree with the rape analogy too.”

Dorey responded further down the thread justifying her use of the term rape: “Guys, I apologise if anyone was offended with the rape analogy. I take the issue of rape very seriously as two very close family members were raped”.

She then redefined the meaning of the term rape: “I know that the word does tend to mainly have sexual connotations nowadays, but historically, rape has meant so much more. And as I said, rape is not a crime of sex - it is a crime of violence, control and anger/hatred.

“It is an act of violence that demonstrates power over someone ... who cannot defend themselves and to my mind - forcing a child to be vaccinated against the informed consent of his or her parent is exactly that - an act of violence by someone who is more powerful against someone who is less powerful.”

Not according to the *Oxford Dictionary*, which defines it as: “Noun: the crime, typically committed by a man, of forcing another person to have sexual intercourse with the offender against their will: *‘he denied two charges of rape’*

“Archaic: the abduction of a woman, especially for the purpose of having sexual intercourse with her: *‘the Rape of the Sabine Women’*

“The wanton destruction or spoiling of a place: *‘The rape of the countryside.’*”

Violence may be involved in sexual assault, but rape is not so without sexual assault. And if she meant an act of violence, “wanton destruction” or the archaic definition, then why did she include the phrase “with full penetration”?

So here comes Meryl's *semi-apology*: “To anyone who was insulted or hurt by my comparing the forced vaccination of a child against the custodial parent's wishes with rape, I do apologise wholeheartedly and without reservation. I looked up the definition of rape prior to posting ... that comparison and in the dictionary sense of the word, it is accurate ...”

Sorry Meryl, but redefining the meaning of the word rape and saying it's okay because you know two people who were raped does not make it acceptable.

The discussion went on for three days and reached 57 comments before the topic dropped off the front page and people, including Meryl probably, thought it would all go away. But even one of her admins was astute enough to notice that everything on the internet stays forever and “someone somewhere will be keeping a scrapbook”.

Well, she was right. The rape comments fell into the hands of 2UE radio commentator Tracey Spicer, the same journalist who hung up on Meryl Dorey on live radio just a few weeks earlier when she was discussing the *British Medical Journal's* fraud findings into Andrew Wakefield's *Lancet* paper.

On air, Tracey discussed Dorey's comments with Hettie Johnstone, an Australian child abuse campaigner who runs a child protection organisation called Bravehearts. Naturally, Hettie was appalled that someone would compare an injection for the purposes of protection against communicable disease with rape.

As expected, Dorey was livid and asked her followers to bombard the radio station with disapproving emails. She also asserted that she had apologised (well, kinda) and that it was a heat-of-the-moment comment. But according to her own defence, she bothered to look up

the definition of rape in the dictionary before she posted it. In addition, she posted similar comments to her mailing list: “This is immoral. It should be illegal. This is medical rape. Since it is illegal to force yourself on someone for the sake of having sex, why is it not illegal for society to force itself on an innocent child whose informed parent has chosen not to subject them to a potentially dangerous medical procedure?”

Posting her rape comments in two places and looking up a definition in the dictionary prior to doing so constitutes more than a ‘heat-of-the-moment’ outburst to me.

In directing her supporters to spam the radio station with emails, Dorey attempted to project the publicity away from herself and towards the “rights of pro-choice parents”. But this issue was not about parents who choose not to vaccinate. It was about the media spokesperson (sometimes president) for “Australia's Vaccine Watchdog” comparing vaccination to rape, which is not only offensive and distasteful, but completely inappropriate.

Even one of the commenters on Facebook pointed this out: “You made us all look bad on this one.”

Eighteen months ago, Meryl Dorey was the go-to person for comment whenever there was a story on

**“ [Vaccination:] Court orders rape ... assault without consent and with full penetration too.”  
- Meryl Dorey, AVN**

vaccination. Not any more. The worm has turned and the false balance is shifting. She is finally being treated in a manner which she deserves – relegated to the pages of natural health media and websites rife with conspiracy theories and quackery. But importantly, she is finally being held accountable for her nonsense, not just by skeptics but by the mainstream media and government departments too. And with opinions like that, it's about time too. ■

**Note:** *The full text of the NSW Office of Liquor Gaming and Racing report on the AVN, including correspondence re complaints, can be found at <http://bit.ly/fvycIS>.*

# Message <sup>not</sup> received

Ian Bryce reports on a test of telepathy, with less than perfect communication.

In 1980, Australian Skeptics announced that it would offer a monetary prize - initially A\$10,000, now A\$100,000 - for any Australian resident who could prove a paranormal or psychic ability or phenomenon.

If such abilities or phenomena exist, then the laws of science would need revision. Obviously this would be of great significance, and we would wish such abilities to be scientifically investigated. If, on the other hand, proponents of such abilities failed to perform as agreed, then that would cast serious doubt on the ability of that claimant to perform their claimed ability. That is not a universal negative, but a body of similar examples, over time, will cast doubt in a more general sense.

Our procedure is to have an initial less-formal test to ascertain the nature of the claim, including where relevant the claimant's ability. If this proves to be positive, then we move to a formal test, the nature of which is mutually prepared and agreed, and if again the result is positive, the claimant will win the award, to dispose of how they see fit.

Since 1980, we have had challenges from around 100 claimants. About 30 of these have led to attempted demonstrations of paranormal powers, and about 10 have progressed to formal tests.

## A NEW TEST

In January 2010 we received an application that was different from the

norm, in that the initial claim arrived via a law firm. Embedded in the usual legal formalities was the statement that the client's ability was to transfer information by paranormal means from Australia to the USA, ie not through established telecommunications or other physical means. We would call this "telepathy", though that was a term the claimant preferred not to use.

The challenger was insistent that we prove our bone fides, though this was not reciprocated - the claimant was apparently reluctant to give his name, address or the identities of any assisting colleagues.

Eventually we met with the claimant and his lawyer at the latter's office, and found the claimant was Barrie Hill of Sydney. He described his 'ability' to us, and we agreed on the following description (without using the term "telepathy"): "The claim is that the claimant has the ability to send information to a remote receiver without using any communication means known to science."

## TEST PROTOCOL

Hill had evidently spent some time with his lawyer, working on a test procedure based on choosing from lists of shapes, words and numbers. Over a few months we refined this into a simple protocol, designed to provide "proper observing conditions" so that there would be confidence in the results.

Six lists of ten words were prepared: animals, Australian artists, countries, flowers, Australian poets and, at Hill's insistence, native American peoples. On the day, a ten-sided dice would be used to select and mark one item from each list. During the half hour test, Hill would 'transmit' the information to his 'receiver' in New York, who would mark the answers on their copy of the result sheet. Hill expected a perfect score, which could be expected only once in a



million tests if chance alone operated.

## LOGISTICS AND SECURITY

The Skeptics normally request that claimants cover any costs incurred by either party. In this case there were no significant costs other than time and effort.

The logistics required were considerable, as was security. We arranged our own team in New York made up of local skeptics, in addition to our team in Sydney. Hill arranged for legal representatives in both cities to witness events.

The time difference dictated an early start in Sydney and late afternoon in New York. Rooms for the test were booked, the exact location of which were known to only one person until the time of the test. A meeting place within walking distance of each room was arranged in both cities, and revealed to all parties 24 hours in advance.

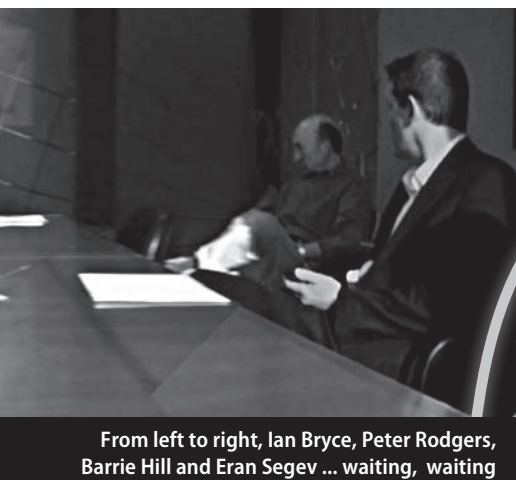
Once on site, electronic devices were to be surrendered, with the option of frisk searches. Telephone communication was to be strictly controlled, and not used during the 30-minute test period. The dice would not be thrown until after lockdown. At the end, the receiving party would relay the received words and the result would be evident.







If the test were successful (or even significantly above chance), we would offer a more formal retest at a later date, following additional security precautions. Hill readily agreed that if technical means were found to have been used, even after the event, any prize



From left to right, Ian Bryce, Peter Rodgers, Barrie Hill and Eran Segev ... waiting, waiting

paid would be refunded. To his credit, he requested that the prize be paid to nominated charities.

As the test date approached, I asked Hill to provide contact details for his NY receiver and her lawyer representative. Among various excuses, all we were told was that his receiver was named "Sue" and her lawyer "Jamie", and that communications would be available on the day.

## TEST DAY

At the designated time (6:30am Sydney time on November 4, 2010), teams on two sides of the world converged on their respective meeting places. The Skeptics team in Sydney consisted of Eran Segev (president of Australian Skeptics), Ian Bryce (challenge co-ordinator), Richard Saunders (vice-president), Jessica Singer (lawyer and NSW committee member), and Peter Rodgers (a magician). Five people from the Skeptics was indicative of the thoroughness of our approach. Hill arrived, minus his lawyer.

Our New York team (Lisa and Jacob) made contact with us by mobile phone. They reported that they were still waiting on the specified corner for the claimant's receiver and her representative to arrive. The fact that this was Winter

in New York meant that this delay was considerably inconvenient for them. We asked Hill for his pair's mobile phone number. He told us they do not have mobiles due to concerns over health. A New York lawyer without a mobile phone? The alarm bells got louder.

At the test start time of 7:00am, we in Sydney walked to the booked room, and commenced our security precautions.

At 7:20, the receiver pair had still not arrived, and we gave Barrie back his mobile and asked him to call them. He insisted on doing this out of our sight and hearing. He reported to us that "they are on their way, held up in transport".

At 7:30, Barrie communicated again and reported that his team were stuck in an elevator in the lawyer's building. We asked to speak to them directly by phone. No, he replied, this building had mobile phone blockage as a precaution since the 9/11 attacks. Then how had he contacted them? Apparently to the lawyer's office landline, Hill said, who advised him that there was a lift stuck and his receivers were probably in it.

As the room bookings expired after an hour, the test was called off. On asked for his reaction, Hill said "I am as mystified as you are". We all went home, very disappointed.

## AFTERMATH

I later asked Hill for contact details of his New York team, so we could verify what happened and provide an explanation for our American colleagues. He refused, and instead requested that we give him contact details of our team.

The mobile phone excuses were repeated – both Sue and Jamie refused to use mobiles due to health concerns. In addition, Hill said that "written advice of the lift failure cannot be obtained due to possible litigation".

Hill offered no apology or explanation, and instead demanded "the tests will resume in the first quarter of 2011".

## CONCLUSION

Formally, the test failed because the claimant and his team did not perform as claimed.

An unfortunate result of the way Hill had handled all this is that we have no evidence to support his account of Sue



and Jamie's strange predicament or even of their existence.

There is always the possibility that a claimant might be delusional, which is why we have preliminary tests. This is not to say this was the situation in this case, as the inability of the test to proceed may very well have been due to misadventure. But, to date, we have no information to substantiate that conclusion, and Hill so far has refused to give us relevant contact details so we can undertake our own investigations.

This is a lesson for all tests, to ensure that all parties have full information prior to any test proceeding. Hill refused to give this information, and despite the fact that it was our \$100,000 at risk, we acquiesced as an indication of our goodwill. Claimants and supporters of paranormal claims are often sometimes too ready to cast aspersions against the Skeptics' sincerity. We feel that, as indicated by the time and effort put into this test, that is a totally unfair and unwarranted suggestion. We cannot always say the same for claimants.

Despite Hill's unilateral statement that tests would be re-held early this year, from our point of view we will not reinstitute another test of Hill for 12 months at least, if at all. Any future test will require complete unrestricted information supplied to us, and direct contact with any assistants he may have.

We would sincerely like to thank our New York contacts, Lisa and Jacob, for volunteering to take part in this investigation, and for their diligence and time. It indicates the great value of having a network of skeptics around the world to investigate such claims. Whether they would be willing to brave the New York City Winter again, particularly considering the failure of this test, is up to them. ■

# HOMEOPATHIC TREATMENT of CANCER



a case report

Gavin O'Connor presents a case report on the coronial inquiry into the death of Penny Dingle, treated by homeopathy for bowel cancer.

In many discussions I've had with supporters of altmed, UFOs, conspiracy theories and the like, I find that the more hard evidence there is negating their beliefs, the more entrenched those beliefs become; the very opposite to what one would expect. It's a type of mindset. In the case of homeopathy, it's a very strong anti-medical-evidence mindset. The results can range from amusing to tragic.

And it was a tragedy that was played out in the Coroner's court in West Australia in June last year. Most of what follows is taken from the Coroner's report, from listening to the evidence and from a transcript of that evidence. Direct quotes from the report or transcript are in quotes. The remainder is a summary of both.

If it were a play, there would be three main characters:

- Dr Peter Dingle who has a PhD in indoor air pollution, focusing on formaldehyde.
- Penny Brown (later Dingle), partner and later wife of Peter. She will be referred to as Penny Dingle. In the report she is often referred to as 'The deceased'.
- Francine Scrayen, homeopath.

Peter Dingle is an environmental toxicologist at Murdoch University in WA where he is Associate Professor. Although not a medical graduate he is the author of several books on health and sickness that have a strong anti-medical and pro-altmed bias. (Google his many web pages.) He is very personable and convincing and had (and probably still has) a high media profile including a regular spot on ABC radio. He gave talks on 'health' in high schools. (My wife heard him speak at the school where she taught and assumed, like most of those present, that he was a medical practitioner.) He describes himself as, scientist, media personality, presenter, writer and community advocate.

Penny Dingle was described by her sisters as being a very vivacious person who was involved in drama and creative writing and in "spiritual matters". She was said to have had a very close and somewhat dependent relationship with Peter Dingle. Her interest in writing was fortunate because she kept a detailed diary of her treatment and her conversations and correspondence with Scrayen.

At first glance her death from bowel

cancer seemed unremarkable. However, her remaining siblings prevailed upon the Coroner to hold an inquest, not into the cause of death but into the preceding treatment she received at the hands of a homeopath.

Francine Scrayen has a diploma in homeopathy from the Oceanic Institute of Classical Homeopathy. In court, she was a bit vague about the institute and the course it offered: "It used to be in Midland", and "It took four years to get a diploma ... I think" and "I think it was full time".

On February 25 2003 Penny underwent a colonoscopy that indicated a rectal tumour. She had had rectal bleeding for approximately two years and Professor Cameron Platell, a colorectal surgeon and Winthrop Professor of Surgery at the University of WA, concluded the cancer had been growing for about that time and that there was a reasonable probability of successful treatment. He recommended a CT scan for a clearer picture and then chemotherapy and surgery. Penny did not attend the next appointment in early March. When Platell telephoned her, she told him she was still thinking about it.



In early April 2003 she again saw Platell and told him she did not want chemo or radiotherapy. She preferred an MRI scan to a CT scan, probably because it involved less exposure to X-rays although the former would give a clearer picture of the tumour. Her husband supported her in this and even wrote to Platell on Murdoch University letterhead recommending this course of action. Although the MRI scan was less than ideal, Platell still felt that a medical intervention on the basis of the available evidence could lead to a cure.

Penny did not attend her next appointments. A stomal therapy nurse eventually contacted her by phone and Penny and Peter came to see the nurse on July 1. She was shown the statistics on survivability following

of them seemed to accept the reliability of the altmed statistics but rejected the evidence-based figures.

Attempts by the doctors and nurses to bring Penny to a consultation were largely unsuccessful. Her GP wrote to her on August 4 2003 and, receiving no reply, contacted her husband at work on August

12. On August 18 Penny phoned to say she was going to try supplements and homeopathic treatments. On September 5

Penny phoned her GP asking for a prescription for pain relief.

Then, on October 12, Platell was called to Fremantle hospital to see Penny. He said "... she looked almost dead. She was down to 35kg, cachectic, suffering from severe weight loss, sunken eyes, grossly distended abdomen, in severe pain and incredibly unwell."

According to the Coroner's report: "At that stage the deceased was suffering from a complete bowel obstruction which meant that her large intestine was completely blocked so that faeces that would normally pass through the large intestine could not get through. If untreated at that stage the deceased was unlikely to survive for much more than 24 hours ... she would die ... a most horrible and painful death involving the vomiting of her own faecal matter."

"The pain associated with such an obstruction (is) extremely severe and arising from a combination of pain from the tumour... also the tumour invading adjacent organs... the cervix, the uterus, the left ovary." Invasion of the bone was also likely.

Scrayen advised Penny by phone not to have the surgery.

[Here I include a personal note. I suffered a bowel obstruction at the New Delhi airport. I didn't know it then but I had a rare condition called volvulus in which the large bowel twists and kinks, effectively blocking it. Apparently my sigmoid colon was too long. The reduced pressure in the aircraft caused the bowel to balloon even more than it would have done at

sea level. To say I was in agony was a gross understatement. At Perth airport, where normal atmospheric pressure had reduced the pain to some extent, the ambulance officers asked me to rate it on a scale from one to ten. Breathless, I could only answer through clenched teeth, "eleven". I have heard since that

**"If untreated ... a most horrible and painful death involving vomiting her own faecal matter."**

the pain from an obstructed colon is about as severe a pain as humans are can be subjected to. I suffered this pain for 8 hours.]

Penny's pain came from her swollen intestine and from other structures in her pelvis. She also had unbearable bone pain. Penny was in pain for 24 hours a day, every day, possibly from July 2002 and certainly from early September 2003 until her emergency surgery on October 12.

This pain is significant in her "treatment" by Scrayen, a "pain never adequately managed", according to the Coroner.

Under questioning in court, not only did Scrayen reveal peculiar ideas about medical evidence but also espousal of homeopathy as well as pain relief. Essentially she said that conventional medications, including analgesics would interfere with the homeopathic cure of Penny's cancer. She also consulted strange people for advice. (See below)

It appears that Penny initially consulted Scrayen at least two years before she first saw a doctor for rectal bleeding. That is, four years before her colonoscopy. At that time Scrayen was treating her homeopathically. Not only was Scrayen persuasive and convincing, she was talking to two people (Penny and Peter) who were already anti-medicine and pro-altmed. It is not difficult to see how they fell under her spell, although somewhat surprising in the case of a person with a PhD.

However, at the time of her diagnosis, Penny had not entirely dismissed conventional medicine. She still had some doubts about Scrayen's treatment as evidenced by a draft letter she later wrote to the homeopath.



Penny Dingle

conventional treatment. According to the Coroner's report: "At that meeting the deceased continued to refuse medical intervention and stated that she had decided to go for 'alternative medicine'. She said the statistics could be 'manipulated either way' and that there were 'good statistics to show that natural therapies also assisted with management of colorectal cancer'."

Later evidence strongly suggested she had been influenced in this decision by both Peter and Scrayen. All



# Homeopathic Treatment of Cancer

Continued...

She wrote: "You waited 12 months, trying to treat, before you suggested I have my internal bleeding diagnosed. I have since learned that any sort of internal bleeding must be investigated immediately as it can be a sign that something is seriously wrong."

One can't help wondering that if Penny's doubts about evidence-based medicine had been reinforced by Peter

Dingle, the outcome might have been much happier. Instead the Coroner commented on Peter Dingle's writings. "It appears that Dr Dingle was a victim of his own misinformation and did not take positive actions which would normally be expected of a person in his position to save a loved one from herself."

When Penny, Peter and Scrayen knew that Penny had bowel cancer, Scrayen's involvement became more intense. She prescribed homeopathic remedies with a complicated and inflexible schedule for taking them. (A hallmark of altmed - when the therapy fails the therapist can always blame

the failure on some inevitable and minor discrepancy.) Scrayen convinced Penny and Peter to exclude from the house anyone who did not display the 'right attitude' towards homeopathy. While homeopathy was not going to cure Penny, despite Scrayen saying it would, it was the exclusion of all pain killers that led to the totally unnecessary suffering that Penny Dingle endured.

A friend who flew to Perth to help look after her described how she burst into tears when she saw Penny: "...she was just skin and bone and she could hardly stand up". While the friend stayed in the house, Penny screamed in pain every night and was in constant phone contact with Scrayen, calling her "a dozen times a day if not more, all times of the day or night". When the visitor/helper questioned Scrayen's therapy she was asked to leave the house. The homeopath had told this carer that "most of Penelope's pain was in her head and she exaggerated her pain".

Reading the next several pages of the Coroner's report is enough to make anyone weep. It is a litany of evidence from friends and nurses who visited Penny and her husband at home. All describe Penny as lying, emaciated in the bath or on a mattress, crying or screaming with pain. A Silver Chain nurse begged her to have morphine which she eventually did only hours before going to hospital on October 12 for the emergency surgery described above.

Through all of this Scrayen remained immovable in her refusal to countenance any pain killers or indeed any normal treatment for Penny.

Peter Dingle had consented to this.

## SCRAYEN, HOMEOPATH

The Coroner's hearing was largely because of Scrayen's involvement in the management of Penny's illness. There were four main sources of information for the Coroner: Scrayen's verbal evidence in court; Scrayen's notes; Peter Dingle; and Penny Dingle's notes.

This was based on classical homeopathy, on reading a star chart and also on dreams she'd had about Penny and consultations with a psychic friend in Belgium and a clairvoyant. (It

## CORONER'S RECOMMENDATIONS

"I have serious reservations about any efforts to register or otherwise legitimise homeopathy or other similar alternative forms of medicine.

"While I do not agree with the proposition that such alternative medical regimes should be outlawed, unless and until their supporters can provide appropriate and sufficient science base, any apparent legitimisation of these regimes could provide mixed messages for vulnerable and often desperate cancer sufferers.

"Evidence at the inquest revealed that homeopathic remedies are sold in pharmacies in Western Australia and homeopathic practitioners, such as Scrayen, have affiliation with private health insurance companies.

"In a context where health costs are increasing at an alarming rate and private health insurance companies struggle to meet the full costs of procedures, medications and hospital beds, it is a matter of concern that funds which could be allocated to such fundamental health needs are being allocated to non-science based alternative medicine practitioners."

### Recommendation No. 1:

*"I recommend that the Commonwealth and State Departments of Health review the legislative framework relating to complimentary [sic] and alternative medicine practitioners and practices with a view to ensuring that there are no mixed messages provided to vulnerable patients and that science based medicine and alternative medicine are treated differently.*

"It is noted that the Medical Board of Western Australia has prepared a draft document titled Complementary Alternative and Conventional Medicine which provides guidance to medical practitioners in relation to when they may recommend unproved or experimental treatments. It is important that this document be finalised, if this has not already been done, and communicated to medical practitioners.

### Recommendation No. 2:

*"I recommend that the Medical Board of Western Australia finalise its document Complementary Alternative and Unconventional Medicine if it has not already done so and take steps to ensure that the document is promulgated to the profession and complied with.*

**Alastair Neil Hope, State Coroner, WA**

**Note:** The full coroner's report can be found at: [http://www.safetyandquality.health.wa.gov.au/docs/mortality\\_review/inquest\\_finding/Dingle\\_Finding.pdf](http://www.safetyandquality.health.wa.gov.au/docs/mortality_review/inquest_finding/Dingle_Finding.pdf)

is possible the last two were the same person.) Scrayen's referral of the case to the psychic/clairvoyant would, in the eyes of most people, destroy her credibility. However they actually raised her credibility in the eyes of the Dingles because when the Dingle cat went missing the clairvoyant said it would return in two days time and it did. The Coroner however, took a more skeptical view and said of Scrayen: "I did not generally regard (her) to be a witness of truth."

It may seem strange to list Penny as a source of information because she had died five years before the inquest. However, she saw herself as a budding writer and she was a prolific diarist. As noted by the Coroner, her writing was simply a record of events and was not motivated by an expectation it would be used in court. Indeed there was a suggestion in court that she kept notes because she, Peter and Scrayen would write a book about the success of homeopathy when Penny recovered, although this arrangement could not be verified. Her writing, then, had a higher level of objectivity than the notes and evidence of Scrayen. The important point is that Penny wrote down what was happening and what was said at the time it happened or was said. Scrayen kept minimal notes on treatment and had an unreliable memory. The Coroner noted: "There are marked discrepancies between what Penelope, Dr. Dingle and Penelope's family and friends on the one hand and Mrs Scrayen on the other say took place at the consults."

When Peter Dingle was questioned about the reliability of his wife's notes, he replied: "These were directly related (to me). Penny was word perfect. Penny told me word for word and I know Penny's memory for words is fantastic".

Scrayen denied in court that she had advised Penny against having surgery. But Penny's notes show that she did so advise. This one astounding discrepancy in Scrayen's evidence was commented on by the Coroner: "In my view Scrayen's advising against surgery was an outrageous thing to do. Scrayen had minimal medical knowledge and was giving dangerous advice on matters in respect of which she had no expertise."

Before leaving comments on the Coroner's report it may be worth reading some direct quotes from Scrayen. These are Penny's diary entries of what Scrayen said to her or about her. And remember, according to her husband, Penny's memory was word perfect.

- "Her symptoms are not real. They are because of a lack of faith."
- "The symptoms are there to teach her a lesson."
- "Cancer is caused by various emotional, diet or childhood issues."
- "She has to deal with past character flaws ... and then she'll recover."
- "She has to heal the cancer herself by controlling her thinking."
- "A lot of the pain is not real. It is exaggerated to get attention."
- "She has to think positively and avoid... people who question the treatment."

Since there is no active ingredient in homeopathic medicines it is often described as harmless. But homeopathy is not harmless. It is one of many therapies that come from a stable of peculiar beliefs. Neither I nor the Coroner could follow Scrayen's rambling and inconsistent explanation of just what homeopathy is. What we could see was its results, and they were tragic.

As the Coroner said: "In this case the choice for the deceased should have been a simple one between accepting the surgical option offered by Professor Platell or facing a painful death. That choice was made more difficult because the deceased was offered other 'alternatives'."

I attended a Homeopathic Conference in 1989. The drawcard was the presence in Perth of their chief educator, Dr Paul Callinan (a PhD, not in medicine). At the time the



**Top** Francine Scrayen, homeopath, resorted to star charts, dreams and a psychic/clairvoyant.  
**Left** Dr Peter Dingle, Penny Dingle's husband, an environmental toxicologist, a "victim of his own misinformation".

Federal Government was considering a proposal that would make it illegal to sell therapeutic goods whose safety and efficacy had not been proved. The altmed industry lobbied against the proposal and it wasn't enacted. Leading homeopath, Lindsay Porter, told the meeting, "Had this legislation been enacted it would have been impossible to practice homeopathy in Australia." Fellow homeopaths applauded her announcement.

Perhaps if they did have to prove the efficacy of their treatment or if Penny had been deterred from homeopathy by those she trusted and were allowed near her, she would still be alive and vivacious today. ■

Gavan O'Connor attended all sessions of the coronial inquiry into Penny Dingle's death.

*Footnote: The author's wife, Dolores, died of melanoma. An account of her visit to a naturopath can be found in The Medical Journal of Australia, Nov 2 1987 and was reprinted (with one egregious error: Axillary became auxiliary) in The Skeptic, Winter 1998.*

# WAKEFIELD in the ROOM

Dr Rachael Dunlop reports on a presentation purporting one thing and saying another.

When it comes to the spreading of misinformation and falsehoods about vaccination, readers could be excused for thinking this dangerous practice is confined to the Australian Vaccination Network. Sadly this is not the case, as my recent experience at a chiropractic seminar revealed. While vaccinating is not part of a chiropractor's daily practice, many have strong views on the issue and a cursory glance at Google will quickly reveal this to be the case.

For example, on a page entitled "To vaccinate or not to vaccinate"<sup>1</sup> Wynyard Chiropractic in Sydney correctly states that widespread vaccination has resulted in the eradication of several communicable diseases, but they also erroneously cite the rise of autism as a "vaccine injury". Putting aside for a moment the fact that the link between vaccines and autism has been well and truly debunked both by science and by the courts<sup>2</sup>, let's take a look at some of the other information on the page.

Firstly, they state that the Wakefield study published in *The Lancet* was from 1988 - it was 1998, and secondly that there are "hundreds of studies" showing a link between vaccines and autism. This is simply not true. In November 2010, the American Academy of Pediatrics published a document containing forty-one studies in support of no link between vaccines and autism<sup>3</sup>. Regardless, the anti-vaccine crowd continue to claim that

Wakefield's data has been reproduced in five studies, but these do not stand up to scrutiny<sup>4</sup>. And besides, *The Lancet* paper was not about vaccines and autism anyway.

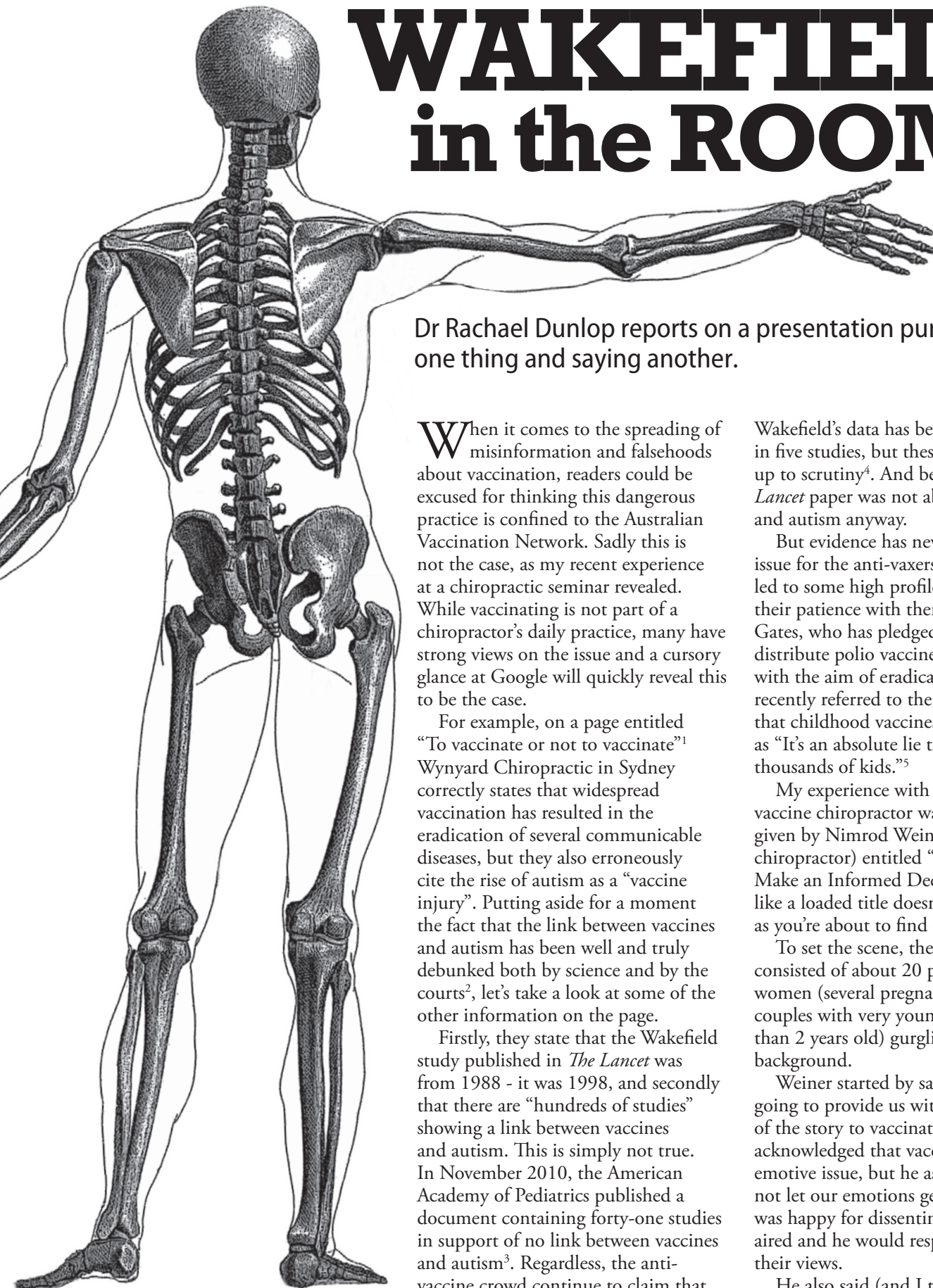
But evidence has never been an issue for the anti-vaxers, and this has led to some high profile people losing their patience with them of late. Bill Gates, who has pledged \$10 billion to distribute polio vaccines worldwide with the aim of eradicating the disease, recently referred to the persistent myth that childhood vaccines cause autism as "It's an absolute lie that has killed thousands of kids."<sup>5</sup>

My experience with an anti-vaccine chiropractor was a seminar given by Nimrod Weiner (pediatric chiropractor) entitled "Vaccinations: Make an Informed Decision". Sounds like a loaded title doesn't it? And it was, as you're about to find out.

To set the scene, the audience consisted of about 20 people, mostly women (several pregnant) and assorted couples with very young babies (less than 2 years old) gurgling in the background.

Weiner started by saying he was going to provide us with both sides of the story to vaccination. He acknowledged that vaccination is an emotive issue, but he asked that we do not let our emotions get in the way. He was happy for dissenting views to be aired and he would respect people for their views.

He also said (and I think I recall this







correctly) that he had been called anti-vaccination after giving some of his lectures, but that he was no such thing. I settled a little lower in my seat when I heard this.

After detailing his qualifications (which include a masters in chiropractic with units of pediatric chiropractic) Weiner emphasised he would stick to the science about vaccinations in an effort to arm parents with the ability to ask the right questions and weigh up the evidence from both sides. He said he approached the research from a logical and rational point of view and his aim was to “empower parents to make a good decision” (this was beginning to sound very much like the AVN rhetoric).

He was also going to explain to us “how safe the diseases [we vaccinate against] are” and thereby allow us to make “an informed decision based on science”. So far this was sounding suspiciously anti-vaccine to me. I had so many “red flags” up already it felt like a red flag festival (or something) and we were only five minutes in.

After a brief explanation of what chiropractic is – it keeps the nervous system healthy – stressors can “imprint on the nervous system” and cause decay, a healthy body heals itself, Weiner finally got onto vaccination. However, the talk was still peppered with phrases such as “leave out emotions and propaganda”, “respect critical thinking and analysis” but immediately followed with “information about vaccines is laden with propaganda”. Weiner continued to emphasise that his information is based on current research and science and further, he has spent more than 100 hours on “this topic alone”.

I reckon if you can count the number of hours you have spent on a topic, then you haven’t spent nearly enough. Also, it doesn’t matter if you’ve spent more than 100 hours, if you’ve read the wrong information from the likes of Joseph Mercola\*, Mike Adams or the AVN, then you’re not going to glean anything based on research and science by the time you finish.

Weiner then proposed that “no criticisms are allowed [from the

audience] without an accompanying suggestion for improvement”. We’ll get to that later.

It was here that I began to tally the number of times he said, or referred to vaccines as “injected into the blood”. Granted, the first time he mentioned it, he did say “straight into the blood or a muscle...” but following that I ticked off at least six mentions of injected into the blood. Anti-vaxers have a habit of doing this – it makes the process sound so much more scary, even though it’s not true. While Weiner did follow up with by saying that some vaccines can be inhaled, he added that these types of vaccines are not as effective.

So then it was time to roll out some of the standard anti-vaccination canards:

- No-one knows how long vaccines last
- There is no guarantee of their effectiveness
- Antibodies have no role in immunity
- Vaccine preventable diseases are designed to come into our bodies as children
- Vaccines have never been tested.

Weiner then went on to talk about negligence and lack of ethics associated with vaccine manufacturers and government health bodies. He made some valid points here, such as Big Pharma test the vaccines they make hence there is propensity to bias, some government advisors have links to Big Pharma suggesting a conflict of interest, and the Therapeutic Goods Administration (Australia’s drug regulator) doesn’t independently test vaccines.

But then he went and undid all his good work by saying something like: No lot of vaccines has ever been recalled for increased adverse reactions, lots that may have caused harm in children, they have never been taken off the shelf. In the “whole history of the world” this has never happened.

Oh, except in Australia in April 2010 when the seasonal flu vaccine was

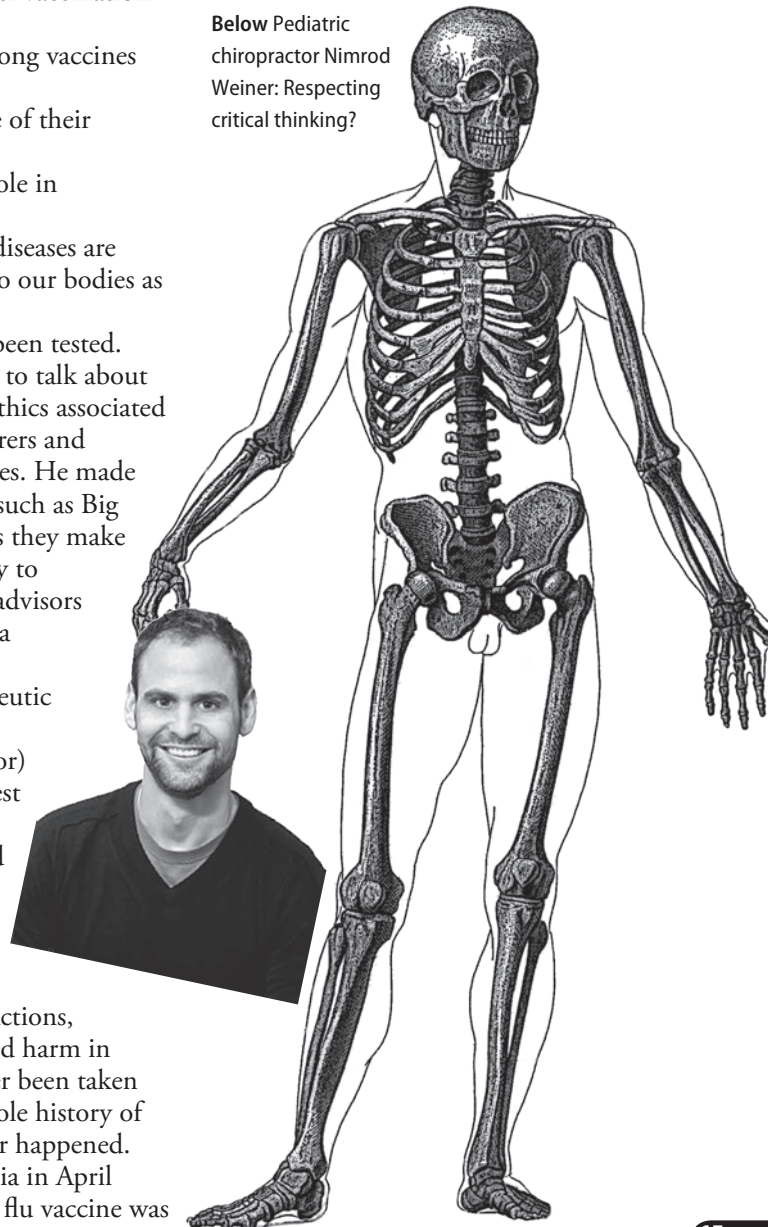
suspended for use in kids under five and recalled for testing<sup>6</sup>.

So he scares parents into thinking that vaccines batches that may be faulty and cause increased adverse reactions are never recalled – oh, except that time when they were.

He also claimed that parents are not told what to expect after a vaccination. I’m pretty sure everyone is told what to expect and even made to wait for at least 15 minutes in case of an immediate adverse event<sup>7</sup>.

He then cited deaths from vaccine preventable diseases in the last decade (cited as sourced from Immunise Australia) and proposed reasons other

**Below** Pediatric chiropractor Nimrod Weiner: Respecting critical thinking?



## WAKEFIELD in the Room

Continued...

than the disease as the cause of death, since vaccine preventable illnesses are not so bad. Really.

He suggested that since the vaccination status of the dead was unknown, these people may have had other illnesses, they may have been Aboriginal (a population which suffers a greater incidence of disease than the rest of the country), they may have lived in unsanitary conditions and perhaps they were in refugee camps. So in other words, any number of explanations - including they were somehow in squalid refugee camps - could explain their death, because it sure as hell wasn't the disease.

As we moved onto vaccine ingredients, I felt as if I was reading the AVN's page or something from Joseph Mercola as he listed all the scary chemicals in vaccines.

There was no acknowledgment of "the dose makes the poison"<sup>8</sup>, or that there are two types of mercury, the one in some vaccines being much less scary<sup>9</sup>. All the usual suspects got a mention including aborted human foetus, aluminium, bacteria, formaldehyde and anti-freeze.

We were also reminded that scientists say that vaccines are safe but what about asbestos, cigarettes and thalidomide - they said they were safe too.

As expected, the old "vaccines cause autism" show boat was rolled out several times. When myself and my companion politely pointed out that Weiner should probably not be using Andrew Wakefield's retracted *Lancet* paper as evidence for such - if, as he claims he was basing his research on good science - he insisted that the science was still valid. [NB: Wakefield's research has been discredited even further since I wrote this piece following a series of articles in the *BMJ* calling his study an elaborate fraud.<sup>10</sup>]

According to Weiner, Wakefield was only in trouble for two things in regards to the *Lancet* research: he didn't

have ethics for the birthday party blood taking<sup>11</sup>, and he paid the parents for the blood, otherwise it was solid science. When my companion gently pointed out that you generally have to do more than that to get struck off the medical register, Weiner said that move was purely political.

During this discussion Weiner also stated he had read *The Lancet* paper. I propose he didn't read it properly, because in his summary he wrote it showed a link between MMR and autism. But *The Lancet* paper doesn't address a connection between MMR and autism, this was suggested at a press conference after the paper was published<sup>12</sup>.

When both my companion and I informed him that Wakefield was paid by lawyers to show a link between MMR and autism and had a patent pending on a single measles vaccine<sup>13</sup>, he claimed to not know anything about this. So while he was quite happy to throw mud at 'Big Pharma' and 'Big Government' for bias, pseudoscience and vested interests, apparently these same rules do not apply to Wakefield.

In fact, the Wakefield-in-the-room was addressed several times, once by a lady inquiring about the Danish study<sup>14</sup> of all children born in Denmark from January 1991 through December 1998 which provided strong evidence against the hypothesis that MMR vaccination causes autism. Weiner said he had not heard of that study either but would be happy to see a copy.

There was more "vaccines cause autism" to come, with evidence in the form of an American Dental Association video showing a neurone dying in culture when incubated with mercury. The dose of mercury was not specified, how a cell in a dish is relevant to a child's brain was not discussed, and fortunately for us the video stopped working half way through.

We were then told that vaccines are associated with shaken baby syndrome, SIDS, ADD, asthma, MS, suppress the immune system and "shift the balance for life". We were told that polio has not been eradicated in many countries, but has simply been renamed (in an attempt to hide the ineffectiveness of



Weiner on Wakefield: I know nothing

the vaccine I presume) by Big Pharma, as flaccid aseptic meningitis or aseptic meningitis. We were also told that one in two people now have a chronic disease, herd immunity doesn't work, and most childhood illnesses are self-limiting, rarely dangerous and have few serious consequences.

Weiner ended by saying he treats babies as young as one day old and if your baby is sick get it to a pediatric chiropractor for treatment as soon as you can. Thanks, but I'll go to a clinician trained in pediatrics.

So after listening to this propaganda for two hours, and asking a few polite questions here and there, I decided to offer "criticism ... with an accompanying suggestion for improvement".

I asked Weiner why he didn't tell us from the very beginning that he was against vaccination. Recall that he said at the beginning of the lecture that some people come away from his seminars thinking he is anti-vaccination. I suggested that he had not shown anything about the risk/benefit ratio of vaccination - that is, the risk of getting an adverse reaction to



a vaccine is tiny compared to the risks associated with contracting the disease. He said he was not anti-vaccination, but admitted he would not choose to vaccinate, but ultimately it is the choice of the parents. My suggestion for improvement was therefore that he inform people from the very beginning that he is against vaccination.

My second criticism was that nowhere in his seminar had he addressed the issue of the seriousness of childhood diseases and that as a pediatric chiropractor, it was irresponsible not to inform a room full of mums holding babies and pregnant women that there is currently an epidemic of pertussis and pertussis kills babies.

I suggested that he had glossed over the seriousness of this disease (and other vaccine preventable diseases) and that while he spent a lot of time talking about vaccine reactions, he didn't even mention that in babies under the age of two years, pertussis can be fatal at the worst, and at the best have complications such as broken ribs, hernias, vomiting after coughing episodes and pneumonia<sup>15</sup>. My suggestion for improvement was that when there is an epidemic of a vaccine preventable disease in our community, he might remind parents that they should talk to their GP who might recommend vaccinating themselves and their kids.

My final criticism was he said that vaccines don't work because I can still get the disease even if I am vaccinated. My suggestion for improvement was that although a vaccine is not a force field, it can significantly reduce the severity of the disease. So kids who have had two or three shots for pertussis can still get the disease, but they have a reduced risk of getting complications and suffering long-term effects.

It was at this point that a discussion ensued around the room in which one pregnant lady asked Weiner if there was a cure for whooping cough. She looked

over to me and I shook my head and Weiner confirmed this. She then asked Weiner which vaccines were important and which you could skip. As she listed them off, she said one thing that made me pause. She said something like, "Obviously I can't skip the pertussis vaccine, that disease sounds really bad."

So maybe we achieved something today.

Yet, sadly, she included chicken pox in her list of "not so bad childhood diseases". It was on my tongue to remind her of the death of a seven year old boy from chicken pox in 2010<sup>16</sup>, but by this stage I was tired and also losing my temper.

For a pediatric chiropractor I couldn't be more disappointed in Nimrod Weiner. He's a smart man who has studied extensively, but he sat in a room filled almost exclusively with pregnant women and parents with babies and scared them into not vaccinating. He told them never to get vaccinated if they are pregnant "no matter what they tell you". He cited studies that have been struck from the literature because they were found to be fraudulent and he defended them when questioned. In the middle of a pertussis epidemic in which at least three babies have died, he told parents that childhood diseases are self-limiting and not very harmful.

I guess all we can hope is that my colleague and I planted a seed in some people's minds today. As for us, we didn't give up on the Wakefield stuff. We didn't let it go when Weiner kept

saying it was "good science". He told us he updates his slides every time he gives a talk, to which I suggested next time you do that, remove the Wakefield one.

Who knows if he will. At least he was willing to listen to our criticisms. Unlike some, he didn't have us ejected from the room as soon as we started to ask questions. I called the Chiropractors Association of Australia (CAA) – Weiner is vice president of

the NSW Branch – to ask for their position on vaccination. I was told they do not have one, and it is a matter for the individual. Perhaps the CAA might want to reconsider this, since it is apparent some of their members are spreading misinformation about vaccine safety and efficacy. Information that potentially puts kids' health and even lives, at risk. ■

\*To his credit, Nimrod did end by saying he reads Mercola "with a grain of salt" and that his website does have some strange ideas about medicine, but if this is the case why mention him at all?

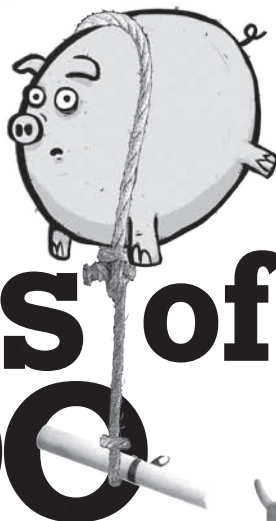
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**“ He sat in a room filled with pregnant women and parents with babies and scared them into not vaccinating ”**







# Degrees of WOO

Tim Mendham

investigates unnatural sciences in our universities.

When the Royal Melbourne Institute of Technology announced last year that it was conducting what it says was an Australian and possibly world-first university study into Power Balance bands, we were pleased that there was at least going to be a proper scientific assessment of the bands' supposed efficacy.

But what further intrigued us was that all three researchers on the project were chiropractors from the university's chiropractic courses.

By all events, the trial was conducted properly and scientifically, including double blind tests on its 40 volunteers, and a computerised dynamic 'posturography' device that measures balance and stability. The study, not surprisingly, came to the conclusion that the bands did not do what they said they did. Dr Rachael Dunlop interviewed the chief researcher, Dr Simon Brice, the result of which can be heard on the SkepticZone podcast #130 ([www.skepticzone.tv](http://www.skepticzone.tv)).

Some might assume, however, that a test by chiropractors on a product to help one's balance could be a case of checking out the competition – something about pots and kettles. To be fair, chiropractic probably does have some benefit as a lower back pain relief. It's the other effects claimed for chiropractic where we find the 'woo'.

This led us to a concern that many have had for a while and that is the creeping of pseudoscientific subjects into tertiary institutions' course content, particularly those where both undergraduate and postgraduate degrees are offered.

We approached the office of Universities Australia (formerly the Australian Vice-Chancellors Committee), the peak body representing the university sector. We pointed out our concern "with an apparent increase in tertiary courses – particularly in medicine areas, but also science and education – where unproven or even disproved subjects and methodologies are being taught and/or researched at Australian universities. Such topics as chiropractic, homeopathy, and acupuncture (for treatments beyond analgesic effects) regularly appear in university calendars, along with young earth creationism, psychic powers, spiritualism etc appearing either in formal university courses or in special education services provided on university campuses.

"It is our fear that tertiary institutions are increasingly playing into offering courses that will attract fee-paying students at the expense of academic rigour, and that even more suspect topics will creep into faculty offerings – those topics that are more suited to new age fairs and street stalls than the halls of academia."

We asked if Universities Australia has an official position on the bona fides of courses offered at Australian tertiary institutions, ie "that their study, researching and teaching are based on sound and established principles and that their inclusion on university courses is justified and on par with other perhaps less-controversial or at least well-substantiated topics".

**"If a particular course offering is of concern, contact the institution in question." - Unis Aust**



We also asked if Universities Australia has any policy or position on courses which incorporate highly suspect or thoroughly debunked pseudoscientific components.

Most of our concern revolved around courses covering 'complementary medicine', and in particular chiropractic, acupuncture, naturopathy, homeopathy, and forms of Asian and particularly Chinese medicine.

We stressed throughout our correspondence with Universities Australia and the later groups we contacted that "we are not concerned with individual studies for research etc



which investigate claims associated with such topics – in fact, we encourage that and have sponsored such research in the past. Our concern is with courses that actively promote such methodologies – through education courses at whatever level – as being valid and proven, when the truth is often quite the opposite.”

We received a reply from Michael Hartmann, Universities Australia director of communication and government relations. He said that “Universities Australia does not have an official position regarding the ‘bona fides of courses offered at Australian tertiary institutions’. Universities are self accrediting and therefore responsible for making their own decisions regarding the courses that they will offer to students. Each will have their own mechanisms for substantiating those decisions.

“If a particular course offering is of concern to your organisation then I would suggest that you contact the institution in question with your concerns and clarify the rationale which has been used.”

Which is exactly what we did.

### SURVEY OF INSTITUTIONS

Following wide consultation with skeptical groups across Australia (and in particular the ongoing research work of Joanne Benhamu of Sydney), we contacted the vice-chancellor’s office of a number of tertiary institutions, all of which had been highlighted to us as running degree or diploma courses of questionable scientific validity:

- Canberra Institute of Technology
- Charles Sturt University (NSW)
- Edith Cowan University (WA)
- Macquarie University (NSW)
- Monash University (Vic)
- Murdoch University (WA)
- Royal Melbourne Institute of Technology (RMIT)
- Southern Cross University (Qld)
- University of Newcastle
- University of Sydney
- University of Technology, Sydney
- University of Western Sydney

The 11 universities listed represent about 30 per cent of Australia’s universities. The one institute of technology (CIT) also offers degree-

level qualifications. These institutions do not necessarily cover every one offering such courses, and we welcome correspondence from our readers on any others.

With each approach to the VC’s office, we introduced our query on their course content with the same concerns as expressed to Universities Australia. We added to this concerns about specific courses they were carrying (the last sentence under “Chiropractic” below was repeated with minor variation in each set of concerns):

**Chiropractic:** While chiropractic claims to use spinal manipulation for treatment purposes, for which there might be some justification, such practice has, at various times, also been applied to conditions including asthma, bedwetting, clumsiness, ear infections, gastric problems, menstrual and pregnancy-related problems, hyperactivity, immune-system problems, urinary conditions, learning

disorders and respiratory problems. In fact, the founder of chiropractic in the 1880s, Daniel Palmer, once wrote that “Ninety-five per cent of all diseases are caused by displaced vertebrae.” Such practices are used on children, with potential long-term damage. The basis of chiropractic is a symptom known as “subluxation”, though chiropractors have never been able to agree on the nature or even prove the existence of such a condition. Obviously, there are serious doubts about the applicability, effectiveness and even whether there is any substantiation for chiropractic, and particularly so when offered under a university’s imprimatur.

**Acupuncture:** While there may be some mild analgesic effect of the shallow insertion of needles (or even laser treatment) through the skin, at various times acupuncture has been applied to such conditions as AIDS, allergies, arthritis, asthma, Bell’s palsy, bladder and kidney problems, breast enlargement, bronchitis,

## SURVEY EXCLUSIONS - MORE TO COME?

**O**ur survey was primarily concerned with specific courses that carried degree and other similar academic qualifications, run by and within tertiary institutions.

Therefore, we did not look more than in a passing fashion at short ‘community’ diploma courses, the sort of thing that runs for a few hours over a number of weeks and are of a general nature for hobbyists and interested members of the public. For example, in among CIT’s Adult Community Education’s short courses on astronomy, jewellery purchasing, chess, and dog grooming are 8-hour courses on “discover your psychic intuition” and “tarot – getting started”. These are often outside of universities’ formal calendars of courses, although they do indicate worrying concerns that they are at least tacitly endorsed by those institutions by being held on their premises and thus indicating a lack of overview on course content. (See sidebar on Creationists on Campus).

Nor did we look into those private institutions which are dedicated almost entirely to these areas, such as the Australasian College of Natural Therapies, which offers diplomas in natural medicine (including naturopathy, homoeopathy, aromatic medicine, kinesiology and ‘myotherapy’).

Similarly with theology courses within theological institutions or faculties. However, it is interesting, to say the least, that the University of Newcastle has a range of theology undergraduate and postgraduate courses within its Arts and Education faculty. This is “designed to appeal to the diversity of Christian Churches and their students, as well as students from other world faiths, indigenous and overseas cultures”. These do not seem to be purely academic courses designed for those interested in religious history and philosophy in the same way as there are courses in the history and philosophy of science available at many tertiary institutions. This might be one area worthy of further investigation.

Another area that may be worthy of investigation is osteopathy, which shares some elements with both chiropractic and naturopathy.

# Degrees of WOO

*Continued...*

colds, constipation, depression, diarrhoea, dizziness, drug addiction (cocaine, heroin), epilepsy, fatigue, fertility problems, fibromyalgia, flu, gynaecologic disorders, headaches, high blood pressure, hot flushes, irritable bowel syndrome, migraines, nausea, nocturnal enuresis (bedwetting), pain, paralysis, post traumatic stress disorder, PMS, sciatica, sexual dysfunction, sinus problems, smoking, stress, stroke, tendonitis and vision problems.

**Naturopathy:** Naturopathy is often rooted in mysticism and a metaphysical belief in 'vitalism', and the claim that many diseases, including cancer, are caused by faulty immune systems.

**Chinese medicine:** While there are some justifications for researching Chinese herbs for their potential medical benefits, the course description includes a number of references to course components and requirements incorporating acupuncture [at UTS].

**Homeopathy:** [There were no standalone homeopathy courses, most falling with "complementary" or Chinese medicine courses.] We note courses covering 'complementary medicine' including such areas as naturopathy, homeopathy, kinesiology, aromatherapy and acupuncture. The stated aim of such courses [at Charles Sturt University] is "to provide complementary medicine practitioners with an advanced level of knowledge, understanding and skills," and yet there are serious doubts about the applicability, effectiveness and even whether there is any substantiation for such areas. Homeopathy, in particular, is known to be without any scientific basis at all.

## RESPONSES

The number of responses was disappointing, in some cases perfunctory, and in most entirely defensive (and some would sense a tone of 'harrumph'). We present here the full responses by those who did do so.

*Professor Ross Milbourne,  
Vice-Chancellor at University of  
Technology, Sydney:*

"UTS offers courses in accord with the Australian Qualifications Framework, and our Academic Board reviews the academic and educational merit of all course offerings – before they are approved – in accordance with high levels of academic standards and academic peer review."

*Professor Margaret Gardner AO,  
Vice-Chancellor and President,  
RMIT University:*

"As a global university of technology and design, RMIT is committed to an ethic of rigorous scientific enquiry. Our academic staff, whether conducting research or learning and teaching, operate within a methodology that is evidence-based.

"The RMIT code of conduct for research, for example, requires researchers to demonstrate integrity and professionalism; observe fairness and equity; and demonstrate intellectual honesty.

"I am confident that the programs you mention - chiropractic, acupuncture and Chinese medicine (we no longer offer animal chiropractic) - are taught within that methodology. RMIT is not responsible for potentially erroneous claims made by others about these disciplines.

"RMIT's chiropractic paradigm is based on a body of scientific literature which recognises the relationship between neuromusculoskeletal and physiological dysfunction. In keeping with the spirit of the philosophy of science, both qualitative and quantitative methods are promoted.

"RMIT's Chinese medicine program is helping lead the international development of an evidence base for Chinese medicine practice. It conducts research projects funded by the National Health and Medical Research Council and Australian Research Council, and has been a World Health Organization (WHO) Collaborating Centre for Traditional Medicine since 2005.

"I find it unfortunate that you should link either discipline with 'young earth creationism, psychic

powers, spiritualism etc' and would request that you refrain from making such a link in your publication."

We responded to Prof Gardner's last point by pointing out that "such subjects as mentioned are or have been taught, researched and/or promoted at universities and tertiary institutions in Australia (though not RMIT). These subjects have, from time to time, also included auras (as in health indicators for the human body) and UFOs - a very worrisome thought."

In fact, as we learned later, the subject of auras has been raised by one academic at RMIT. See the sidebar "Academic Auras".

*Professor Gary Martin, Acting Vice  
Chancellor at Murdoch University:*

"Thank you for enquiring about the Chiropractic program here at Murdoch University. We can assure you that our program meets the same rigorous academic standards as all our programs and fulfils the demanding professional accreditation standards established and reviewed by the Council on Chiropractic Education Australasia (CCEA).

"Chiropractic is an emerging profession, and it is a very positive sign that this profession is being represented increasingly in universities throughout Australia and many other parts of the World. The University environment facilitates quality assurance, professionalism and scientific enquiry; our aim is to produce graduates who are critical thinkers.

"The chiropractic profession has been regulated by State regulatory boards for many years, and now by the new national board, the Chiropractic Board of Australia (CBA). The School of Chiropractic & Sports Science does not support any outrageous claims made by individual chiropractors and promotes an evidence-based practice approach to teaching and learning."

The lengthiest response and that which was the most willing to discuss the issues of concern came from

*Professor Nicholas Klomp, Dean of  
the Faculty of Science, Charles Sturt  
University:*

"You are partly right that Charles





## CREATIONISTS ON CAMPUS - HOW WOO WORKS WITH UNIVERSITY SUPPORT

Last September I received an email update from Creation Ministries International (CMI). I'd joined their email mailing list years earlier and found the weekly emails to be informative (in that they indicated what CMI was up to and where it'd be next) and often unintentionally hilarious (<http://creation.com/strategy-of-the-devil>).

The subject line of the email made my jaw drop: "University-sponsored Creation Seminar at Hervey Bay". I hoped it was not my University.

The email detailed how this was the first time in CMI's history that a secular university had "shown this sort of open-minded commitment to presentation of the 'other side' of this issue". The email then advised that "The only presenters at this event are CMI scientists, and it is entirely the university's event, and at its own initiative. The sponsoring organisation is the University of Southern Queensland, Fraser Coast, which is covering costs, and receiving all registration and fees."

I phoned the University of Southern Queensland's Fraser Coast Campus reception office to enquire about the event. The reception staff told me that the event was being organised by the Fraser Coast campus' Provost Office exclusively. I was then transferred through to the executive assistant to Provost, Mrs Rhonda Eastall who, I was told, was handling all inquiries.

Mrs Eastall was very pleased to hear I was interested in the presentation and agreed to send me out the necessary details I needed to book tickets. She spoke the names of the Creation Ministries scientists with familiar ease. I pointed out that I believed this would be the first time a public university in Australia had held a seminar like this. She agreed - "I know, isn't it exciting"

She then went on to describe how good it was to be able to bring education into a church setting. Within minutes I received via email the official flyer for the seminar, produced by USQ and an accompanying note that read: "The University is hosting this seminar due to the interest of providing education in churches and for the greater community who have an interest in the world, human origins and sciences (eg science teachers, university and high school students, church members, general public interested in human origins)."

The flyer itself titled the talk "Creation and Evolution, scientific evidence, myths and challenges", and described the seminar as a USQ special event, with two expert scientists challenging society's largely uncritical commitment to the theory of evolution. Dr Don Batten and Dr Tas Walker of CMI will argue that conventional thinking about evolution is seriously flawed. They will present scientific evidence that lends support to Creation as an alternative explanation of our origins.

With this in mind, it is worthwhile noting that CMI's website clearly states: "The scientific aspects of creation are important, but are secondary in importance to the proclamation of the Gospel of Jesus Christ as Sovereign, Creator, Redeemer and Judge."

The event had a charge of \$20 for adults and \$15 for school age child and seniors, with the

funds going to the University to cover costs of the seminar, administration, coffee on arrival and barbeque lunch. I couldn't help but wonder how much of the 'administration' was actually taking place during university work time, as CMI claim its events are free to run and organise.

I now knew that the Provost office of the entire Fraser Coast campus was behind the event, not only providing a venue and a forum for the dissemination of creation theology masked as science, but actively and uncritically supporting CMI through association with a public university, under the banner of a "continuing commitment to engage intellectually with our community".

The Fraser Coast Campus is just one of USQ's three main campuses, and I was willing to wager that the rest of the University had no idea this was taking place. I compiled a list of every single email address, of every single staff member, of each and every USQ facility, and sent them a message outlining what was going on at Fraser Coast.

Then I started receiving replies from USQ staff. The first one was disheartening, assuring me that the qualifications of both Dr Batten and Dr Walker were impeccable and, through the respondent's confusing series of seemingly illogical steps, actually related to evolutionary biology. They advised me that I would be doing myself a disservice by not attending the talk and becoming more informed on the topic. The next response merely advised me that the recipient did not agree with my 'position' and did not wish to receive further correspondence.

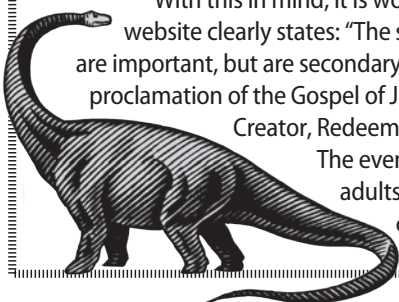
Then the floodgates opened. I found my inbox filling with messages of dismay that this was able to happen, mixed with gratitude for being forewarned. Various academics and staff from a range of disciplines and departments across the University wrote to share their thoughts and advise that they would be seeking an explanation right away. Curiously many of those who replied showing support were very concerned with confidentiality, some even replying only from private email accounts. The reasons given were fear of recrimination for voicing their concerns, providing yet another indication to me at least just how tough a battle we have to keep our schools and universities reason driven.

At 5pm on Monday September 20, 2010, I received correspondence from a staff member who advised me that while they were formally complaining, the University had told him they had withdrawn all support, effectively cancelling the event!

I checked the CMI webpage and found that although the event was still being advertised, there was now a comment: "Stop press! A concerted campaign of vitriolic and deceptive opposition from persons outside the University of Southern Queensland has resulted in the USQ Fraser Coast campus no longer sponsoring the seminar."

I was amazed both that my efforts had achieved a desired result at all, and that it had taken only three days. Yes, CMI might find another venue. Yes, CMI was able to get into a university in the first place, but now there are many staff and associates who are not necessarily members of the 'skeptical community' who will be watchful.

— Jayson D Cooke



# Degrees of WOO

*Continued...*

Sturt University offers a degree in 'complementary medicine', but you are wrong in your assumption that CSU teaches such areas as naturopathy, homeopathy, kinesiology, aromatherapy and/or acupuncture. I agree that there are serious doubts about the applicability and effectiveness of many of these approaches to health care.

"In fact, Charles Sturt University offers the Bachelor of Health Science (Complementary Medicine) to those graduates of various diplomas from TAFE's and other recognised post-secondary providers who are prepared to study for an additional 1.5 – 2.5 years in strict evidence-based disciplines. Students must complete the following core subjects and, depending on what-else and where-else they have studied in the past, must choose up to eight additional electives from a strictly prescribed list of subjects.

"CSU recognises that there are a great many practitioners of various forms of complementary medicine already operating in Australia and across the world. Our Bachelor of

Health Science (Complementary Medicine) aims to ensure that those who choose to do extra study with CSU have formal health and scientific training, as well as an understanding of the need for evidence-based practice and the limitations of specific complementary therapies."

We responded by pointing out that we appreciated Prof Klomp's comment that CSU doesn't teach naturopathy etc, and also that CSU offers a range of highly legitimate qualifications in health science, particularly in specialist and technology areas.

It's for that reason, we said, that we find it a concern that "Students entering the course will be required to possess an approved and government accredited qualification at the diploma level (or higher) in Complementary Medicine in the following therapeutic modalities: naturopathy, nutritional science, homoeopathy, kinesiology, herbal medicine, aromatherapy/ aromatic medicine, oriental therapies, acupuncture and remedial massage."

Some of these, you will recall, were the very same areas that Prof Klomp had expressed "serious doubts about [their] applicability and effectiveness".

In addition, we noted: "Upon admission, all students are awarded a credit package of 48 points based on completion of a recognised

Diploma or Advanced Diploma in a complementary medicine modality", which includes among others aromatherapy, kinesiology, reflexology, Ayurveda [sic] and naturopathy."

Surely these prerequisites and/or credit benefits, we asked, could easily be seen as endorsements by a noted Australian institution that such 'studies' have validity, when in fact they are not without serious question. Homeopathy, in particular, is without an evidence-base at all, as is even admitted by homeopaths.

Prof Klomp responded: "I understand especially the point you make about not providing validity or endorsement to un-scientific approaches to healthcare. In the end it is a decision to either not engage with the industry at all, or attempt to improve the scientific training of (potential) practitioners, so that they are more likely to offer a service to the public that is less likely to make unfounded and/or incorrect claims of efficacy or, worse, impede referral of genuinely sick clients to the more formal health system.

"Universities give credit to prior learning, although at CSU we restrict this to government-recognised qualifications. On balance, I believe our approach of insisting on teaching the science required by all health care practitioners, with a strong emphasis on evidence-based practice, but acknowledging the interest and achievements of people who have formally studied these other subjects, is a reasonable approach.

"CSU also does some excellent research in complementary medicine, as acknowledged in the government's recent process of research measures. For example, we produced a dozen scientific (peer-reviewed) papers last year alone on identifying the active ingredients (if any) of traditional Chinese medicines and other claimed herbal remedies. The research is fed directly back into our teaching. Students cannot escape CSU without being thoroughly exposed to scientific approaches to research and knowledge."

He added that "We have found that many students upon starting our course transfer to more formal health programs (pharmacy, medical science, nursing)

## ACADEMIC AURAS

I have a diploma in electronics from RMIT.

The only time I recall any woo during my diploma (mid 90s) was when I had to get through the management/humanities part of it (I forget what the subject was called). It was mainly about how to hold meetings, interview staff, do project management, write reports, do presentations, that kind of thing.

Somehow the teacher conducting this class brought in a discussion of auras. This was presented to a class full of practical electronics students by the way, people who are quite comfortable with what other people would regard as the magic of electronics and magnetism.



I recall a number of students being shocked by the teacher bringing up the subject of auras; clearly she was a believer.

One student in particular, knowing that I'm a skeptical person, said to me "Malcolm, we are letting you off the leash, this is a load of rubbish, go for it." Anyway, I thought I put my case against auras rather well, and regardless of my colleagues' encouragement, I was polite and reasonable about it. More effective was a group chat with the course co-ordinator; he was embarrassed more than anything. We had a different teacher the following week and for the remainder of that subject.

— Malcolm Vickers



upon exposure to evidence-based practice in these fields.”

(We would like to thank Prof Klomp for spending the time and effort to at least consider the issues.)

The personal assistant for *Dr Michael Spence, Vice-Chancellor and Principal, the University of Sydney*, did say they would pass our request on to Dr Spence for his attention. It seems to have stopped there, as we received no reply.

And that's it – less than half of the institutions bothered to reply, let alone justify their academic offerings.

Despite the protestations of those who did reply, it is still evident that, under the imprimatur of universities and their reputation for academic probity and accuracy, the public, students and no doubt many academics would regard these areas of activity as having been endorsed by such institutions. Mentioned in relation to advanced studies, no matter how much the subject is encased in references to research and evidence, the view is that these areas have been given the seal of approval.

And in many instances, that is exactly what has happened. The fact that several universities have set up clinics in acupuncture, chiropractic, Chinese medicine and naturopathy to treat students and staff is indication enough that this is not a moot point, but a statement that, yes, these are proven modalities.

Despite the fact they're not.

This concern will be the subject of further research and approaches to tertiary institutes for them to at least seriously justify the inclusion of such courses. Dismissive and bland references to market forces, the Australian Qualifications Framework and internal reviews of the academic and educational merit of all course offerings are not enough.

By and large, we feel the response to date has been, to say the least, pathetic and worrying. ■

About the author:

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## WOONIVERSITIES AT PLAY - SUBJECTS FOR REVIEW

*For the record, the list of courses offered by Australian tertiary education bodies which incorporate potential pseudosciences (correct as at February 24, 2011, more than survived but probably incomplete as per other institutions).*

### CANBERRA INSTITUTE OF TECHNOLOGY

- Naturopathy - Advanced Diploma

### CHARLES STURT UNIVERSITY

- Bachelor of Health Science (Complementary Medicine)
- Course in Biodynamic Agriculture

### CURTIN UNIVERSITY

- Evidence Based Complementary Medicine (course)
- “Complementary and alternative medicines including medicinal herbal therapies and their chemical constituents, nutritional therapies and other miscellaneous treatments. Pharmacological actions and clinical uses of complementary medicines including evidence of safety and efficacy. Clinical role of complementary therapies.”

### EDITH COWAN UNIVERSITY

- Complementary and Alternative Medicines
- “This unit [within the Faculty Of Computing, Health And Science School Of Nursing, Midwifery And Postgraduate Medicine] examines the current knowledge and evidence to support complementary and alternative medicines (CAM). Potential benefits and risks are explored together with consumer values. The focus of the unit is the application of this knowledge into current clinical practice.”
- Complementary and Alternative Physical Therapies (no details given as to what these are)

### MACQUARIE UNIVERSITY

- Bachelor of Chiropractic Science
- Master of Chiropractic
- Plus six chiropractic clinics

### MONASH UNIVERSITY

- Graduate Certificate in Medical Acupuncture

### MURDOCH UNIVERSITY

- Bachelor of Science in Chiropractic
- Postgraduate Diploma in Sports Chiropractic
- Plus: Murdoch University Chiropractic Clinic

### RMIT

- Bachelor of Health Science (Chiropractic)
- Master Clinical Chiropractic
- Chinese Medicine/Human Biology – Bachelor of Applied Science (Double Degree)
- Bachelor of Health Science (Acupuncture and Chinese Manual Therapy)
- Graduate Diploma in Acupuncture
- Master of Applied Science (Acupuncture)
- Nutrition postgraduate degree (Aimed at health practitioners, including doctors, nurses, physiotherapists, chiropractors, osteopaths, naturopaths and other complementary medicine practitioners.)

### SOUTHERN CROSS UNIVERSITY

- Clinical Science (Bachelors and Masters degrees). Alongside nursing, midwifery, allied health, and psychology, “The [Bachelors degree] course allows students to tailor their study program to meet their specific needs and interests, including those wishing to pursue a career in osteopathy, psychology, naturopathy and human nutrition.”
- Plus SCU Health Clinic which will “Train students in applying naturopathic and osteopathic skills in assessment and treatment”.

### SUNSHINE COAST TAFE

- Certificate in Aromatherapy
- Diploma of Reflexology
- Certificate and Advanced Diploma in Ayurvedic Lifestyle Consultation

### UNIVERSITY OF NEWCASTLE

- Complementary Therapies in Healthcare
- “The course will be theory and practical based and will include complementary therapies such as massage, aromatherapy, Reiki, meditation, and guided imagery. These therapies have been selected to suit the scope of practice of health care professionals and also because of burgeoning community interest and usage of these complementary therapies. The different modalities will be viewed from an historical, social and contemporary basis within the legal context of modern society in Australia.”

### UNIVERSITY OF QUEENSLAND

- Centre for Integrative Clinical and Molecular Medicine. Within the School of Medicine, while this Centre undertakes “scientific research to evaluate the scientific foundation of complementary medicine” it also “is particularly renowned for its studies in integrating evidence-based complementary therapies into clinical care to help people achieve and maintain optimal health and well-being”.

### UNIVERSITY OF SYDNEY

- Masters and Graduate Diplomas and Certificates in Herbal Medicines

### UNIVERSITY OF TECHNOLOGY, SYDNEY

- Bachelor of Health Science in Traditional Chinese Medicine. (Includes acupuncture, and assumes knowledge based on “Any two units of English; and any two units of science - biology is recommended”.)
- Plus UTS Traditional Chinese Medicine Clinic, including an acupuncture clinic.

### UNIVERSITY OF WESTERN SYDNEY

- Bachelor of Applied Science (Naturopathic Studies)
- Graduate Diploma in Naturopathy
- Master of Health Science (Acupuncture)
- Master of Health Science (Traditional Chinese Medicine)
- Plus UniClinic offering treatments in naturopathy, podiatry, and traditional Chinese medicine and acupuncture





# Northern Exposure

Martin Bridgstock and Kylie Sturgess investigate paranormal belief in the Sunshine State.

The state of Queensland has a history of involvement with the paranormal. Under Joh Bjelke-Petersen's premiership there was strong interest in the Milan Brych 'cure' for cancer and the Stephen Horvath hydrogen car (Wear 2002). Worst of all, in the 1980s, Queensland came close to having creation science taught in state schools (Bridgstock and Smith 1986).

Joh's Minister for Education, Lin Powell, when he was trying to push creation science into Queensland schools, used to claim that large numbers of people supported his actions. Was he right? Nobody knew. With this in mind, we wanted to know what Queenslanders really thought about the paranormal. Is there massive support for weird ideas and quack cures?

We can now find out. Based in Central Queensland University at Rockhampton, the Queensland Population Laboratory is a professional outfit which specialises in polls and surveys. Every two years, the Laboratory does the Queensland Social Survey. It contacts about 1200 Queenslanders, and asks them a range of questions. For a fee of \$1500 per question, your questions can be asked.

That sounds expensive, but is much cheaper than most commercial polls.

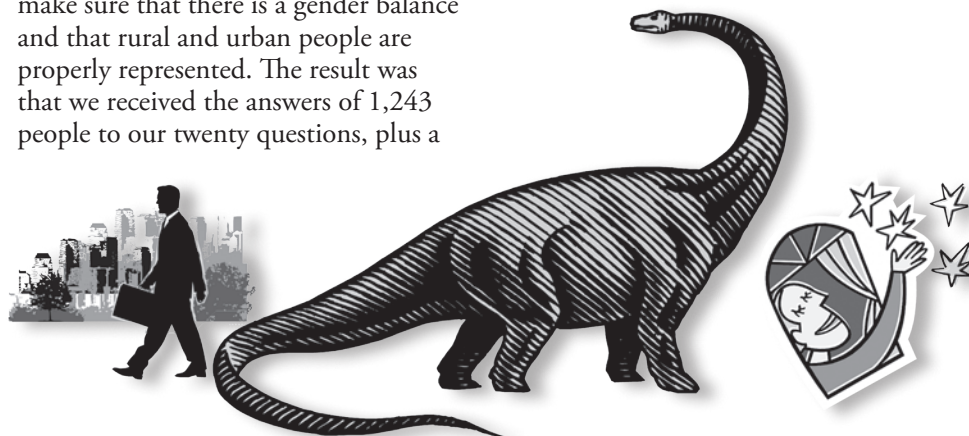
We contacted the Australian Skeptics Science and Education Foundation and explained that we would like to ask Queenslanders twenty questions for the 2008 survey. The Foundation (bless them) agreed to fund the survey. For the last couple of years we have been analysing the results, and would like to share some of the most striking with you.

The Queensland Social Survey interviews are all done by phone. Trained people call numbers at random in Queensland and ascertain whether the people are prepared to take part in the survey. The people approached are random, except that care is taken to make sure that there is a gender balance and that rural and urban people are properly represented. The result was that we received the answers of 1,243 people to our twenty questions, plus a

range of other 'standard' questions. The survey's organisers present a good deal of evidence about how representative their twelve hundred interviewees are. With one exception, the interviewees are a good cross-section of Queenslanders. That exception is that fewer people in the 18-24 age bracket were interviewed than should have been, and more older people. Apart from that, we can be confident that the respondents do represent the population of Queensland (Hanley and Mummery 2008).

## DO QUEENSLANDERS BELIEVE IN THE PARANORMAL?

To ask about paranormal beliefs, we had to make a selection from the thousands



**Table 1****Percentage of Queenslanders believing in some paranormal propositions**

BELIEF	BELIEVING OR STRONGLY BELIEVING (%)
Psychic or spiritual healing or the power of the human mind to heal the body.	58.9
Creationism, which is the idea that God created human beings pretty much in their present form at one time within the last 10,000 years.	37.9
Ghosts or that spirits of dead people can come back in certain places and situations.	35.9
That extra-terrestrial beings have visited earth at some time in the past.	29.4
That people can hear from or communicate mentally with someone who has died.	29.3
Astrology, or that the position of the stars and planets can affect people's lives.	28.5

of beliefs which actually exist. The percent of people believing, or strongly believing, in some paranormal topics is shown in Table 1.

How does this compare with the views of Australians generally? It's hard to say, as different polls ask questions in different ways. A Nielsen poll of Australians in 2009 reported that 32% of Australians believed in ghosts and 25% in astrology. These are very similar to the Queensland results. On the other hand, only 23% of Australians believe the Creation account of origins, which is a good deal less than the figure for Queensland. However, the options given were different, and any social researcher can tell you that asking questions in slightly different ways can produce completely different results. Our best judgment is that there is a slight tendency for Queenslanders to believe more in the paranormal, and a somewhat larger tendency for them to believe in creationism. Even the latter percentage, though, is clearly a minority.

Clearly, one belief is much more

popular than the others. Psychic and spiritual healing commands a majority assent, while all the others are near the one-third level. You might, as Michael Shermer (2001) did, have some doubts about the item concerning psychic and spiritual healing. A great many people believe that, if you have a positive attitude to health matters, you will do a great deal better. Therefore, if you believe this, you might agree with the item without endorsing any paranormal belief at all.

The second most popular item is creation, followed closely by ghosts. All of the others are just below 30% in approval. This seems to show that apart from the healing item, most paranormal beliefs are endorsed by only a minority of people in Queensland.

Now, the levels of belief on several of the items are similar, so could there be

a single underlying item, roughly called 'paranormal belief' on which some people rate high and others rate low? This could simplify the results a great deal, as people rating high believe most of the items, people rating low do not.

Answering this question needs statistical analysis, and one way is to use a technique called factor analysis (eg Child 1970). In factor analysis, belief in the various items is correlated, and then a computer is set to answer the question of how many underlying scales there are. For this data two underlying factors, or dimensions, accounted for about 58% of the variance\*. This means that we can reasonably reduce the number of scales from six to two, a considerable simplification.

The two factors, and how each item relates to them, are shown in Table 2. They tell us a good deal about how paranormal beliefs fit together in people's minds. If you think visually, you can plot them out on a piece of graph-paper. Five of the beliefs cluster together, loading high on the first factor. These concern a number of 'mainstream' paranormal propositions such as astrology, ghosts, communicating with the dead and the like. If someone believes one of these, they are more likely to believe in the others. Now it is pretty clear why someone might believe

in ghosts and in communicating with the dead. After all, if you believe in ghosts, all you have to do is communicate with one and you are talking to the dead! But it is much less clear why a believer

in these two items should also believe in astrology or ancient astronauts. There is no logical link, but they do go together in people's minds.

**“ What Queenslanders really think about the paranormal - is there massive support for weird ideas and quack cures? ”**



# Northern Exposure *Continued...*

The single item of belief in creationism is off on its own. It loads extremely highly on the second factor, but hardly at all on the first factor. The other five items all load highly on the first factor, but, with one exception, hardly at all on the second. The exception is the item derived from Erich von Däniken's ideas about ancient alien visitors. This is closely linked to the other paranormal items, but is a little negative on the second factor.

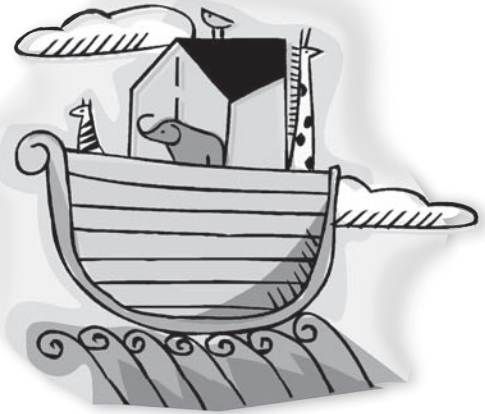
What does this tell us? Well, for years there has been a debate among psychologists about whether paranormal belief is a single tendency, or a complex of several different ones. From this evidence, it looks as if there are two different types of belief, and a person's views on one tells us almost nothing about their views on the other.

Probably, what we are looking at on the first factor is a general disposition among some people to accept almost

any proposition which involves paranormality, or the 'unknown'. We might conjecture that people rating high on this factor describe themselves as 'open-minded' and have almost no idea about any sort of critical investigation. Probably, if we had put in items on telepathy and clairvoyance, we would have found that those, also, load very highly on this factor. We could reasonably treat this as a general disposition to believe in paranormal propositions, and ask further questions about what sort of people believe in this way, and why they do so.

The other factor is quite different. Creationism stems directly from fundamentalist Christian belief. If we had included items on belief in, say, heaven and hell and the Devil, it is probable that they would have loaded positively on this factor. We should therefore treat it completely separately from the other paranormal items.

We might note two other points which are of interest. First, the creation item loads slightly positively on the first factor, and the other items mostly are positive on the second factor.



This suggests that the two types of paranormal belief are slightly positively correlated, which is interesting and possibly merits further research. The exception is the item relating to Erich von Däniken's ideas. Although it is linked to the other 'mainstream' items, it also loads negatively on the second factor. This makes sense: if you believe in Young Earth Creationism, you cannot accept von Däniken's ideas, which is that aliens (anathema to fundamentalists) have been affecting human history over long periods of time.

## DO QUEENSLANDERS SUPPORT CREATION SCIENCE?

One of our main concerns was with support for creation science in Queensland. We asked a question about young earth creationism, and also about support for two scientific theories, evolution and continental drift. In the USA, repeated surveys have shown a chilling result from these sorts of question: given a choice between the two, about 55% of adult Americans support creation over evolution (Religious Tolerance 2011). It is truly frightening that citizens of the world's greatest scientific and intellectual power reject a key finding of science in such large numbers.

What do Queenslanders think? You can see the result for creation in Table 1. Table 3 shows the corresponding percentages for two major scientific ideas, evolution and continental drift. Both are logically opposed to young earth creationism. The results suggest that a clear majority of Queenslanders support evolution. Roughly 62% support the evolutionary statement as opposed to 38% who support the creation statement.

**Table 2**

*Factor loadings of six paranormal items*

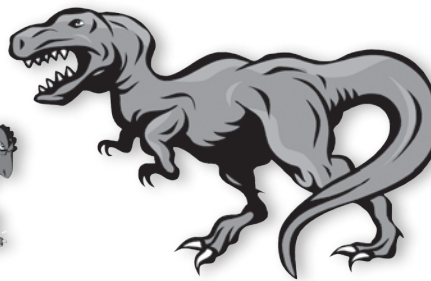
BELIEF	FIRST FACTOR LOADING	SECOND FACTOR LOADING
Creation	0.06	0.98
Ancient astronauts	0.68	-0.19
Psychic healing	0.80	0.09
Communication with dead	0.81	0.07
Ghosts	0.66	0.10
Astrology	0.54	0.06

**Table 3**

*Percentage of respondents believing in two scientific propositions*

SCIENTIFIC PROPOSITION	PERCENT BELIEVING OR STRONGLY BELIEVING
Evolution, which is the idea that human beings developed over millions of years from less advanced forms of life.	62.5
Continental Drift, which is the idea that continents have been moving their locations for millions of years and will continue to move in the future.	81.2





This statement contradicts former Minister for Education, Lin Powell, who claimed that there was widespread support for teaching creation science in state schools. There is minority support, but we have also seen that about 36% of the survey sample believe in ghosts, and about 59% believe in psychic or spiritual healing. Therefore, according to Powell's own logic, these also should be taught in Queensland schools. Of course, we should not expect intellectual honesty from a fundamentalist politician, and we did not get it.

During the Bjelke-Petersen years, the ruling National Party overwhelmingly represented the rural areas of the state, while the other conservative party, the Liberals, and the opposition ALP were mostly confined to urban areas. We were therefore interested to know if support for creation science was a state-wide phenomenon, or whether it was confined to rural areas. Table 4 shows the answer to this question. We have cross-tabulated area of residence – urban or rural – with belief in creation science.

To our surprise, the differences are rather modest. Rural people are just over seven percent less likely to believe in evolution, and this is statistically significant. Rural dwellers are a little more likely to believe in creationism, but this difference is even smaller – under five per cent – and is not statistically significant. In both cases there is a substantial majority who believe in evolution, and a minority (albeit a sizeable one) who believe in creation. The idea that rural Queensland is a rabid 'bible belt' of creationist belief is not supported by the evidence.

### WHAT ABOUT RELIGION IN QUEENSLAND?

Queensland has been noted for its conservative, religious-based outlook. One of us remembers former Miss World Belinda Green appearing on a Queensland television show. She

**Table 4**

#### *Urban and rural areas compared about belief in creation and evolution*

TYPE OF AREA	PERCENTAGE BELIEVING OR STRONGLY BELIEVING IN EVOLUTION	PERCENTAGE BELIEVING OR STRONGLY BELIEVING IN CREATION
Urban	64.3	36.7
Rural	56.8	41.4
	$X^2=4.82$ $p<5\%$	$X^2=2.09$ Not sig.

**Table 5**

#### *Type of religion and belief in creationism*

TYPE OF RELIGION (Christians and non-believers only)	PERCENT BELIEVING IN CREATIONISM
No religion	13.2
Liberal	38.2
Moderate	49.4
Fundamentalist	76.9
	$X^2=168.3$ $p<0.1\%$

was about to make a sexually-related comment and suddenly stopped herself, saying "Oh no, this is Queensland!" So it is natural to ask about the religious outlook of Queenslanders.

Over the last few decades, western countries have seen two trends in religious belief. By far the most spectacular has been the eruption of fundamentalist Christianity into a militant mode. We see mega-churches packed with thousands of ecstatic supporters, ranting evangelists on television and overt attempts to influence the political process. On the other hand, quietly and without much fuss, there has been a steady growth in the number of people who do not hold religious beliefs at all. Even in that heartland of fundamentalism, the United States, the number of disbelievers has now risen to about 15%, from only 8.2% in 1990 (American Religious

Identification Survey 2008). In the US this corresponds to tens of millions of people, and organisations like American Atheists are beginning to raise their profile, demanding to be heard on issues of public concern.

With this in mind, we had a careful look at the number of religious non-believers in Queensland. QSS asked a question about what church people belonged to and, when responses were unusual, recorded what people actually said. We classified the religious views of our respondents into four categories, leaving out non-Christians. The four categories were 'Non-believers,' 'Liberal Christians,' 'Moderate Christians' and 'Fundamentalist Christians'. Our first surprise was that fully 25.5% of respondents did not appear to be religious believers. Not all were atheists or agnostics, but this sizeable figure refers to all those who did not have

## Northern Exposure *Continued...*

a religious affiliation. This number is greater than those in any church, including the Anglicans (23.1%) and the Catholics (19.7%). Of course, if you add together all the religious groups, they far outnumber the unbelievers, but the size of the non-religious population is quite surprising. The Nielsen poll, incidentally, found that 30% of Australians were atheist or agnostic, which is a slightly larger figure.

If we take our four-fold classification of religious belief and relate it to belief in creationism, we find the results in Table 5. They are clear cut and very statistically significant. Among unbelievers, only about one person in eight believes or strongly believes in creationism. Among fundamentalists, over three quarters believe or strongly believe in the creation view. We can go a little further. The survey asked respondents whether their religious beliefs were very important to them. Of those fundamentalists who said yes, an overwhelming 93.7% believe the creation account.

As a skeptic, you might be surprised at the number of dissenting people in these statistics. How can more than one-eighth of religious unbelievers accept creationism? How can nearly a quarter of fundamentalists reject creationism? There are several answers. Our classification of religions is pretty crude, and some people may be wrongly classified. Further, QSS told us that some people were astonished and confused by our questions, so their responses may not have been representative of their actual views. We do have a feeling, however, that there is something real here. We think that even in fundamentalist churches there are people who, quietly, do not agree with the dogma. Perhaps they are there for the companionship, or because of family pressures, or for fun. And even among unbelievers



there may well be people who do not understand science and cannot see why creationism is not a viable explanation.

The moral from this is pretty clear. Unlike fundamentalists, we skeptics should not regard anyone as doomed. We should put our case, as clearly and cogently as we can, to anyone who will listen. And we might make progress in the most unexpected areas. ■

*\* For the statistically inclined, we dichotomised the variables and used SPSS to carry out a principal components analysis with listwise deletion, followed by varimax rotation.*

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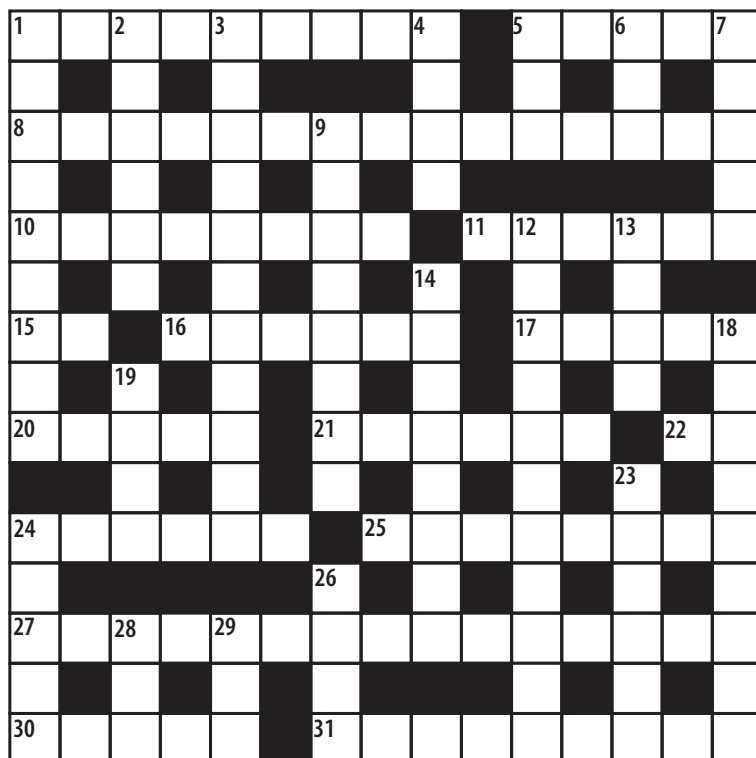
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# Brain testers

## CRYPTIC CROSSWORD no 9



Tim Mendham + Steve Roberts

## DR BOB'S TRIVIA QUESTIONS

1. In Liechtenstein's last war, they sent 80 troops to go and wallop the Dutch; how many men returned?
2. In what language do the first five words in the dictionary mean 'sky', 'baffle', 'hat', 'head', 'beret'?
3. How did 19th-century German scientists explain the arched brow of Neanderthal skulls?
4. Sigmund Freud said that if the patient agreed with the analyst about the diagnosis, then the diagnosis was probably correct. But what if the patient vehemently disagreed with the diagnosis?

Answers on page 62

### ACROSS

1. Disgraced doctor has the site for an al fresco funeral party. (9)
5. Unavoidable companion of taxes. (5)
8. Renaming Friday, I somehow find myself talking to Harvey, god and Snuffleupagus. (9,6)
10. Ball stand whasit for baby problem. (8)
11. Dishonest players are not chaste. (6)
15. Small promotion in the current era. (2)
16. I ran back in time. (6)
17. A thousand lyre turned away from reality. (5)
20. What the ...?! You're equal?! (5)
21. Short presentations torn and broken in small island. (6)
22. The story of my life, at 105. (1-1)
24. Creative heart is truly central. (6)
25. Two donkeys go in to a bar, one kills the other. (8)
27. It's no joke if you can't end it. (4,2,9)
30. The centre houses UN sex. (5)
31. Top kid may be an alien hybrid. (9)

### DOWN

1. Joint prohibited because of the abuse of the balance of power. (9)
2. Barbie's boyfriend goes back to the ship and frighten sailors ... (6)
3. ... and do the same with queens, by using intimidatory workers. (11)
4. Periods of reported confusion. (4)
5. The German red rose. (3)
6. Best fighter pilot in the pack. (3)
7. It's a hell of a way to make shade. (5)
9. As antics go I'm not sure what to make of it. (8)
12. I'm in each photo of a worthless treatment. (11)
13. The glow of a golden god. (4)
14. Rip Satan to shreds for taking sides. (8)
18. Top notch profession to finish. (6,3)
19. Copper lieutenant arrested individuality in a group. (4)
23. What is, as is, is not Francis. (6)
24. As a chook, it's a pale imitation. (5)
26. Copies primates. (4)
28. Five love ten who voice their result. (3)
29. Nasal negatives found in 9 down. (3)



# Really?!



Eran Segev talks with David Aaronovitch, conspiracy theory investigator, on the what, why and how to deal with conspiracy followers.

**D**avid Aaronovitch is an award-winning journalist with a regular column in *The Times* newspaper. He is also a broadcaster, a documentary maker and the author of two books, the latter of which is *Voodoo Histories*, about the role of the conspiracy theory in shaping modern history.

*David, can you tell me a little bit about your role as a journalist? I know you're interested in conspiracy theories, but that's not your only interest.*

No it's not. I've been a journalist in TV and radio and print for more years now than I'd like to mention. I'm mostly interested in international affairs, politics, culture and the media, and the interrelationship between them. So that's the area that I write about for *The Times* as a columnist and I've also

worked on other newspapers too.

[In addition to *The Times*, Aaronovitch has written for *The Independent*, *The Guardian* and *The Observer*, winning a number of awards, including Columnist of the Year 2003 and the 2001 Orwell prize for journalism. - Ed]

*You wrote a book about conspiracy theories, of course, and the introduction of the book is titled "Blame Kevin". It describes how you came to be aware and skeptical of conspiracy theories. Can you tell us how that happened?*

I've increasingly been very interested in why people believe what they do. This is largely because I was brought up in a household of communists – my father was a fulltime worker for the British Communist

Party in the 50s and 60s. And that business of why people choose to believe what they do and about commitment has always fascinated me. But one aspect that began to interest me a lot after 9/11 was the area of hoaxes and conspiracy theories – in other words, how people would choose to believe what seems, on the face of it, to be absurd things ... and how intelligent people would believe absurd things.

There was a particular cause the name of which made me say "I need to write this book". And this was when I was with this chap called Kevin, a terrific guy, and we were filming in Tunisia together for a BBC program which was about how, in tourist destinations, the tourists can go about their business completely unaware of the bad treatment and torture of local



dissidents. This was quite a difficult program to do because the Tunisian secret police were watching quite a lot of the places we were going to. Kevin was an ultra-reliable ultra-sensible and intelligent guy to go with. He was acting as the cameraman and we had to travel down from the north to the centre of the country which was quite a long way.

It was on this journey that he suddenly turned around to me and started talking about the moon landings of 1969 and he asked me what I thought about it and I said I'd watched it on television when I was a kid. He then went on to tell me that I hadn't and that it had all been mocked up on a stage somewhere and the evidence for this lay in a series of discrepancies about the photography and so on. And he asked me "What do you think about this?" I said my first reaction of someone who hadn't really thought about it is that I feel instinctively that it would take a hell of a lot more effort to organise a hoax moon landing than a real one - much easier to do a real one, so in a way what you are choosing to believe in

is something much more ridiculous, something much more complicated. And it was interesting to me that you want to believe it.

I thought about this afterwards and I thought there was really something here to be explained. I wondered how you could choose to believe something that was inherently more ridiculous than the thing that you were questioning.

That kind of started me off looking at conspiracy theories. That was about the time that the first conspiracy theories about 9/11 were beginning to appear in 2002. I just simply started looking at all the conspiracy theories, and at least a couple which I had, in a kind of quiet way, had believed in myself, in a quiet way, such as the conspiracy to kill JFK or the idea that Hitler had set fire to the Reichstag.

I looked at dozens. Boiling them down to get a range of conspiracy theories, what they had in common and what was different about them - this was quite a huge task; it took me nearly six years to write the book.

It was really quite fascinating, I could easily have extended the book to include urban myths or conspiracy theories not in Western countries, but there was so many that narrowing them down was really quite

a labour. But I got through it in the end.

*You discuss in the book several possible definitions of what makes a conspiracy theory. You chose one - can you tell us what it is and why you chose it?*

Essentially, it is, if you like, the adoption of a less likely theory as being the most likely theory. That essentially is what a conspiracy theory is. The one

thing you can say about conspiracy theories in their entirety is that they tend to abandon the role of accident and contingency in human life. And to give deliberate agency to almost everything that happens.

For instance, to a conspiracy theorist the First World War was deliberated upon by somebody and its outcome decided by somebody, whereas a historian would see it as combination of a huge number of disparate incidents that combine to create a particular event.

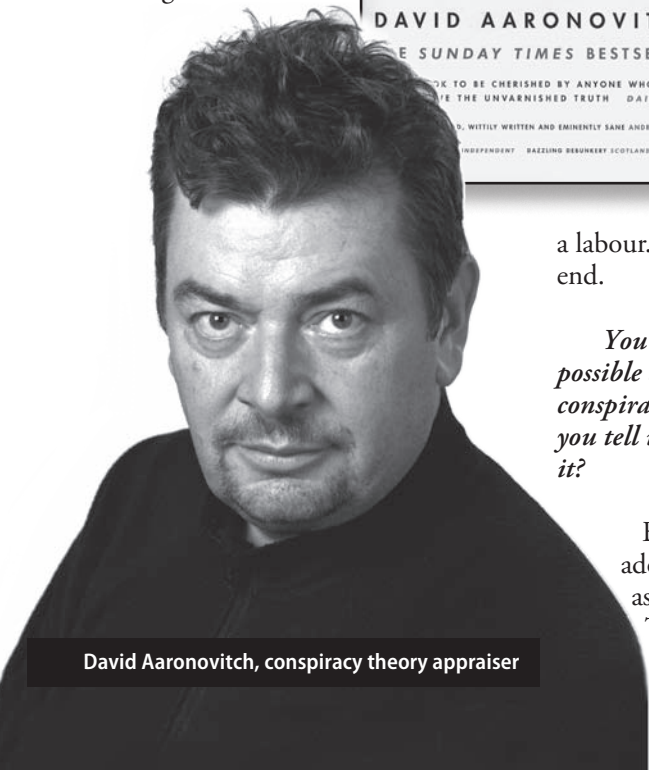
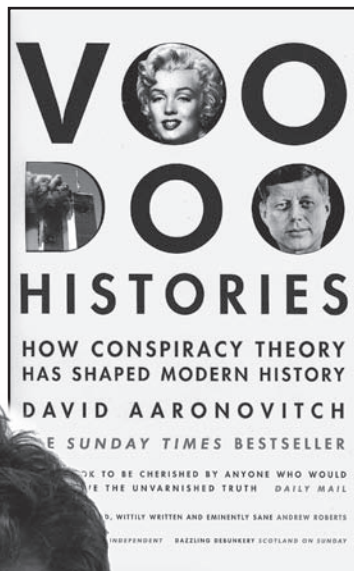
Although conspiracy theories are a huge over-simplification, they are also an 'over-complexification' if you know what I mean. They manage to be both at the same time.

Conspiracy theory is essentially a decision to believe a less likely version of history. That's pretty much what it is.

*You've chosen specific conspiracies that obviously meet that definition, but also cover a range of different types of theories. Could you describe a few of theories that you have covered and why you chose to include those?*

I wanted to include the first conspiracy theory that I look at which is the Protocols of the Elders of Zion, or the idea of a Jewish world conspiracy, but it could actually stand in for the notion that a small group of people could, on a global level, try to cause something to happen, which is a constant theme in a certain type of conspiracy theory. The second one that I look at is a sponsored conspiracy theory, ie the one in Stalinist Russia, where there was the gigantic Trotskyite conspiracy where all the accidents and industrial problems that Stalinist industrialisation had led to was somehow the product of deliberate sabotage by these people.

I look at what you might call pseudohistory in terms of what led up to Dan Brown's books, not that these are in the same league. But it's very interesting psychologically - the Holy Blood Holy Grail idea, that the Catholic Church conspired to suppress the secret bloodline of Jesus. In that one I'm looking to see what it is that people like so much.



David Aaronovitch, conspiracy theory appraiser



# Really?!

Continued...

*I'd love you to tell us what the name of that chapter is.*

It's "Holy Blood, Holy Grail, Holy Shit". Incidentally, that's one of the things about book-writing – I put that chapter heading down always expecting that the publishers demand that I take it out. I suppose, in a way, I was hoping that they would, but when they didn't I left it in.

And then there are the conspiracy theories which involve specific iconic individuals like JFK, Marilyn Monroe or Princess Diana, where I think something else is happening there which tries to explain the sudden taking away of an iconic and important figure. There's a whole slew of conspiracy theories which are essentially similar from the 1980s that show that conspiracy theories, to use the Dawkins word, are memetic. In other words, there's a fashion for certain types of conspiracy theories at certain points of history which then disappear.

Well, if you were to believe in most conspiracy theories you wouldn't expect only fashionable theories to be true, so this tells us that the construction of conspiracy theories is not totally unlike the construction of, let's say, religious movements. It has a similar kind of faith-based element to it.

That's the kind of range that I tried to get in. Coming right up-to-date in the American paperback edition are the anti-Clinton and anti-Obama conspiracies, including the 'birther' conspiracy about Obama [that Obama is not a natural-born citizen of the US and is therefore ineligible to be president], which show that conspiracy theories can often be the rationalisation by the politically defeated of their own defeat. In other words, something like the Republicans only lost because of the devilishness of this man Clinton or the incredible fiendish capacity of this man Obama.

*Since you talk about current politics, I wanted to ask you about Dr*



*David Kelly who committed suicide after revelations about the war in Iraq. I was just wondering if you felt you might be taking a bit of a risk by including something as recent as that?*

I imagine when you say taking a risk, you mean because I might turn out to be wrong?



*It's something which is still high on the political agenda in Britain and perhaps not seen as a conspiracy theory like the JFK theory might look to the person in the street.*

In my mind that would just make it all the fresher, all the more salient, and that people are actually dealing with one which is 'on the go' now. My motivation now was that the book which purported a murder and a conspiracy was an almost perfect example of a technique of constructing a conspiracy theory. I just couldn't let it go. It was absolutely the model of normalising the abnormal and abnormalising the normal – reversing everything in order to come up with the conclusion the author wanted to come up with.

I wanted to show how he had done it. How he had overlooked

anything that negated his case, or cast doubt on the evidence that negated it, and how he exaggerated anything that supported his case until eventually he'd kind of stood this mountain on a pinhead of actual conjecture with no evidence whatsoever. To the extent that nevertheless people reviewing his book said he put forward a convincing case, to which true skeptics would say: "If this is a convincing case, what on earth is your idea of an unconvincing case?"

In other words, how easily convinced some people are.

There are reasons why people are easily convinced by some things and not by others, and that is largely because you want to be. And that's quite an obvious but nevertheless important lesson.

*Basically you use that as an example of what a conspiracy theory is to people who could aware of the details and could follow it in the press. And then they could see, through your analysis, how this pans out as a conspiracy theory.*

This particular one, the Kelly one, comes up every four or five months, because there's a group of doctors – there are six of them or so – who every now and then demand a new inquest or inquiry. And the story is reported by certain papers as if it had just happened. So that the *Daily Mail*, for instance, has now reported this four or five times. And every time it's done this it's as if this is a significantly new story when in fact it's exactly the same old people saying exactly the same old thing, adding absolutely nothing to what they've said before. And this because it kind of fits the agenda of that particular newspaper, although not so much in their case because they actually believe it.

It also speaks to the kind of belief that sometimes happens that governments are so wicked in the west that they are capable of anything secretly.

*Including deleting all the emails of those doctors?*





That's the kind of classic – every time a conspiracy theorist has a problem with his or her computer – and it's almost always his computer – then in that case that's the authorities doing something to them.

Now it is true, as we know from China and Iran that there are organised state hackers, that sometimes do this sort of thing. But on the whole we can honestly say that most conspiracy theorists in America and Britain are fairly safe from their governments.

One of the things I put into an article I wrote for *The Wall Street Journal* was that it seemed to be a fact that, despite the fact that the conspiracy theorists were the people who had discovered the supposed truths and were proving it about these people in power who were capable of any act, no matter how despicable, that none of them had ever actually been killed themselves.

*The Wall Street Journal* was rather worried that I might be encouraging the killing of conspiracy theories and made me tone down that part of the article.

*It sounds like you don't really expect to convince any conspiracy theorist.*

Well, actually, I have had several communications – emails and letters from people who said they had changed their minds as a result of reading the book. I have to say I was a bit surprised because on the whole if you believe in conspiracy theories and you're confronted with a book that says, at the outset, that this is mostly a debunking exercise, most conspiracy theorists are not going to want to read it. But some people do ... some people who believe in conspiracies are genuinely open-minded and questing thinkers who have just not managed at that moment to calculate reality and the odds on reality. They have a skeptical cast of mind but have not really applied their skepticism with any kind of rigour. Every now and then – and it's been immensely encouraging – I've got someone who says they have read the book and said they have changed

their mind as a result of it. Now, I don't expect that to be a huge number but you know that as a skeptic yourself the pleasure of that one person who says that to you is worth all the rest.

*The thing is you often expect conspiracy theorists to take their general line of conspiracy which is "evidence against the conspiracy is evidence of the conspiracy". So a book like yours could actually make some people stronger in their beliefs, because here is this important journalist writing this book with all this evidence and dedicating 300 pages to it, so this must be true.*

One of the things I love about modern conspiracy theories is that increasingly they have to take on the appearance of scholarship and that means that, if you're a person who is a professor, like David Ray Griffin who is a theologian and has written eight books about 9/11, which if it's packed full of footnotes, then that per se constitutes scholarship because it has a scholarly appearance.

What is actually in the book and what the footnotes refer to might be absolute rubbish but as long as it looks like something like it you might think that it is. The point that you're making is absolutely right. When I first saw the documentaries on the BBC that the Holy Blood Holy Grail books were based on and that led up to the famous *da Vinci Code* introduction from Dan Brown where he said that a number of things in this book are actually true, and then goes on to enumerate a number of things which are complete rubbish. He's got them largely from Holy Blood Holy Grail – that was written by people

who created these documentaries for BBC television in its historical and archaeological series called *Chronicle*.

I think we were entitled to believe, and I did as a teenager, because it was on the BBC and one of the BBC's leading programs that it was true. I thought that the man presenting it must be an historian. I did not realise that he was actually a TV scriptwriter for a science fiction series.

*But he was on television. It's like "It's in the papers so it must be true."*



I think that's right. We get these appetites for a lot of conspiracy theories. I'll give you an example. I think I'm right in saying that when it comes to the bombing of the USS Liberty in 1967 by the Israelis, the only documentaries that have been shown are those that claim it was a conspiracy.

# Really?! *Continued...*

Nobody has ever made a documentary, as far as I know, which shows the truth – what I think is almost certainly the truth – which was that it was a case of mistaken identity.

*I wanted to ask you, what is it about people who are self-professed sceptic, like Jim the fellow you mention in the last chapter who was with you on the school board, who are really very sceptical in many areas of their lives but they buy into one very specific conspiracy theory, and they may even laugh off others and would definitely have a general sceptical attitude.*

This guy that you mentioned, Jim, was an interesting kind of a skeptic because he wasn't really a skeptic at all. It was a form of self-description. He didn't believe anything that the authorities told him. Now that is not a skeptical position – a skeptical position does not start off from the position of “I am always being lied to.” you might not be being lied to. It may be perfectly reasonable to expect, in quite a lot of situations, that you might be being told the truth. Secondly he was incredibly credulous when it came to theories which contradicted what he regarded was the official view.

I'll give you an example of what this particular man believed. He firmly believed that people who do mental illusions were actually mind readers. I said to him, look, there are two things here. Firstly, when you see a magician being sawn in half, you don't think he's really been sawn in half, do you. You know that it's a trick and that it's a brilliant trick. You don't know how it's done. It's exactly the same with these mental illusionists.



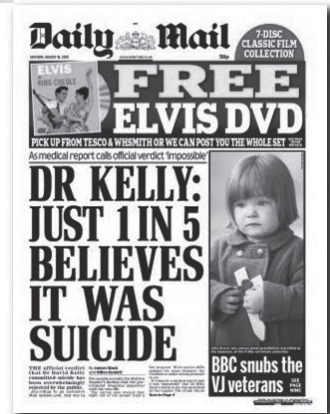
**Conspiracies:** Dr David Kelly (left) made revelations about the Iraq war; the *Daily Mail* (below) published revelations about David Kelly's death; and the Protocols of the Elders of Zion (bottom left) created revelations about the Great Jewish Conspiracy.

The other thing is, the clue lies in the word “illusionists”. It's why they call themselves illusionists because it's an illusion. You want to believe it's true. In other words, he was no kind of skeptic. In his mind, his total lack of skepticism emerged from his kind of self-heroising notion of himself as a skeptic.

*That's why I said that not only people like him who are self-professed skeptics, but people who are really skeptical in their attitudes. I do make that distinction because I do know that a lot of people would say something like “You know I'm skeptical in general” or “I used to be a skeptic, but ...”. We hear that a lot. But I was wondering about the people who are skeptics. Do you encounter that a lot?*

You can see why it happens, because governments do sometimes lie, companies exaggerate and people cover things up, and so on. You can decide whether or not you think such things as lying and deceit are habitual, and you can decide if you think you are likely to get away with it or whether things are too complicated for people to have planned out. That's sometimes in the mix. You can be skeptical about the claims that people make for themselves.

But being skeptical means saying, either examining this myself or this is the nearest thing I can get given the time I have available, and given what I think I know about expertise and my

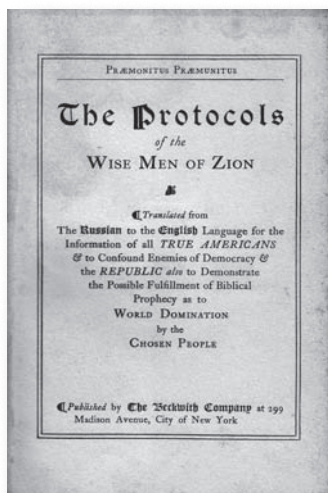


experience tells me what's going on. We face a whole series of classic situations like in the technologically and scientifically very complicated world. What are we going to take on trust and what are we not going to take on trust and why do we do it? When we try to assess, let's say, whether or not a vaccine has some of the effects that are claimed for it by some people, we're not in ourselves going to be able to step into the laboratory, put on the white coat, don the mantle of the expertise, and say, right, we've tested it for ourselves, so we can tell you what the truth is. We're going to have to do a much foreshortened version of that which involves us assessing, in the time we have to do it, the various arguments and the various expertises that people involved in this take a position on.

That's where the true skeptic must stand. The true skeptic is not somebody who says I seek to achieve an Olympian knowledge of everything. It's impossible.

*Do you think of yourself as a skeptic?*

Like most of us, I regard myself as the one true skeptic. Don't we all? Yes, I think I do regard myself as







a skeptic. I'm increasingly a skeptic. I started off being fairly doctrinaire politically because that was my inheritance. And I think that experience has led me to try and form, if you like, a properly skeptical cast of the mind, including knowing when I may need to take things on trust, because that's important too. To put it in its obvious context, when you step into an aeroplane you put yourself in the hands of the pilot. You choose to do this dozens of times over. This is a rational thing to do, otherwise we couldn't achieve anything.

If you have a series of really bad air accidents that were unexplained, that might be a less obvious thing to do.

So, yes, I do regard myself as a skeptic ... a proper skeptic.

I have to say my claim to being a skeptic would be strengthened if I had more scientific knowledge. I'm a classic product of the division between the arts and the sciences in the sense that I had nearly no scientific training whatsoever.

I have had to look at people who I trust whose instincts and whose approach to life seem to me to be properly skeptical in order to understand where I might appear on that spectrum.

Let's take somebody like Ben Goldacre, who is someone I admire very much. I don't know the things that Ben knows, consequently I choose to trust him and allow him to have expertise for me. This can seem like a very unskeptical thing to do.

*There is one last thing I'd like to ask you. One thing that skeptics often find difficult when dealing with true believers is how to treat them with respect, because often their beliefs are so patently ludicrous that you can't help but lose a bit of respect. Your book is very entertaining, often funny, but it is also very detailed. At no point anywhere in the book do you dismiss claims on appearance only. Can you suggest to skeptics out there how one might be respectful of a conspiracy theorist without writing a 300 page book, because not all of us can do that.*

The first point is, as I said to you earlier, I have been, not a conspiracy

theorist in the sense of active in it, but a believer in certain conspiracy theories. Maybe in the case of JFK because I once saw a documentary which mentioned the 'magic bullet'. But also because I found the idea of the conspiracy a more interesting story. I actually liked the story better. It is more satisfying. I mean, that's one of the things to remember about quite a lot of

faith, I think it becomes much easier to deal with people who take that as the next stage forward and make those a systematic part of their lives. In other words, they're just doing what we do but more so.

Sometimes it becomes more urgent. We can take the example of Jim Carrey and MMR. Jim Carrey decided to make a major campaign



these stories that they are better stories than the truth.

Let me give you a tiny example of the way we tell stories about ourselves. It was pointed out to me by a number of friends who work in psychoanalysis or psychotherapy, people who are continuously giving back-histories to things like their illnesses or anthropomorphising the weather: "It always rains on my birthday." Or football supporters, for instance – "The referee doesn't like my team. My team always gets the bad decisions against it." Or, "we always are scored against in the last minute." A whole series of notions in which we impose a narrative and an agency on what is actually a series of fairly random events.

Another thing about having respect for people is because we all do it. If we recognise in ourselves the tendency and the desire for a better narrative and for

against the MMR vaccine. If he's successful, kids will die of measles who don't need to die. You need to be very very firm with Jim Carrey and people like him about the consequences of his way of thinking. I mean that you also recognise that it also comes out partially from the experience his girlfriend had with having an autistic child, and the desire that we have to have an overarching and clear explanation for the catastrophes that happen to us. ■



*Editor's note: This interview was first broadcast on The Skeptic Zone, [www.skepticzone.tv](http://www.skepticzone.tv).*

About the author:

**Eran Segev** is president of Australian Skeptics Inc.



# Out of the shadows

Michael Wolloghan talks with post cult counsellor Gillie Jenkinson about abuse, pseudo-personalities and introjections.

**G**illie Jenkinson is the popular and respected director of Hope Valley Counselling in Derbyshire, England. She specialises in offering counselling and psychotherapy to those who have left manipulative, destructive cults. Jenkinson has made a reputation as an effective and engaging speaker and will be venturing to Brisbane and Sydney this April. She will be presenting a seminar on the mental health issues faced by ex-cult members and a recovery model that assists ex-members find their feet again.

She demonstrates a unique ability to combine her insights, skills and experience to help others. It was my pleasure to talk to Jenkinson about her upcoming Sydney seminar.

**Q** *Firstly, I'd like to briefly know about your experience and qualifications in helping people recover from toxic, abusive cults.*

**A** There is no specific training course for therapists to help people recover from toxic and abusive cults, so it is difficult to get qualifications for this specific work. Because of this I decided to get trained as a regular professional counsellor and psychotherapist and am now accredited in UK, have supervision and work to a code of ethics. On top of this, I attended Wellspring Retreat in Ohio twice as an intern and learned a great deal from Dr Paul Martin (who sadly died in 2009) and the whole setup there. I also visited MeadowHaven, a residential therapeutic community south of Boston, USA, for a few days to see how their setup works. Both these visits taught me a great deal.

The other way I have learned about this work is by regularly attending International Cultic Studies Association conferences which are always a great

place to learn about working with cult leavers. The publications produced by ICSA are very informative and it is a good network of others interested in this field.

My own experience of being in and exiting a cult in the 1970s also informs my work with others. I have many years' experience supporting and counselling XMs [ex-members].

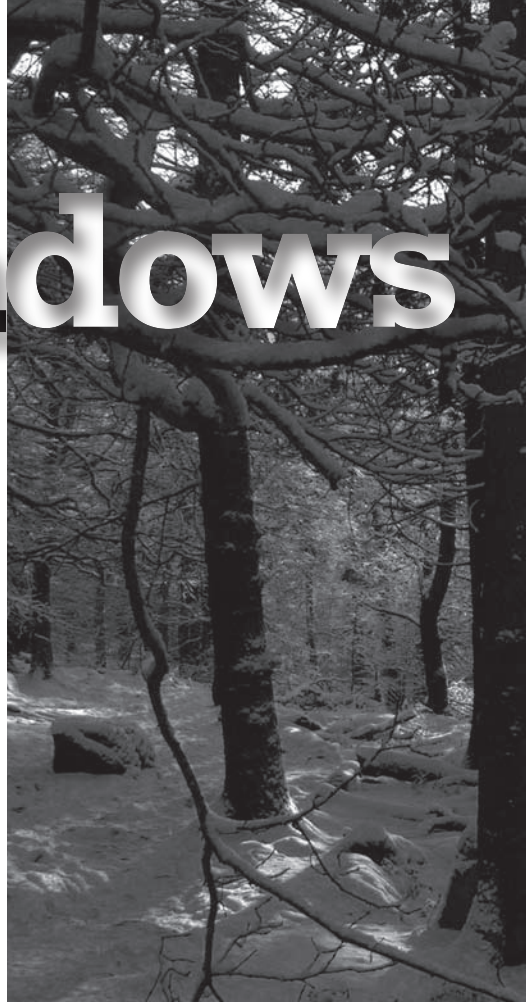
**Q** *What are the common issues in post-cult recovery? What are the effects after leaving a cult?*

**A** I find that cult leavers often feel a great deal of shame at having been taken for a ride and often blame themselves for being 'so stupid' instead of realising that they may have been subjected to deceitful recruitment techniques (what was in the box was not what they were expecting because the box had a different picture) and that the whole thing is more complex than they realise. Margaret Singer said you cannot be subjected to thought reform and know it. I agree and so I try to highlight this side of things to cult leavers.

Many cult leavers also suffer disorientation, depression, traumatic side effects such as dissociation and may have developed a cult pseudo-personality which is a new personality formed in order to be a member of a particular cultic group/relationship.

**Q** *Do you think there are similarities between recovering from domestic abuse, work place bullying and cultic abuse? What are the differences?*

**A** I do agree there are similarities. I think the following (and more) occur in all:



- Harassment
- Authority structure is coercive
- Intimidation
- Making you unnecessarily distrustful of others – paranoia about those who are 'outside' the relationship
- Upsetting you on a regular basis over minor things to reiterate control
- Threatening behaviour
- Violence
- Abuse - psychological, physical, sexual, financial or emotional
- Putting you down in front of others.

Which in turn causes:

- Anxiety
- Dread
- Low self esteem
- Undermined confidence
- Ashamed to admit it is happening
- Believe it is 'my fault', and
- Feeling inadequate.

I believe for those who have been in a cult it may be all these and more.

Recovery from these is challenging and it's vital that the therapist knows about the dynamics that occur with domestic abuse, workplace bullying and cults. They need to know about thought reform (sometimes called mind control),





Gillie Jenkinson, Hope Valley Counselling, Derbyshire

influence, narcissistic personality disorder among other things. They need to be able to offer a relational therapy but also offer psycho-education so that those who have suffered these terrible abuses can be helped to understand what has happened to them.

Without the therapist understanding the issues, it is possible that the client will continue to flounder and may even end up being victimised again because they cannot recognise what has happened to them. It is important to look first at the abuse they have suffered and not to interpret the situation as being to do with early childhood.

Those issues can be addressed later when looking at what may have made the individual vulnerable to the abuse. Of course the vulnerability may simply be being in the wrong place at the wrong time - you cannot necessarily know when you go into a new job, get married or join a class or group that it will turn out to be abusive. You cannot know when you leave home to go to university that trying to find new friends may result in your being recruited into a group which takes up years of your life and harms you.

**Q** *I've heard you will be discussing the 'cult pseudo-personality' at your Sydney seminar. Can you explain what that is and how this new identity gets created within a cult?*

**A** XMs who have been seen shortly after leaving a cult often show character traits and attitudes of their group – I suggest this is the cult pseudo-personality because it is different from who they were before the cult. I believe that the cult pseudo-personality forms in the cult by 'introjecting' the beliefs and behaviours of the group. Introjection is a normal developmental process but, like anything, it can be used in an unhealthy way.

Introjection is defined by Gestalt writers Perls et al [Gestalt Therapy:1951] in this way: "Material – a way of acting, feeling, evaluating – which you have taken into your system of behaviour but which you have not assimilated in such fashion as to make it a genuine part of your self. The self takes the 'material' in on the basis of forced acceptance, a forced (and therefore pseudo) identification and that although it is a foreign body, the organism resists it being dislodged."

**Q** *Why do you think the concept of the pseudo-personality is important to understanding the cult recovery process?*

**A** I think the issue of cult pseudo-personality is key to recovery and suggest many mental health issues faced by XMs may be held within the pseudo-personality (although there may be pre-existing mental health issues that need addressing over time).

It is important to have a framework in which to work. In regular counselling and psychotherapy the framework is clear from the training but because of the very particular abuse suffered in cults and domestic abuse and workplace bullying the abuse needs addressing in a particular way – as I've said above – with a psycho-educational/relational approach because the client may not understand what on earth has hit them. It is vital to understand the client's belief system and not dismiss it as crazy or psychotic until it has been fully explored.

**Q** *How does your post-cult counselling differ from others? What exactly does it involve?*

**A** When I work with XM clients, the first thing I do is, as with any client, set the boundaries and make clear what they will receive from me, my training etc; we discuss my 'agreement for post-cult counselling'. Because many XMs need more input than a 50 minute

# Out of the Shadows

*Continued...*

session once a week, I offer 'time away' in the Derbyshire Peak District where I live. I have an aim to see a centre set up in this area, but until that happens clients stay locally in a hotel, B&B or holiday cottage and come and see me for approximately four hours a day, depending on funds.

We usually start with their telling me what has happened to them and alongside this we address a number of psycho-educational areas. I believe the pseudo-personality is laid down in layers, like pieces of a jigsaw, and I address these pieces under a number of subject headings:

- Thought reform
- Anger & rage
- Influence
- Hypnotism and altered states
- Spirituality values
- Profiles of a narcissistic cult leader or guru
- Critical thinking and choices
- Boundaries to relationships
- Trauma and the body
- Sexual abuse and rape, and
- Reconnecting with family and friends.

In practice, I will often start with Lifton's eight components of thought reform and give a sheet to my client to fill out their experience under each heading. This can work for cult, bullying and domestic abuse. These components are:

- Milieu control – don't look out and don't look in – internal/external control of communication
- Mystical manipulation – they are so spiritual you believe them. Planned spontaneity creates mystique justifying extensive personal manipulation
- The demand for purity – you were no good before and must become pure as defined by group/relationship
- The cult of confession – spill all the beans. Tell them everything and

especially that you are at fault

- The 'sacred science' – they know 'The Truth' better than you – the ultimate moral vision
- Loading the language – don't think about the words – you use thought terminating clichés
- Doctrine over person – what the cult believes is most important replaces reality of the individual
- Dispensing of existence – we know who should exist and who shouldn't, those who have a right to exist and those who do not.

**Q** *What ethical standards, philosophy and approach do you have to counselling?*

**A** I am accredited with the United Kingdom Council for Psychotherapy and follow their code of ethics. I think it is vital that I always remember that the therapist has more power (and information) than the client and that I am constantly aware of this and give my clients as much choice and power as possible.

For example, where to sit in my room, which subjects to address first, how to go about the post-cult counselling.

My training is mixed as I did a diploma in Pastoral Counselling, which was an eclectic approach and we looked at a number of different modalities as well as Christian spirituality. This helped me question how to work with spirituality issues and taught me to be open to people's beliefs while bracketing off and holding my own background and spirituality. I am open to sharing if a client wants to know where I am coming from spiritually.

I then did an MA in Gestalt psychotherapy. This was an integrated training and taught me about the Gestalt approach, which I really enjoy. It also taught me how to work with developmental issues and transference. The mixture of developmental and psycho-educational (raising awareness) has been very helpful for working with XMs as I understand the depth of pain and trauma as well as the

need to deal with things on a cognitive and behavioral way. On my MA I did research into "What helps ex-cult members recover from an abusive cult experience?" This was qualitative research and I asked eight XMs what had helped them recover.

**Q** *Do you think governments need more programs and initiatives in the area of cult recovery?*

**A** Of course. Many XMs leave the group disorientated and un-socialised (if that is a word). For those born and raised in a group, it is often terrifying to leave, especially as society has very little understanding of what they have grown up in and have no idea of the world in their head which is so different to society's view of life.

Many leave cults destitute and unable to pay for any sort of support or counselling. Because of this, and because our government or society in UK don't recognise the problem, we have set up a charity EnCourage Survivors of Cults and Abuse. We are currently fundraising in order to subsidise post-cult counselling for XMs and to fund a centre in the Derbyshire Peak District, so if you have a spare million do contact us!

Most European governments address the problem of cults by providing information, but this is not enough because for some it is too late. Governments need to address the problem from all angles; information giving – warning; funding exit counselling; funding places for those to go when they leave; and post-cult counselling. ■

**Note: Gillie Jenkinson's seminars**

**Brisbane: 7pm, April 12, Quakers Meeting House, 10 Hampson Street, Kelvin Grove.** (infoqld@cifs.org.au; 0413-082-344)

**Sydney: 6pm, April 19 "Golden Grove", 5 Forbes St, Newtown** (www.cifs.org.au/)



About the interviewer:

**Michael Wolloghan** is an investigator of cults and strange religions.





# THE empathetic skeptic



Richard Hughes asks if skeptics are better.

There's that old quip in skeptical circles that if skeptics always seem to think that they're right, it is because more often than not they are.

It is a flippant attitude to take, make no doubt, but there's more than a grain of truth in it.

Steering away from some of the more contentious topics of discussion (sex, politics and religion – to name just three), there is a great deal of consensus within the skeptical community on most matters. Importantly, this consensus arises not from authoritarian dogma or personal revelation, but through the application of critical thought to the understanding and analysis of alleged phenomena.

This then raises a curious conundrum: If we're so right, then how is it that the rest of the population can be so wrong? Why is it that so many people believe unscientific, often bizarre claims?

A popular fiction within the skeptical community is that people believe weird things because they are stupid, or at least less intelligent than skeptics. At The Amazing Meeting Australia, none other than skeptical hero and legend James Randi made a comment to that effect, and (joke or not) it was greeted with applause from the audience.

Such sentiments have also surfaced during private conversations with skeptics, though not always explicitly. Often, if queried directly, people will deny that they hold such an opinion. Yet, as is often the case, off the cuff remarks and actions will often be at variance with this assertion of neutrality. There are parallels to be drawn here to the casual '-isms' (racism, sexism, etc) of society at large, made small and specific in the confines of the skeptic subculture.

This puts us then rather ironically at odds with reality. The simple fact of the matter is that skepticism and intelligence are not one and the same thing.

That's not to say that skepticism is unintelligent – that too would be a falsehood – but that it is not generally required in order to excel academically, or even just to be a particularly 'sharp' individual. History is littered with examples in support of this. Linus Pauling is probably the most famous example of this, though more recently the psychologist Darryl Bem made news with an announcement of spurious evidence for the existence of Psi abilities.

Topping them all, however, is Dr Kary Mullis, the 'quintessential crank'. In his autobiography *Dancing Naked in the Mind Field*, Mullis documents his encounter with an extraterrestrial in the form of a "glowing raccoon". Yet he is also a Nobel Prize winner, due to his work developing PCR (a now indispensable technique for most research involving DNA).

By the same token, a well-tuned skeptical radar is no guarantee of intelligence. Skepticism is, on a fundamental level, a filter, not a constructive or creative process.

In light of all this, it seems like now might be a good time to call for a renewal of empathy in the skeptical movement, as an introspective exercise more than an outward manifestation of behaviours. Such a meditation may well result in a change of habits, but more importantly it can provide greater insight into how you might plant the seeds of critical thought in any particular person's brain.

When dealing with believers, then, it is important not to dismiss them as stupid or ignorant. Try to

understand where they're coming from, and why they might believe what they believe. Even, perhaps, try to nut out how they might be viewing you – after all, if you play directly into their preconceived notions of what a skeptic is, you're unlikely to make any headway.

That said, I want to make clear what I'm not calling for: uniform 'accommodationism'. Within the skeptical community there is room for a large variety of styles and personalities, and tactics should vary to account for a multitude of situations. Empathy does not mean we should all hold hands and sing Kumbaya. There is a time for the gentle touch, and a time for tough love. There are certainly situations that call for hard words and verbal flaying, particularly with respect to prominent or dangerous individuals who seem incapable of empathy themselves.

Such dangerous individuals are the exception, however, and not the rule. It would be foolish of us to treat every anti-vaccination proponent as Meryl Dorey, every cold reader as Sylvia Browne, and every creationist as Ken Ham; worse still would be to think of them as necessarily ignorant or stupid. Personal attitudes – no matter how well hidden we think they may be – tend to leak out into our mannerisms and treatment of others.

In short: Let's make empathy the rule for the skeptical movement, and not the exception. We can only be stronger for it. ■



About the author

**Richard Hughes** is president of the University of Melbourne Secular Society, and a member of the Young Australian Skeptics. His blog is at [www.divisiblebypi.com](http://www.divisiblebypi.com)

# Poles Apart



Ken McLeod takes a break from the AVN – sort of – to look at some silly science.

Well, you can stop worrying about water fluoridation and alien invasions and vaccines and orgone radiation from cellphone towers, or any of the other disasters that are slowly creeping up on us to wipe out humanity. No, it's not because these threats don't exist; it's because there is a humanity-destroying disaster unfolding right before our eyes, and we'll all be dead before any of them can hurt anybody.

Let me explain. The good folk at the Australian Vaccination Network have alerted us to the unfolding disaster that has been revealed by mass bird deaths and the change of an airport runway's designation at Tampa Florida.

In a long email sent on January 14 2011, from one of the AVN's leading lights, "oufreshideas," she reveals that: "It all begins on a runway in Tampa, where airport officials recently closed that runway in order to change the numeric designators painted there. Why are those numeric designators being changed? Because the Earth's magnetic poles are shifting and the numbers previously painted on the runway no longer match up with the magnetic measurements of sensitive airplane instruments."

Wow! Who could have guessed that the Earth's magnetic poles are shifting? Who could have guessed that runway designations have to be changed because of that? Scary stuff! But it gets worse.

"The Earth's magnetic field 'flips' (or reverses polarity) every few thousand years. This is called a geomagnetic reversal. In between these flips, the magnetic field can become quite weak and chaotic, causing 'turbulence' in the field, which can effectively cause weaker gaps in the magnetosphere.

"These magnetic gaps or weaknesses can allow outside influences that normally would not penetrate the

magnetosphere to reach deep into that magnetosphere, theoretically all the way down to where birds fly at very low altitude.

"The weakening Earth magnetosphere was allowing 'poisonous space clouds' to enter deep into Earth's atmosphere where it is coming into contact with birds.

"These 'space clouds' are called Noctilucent clouds which exist at very high altitudes (roughly 50 miles) and accumulate space dust from micrometeors and other sources.

"These deadly space clouds are reaching into the lower atmosphere and killing these birds in flight ..."

What, exactly, would be found in these deadly space clouds that might be killing the birds? she asks and offers the following possibilities:

- "These clouds might be moving along with gaps in the magnetosphere that would invite deadly radiation to 'fry' the birds in flight"
- "The deadly space clouds could have frozen the birds in flight with blasts of extremely cold air."
- "The most likely explanation is that the birds were killed in-flight by changes in the composition of the air they were breathing. And as it turns out, Noctilucent clouds are largely made of a poisonous gas known as hydrogen cyanide."
- Secret weapon testing and the High Frequency Active Auroral Research Program (HAARP) "could be altering the magnetosphere in ways that are contributing to the invasion of our lower atmosphere with these Noctilucent clouds composed of hydrogen cyanide."

So there you have it. The mass bird deaths are caused by radiation or supercold air or poisonous gasses brought to the lower atmosphere by a weakened magnetosphere caused by



secret gummint weapons projects, and we're all doomed.

She goes on to say: "Could humans be next? The really concerning part about all this is the sudden realization that if these poisoning clouds of Hydrogen Cyanide could reach into our lower atmosphere, they could also theoretically reach ground level. That's where humans live, of course, and if such a poisonous cloud reached down into a major city such as New York, it would cause the mass instantaneous death of potentially millions of people."

There's just a few problems with this scenario, which should be bleeding obvious to anyone with a high school science education, and certainly were to this crusty old navigator.

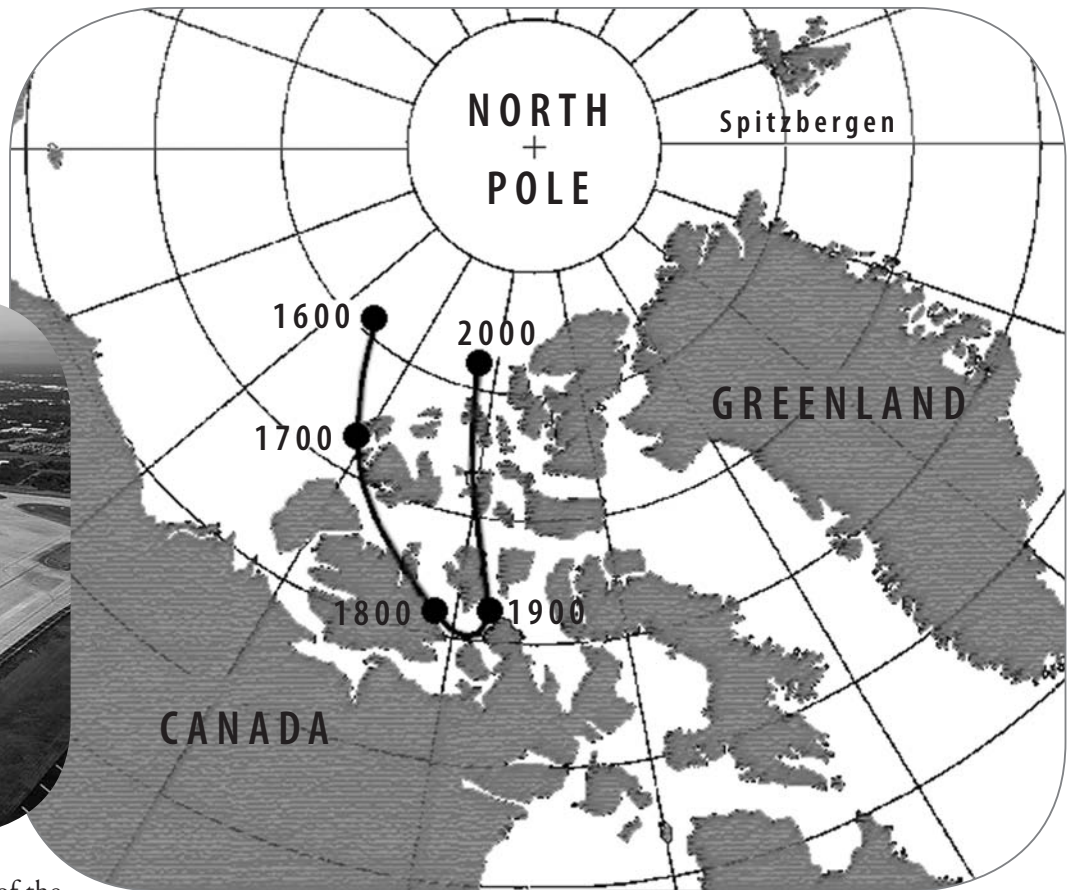
Firstly, the movement of the Earth's magnetic poles is a well-understood phenomenon, and has been known by navigators as long as we have used compasses. The difference between bearings to True North (the Earth's rotational axis, or North Pole) and the North Magnetic Pole is known as 'magnetic variation'. This changes at a known rate as the magnetic poles





**Right** Movement of the North Magnetic Pole over the last four hundred years.

**Below** Tampa airport, where the numeric designators have changed!



move due to the fluid nature of the Earth's core.

The magnetic variation at Tampa Florida is  $5^{\circ} 15' W$  currently changing by  $0^{\circ} 5' W/\text{year}$ .<sup>1</sup>

Tampa has undergone a change of magnetic variation of  $3^{\circ} 9'$  in the last 100 years. Runways are designated by the first two numerals of their magnetic bearing, rounded to the nearest  $10^{\circ}$ , so Tampa's Runway 18L got its designation from its magnetic bearing at the time it was built of  $183^{\circ}$ . Many years later, the magnetic bearing of the runway has changed to  $186^{\circ}$  so it has been designated Rwy 19L. (The "L" designation means the left of two parallel runways.) So there is nothing unusual in a change of runway designation, but it is rare enough to excite the conspiracy theorists. Nothing to worry about here, folks.

Yes the Earth's magnetic poles do undergo 'geomagnetic reversal', and reversals are recorded in the magnetism of ancient rocks. Neither the cause nor the predictability are well understood, the last such reversal occurring 780,000 years ago, and the next one is probably tens if not hundreds of thousands

of years away. The earth's magnetic field strength is at about its historical average. Nothing to worry about here, folks.

Noctilucent clouds (from the Latin for "night shining") are made of crystals of water ice. They are not made of "space dust" or hydrogen cyanide, and are not being lowered to the altitude birds fly at, or lowered to anywhere. Nor are they "frying" birds with radiation, nor freezing them. Nothing to worry about here, folks.

Nor are secret weapon testing and the High Frequency Active Auroral Research Program (HAARP) "altering the magnetosphere"; whatever changes are happening are entirely natural and normal. The current theory of the cause of mass bird deaths centres on flocks of birds being panicked by New Year's fireworks. As the US Geological Survey's National Wildlife Health Center pointed out: "There is nothing apocalyptic or anything that is necessarily out of the ordinary for what

we would see in any given week."<sup>2</sup>

So get back to worrying about something else. There's nothing to worry about here except the mindset of the people who circulate this rubbish. ■

#### REFERENCES

1. The US National Oceanic and Atmospheric Administration has a good website for finding and predicting magnetic variation for any location on Earth at <http://www.ngdc.noaa.gov/geomagmodels/struts/calcDeclination>
2. <http://www.abs-cbnnews.com/lifestyle/01/08/11/mass-bird-and-fish-deaths-stoke-curiosity>

About the author:

**Ken McLeod** is a retired navigator and air traffic controller, search & rescue national manager, Australian aviation representative on two United Nations committees, and a Senate researcher. He was also 2010 joint winner of the Skeptics' Thornett Award for the Promotion of Reason, awarded for his campaigning work against the Australian Vaccination Network.





# Show Buzzness

Stephen Wood experiences a novel diagnostic tool – rods, wands and conductivity.

In about 2006, I was seeing a chiropractor for a lower back issue. At the time I had no strong opinion on what was causing my problem, and neither did any particular medical specialist, so I was a little experimental in some of the healers I consulted. Although I tried conventional doctors, chiropractors, acupuncture specialists and physiotherapists, there was little progress in reducing the problem. My chiropractor then gave me an unsubstantiated recommendation for a new type of treatment. My chiropractor was an advocate and user of this treatment, but though she didn't describe it in any great detail to me, I booked in and attended a session. It makes a good story, but as a scientist myself, the skin crawls (or in this context, is that vibrates? – read on).

The following statements are based on my reading and interpretation of websites and pamphlets provided by the company in question. Complementary and Ecological Medicine (CEM) philosophy is that while conventional medicine looks at chemistry/biochemistry of the body, CEM's healing processes evaluate the 'energy' of the human body. The history of the approach comes from Dr Reinhold Voll

who, in the 1950s, developed what is best described as an 'extension' to acupuncture, believing that acupuncture points have a conductivity which can be measured.

To give a specific, one example quoted is that of a lung cancer sufferer who apparently had a lower conductivity in the acupuncture points affecting lungs relative to healthy patients. Dr Voll's findings were extended by James Hoyt Clark (a scientist from Utah USA) who developed a computer program to interpret the meanings of the responses to 80,000 different substances. It's at this point the pamphlet becomes difficult to understand logically. The pamphlet lists a bunch of substances that the system holds in memory, ranging from homeopathic remedies, weeds, animal dandruff (?) etc.

By stating this list it appears to imply that these substances have electrical conductivity – which I'm not sure are to be reversed out to the benefit of the patient, or the conductivity 'applied' to yield better health.

To describe my experience more specifically, the nurse (not a doctor, but a nurse with postgraduate training in tropical medicine, neurosurgery and environmental medicine, though the pamphlet does not list where these degrees were gained) asked me a series of questions on my problem and then introduced me to a box roughly the size of a DVD player that was hooked to a computer. I was to hold a copper rod that was linked to this device and then she would prod me with what can only be described as a 'magic wand' that was also hooked to the box. She would press me with the end of the wand in various places on my body and the machine would make a buzz or whirr.

She performed this on every finger, every toe and many points on other parts of my body. It was explained to me that the computer was collecting information on my conductivity and that the overall result would be explained at the end. After a good half an hour of prodding, the overall conclusion from the study was that my body was significantly lacking the element selenium. I was told to eat more fruit and vegetables and I was prescribed the following products:

- Bee pollen tablets
- Emu oil
- A small 20ml bottle of fluid 70%





purified water, 30% ethanol which was placed on an electrical plate and a current introduced for about 20min while we finished our discussion

So where was I financially at the end of this session? (It's a few years since I went, so these figures are rough.) The consultation was about \$150, and the above three items totalled about \$200 (the only specific I remember is that the 20ml bottle was a bargain basement price of \$40!).

I have just found the bottle, buried in the back of a cupboard. I was flabbergasted to read that the bottle label says "The bottle is not intended to treat any medical condition and no claims are made that it will bring about any physical health outcome." Wow, I'm sold – sell me more!

And although I could start picking on the costings (Blackmores sells Emu oil tablets for about \$10 a bottle) my

scientific mind cannot begin to process how this process really works, or how many people have been taken for a ride on this train. I must admit a few years ago I had a slightly more 'open mind' about treatments, in the absence of getting anywhere with other medical sciences.

The problems with the approach might be inherently obvious, but to state them: what possible science really thinks it can accurately describe the conductivity of the human body. The number of variables is colossal, and the human body far too complex a machine to read in this manner.

In addition, we know that the system has been calibrated to recognise the response to 80,000 different substances. Surely, when approaching this from a conductivity point of view, this is effected by layers between, say, the skin and the blood stream. Therefore, the calibration, and along with this the

relative conductivity, will differ from person to person given variability in muscle/fat thicknesses etc. I could go on.

As I see it, this truly is quackery at its finest, but linking into other better known pseudosciences, acupuncture and homeopathy to give it better acceptability. ■

#### References

Complementary and Ecological Medicine – various pamphlets  
CEM Website ([www.healthyconcept.com](http://www.healthyconcept.com))  
Dr Reinhold Voll (<http://www.biomeridian.com/voll.htm>)

About the author:

**Stephen Wood** is a skeptic and petroleum geologist. He is happy to receive comments to [stephenwood77@hotmail.com](mailto:stephenwood77@hotmail.com).



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# The cycle of life

Birthdays – mystics – fakers – virgins. And so it goes, the almost inevitable realisation that all knowledge is connected and connectable.

## MONKS AND VIRGINS

The Feast Day of the Virgin of Montserrat is held every year on April 27. The monastery of Santa Maria de Montserrat, sited in a mountainous area in Catalonia, Spain, was founded by Benedictine monks in the 11th century. Legend has it that the monks could not move a statue of the Virgin Mary and infant Christ to construct their monastery, choosing to instead build around it. Believed by some to have been carved in Jerusalem in the early days of the Church, the statue is more possibly a Romanesque sculpture in wood from the late 12th century. Ignatius of Loyola visited the monastery in 1522, laying down his military accoutrements before the image. Then he led a period of asceticism before later founding the Jesuits – the Society of Jesus.

**“The secret of life is honesty and fair dealing. If you can fake that, you’ve got it made.” – Groucho Marx (with variations attributed to George Burns, Richard Jeni, Cesar Romero – all actors or comedians – and Daniel Schorr, journalist).**

## THE FIRST CHRISTMAS?

The day and year of Jesus’ birth are uncertain. The 25th of December does not tally with Luke 2:8, which mentions that shepherds were keeping watch over their flocks during the night. In December, flocks would have already have been moved from the fields into pens. The Gospels say that Jesus was born when Herod was King of Judea (Luke 1:5). Luke 2:2 states that Jesus was born when Cyrenius (aka Quirinius) was also governor of Syria. But Herod was king from 37 BCE until his death in 4 BCE, and Quirinius was not governor until a decade after Herod died. There is no record of a census ordered by Caesar. Source: [http://www.religioustolerance.org/xmas\\_date.htm](http://www.religioustolerance.org/xmas_date.htm)



The teachings of Don Juan: a Yaqui way of knowledge  
Carlos Castaneda



# What goes

## DEADHEADS & BOOZE

Pan American Airways estimated that between the ages of 16 and 18, Abagnale flew over 1,000,000 miles at Pan Am’s expense by ‘deadheading’ (offering free travel to staff on empty flights). Abagnale said he was often invited to take the controls in-flight, but never accepted, using the “8 hours between the bottle and the throttle” rule of not drinking before a flight. Other supposed abstainers are nuns and monks, despite the fact that it was monks in the Middle Ages and Renaissance who invented many types of different alcoholic beverages. Drinks based on monkish recipes include Chartreuse, Frangelico, Dom Perignon and Benedictine. Source: <http://wiki.answers.com> + Wikipedia



### THE OTHER FIRST CHRISTMASES?

Other religions and festivities have also centred on December, such as the Roman Saturnalia, probably because of the winter solstice. According to some sources, in Phrygian, Greek and Roman pagan religion, Attis was supposedly a son of a virgin; his birth celebrated on December 25; sacrificed as an adult in order to bring salvation to mankind; and died about March 25, after being crucified on a tree, and descended for three days into the underworld. On Sunday, he arose, as the solar deity for the new season. According to <http://www.tektonics.org/copycat/attis.html>, an “education and apologetics ministry” site, the stories are a fake, created post-Jesus to try to take some of the gloss off the Christian stories. Source: [http://www.religioustolerance.org/xmas\\_sel.htm](http://www.religioustolerance.org/xmas_sel.htm)



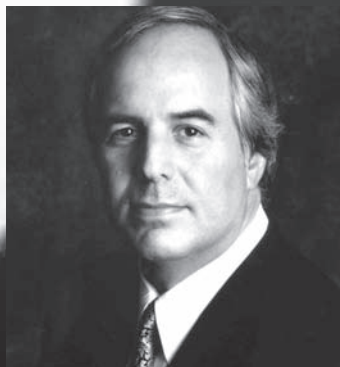
**Carlos Castaneda was awarded a BA and PhD at UCLA based on the work described in his books.**



# around ...

### THE FAKE CONSULTANT

Also on April 27, another faker, Frank William Abagnale, Jr was born in 1948. He is an American security consultant best known for his history as a former confidence trickster, cheque forger, impostor and escape artist. He became notorious in the 1960s for successfully passing US\$2.5 million worth of meticulously forged checks across 26 countries over the course of five years, beginning when he was 16 years old. In the process, he claimed to have assumed eight separate identities, including an airline pilot, a doctor, a Bureau of Prisons agent and a lawyer. He escaped from police custody twice, all before he was 21 years old. He is currently a consultant and lecturer at the academy and field offices for the FBI.



**Frank Abagnale's autobiography was not written by him – a fake fake?**

Source: Wikipedia, except where noted

### FAKER NOT FAKIR

Another person with mystical associations, actually born on December 25, is Carlos Castaneda. He was an author, philosopher and writer of a series of 12 controversial books, starting with *The Teachings of Don Juan* in 1968. These dealt with his alleged training in traditional Mesoamerican shamanism. For several years, anthropologists considered his work authentic and important, but then a number of exposés questioned his veracity. Critics now claim the books are works of fiction, citing internal contradictions, discrepancies between the books and anthropological data, alternative sources for Castaneda's detailed knowledge of shamanic practices, apparent sources of plagiarism and lack of corroborating evidence. He died April 27, 1998.

# In the wake of Wakefield

## The Panic Virus

By Seth Mnookin

Black Inc Books, A\$32.95

Instinct is something that most of us have. It is that little voice that helps guide us, that helps us with our choices in life not just for ourselves and our families. What happens, however, when this instinct clashes with science? Seth Mnookin, a contributing editor at *Vanity Fair*, tackles this very issue in *The Panic Virus*.

Mnookin gets to the heart of the controversy that has seen declining rates of vaccinations and the return of diseases such as pertussis and measles, diseases long thought to have been controlled.

There have been multiple studies disproving the link between vaccines and conditions such as autism and mercury poisoning. Despite these, the purported links still remain. Mnookin reveals to the reader how this is still possible. He shows how families who, at the initial onset of autism spectrum disorder (ASD) symptoms, feel ignored by the medical profession and government services. In many cases, this feeling would appear to be justified. Desperate to find out what is happening, they turn to the internet and to popular media.

Mnookin explores how the media have latched on to initial studies and sought sensationalism rather than true information. Take the classic study which by now most skeptics are familiar with, the infamous 'Wakefield study' in *The Lancet*. Prior

to the media circus surrounding the initial release of this study, five experts from the Royal Free Hospital School of Medicine in London, who addressed a press conference, were adamant in their message: "Further research was needed before any conclusions could be made. In the meantime, however, children should continue to receive the MMR vaccine." It was Wakefield who diverted from this, declared the link with the MMR vaccine and stated he could not support its continued use, citing the link between it and irritable bowel syndrome and then autism.

Sensing a sensation, the media ran with this rather than applying appropriate rigour. In fact, it was not until several years after the *Lancet* paper was published that any real investigative analysis was carried out. The media

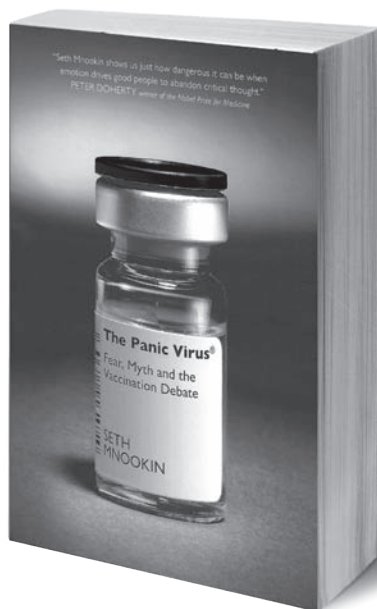
made it seem that it was public opinion that was the decider of science. The media would postulate that those speaking purely from a sensationalist emotional standpoint shared equal weight with those of the scientific community painstakingly carrying out their investigations.

The internet is often an initial source of information and a reference for the media. The freedom that exists on the net, while making dissemination of information easy, lacks regulation. For a medical paper to be published and to become mainstream, there are multiple checkpoints. Research needs to be formalised. It needs to be detailed and undergo extensive peer review. Only after these conditions have been met can an article be published. Even then, once published there is a critical review period while the relevant profession analyses these results and in many cases prepares to replicate. The internet, however, does not have such rigour. Anyone can publish material and insinuate that either they or the source is an expert in this field. Even discredited published papers can be included in references when the results have not yet been accepted or replicated. While the internet is a valuable research tool, one must never rely on 'the University of Google'. The media feed off the sensationalism of these sites, and in many cases, administrators of these pseudoscience sites are used by the media as 'experts'. This, in turn, acts as a magnet for the uninformed seeking information.

While staying close to the facts, Mnookin succeeds in humanising those families seeking help with autism. For the vast majority, these families are not gullible or naive but have felt alienated and ignored. Neglected by authorities, families cannot be blamed for turning to what seems to be the only support groups available - each other. It is within these groups that their instinct is maintained and their conviction is strengthened. This is exacerbated by charismatic figures in the public eye offering solutions to their suffering. At a price, of course. As each new study is released indicating no link, the more inward these families become and more convinced that there is a conspiracy. After all, their instincts only reinforce their view of a connection.

Upon reading this book you find yourself empathising with those impacted. While you cannot say you know how they feel, you can say that you are beginning to understand why they feel the way they do.

- Reviewed by Brad Hester



# Things that go bump

## Something is Out There: Unlocking Australia's Paranormal Secrets

By Julie Miller and Grant Osborn

Allen & Unwin, **A\$27.99**



I am interested in claims of UFO and yowie activity for a number of reasons. Firstly, living in the Penrith basin of Sydney and having a large country property at Mudgee in Central NSW, I have never seen or seen evidence of the Penrith panther (except during the football season during a home game). And this is where the panther supposedly hangs out! In addition to this, having been a member of the RAAF and Army Reserve for over 22 years, I spent most of my service in field units on exercise all over Australia, from mountains to desert, from coastal sections to snow, even spending some three rewarding months with indigenous Army Reservists in the north of Australia. Again, I've never seen or come across anyone who saw or had a coffee with a yowie. And as a part-time photographer with an interest in astro-photography, with over 1000 nights looking at the stars, I have never seen a UFO, aliens, alien scat or evidence of alien landings. I say this not to impress you but to impress upon you that, just maybe, I'm skeptical of the stories in the book. Why, because not only have I never seen anything, but because in my experience in the ADF Reserves, 26 years

in law enforcement and personal interests, nothing has ever come across my path that I have not been able to explain. Also, I have no fresh batteries for my EV meter.

Initially, I was skeptical about this book, thinking it was another book that put forward the paranormal view that ghosts exist and UFOs abduct people and that the Penrith panther is running rife throughout NSW, killing organic chickens. This impression is provided by reading the back cover. But after reading the whole book, I can say that this is the book that skeptics have actually been waiting for!

The book covers just about every paranormal issue current in Australia. Split into three sections dealing with paranormal activity such as ghosts, UFOs & aliens, and cryptozoology, the book provides locations and events that have shaped the paranormal culture in this country.

What I enjoyed about this book is that the

authors are obviously not part of the paranormal culture where one small event is extrapolated into unexplained areas. For example, the authors admit that over 10,000 'sightings' of the yowie have occurred, but where is the evidence? This is how many skeptics think. My concern is that, depending on who you speak to, different organisations whether they investigate ghosts, yowies or UFOs, tend to demonstrate a complete reluctance to talk to the media. Miller and Osborn themselves repeatedly state they do not get return calls or emails from 'experts', and when they do, some of the experts tend to be vague and not show their hand. If I was writing a book on the yowie in Australia, I would want the 'experts' to assist and lay all the evidence out for my analysis. Show me the images, show me the fur, show me the scat, and show me the DNA etc. The authors of this book continuously state this does not happen, experts continually cancelled at the last minute, and evidence was very questionable. Tim the Yowie Man and his footprints, they say, is a prime example of questionable evidence.

The authors expand on some claims by referring to professionals in such fields as archaeology, palaeontology, science and government organisations. They do, on many accounts, tend to undertake a comparative analysis and when the evidence is unavailable, they infer that the claim may well be hogwash. I was impressed by one claim of the so-called Min-Min lights, a generic Australian term used to describe any unexplained lights in the sky. The authors ventured into the Victorian high country to investigate a number of lights that have been seen. The lights are red and white and seem to move in a pattern that was random. In the morning, the authors look at the area in question and later find out that the lights belong to kangaroo hunters out on a shoot. Because they are so far away, their vehicles cannot be heard and the flash of weapons not seen.

The supernatural section of the book looks at ghosts in theatres, jails and hotels. The second section, addressing the 'science' of UFOlogy, looks at the UFO capital of Australia, Wycliffe Well, the Westall Conspiracy and the Min Min Lights. One subject that I read with interest was the Valentich disappearance. Readers may remember the two-part article that the reviewer wrote on this subject previously in *The Skeptic* [issues 29:4 and 30:1]. The third section on cryptozoology, the study of anomalous creatures, is the most subjective. Aside from the yowie, the authors look at mega-sharks, giant ripper lizards, bunyips, panthers and tigers. Again, I stipulate that the authors looked for



## Things that go bump

Continued...

evidence and on every front failed to find anything they could not explain.

I was struck by one particular passage: "Whereas established science, rigid and rigorous by definition, might bow to accept a new discovery, only when laden with suitable proof, pseudoscience is more than happy to plough straight ahead and make spectacular flights of logic from conjecture to hypothesis to theory on the wings of nothing but sheer imagination alone."

The authors have written two previous books on the paranormal, the first being *Ghost Hunt*, which was written in conjunction with a television series of the same name, and *Unexplained New Zealand: Ghosts, UFOs & Mysterious Creatures*, which is similar to the book under review. Both of these covered experiences in New Zealand.

Miller is not an investigative journalist or

paranormal investigator, she is a travel writer, and Osborne is a television producer who has been involved in such programs as *Big Brother* and *The Great Outdoors*. This makes for an interesting combination - a travel writer and a TV producer writing a book on the paranormal in Australia. The result is much better than a paranormal investigator with an EV meter attempting to show off his slime collection and images of orbs.

I recommend this book for two reasons. The authors appear honest in their assessments of the issues and demonstrate they too are frustrated by the people who make claims and do not have evidence. But also, they leave open some claims when other similar evidence is apparent. This makes skeptics stop for a moment and think, and to seek more evidence. And this makes for a good book. The paranormal people will love it because it makes paranormal mainstream and something to be taken seriously, especially if you have a haunted house and run ghost tours.

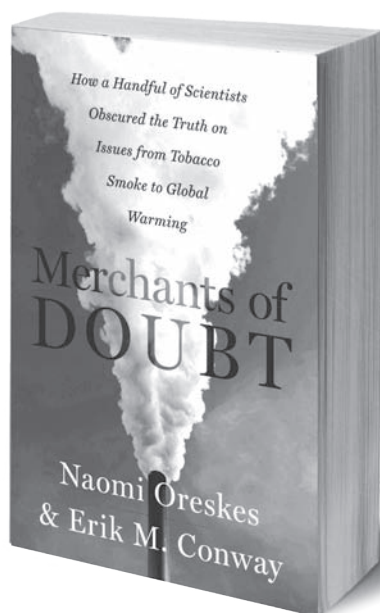
- Reviewed by Geoff Cowan

## Mind changers

**Merchants of Doubt** - How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming

By Naomi Oreskes and Erik M. Conway

Bloomsbury Press, A\$41.00



I was attracted to this book because of previous exposure to the international conspiracy by several tobacco companies to attack the epidemiological evidence on disease related to tobacco smoking, and a longstanding interest in the capacity for self-delusion exhibited by people who market lethal addictive products.

Prof Oreskes has provided a very detailed and well-researched book documenting the activities of a small group of retired US physicists working through 'shell' institutes to disguise funding sources who have provided industry with attacks upon scientists, publications, politicians, legislators

and public servants. The *ad hominem* attacks upon key scientists who published initial evidence (such as the increased death rates among wives of smoking Japanese men, and climate modellers) provide a clear demonstration of the poverty of contradictory evidence and the intent of the perpetrators to create an uncertain political milieu in which doubt can provide paralysis of action.

We, who attempt to provide scientific solutions for the problems of life, often assume a certain collegiality that overrides mere social beliefs but Oreskes describes the complete subversion of any commitment to scientific process by this group of ex-scientists and ascribes this to an overwhelming belief system - 'free market fundamentalism'. Other motives, such as loyalty, venality, or blackmail, are not canvassed.

The authors also provide some discussion of other publications where similar techniques have been applied but not in a great deal of detail.

Overall this a very good read, well-documented (approx 30 per cent of the pages of the book are references and footnotes) and provides a useful diversion for Skeptics to understand how good science can be undermined, and why.

- Reviewed by David Brookman

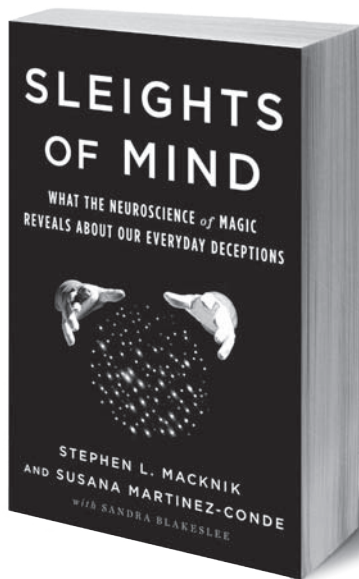


# Now you see it ...

## Sleights of Mind: What the Neuroscience of Magic Reveals About Our Everyday Deceptions

By Stephen L. Macknik and Susana Martinez-Conde

Profile Books, A\$32.99



It is hard not to pay attention to optical illusions, and wonder how can it be that one line is not really longer than the other or one circle is not really darker than the other or all the other varieties that tell us our eyes lie to us.

It was only a few decades ago that neuroscientists realised that the mistakes in visual processing were tools to examine how the eyes and brain process information. (It was also a reminder of the wonderful and mysterious lesson that our brains do not make perfect inner models of reality, but only use the tricks and shortcuts descended from their evolution to make useful, rather than exact, models.)

In a way, magicians perform optical illusions and even behavioural illusions.

You enjoy a magician's performance because although it looks as if he makes coins manifest from the air or makes a ball vanish when he throws it up, you know that such things cannot really be and yet you cannot figure out how the impression the magician makes is so strong. If we can get neurological understanding of the visual system from optical illusions, perhaps the illusions performed by magicians would offer an even broader range of tools to evaluate brain function.

This was the insight of Stephen L. Macknik and Susana Martinez-Conde. They are both directors of neuroscience labs and they are married to each other. Because they had done research on visual illusions, they hosted a conference in 2005 in Las Vegas, headquarters for some of the best magicians in the world. They got the insight that magic could be studied to gain understanding of perception and even consciousness. They even became certified magicians.

You might not be able to get through any of their scientific papers on the subject, but here (written with Sandra Blakeslee) is *Sleights of Mind: What the Neuroscience of Magic Reveals About Our Everyday Deceptions*, a delightful and illuminating book about how magicians in many ways take advantage of our brains' imperfect modeling of reality and what this tells us about how the brains work.

The immediate attraction of this book for many people will be that it gives magic secrets away. This is, of course, necessary to explain how what the brain perceives is different from what is presented to it, but it might be seen as a violation of 'The Magicians' Code' to tell such secrets. The authors have conscientiously marked all such explanations with a 'spoiler alert', so that if you still want to be baffled you can skip the explanation. Of course, you will be missing all the fun and insight, and it is hard to imagine anyone who would resist looking at the spoilers. Even more important is that knowing the trick doesn't make it any less of a trick; the authors still go to magic shows and still are fooled.

Of course, a magician has secret methods to work magical effects, but the trick isn't where the real secret lies. The real secret is that the trick is within the brain itself, and the explanations can't spoil such effects. The authors feel that it is not a matter of the brain getting things wrong or making mistaken judgments. Illusions "are adaptive shortcuts that your brain makes to speed up such processing, or reduce the amount of processing necessary to provide you with the information you need to survive and to thrive, even if the information isn't technically accurate."

The hardwired processes of paying attention cannot be overcome, but they can be hacked, and this is what magicians do. Among the many techniques described here are those which control the attention of an audience. Everyone knows that if you stare at something, people around you will want to take a look to see what you are paying attention to. Magicians do this all the time, but it is not usually so simple. A magician who produces a live dove, for instance, knows that you cannot help but pay attention to the flapping of the dove. While the spotlight of that attention is on the dove, who knows what might be manipulated outside the spotlight?

Among the many magicians who have contributed to the research here are Penn and Teller, who do a cups and balls trick during which Penn juggles some balls. "This is not juggling," Penn says as he juggles, "This is misdirection." It's P&T's trademark, giving away a trick's secret but actually giving away nothing; you cannot help watching Penn juggle as the sly Teller does a secret move.

It can't always work; you have to be able to pay attention to pay attention to the wrong thing. The authors have a grant proposal to see if failure to be fooled by magic tricks might be a novel way to diagnose or better understand autism.

The authors describe with good humor and charm their attempts to become fully-fledged performing magicians, and the difficulties involved. Skill with the hands is important, but not as

## Now you see it ...

*Continued...*

important as you might think. "Pulling off these simple sleights requires about as much dexterity as you need when learning how to shuffle a deck of cards for the first time." It is using the eyes and body for misdirection that is hard, as is not paying attention to the work of your own hands which would make people realise what you are doing.

Accomplished magicians practice enough that tricky movements come as second nature and require no attention. If the magician stops to think, "Here's where I must be careful in doing the trick," the audience is handed a higher likelihood of being able to tell what is going on.

There are real-life lessons here. The reason that a magician can so easily take your attention away from the mechanics of the trick is that we are so bad at multitasking. There has been a decade of research on multitasking, long before the authors got interested in magic. Multitaskers just don't get all the tasks done as well as those who are doing one thing at a time. Those who couple driving with talking on a mobile phone, even if the phone is hands-free, are able to pay as little attention to the road as drunks do. There are wonderful examples in the book of magicians (or psychologists doing

experiments) who do such things as riding around on a unicycle in a clown suit without being noticed because attention is elsewhere. Remember, too, that a good patter is not just the mark of a smooth performance; the magician who tells jokes, witty or corny, is counting on your mind to be occupied with the humour so that it can't do much else.

The authors have no concern that pushing scientific investigation of magical feats will make them any less magical, any more than Copernicus diminished the beauties of sunsets. In fact, they are doing what magicians have been doing all along: "Magicians basically do cognitive science experiments for audiences all night long, and they may be even more effective than we scientists are in the lab." And it may well be that armed with better understanding of how magic works, the authors can improve the effectiveness of their own tricks and those of other magicians.

Their book reads well as a summary of a personal quest for scientific and magical understanding, and one of the best things about it is that it refers repeatedly to their website where you can see the specific magic effects themselves. Their book is a delightful tour of magic techniques; but in showing the techniques this way, abracadabra, the authors have induced the reader to learn some serious neuroscience as well.

- Reviewed by Rob Hardy

## Self possessed

**The Rite: The Making of a Modern Exorcist**

By Matt Baglio

Pocket Books , A\$24.99

We skeptics tend to seek the scientific evidence in regard to the paranormal. But in the event of demons infesting normal everyday religious people, there seems to be a nexus between religion and the paranormal that is complicated and hard to define. Normal reaction would be "dogma", "superstition" and "mental health issues", but the professional exorcists take their job seriously. After all, the first exorcism was conducted by the son of god himself, Jesus, casting out demons.

Generally, exorcism in the Catholic Church is a ritual (as opposed to a sacrament) conducted by authorised members of clergy to remove demons that may inhabit a person. The use of exorcism is

not confined to the Catholic Church, but other religions, including Islam and Hinduism, practise these rituals. Recently, in an essay by Adam Knott, titled "Deliver Us from Evil" and published in *The Weekend Australian Magazine* last December, it was revealed that the Sydney Archdiocese is leading a push to have an exorcist in every parish.

But the most startling claim, from a Bishop Porteous of the Catholic Church, is that the increasing use of non-Christian relaxation methods such as yoga, and such movies as *Twilight* and *Harry Potter*, are the cause of much of the spiritual issues that young people now have. This "spiritual adventurism", including tarot cards, astrology and séances, poses some great temptations and invites demonic issues.

This essay and the book, *The Rite: the Making of a Modern Exorcist*, come at an interesting time in the history of the Catholic Church. With continual issues such as sexual abuse allegations, trials and other related matters, a skeptic may think that the discussion of the rite of exorcism is a misdirection used by the church to address other matters.





No doubt skeptics and atheists would not just be interested in the concept of exorcism, and understanding how this dogma has come about, but ask why such rituals are still required in the 21st century. But you might be interested to know that an organisation known as the International Association of Exorcists exists and that an accredited program of training exorcists is run by the Vatican. I suggest that readers who saw the movie *The Exorcist* cannot be disregarded, because the book itself, for this reviewer, asked more questions than it gave answers.

Matt Baglio's book provides some graphic scenes in regard to the exorcism of demons from believers. Using *The Exorcist* as a benchmark, most people requesting exorcisms tend to attend many rituals over a long time, sometimes for up to ten years. Interestingly, demons affect all types of people, including priests and nuns, but generally the book describes people who are devout church attenders, middle and lower class, with low levels of literacy and economic status. Atheists do not tend to get infested by demons; I suspect the same with skeptics too.

Baglio is a freelance journalist working in Rome and was able to document the training and experiences of a Catholic priest, Father Gary, from a normal parish priest in the United States to the role of parish exorcist. The book itself has now been put into production as a movie, also called *The Rite*, starring Sir Anthony Hopkins.

Baglio describes the journey of Father Gary, after being selected by his Bishop, to be trained at the Vatican-sponsored exorcist course. This course is conducted in modern facilities and much of the course work is not on Canon Law but on psychology, criminology, mental health, the law, illicit and legal drugs and related areas. This provides a background to the role of the exorcist that is different from the dogmatic Max von Sydow in *The Exorcist*. Defined procedures and policy in regards to the conduct of exorcism are now indicated by training to the point that all exorcisms in the United States can only be conducted after referral by mental

health professionals and the approval of a Bishop. No doubt this is a result of possible litigation issues. But as the book indicates, in Rome you can actually walk off the street and have an exorcism while you wait. It is this form of exorcism that is described in the book.

The signs of possession include sleeplessness, speaking in tongues, show of strength and aversion to all spiritual things such as holy water. Other activities, such as self-abuse through cutting the skin, biting and lack of appetite, also indicate possession.

The reviewer has been involved in law enforcement for over 25 years and these symptoms tend to be more the demonstration of clinical signs of mental health issues than 'possession'. I would suspect that perhaps, even 100 years ago, possession would have been a good explanation, but with advancements in medical science and an understanding how the brain works, a more scientific approach would provide answers.

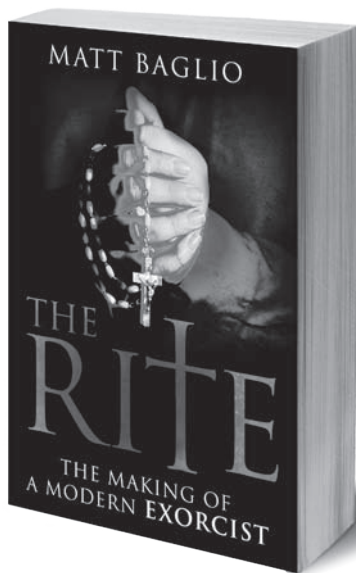
*The New York Times* published an article in November by Laurie Goodstein, "For Catholics, interest in exorcism is revived", looking at exorcism in the United States. The article states that the current workload for exorcists in the US is overwhelming, and as a result priests now need to distinguish between people who are allegedly possessed by the devil and those who have mental health issues. The article quotes a high ranking Bishop who says that exorcisms are rare and that they should not be used in the event of mental health issues. If this is a result of either the increase in the litigation against the church or a responsible approach to pastoral care, the reviewer is sceptical. There appears to be a return to the traditional rituals by the current Pope, and exorcism has not been forgotten.

*The Rite* has been written in sequence from the time of selection of Father Gary as an exorcist, his time in Rome, his training, his secondment to an actual exorcist, and then graduation and posting to a parish as an exorcist. I enjoyed certain those aspects of the book in which Baglio defines all aspects of the process, without favour to anyone. This is seen in Chapter 4 "Know your enemy", where the book turns from a 'non-fiction' story to an essay on the origins of demons and the devil. This chapter provides a wealth of source material to both the believer and the non-believer in relation to the concept of the devil and how he (or she) acts in regards to the world and environment. After this chapter has been completed, the book returns to its narrative story line, which is a shame because providing explanations and reference to source material provides a degree of authority to the book.

The movie of the book will be released early this year. I hope it will be better than the book. Other than the chapter on the Devil, the book is very much a narrative, but surprisingly the citations and notes at the end of the book create a better picture of the context of exorcism. I know that the book was written to demonstrate the journey of one man, but further information in regards to the processes, rites and additional explanation would have made the book a better read.

Would I recommend it? Wait for the movie.

- Reviewed by Geoff Cowan



# More decisions

In which is discussed doing it yourself vs calling on experts

In “Decision Time”, *The Skeptic* (Vol 30:4, p24), Martin Bridgstock tackles a timely topic: how can skeptics who are not scientists make sense of complex scientific controversies like anthropogenic global warming (AGW)? He proposes a method and reaches a view. Correct as his conclusion may be, there are still many other matters connected with AGW that should hold the attention of skeptics.

Martin starts with a threshold issue. Skeptics typically worry about pseudoscience rather than science. AGW is science. Does that disqualify AGW? He says “no”. I agree. There are good reasons for skeptical interest.

But precisely because it is ‘real science’ there is another threshold issue. Is it a controversy where it is reasonable for a layperson to hold an ‘opinion’? That might sound arrogant, but consider another example. If two chemists disagree on the complex formula of a chemical compound they have both synthesised, should or could anyone outside their professional speciality take sides? I doubt it. But if I said that only experts should get involved with climate change I would certainly be told where to get off. It’s different.

It affects us all. And of course it’s about something familiar, the weather.

Martin’s three-pronged methodology asks: What are the climate scientists collectively saying? What do systematic studies of climate scientists’ positions by non-scientists reveal? And what kinds of conclusions have been published by reasonably trustworthy scientific bodies?

Via this route, he says, non-scientists can make judgements on such matters. His own somewhat lukewarm judgement is that the case for AGW is “probably strong enough to accept”. He could have saved himself a lot of trouble. A single document, the Royal Society’s *A guide to facts and fictions about climate change* issued in March 2005 does cover all of his concerns. Never mind. Doing it yourself is probably more convincing.

What are the big AGW issues for skeptics?

For one thing, as I argued here in 2005 after climate skeptics had been vilified as “disgustingly evil” and “Holocaust deniers”, skepticism is the oxygen of scientific progress. It should not be feared. Indeed, skeptics have a duty to support it.

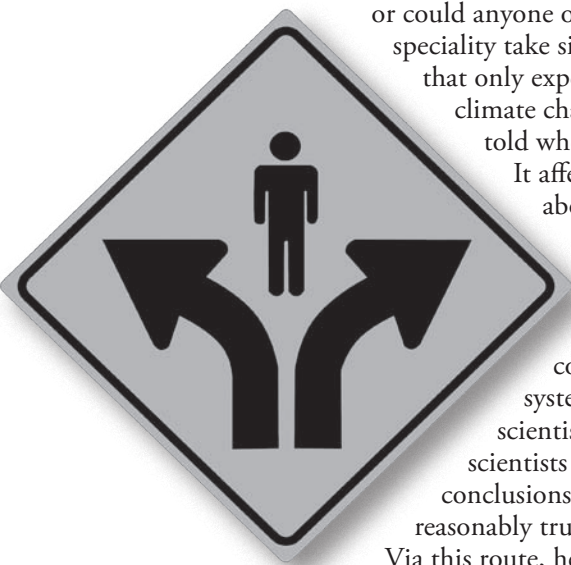
But there’s more. Let me start by dividing the ‘climate change debate’ into three aspects: the science; the evidence; and what to do about it.

With the truly basic science, it’s hard for lay skeptics to say much. Who of us knows enough, for example, to judge the latest findings on the radiative forcing of methane or the momentum budget analysis of the West African westerly jet? But the tangible evidence (eg has there been warming in the last 10 years?) and what to do about it (eg should we install solar panels, ride bicycles?) are easier to grasp and fair game for all.

My own pet subjects are future energy sources, energy conversion technologies, and their related costs. Here I would encourage active skeptical scrutiny. The passion in debates about the virtues of this or that form of energy has all the characteristics of good old religion. One can easily find scientists enthusiastically proclaiming the superiority of geothermal energy, or hydrogen, or solar, or carbon capture and storage, or any of the other innovative low-carbon technologies that one reads about regularly. Experts disagree – just think of nuclear power. And as with religion, they can’t or won’t all be right. Ideal skeptical fodder.

The argument is usually not about science. It’s about perceptions and predictions. The experts themselves often act, unhelpfully, as advocates for their pet discoveries or technologies. There is a gulf between acquiring new knowledge, which is what scientists do best, and assessing its useful application. Researchers are often remote from the ‘market’ where their ideas might be applied, or they can be conflicted through their involvement in producing new knowledge, or they can be disinclined or unqualified to assess the broader picture of costs and benefits of putting their ideas into practice, or they can simply be too optimistic. Of course, people in research have to be optimists. It’s a tough game and optimism goes with the territory. And that’s precisely why skepticism is so important.

Unfortunately, I don’t think Martin Bridgstock’s approach to making sense of scientific controversies will work quite as well when applied to this kind of practical technology debate. It is harder to get at the objective information needed. Worse, any





analysis will soon run into unverifiable blue-sky claims (or 'forward-looking statements' as business is required to call such spin). All such predictions and projections, like future cost reductions and efficiency gains, should be viewed skeptically.

So, skeptics, don't throw away your critical faculties. Climate change still offers many opportunities. You just have to look in the right places.

Tom Biegler  
St Kilda East VIC

### ... and some further debate

I approached with interest Martin Bridgstock's paper "Decision Time", being a keen follower of the whole climate change controversy. And it still is just that – a controversy, with the 'science' far from settled, unlike what some would have us believe. It was disappointing, and did little to further the cause of either side.

Twice in the section title "The Contested Terrain", and at least once in the following section Mr Bridgstock refers to "predicting" the future with computer models. This is a common but unfortunate and misleading choice of terminology, as it tends to lend an air of mysticism to the results. After spending about forty years of my working life in the technical side of the computer industry, in both hardware and software for large second-generation mainframe computers, I believe I can safely make the following statement: computer models do not, by any stretch of the imagination, "predict" anything. That's the realm of tarot cards and crystal balls.

Modelling programs, while by nature very complex, are also, like any other computer program, very single-minded and only do what they're told to do. Assuming the same set of values for all of the input data, a computer will always produce exactly the same result. Change just one of the variables applied as input to the program (any program!) and the result will change. That's how computers and computer programs work.

Much of the variation in modelling programs is achieved by feedback, ie feeding some of the output values back as either positive or negative inputs to try to emulate the behaviour of a dynamic system such as climate. But it's not a prediction, it's an inevitable conclusion based on the input values. There are, therefore,

as many differing results produced by climate models as there were modelling runs with differing inputs. With experience, a particular set of input values and/or feedback levels can be selected which will produce any desired range of results. It's that simple, and if you believe some of the scientists on the side of truth, this is exactly what is being done to (pardon the pun) cloud the issue.

In the next section, he asks whether global warming is a skeptical matter. A quick trip to your nearest dictionary should answer this question. *My Australian Oxford* defines sceptical as "inclined to question the truth or soundness of accepted ideas", so a sceptic is by definition a questioner. Nothing about being concerned only with paranormal or pseudoscientific matters – that's a matter of personal choice, not definition. Anyone who professes to be a genuine sceptic, and who also possesses anything even vaguely resembling a logical mind, must question what is some very questionable 'logic' lurking behind this subject.

With all due respect to Mr Bridgstock's professional position as a lecturer, his fairly superficial treatment of the subject seems to rely heavily on references of his own making, three of them to be exact. Hardly an objective viewpoint. I have also read (and re-read) Ray Evans' article in the July-August *Quadrant* included in Mr Bridgstock's list of references and I could find nothing in it that would indicate any support for a conclusion that there is more evidence for the AGW theory than against it. Quite the opposite, in fact.

Noticeably absent from the list of references was any mention of two of Australia's experts in the field – Professor Ian Plimer and Professor Robert Carter. Has he ever bothered to read what either of them has to say on the subject? If he hasn't yet read their books, I suggest he make it a matter of priority to do so. It may persuade him to change his own chosen direction. If he has seriously read them, does he then totally discount their expertise? Two questions arise: what is Mr Bridgstock's opinion of the credibility of these two eminent scientists, and more importantly, for this discussion, what is their opinion of his?

There was no mention of the cessation of warming that happened around 1998, the subsequent cooling that has been happening for the last decade (in spite of still-rising CO2 levels!) and which has been projected by no less than seven independent researchers, using different methods, to continue until at least 2030. How does one reconcile that as





having any direct connection with CO2 levels? Professor Carter has some interesting and persuasive points to make about this particular phenomenon, but I won't steal his thunder – read it yourselves!

If climate change, anthropogenic global warming – call it what you will – ever was a truly scientific question worthy of the money, time and resources spent on it, it has long since ceased to be that. It is now blatantly and unashamedly political, concerned wholly with saving face over an issue manufactured for political ends, and for those with their eyes open, the cracks have been showing for some time. The failure of Copenhagen 2009 was the beginning of the end.

Professor Carter's comments on "consensus" and the popular view that there is consensus among scientists that AGW is happening, bear heavily on how we should sensibly attempt to interpret the state of play. Who would you choose to believe on a scientific issue – scientists in your own backyard with proven credentials, or politicians? In his recent book *Climate: The Counter Consensus*, Carter states more than once that science is not about consensus. It's about one scientist being right. We should all think about that statement, and its undeniable truth in the history of mankind.

Robert M Steley  
Chittaway Bay NSW

Without wanting to go into the arguments for and against anthropogenic global warming (AGW), I find the article by Martin Bridgstock quite disturbing.

So, it's OK just to poll the 'experts' without examining any evidence at all?

"Wide acceptance of an idea is not proof of its validity." - Dan Brown.

Let's not get sidetracked into religion.

A simple Google search reveals numerous criticisms of Anderegg and his methods:

<http://physicsworld.com/cws/article/news/43002>

<http://nofrakkingconsensus.wordpress.com/2010/06/24/who-is-william-r-l-anderegg/>

<https://calderup.wordpress.com/tag/william-anderegg/>

I admit that I have not read *Poles Apart* by Morgan & McCrystal, however, two items on this review page worry me:

<http://www.scribepublications.com.au/book/polesapart>

Firstly, the review by Rod Moran (*West*

*Australian*) says "The authors skilfully — and rigorously — blend hard science, statistics and anecdote to end up with a final chapter appropriately titled 'The Verdict'." Anecdote?

Secondly, "His (McCrystal I presume) method was to hire the finest international scientists available to present their best arguments." Hire?

In his conclusion, Martin Bridgstock describes himself as "non-scientist" yet he is a senior lecturer in the School of Biomolecular and Physical Sciences at Griffith University with B Science (Hons), M Science, PhD qualifications. Sorry Martin, but I'm confused.

While not wanting to comment on your conclusions Martin, I'm not convinced about the method.

Alan Stern  
South Hurstville NSW

## Martin Bridgstock responds:

Tom Biegler understands my arguments, but suspects that my method may not apply to some other types of controversy. That may be so: if it works for important scientific controversies, I will be content.

Robert Steley objects to my term "predicting" with computers. I can't see why. If I construct a mathematical computer model of how the world's climate works, feed in the best data I can find, and then get the computer to say what the world will be like in 2030 or 2050, that strikes me as a justified use of the term "computer prediction." Robert points out that computer predictions can be fiddled. Certainly they can, as can almost any scientific experiment or observation. So what?

I was astonished by Robert's next claim. Using a dictionary, he claims that "sceptical" need not involve paranormal or pseudoscientific matters and "that's a matter of personal choice, not definition." No, it isn't. *The Skeptic* is the magazine of the Australian Skeptics. They have a very clear statement of aims, which appears on their website, and which does involve paranormal or pseudoscientific claims. I suggest that Robert should read it.

Robert also says that I "rely heavily on references of his own making, three of them to be exact." Well, my key references are Anderegg *et al*, the statements of major scientific societies and the Morgan and McCrystal book. I didn't write any of those. Years ago, I co-edited a book





and published several dozen papers on creation science. I see nothing objectionable in drawing on my own knowledge in that area, where it is relevant.

I was astonished by Robert's comments on the Ray Evans paper. A look at my original article (page 25, right hand column) reveals that I was using the Evans paper to show that some anti-AGW people have been abusing those they disagree with (as have some pro-AGW people). I went on to say that all abuse is wrong, and should be ignored. I am surprised that Robert did not see this.

Robert then refers to two – perfectly genuine – Australian scientists. Both have achieved the rank of full Professor, both have substantial lists of publications and both have spoken out strongly against AGW. Contrary to Robert's assumption, I *have* read work on the topic by both scientists. However, a check through the *Web of Science* shows that very few of their scientific papers are on the AGW topic. They would therefore not be classed as top scientists in the area.

Robert claims, without evidence, that AGW has now given way to cooling. If he produces evidence of this – from proper scientific journals – I will consider it. I will not comment on some of his wilder statements. Finally, he gives me a choice of believing local scientists with credentials, or politicians. I reject that choice. My first preference would be to understand all the issues myself. Since that isn't possible, my second choice is to find what the best experts worldwide think, and I did that. My third preference is to find what people who had no prior opinion but who had researched the topic think, and I did that. My fourth choice is to listen to what major scientific organisations think. I did that, too.

Alan Stern profoundly misunderstands me when he writes, "So, it's OK to poll the 'experts'

without examining any evidence at all?" No, I didn't say that. I said that when a scientific issue is so important that we *must* take a stand, and grasping all the complexities will take an unacceptably long time, then the procedure I suggest may be the best way to arrive at a reasoned decision (page 25, middle column and page 26, left hand column).

In my judgment, there are no objections of substance raised in the websites Alan mentions. If he thinks they are important, let him spell out why.

Without having read the work, Alan is worried because there are "anecdotes" in the Morgan and McCrystal book. The book is full of argument and evidence, and the occasional anecdote makes it more vivid and readable. Alan will find an anecdote (about a former Miss World) in the article by Kylie Sturgess and myself in this issue. There is lots of evidence, too. Anecdotes need not undermine logic and evidence, provided the latter are sound.

Alan also objects because Morgan (not McCrystal) paid people. Yes, he paid the best scientists to give him their best arguments, pro and con. That was one of the ways the authors could complete their work in only 18 months.

Finally, Alan says he is "confused" because I describe myself as a non-scientist. I lecture in Science, Technology and Society and have a background in social science. I am sorry if this is confusing.

Martin Bridgstock  
Griffith Uni, Nathan QLD

## The Skeptics' Guide to the Universe

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[www.the.skepticsguide.org](http://www.the.skepticsguide.org)



# Your Stars: MARCH 2011

With our Astrologer Dr Duarf Ekaf Jr

## Aries: 19 April-13 May

Following an unfortunate mishap while juggling chainsaws, medical care lets you down significantly this month when you find that your blood group has been deleted.

## Taurus:

### 14 May-19 June

Many of the conventional attributes customarily assigned to persons born under your star sign mysteriously acquire a bizarre and tragic veracity when you visit a china shop.

## Gemini: 20 June-20 July

You have perhaps heard those many stories where someone living a mundane, humdrum life suddenly finds that they have won division 1 of Tattslotto, thereby becoming fabulously wealthy? Well, this will not happen to you this month. Buying a ticket might have helped.

## Cancer: 21 July-9 August

Consider the ant - constantly and diligently toiling, living an abstemious and virtuous life, a respected and valued member of its community, convinced that hard labour is its own reward with nary a care for the decadent joys of life. But, you're not an ant, are you?

## Leo: 10 August-15 September

While waiting at a suburban station, in front of a poster showing a whale, you bend over to tie a shoelace and thereby miss being fatally speared by a hail of harpoons, thrown by a group of lost Fijian whale-hunters on a passing train. But this will not worry you, because you never become aware of what happened.

## Virgo: 16 September-30 October

This month, late one night, a voluptuous female will desperately kick and scratch on the door of your bedroom. You should allow her to leave.

## Libra: 31 October-22 November

A distant Canadian relative, of whom you have never heard, sends you a large parcel of gold nuggets which is left on your doorstep, but before you open your front door a passing kangaroo picks it up and hops away with it, never to be seen again. What a pity. If only you had known!

## Scorpio: 23 November- 29 November

Severe misfortune is your wretched lot this month, when on a round tour of New Zealand you trip on a fossilised sheep turd and break your leg in three places. You should not have gone to those three places!

## Ophiuchus: 30 November

### -17 December

You are a man carrying a large snake across his shoulders.

I always wondered about Ophiuchans, I mean, what is the point of that, where do you think you are going with it, and does it bite.

## Sagittarius:

### 18 Dec-18 January

The stars look down on you this month, and despair.

## Capricorn: 19 January

### -15 February

Sorry about this, but when I looked in my crystal ball for you this month, it said "Cannot display the required information - you need to download the latest version of Flush Player. Click here to proceed." And the cat has eaten my mouse.

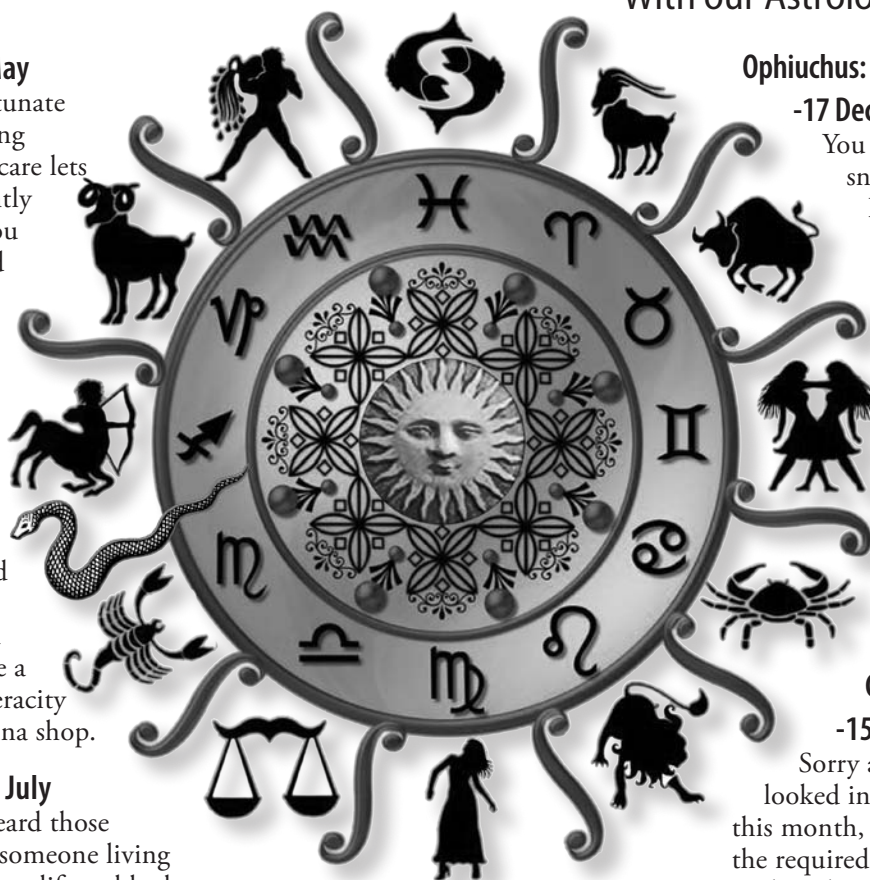
## Aquarius: 16 February-11 March

Do you know that a man in Sydney is run over by a passing car approximately every 30 minutes? While rejoicing in the fact that it is not you, please spare a thought for that poor man - he must be pretty exasperated by now.

## Pisces: 12 March-18 April

3.14159 cccccc.

[These cryptic crosswordians just can't help themselves - Ed] ■







# What you think ...

## Proof of Belief?

I would like to respond to Ian Foster's *Proof of Belief* [*The Skeptic*, 30:4, p57] in which he claims his religious experience constitutes "incontrovertible evidence of the reality of God".

Religious experiences can take many forms - from feelings of the presence of God in the believer's life, to an overwhelming sense of a transcendental numinous power, and on to full blown visions of supernatural beings.

Anthropological research has revealed that religious experiences are common to all faiths<sup>1</sup>. For example, although I am an atheist my wife and her family are Hindus, and I have attended Hindu religious ceremonies where I have seen participants overwhelmed by, what to them, is the presence of their gods.

If Ian believes that religious experiences such as his own are evidence for the existence of the Christian god, will he acknowledge that Hindu religious experiences, which are just as profound for them as his experience is for him, are incontrovertible evidence of the reality of Hindu gods such as Shiva?

In order to determine if such claims are true I think we need to look at them with dispassionate objectivity: just because an experience is profoundly moving doesn't necessarily mean that it is grounded in an object that is external to the mind of the percipient.

Indeed, research on the neurobiology of religion indicates that the parietal lobes, temporal lobes and limbic system of the brain play a role in the generation of mystical experiences<sup>2</sup>. Given that there is no objective empirical evidence for the existence of a God or gods, and that research suggests mystical experiences are the result of brain activity, I think the only reasonable conclusion that can be drawn is that these experiences

cannot be considered incontrovertible evidence of the reality of God due to the possibility that they could be entirely natural in origin.

### REFERENCES

1. Lewis, I.M. *Ecstatic Religion*, Penguin Books, England, 1971
2. Holmes, B. In *Search of God*, *New Scientist*, Vol 170, No 2287, page 24

Kirk Straughen  
Kippa-Ring, QLD

It is difficult to know where to begin in responding to Ian Foster's article in the December issue. I have always had a somewhat puzzled sympathy for those skeptics who are true to the cause in our battles against quackery, pseudoscience and woolly thinking but who nonetheless treat as gospel what they read in ancient collections of partisan, often myopic, religious writings. This credulousness is very often justified by exposure to "incontrovertible evidence" of God which seems to occur only at times of crisis, when one's morale is low and defences against religious certainty are down. Loneliness and despair certainly are the feeding grounds of the 'God experience'. In fact, though, these personal experiences are not so much revelations as opportunities to reinforce long-held beliefs which are impervious to rational analysis, and the 'evidence' presented, as in Ian Foster's article, is not evidence but anecdote at best.

All of this probably matters little and would not have moved me to respond were it not for Foster's unreasonable and uncharitable allegations about the motives of skeptics who are also atheists. He accuses us of lack of respect for or tolerance of religious believers, and attacks with the assertion that: "Atheism ... requires such a certainty of belief in the existence of nothing outside our physical world that a true

sceptic must apply a suitably high burden of proof for this assertion". We are, apparently, hypocrites.

This is wounding, to say the least. Should I respect and tolerate every religious belief simply because it is genuinely held? How far should this extend - to the symbolic drinking of the blood of Christ by children, the stoning to death of women, the abandonment of child witches by their parents? All are current practices in the name of God and are acceptable or even required in mainstream religious cultures.

Foster also harbours the common misconception that atheists have 'beliefs' which are as strong as those of any theist. Atheism is defined by the Concise Oxford Dictionary as "Disbelief in the existence of a god". It's as simple as that. There are many things I disbelieve in (gods, fairies, leprechauns, pots of gold at the end of the rainbow) but I feel no burden of proof in relation to any of them, and I have absolutely no certainty of belief in the existence of nothing outside our physical world! The more I read about dark matter, dark energy and particle physics, the less certain I am about anything at all.

The burden of proof, such as it is, lies entirely with those who *do* believe in such things. There is, at least, observational evidence for dark matter and dark energy. As for gods and leprechauns, Christopher Hitchens puts it nicely: "*What can be asserted without evidence can be dismissed without evidence*".

Alan Needham  
Wanneroo, WA

As a "born again atheist" I feel the need to reply to your correspondent Ian Foster. I am fed up to the back teeth with smug, pious and bigoted Christians who pull the "god experience" to validate their belief in a supernatural being. Been there, done that, for about 25 years and was just as patronising in my treatment of those who had not had the same spiritual experience. Studied theology, imagining

## Proof of Belief?

Continued...

all sorts of religious experiences, ordained deacon in the Anglican Church, but was never quite able to silence the voice of reason at the back of my mind that insistently pointed to the inconsistency of a so-called loving god who was so horrendously capricious. We really are here to procreate the species, just as any other living creature on the planet. The pity of it is that we have cognition and know that this is all there is but our vanity says otherwise.

Ian Foster refers to a dark period in his life that a turning to god and prayer carried him through. As a practising Christian I had many dark periods where I believed god and prayer played a part in getting me through. But, you know, I've had similar dark periods since espousing atheism where "I got through" without the benefit of prayer or god. Isn't that what evolution is, in part: survival. An emotional experience of the reality of god is not proof of the existence of god. This is just magical thinking and, quite frankly, a belittling of the amazing power of the human psyche.

Patricia Nissen  
Woy Woy, NSW

*[Editor's note: There were more letters received on this topic than we were able to include on these pages, through both the space available and the length of some individual letters. Our apologies to those correspondents whose letters have not made the cut. Lack of publication is no indication of lack of quality.]*

## Wrong evidence

In *The Skeptic* 30:4 [p38] Chris Borthwick points out that many positive effects reported (especially psychological) in respectable scientific

journals can be wrong.

Many years ago, as a lecturer in psychology, I fronted up to a class of some 100 or so students to administer practical exercises in statistics. I gave each student of sheet of figures, each generated by random process, from which each student had to calculate, using the process known as 'analyses of variance', what the statistically significant effects might be supposing the data was from a real and well-controlled study.

When all had put their pens down, I asked for a show of hands as to how many had found significant main effects. About four or five hands shot up.

Now, let us suppose that these were post-grad and graduates scattered around the world beaver away to find an effect to yell about in a respectable journal. Most of their results would end up being filed in the waste-paper basket, but maybe one or two would be reported, in seriatim as a first report, and then as a confirmation of the first, and thus the effect passes in the annals of psychology, usually with the name of the researcher first to score, attached to the supposed effect.

As one of my old lecturers once suggested, we really need a *Journal of Negative Results*.

Rex Newsome  
St Lucia, QLD

## Big Bang Additions

John Nash [*The Skeptic* 30:4, p62] asks "Before the Big Bang, did  $1 + 1$  still equal 2?"

There are two parts to the answer.

In mathematics, 2 is defined as being equal to  $1 + 1$ . It is defined conceptually - completely independent of space, time or any need for the physical universe. So,  $1 + 1 = 2$ , whether there was a Big Bang or not.

In physics, it is thought that both

space and time were created in the Big Bang. Without time, there is no notion of 'before', so the phrase "Before the Big Bang" doesn't have any meaning.

Julian Orbach  
Stanmore, NSW

## Climate & Methane

This excellent journal has many qualities but it is not well suited to the sort of discussion Robert O'Connor and Colin Kline want to start in their efforts to deconstruct me on climate. This response comes six months after the original article and three months after their comments in the last issue of *The Skeptic* [30:4, p56], comments based partly on misunderstandings but also on an undoubted omission on my part. The time lag is partially why I never bothered to respond to earlier criticisms of my articles in long gone issues of *The Skeptic*, and why I included an email address in the article. The idea of the original note was for Robert, in particular, to contact me directly so we could clear up some confusion on his part.

He and Colin are welcome to abuse me, of course, but abuse when the abuser has the full story is perhaps more constructive. For the record my other email addresses are mlawson@afrc.com.au and markslawson@optusnet.com.au. I can assure both men I will be professional.

But if they still insist on using mere print, Colin is the easiest to deal with, as he was complaining I did not reference any material when I stated that concentrations of methane in the atmosphere levelled off around the turn of the century. The relevant graph can be found on the US National Oceanic and Atmospheric Administration Office site - <http://www.esrl.noaa.gov/>



gmd/aggi/. Not happy with that? The 2007 IPCC report contains a detailed discussion of this issue, which is best summarised by scientists saying that they don't really know why methane concentrations have levelled off.

As a journalist, I put this to a senior global warming scientist recently who agreed, reluctantly, that the levelling off of methane concentrations was good news, but for various reasons was not so important. Whatever. The two references cited by Colin are not relevant to the simple point I was making.

As for Robert, I'm not sure why he thinks I've contradicted myself although the use of the word "saturation" may have confused things. Rather than try to explain the physics and have him jump down my throat over "errors", both real and supposed, I can point him to a fully worked out graph of CO<sub>2</sub> concentrations and temperature responses in the atmosphere given in the classic climate text *Climate, History and the Modern World* by H. H. Lamb (Routledge, 1995), page 334 in my copy. To give you a shorthand idea of the curve, the first 400 parts per million worth of CO<sub>2</sub> (we are now around 390ppm) warms the atmosphere by perhaps six degrees, while the next 400ppm by between 1 and 2 degrees.

A more precise reference is the classic paper "The Ice-Core Record: climate sensitivity and future greenhouse warming" by a group of French scientists led by C. Lorius (*Nature*, September 13, 1990 – it's available online). This says that doubling CO<sub>2</sub> in the atmosphere will increase temperatures by 1.1 degrees – that is, the warming effect, without feedbacks, will be 1.1 degrees. Skeptics can check *The Climate Caper* by former CSIRO scientist Garth W. Paltridge (Connor Court, 2009), who also gives a figure of about one degree but says the change would take centuries. Paltridge's book also has

an explanation of the physics.

That is the essence of the simple point I was making in the articles which have drawn Robert's ire. The whole argument has then been about the degree to which climate is supposed to amplify that modest warming. With that in mind, Robert should also go back and look at the first reference he cites. This says that there is more warming to come from CO<sub>2</sub>. Quite right. It just doesn't say how much. A classic misdirection. A further complication, as I note in the article, is that on present trends CO<sub>2</sub> concentrations in the atmosphere will only increase by 50 per cent by the end of the century, and not double as earlier estimate suggested.

In any case the heat has gone out of the debate – pun intended. It's time to move on.

Mark Lawson

Hornsby Heights, NSW

## Gravity matters

Cosmologists, such as Paul Davies and Stephen Hawking, have claimed that the universe could have arisen spontaneously based on the supposition that the net energy of the universe is zero. This is based on the claim that gravitational energy is negative and counter balances all other positive energy components. Thus, in Hawking's words, the universe is "the ultimate free lunch".

The notion that gravitational energy is negative seems quite odd, but Ian Bryce [The Skeptic, 30:4, p59] provided some arguments on why Gravitational Energy (Eg) could be deemed negative. We both agree that if the zero reference is at zero separation, then Eg is positive, but if the zero reference is chosen to be at infinite separation then Eg is negative.

Ian's arguments were based on the practical difficulties of using zero separation as the zero reference for Eg and the mathematical simplicity of

using infinite separation as the zero reference. If the zero reference were chosen then for point masses, then Eg would be infinite for all non-zero separations, and for non-point masses, how do you get zero separation?

However, a point mass has infinite density and so is not physically realisable. For non-point masses, consider the following thought experiment. Imagine that you drilled a hole through the centre of the earth and then dropped a ball into the hole. After the oscillations died down the ball would come to rest in middle earth. Now, suppose that you had tied some string to the ball. If you pulled the ball out of the hole, then the force is actually proportional to the distance from the centre while the ball is below the surface, whereas it is inversely proportional to distance squared above the surface. The energy required to pull the ball from the centre of the earth is finite, and so the use of zero separation as the zero reference is quite feasible (theoretically). However, the use of the simple formula,  $E_g = -m/r$ , is OK for non-overlapping masses, but it is wrong for overlapping masses, such as described in this example.

In addition, at the start of the Big Bang there was no matter, only energy. As the temperature of the universe cooled, then matter distilled out of the radiation – firstly the high mass particles and then the low mass particles (such as electrons and positrons). Prior to the creation of matter, what was the status of gravitational energy? I am not sure, but is there someone out there who can tell us?

The suggestion that Eg is negative should not be based on mathematical simplicity, but on the basic physics. I didn't understand the rest of Ian's arguments, but I gather that we both agree that the idea that the universe is a free lunch is counter-intuitive. I believe that the high priests of physics owe us an explanation.

Kevin Rogers  
Modbury, SA



## Students alert!

Teaching science is hard. On top of the tedious compliance with rules and regulations, we are expected to keep our students fully engaged and spark in them an endless desire to learn. It can all be very daunting and exasperating.

One of my students, whom I really like, recently asked me “Mr Stephens, why do we have to learn all of this stuff if we can just look it up on the internet?” I really can’t blame the student for asking the question, based on the way standards and testing are pushed, from a student perspective it may seem that all we want is for them to regurgitate information. It can all be very daunting and exasperating.

So sometimes we could use a little bit of help bringing the fun back to science. Let’s face it, while us geek-nerd science teachers and skeptics may love science without any need for candy coating, the average student does not share that love. Likewise, the average student has never been taught to relish the virtues of critical thinking.

What I want most for my students is for them to become lifelong critical thinkers, to apply the same logic and reasoning they learn in science class to every aspect of their lives. Of course I want them to learn the Earth Science and Biology I present to them as well, but primarily I want them to embrace thoughtfulness. To do this, I’ve got to capture their attention and imagination, and nothing does that better than talk of paranormal investigation, which strangely enough is not mandated in the state standards. I can talk until my face is blue about plate tectonics, electron transport chains, natural selection, convection currents or any of the number of topics I find riveting, and I’m almost universally greeted with blank stares. But as soon as I say “I don’t believe in ghosts”, oh boy, do I get a landslide of comments and discussion.

Scouring the internet for help, I happened upon George Hrab’s interview with Dr Rachael Dunlop in which she discussed the Mystery Investigators presentations she performs with Richard Saunders. I sent an email to them, inquiring whether or not they had a video available. Imagine my delight when I

received an email back from Richard suggesting that perhaps he could do a presentation for our students while on vacation in the Bay Area.

Richard visited two of my science classes for a rousing question and answer session and then engaged an audience of over 100 students and ten staff members in a presentation of the Mystery Investigators. Never have I seen my students so engaged and willing to participate. I can only imagine how captivating the Mystery Investigators must be when Dr Rachie is involved as well.

In short, educators, especially in science, have some valuable allies to be found in the skeptical movement. If you are looking to get the youth in your charge to drop some of their superstitions, think critically and recognise the joys found in reality, seek out presentations by the Mystery Investigators and other like-minded outreaching skeptics. You will not be disappointed, and you just might have a great time yourself, I know I did.

Aaron Stephens  
Vacaville, California USA

## CRYPTIC CROSSWORD SOLUTION



## DR BOB'S TRIVIA SOLUTIONS

1. 81 - They picked up a drifter along the way.
2. Australian Sign Language.
3. He frowned too much in his youth.
4. Then the diagnosis was even more likely to be correct, oh yes.

*You can see more like this, every month and going back some years, at [www.skeptics.com.au/features/dr-bobs-quiz/](http://www.skeptics.com.au/features/dr-bobs-quiz/)*

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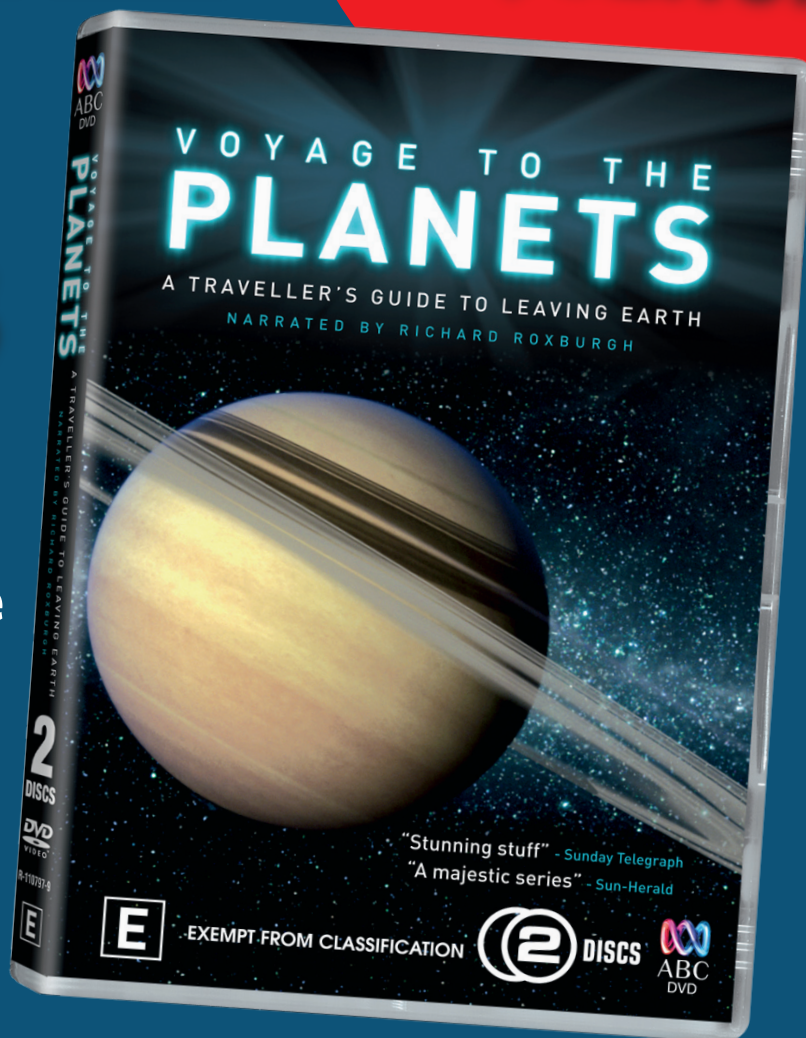
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