

# THE SKEPTIC

Vol. 34, No 4. December 2014

# FAKE!

Science  
Aliens and  
Phoney Fauna



+ Diets Deniers Campers Fairs



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





# Skeptical Groups in Australia

## **Australian Skeptics Inc – Richard Saunders**

www.skeptics.com.au  
PO Box 20, Beecroft, NSW 2119  
Tel: 02 8094 1894; Mob: 0432 713 195; Fax: (02) 8088 4735  
nsw@skeptics.com.au

Sydney Skeptics in the Pub – 6pm first Thursday of each month at the Crown Hotel, cnr Goulburn and Elizabeth Streets in the city (meeting upstairs)

Dinner meetings are held on a regular basis.

**2014 convention** - November 28-30. [convention.skeptics.com.au](http://convention.skeptics.com.au)

## **Hunter Skeptics – John Turner**

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

Meetings are held upstairs at The Cricketers Arms Hotel, Cooks Hill (Newcastle) on the first Monday of each month, excepting January, commencing 7.00pm, with a guest speaker or open discussion on a given topic. Visitors welcome. Further information from the secretary at: [kevin.mcdonald379@bigpond.com](mailto:kevin.mcdonald379@bigpond.com)

## **Australian Skeptics (Vic) Inc – Chris Guest**

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 – Laurie Smith**

RSB 11 Callaghan's Creek Boxes, via Tallangatta VIC 3701  
Tel: (02) 6072 3415  
Meetings are held quarterly on second Tuesday at Albury/Wodonga on pre-announced dates and venues.

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

PO Box 3480, Norman Park QLD 4170; [www.qskeptics.org.au](http://www.qskeptics.org.au)  
Tel: (07) 3255 0499 Mob: 0419 778 308 [qskeptic@bigpond.com](mailto:qskeptic@bigpond.com)

Meetings with a guest speaker on the last Monday of the month from February to November at the Redbrick Hotel, 81 Annerley Road, South Brisbane. Dinner from 6pm, speaker at 7.30pm.

Qskeptics eGroup - [www.egroups.com/list/qskeptics](http://www.egroups.com/list/qskeptics)  
Brisbane Skeptics in the Pub - [brisbanesitp.wordpress.com](http://brisbanesitp.wordpress.com)

## **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.

## **Canberra Skeptics – Lauren Cochrane**

PO Box 555, Civic Square ACT 2608  
<http://www.canberraskeptics.org.au> Tel: 0408 430 442  
[mail@canberraskeptics.org.au](mailto:mail@canberraskeptics.org.au) (general inquiries),  
[arthwollipot@gmail.com](mailto:arthwollipot@gmail.com) (Canberra Skeptics in the Pub).

A free monthly talk, open to the public, usually takes place on the 1st Saturday of each month at the Lecture Theatre, CSIRO Discovery Centre, Clunies Ross Rd (check website for details of the current month's talk). Skeptics in the Pub gather at 1pm on the third Sunday of each month at King O'Malleys Pub in Civic. For up-to-date details : [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 Geoffrey Dean**

PO Box 466, Subiaco, WA 6904  
[info@undeceivingourselves.org](mailto:info@undeceivingourselves.org)

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.org](http://www.undeceivingourselves.org)

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

PO Box 84, Battery Point TAS 7004  
Tel: 03 6225 3988 BH, 0418 128713 [parkerley@yahoo.com.au](mailto:parkerley@yahoo.com.au)

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

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

Tel: (08) 8927 4533 [brer23@swiftdsl.com.au](mailto:brer23@swiftdsl.com.au)



# THE SKEPTIC

Volume 34 • No 4 December 14

## Contents

### REPORTS

- Paranormal fair - talks** 10  
Jo Alabaster
- Paranormal fair - expo** 15  
Saunders, Bowditch, Mendham
- The other paranormal fair** 17  
Eran Segev



10

17

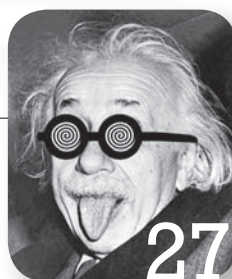


### FEATURES

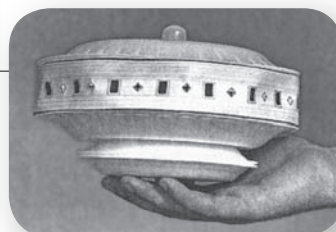
- The other side of eureka** 18  
Anthony Klein
- Phoney fauna** 23  
Tim Mendham
- DIY pseudoscience** 27  
Various
- Flying sorcery** 32  
Steve Roberts
- Hits & myths** 34  
Laurie Eddie



18



27



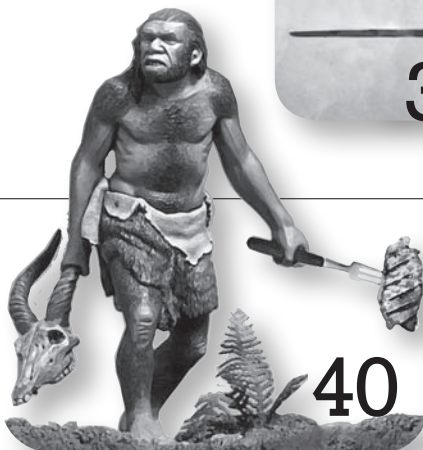
32



34

### ARTICLES

- Neanderthal man** 40  
Bostijan Savle
- Cognitive dissidents** 46  
Martin Bridgstock
- Skeptically camping** 50  
Phil Kent



40



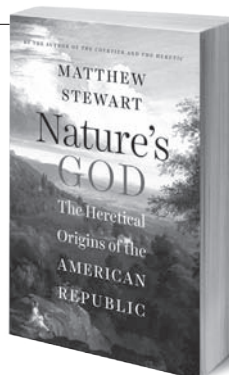
46

### REGULARS

- Editorial** 4
- Around the Traps** 5
- Them!** 8
- The logical place** 14
- Birth of a notion** 39
- Puzzles page** 45
- What goes around** 52
- Book review** 54
- Forum** 56
- Letters** 59



52



54



## It never rains but ...

**W**e are heading into what the media kindly refer to as “the silly season” – that time of the year when the serious news dries up only to be replaced by the odd, the strange and the obviously heat-befuddled.

Apart from the “bush like a tinder box”, “shark attack terror on northern beaches” and “Christmas strike upsets Santa”, we can also look forward to those space filler stories like “UFOs baffle scientists”, “ghosts baffle scientists”, “mystery sea monster baffles scientists” etc – a sad observation on how easily our scientists are baffled.

But what we are also guaranteed to have are stories on droughts. Not so silly, but a perennial of Summer months is the “farmers doing it tough” stories that depict the iconic figure faced with hardships, low prices, overseas competition, government bureaucracy, unhelpful banks and, of course, drought.

And where there’s drought, there’s divining.

And where there’s divining there is, apparently, the CSIRO.

The soon-to-be-enthroned executive officer of CSIRO, Dr Larry Marshall, made a telling comment even before he had taken up the reins by endorsing divining as an actuality with an 80 per cent success rate.

A slip of the tongue? A momentary lack of judgement?

We can all do that; we have all done that. But when it comes to the head of Australia’s largest research institution then you have to wonder about what priorities we can expect. Will the new boss be setting the specific areas where CSIRO should concentrate, and is divining one of them?

The CSIRO quickly responded to their new boss’ statements, with a ‘there’s nothing here to see folks, move on, move on’ approach: “Don’t worry. Larry’s interested in helping farmers access water but he wasn’t saying

divining is the answer.”

This elicited such responses on Twitter as “Great to hear! So, um, that thing about divining being 80 per cent accurate ... misquote? I hope?”

It wasn’t a misquote, as a recording of the relevant ABC Rural radio interview showed, and despite couching his views as being “out there” and that he’d rely on the more level-headed people at CSIRO to advise him, he certainly said it was something to look into.

A follow-up comment to a science publication that CSIRO should “push the envelope” indicates there might be more to come.

But can CSIRO afford pushing those envelopes that are on shakier ground?

Over a period of quite a few years, CSIRO undertook a series of experiments on cloud seeding, with mixed results. Given the right conditions, there might be a positive impact of cloud seeding, CSIRO said. But getting those right conditions and a financially viable outcome was difficult.

The conclusion to those efforts was: “Given the current priorities for atmospheric research in CSIRO, the study of weather modification techniques must compete with funds for research into climate change, climate variability and air pollution studies. It is likely that any substantial research into this area in the future will be initiated by the water industry and will require substantial support from that body. However CSIRO will retain its expertise in the fundamental cloud physics necessary to evaluate any studies undertaken by the water industry.”

There is competition for funds – even more so than when that conclusion was written – so putting pseudoscience on the starting line with other less “out there” prospects will hopefully not lead to a messy battle over precious resources, both water and money. ■

*- Tim Mendham, editor*

## THE SKEPTIC

ISSN 0726-9897  
Quarterly Journal of  
Australian Skeptics Inc  
(ABN 90 613 095 379)

**Editor**  
Tim Mendham

**Editorial Board**  
Steve Roberts  
Eran Segev  
Martin Hadley  
Barry Williams

**Design Services**  
Nova Consulting P/L

**All correspondence to:**  
Australian Skeptics Inc  
PO Box 20  
Beecroft NSW 2119  
Australia

**Contact details**  
Tel: +61 (0)2 8094 1894  
Mob: +61 (0)432 713 195  
Fax: +61 (0)2 8088 4735

editor@skeptics.com.au  
www.skeptics.com.au

The Skeptic is published four times per year by Australian Skeptics Inc. Views and opinions expressed in articles and letters in The Skeptic are those of the authors, and are not necessarily those of Australian Skeptics Inc. Articles may be reprinted with permission and with due acknowledgement to The Skeptic. All effort is made to ensure correct acknowledgement of all contributions. We are happy to update credit when so informed.

**Editorial submission deadline for the next issue:**  
January 15, 2015





# Around the traps...

## Bent Spoon to CSIRO head

**AUSTRALIA:** The incoming chief executive of the CSIRO, Dr Larry Marshall, was awarded the much uncovered Bent Spoon award for 2014 at the Australian Skeptics National Convention in November.

The Bent Spoon is the Australian Skeptics' annual award for the "perpetrator of the most preposterous piece of paranormal or pseudo-scientific piffle".

Marshall, even before taking up his new position, put the spotlight on himself with some unguarded comments endorsing water divining.

In an interview with ABC Radio, he said that he had seen diviners operate with very good results.

"Something that has always fascinated me, I don't know if you've ever seen farmers find water, and as a scientist I can't explain how they do this, but there's a number of tricks when people dowse for water, and I can tell you, I've seen people do this with close to 80 per cent accuracy.

"I've always wondered whether there is something in the electromagnetic field or in gravitation anomaly, whether there's something that would enable you to more efficiently detect water."

The Twitter world leaped into action, with many comments questioning why someone with a physics background, and soon to be head of the country's largest research institution, would endorse the totally unproven 'skill' of dowsing.

CSIRO quickly followed with its own Twitter message: "Don't worry. Larry's interested in helping farmers access water but he wasn't saying divining is the answer." This apparent attempt to put a lid on the commentary failed; in fact, it then encouraged others to comment on the attempt itself.

Marshall later told ScienceInsider that, while he would be seeking further advice from his more "level headed"

CSIRO staff, while dowsing is a "little out there" it is the agency's job to "push the envelope".

Dr Marshall takes up his new position in January 2015. He was educated at Macquarie University where he took a doctorate in physics. He has spent the last 25 years in technology venture capital.

Eran Segev, president of Australian Skeptics Inc, said that "The members of the various Skeptics committees from around Australia who vote on the Bent Spoon Award were in agreement that it was not so much that Marshall has a science background and was endorsing an unscientific process – others have done that as well – but that he was soon to be in the top position of CSIRO which was our greatest concern.

"It was also their view that it should be clear that the Bent Spoon was going to Marshall as an individual, and not to the CSIRO."

Dishonourable mentions in the Spoon category were the perennial contender Fran Sheffield of Homeopathy Plus for her endorsement of homeopathic treatments of the Ebola virus, and the promoters of the Premium Wine Card, a credit card-sized item that supposedly improves the flavour of wine through "an embedded set of precise frequencies that produce a long-lasting natural resonance [that] can be transferred to wine through the wine glass." Both contenders were presenting totally unproven, disproven or just plain silly solutions.

### SKEPTIC OF THE YEAR

The more appreciated Skeptic of the Year Award went to Peter Tierney, a consistent campaigner against pseudoscience, misrepresentation and dodgy behaviour among the anti-



vaccination brigade, particularly the Australian Vaccination Network and various chiropractors. He has gained much media attention through his blog and complaints to AHPRA and the Chiropractic Board of Australia, whose industry members repeatedly flaunt the organisation's admonition on promoting an anti-vaccination stand. Tierney is continuing his campaign.

The third award for 2014 was the Thornett Award for the Promotion of Reason. This commemorates Fred Thornett, a Tasmanian Skeptic who died in 2009 (in true awards fashion, we call it "The Fred"). It acknowledges a member of the public or a public figure who has made a significant contribution to educating or informing the public regarding issues of science and reason. In addition to a commemorative certificate, \$1000 is awarded to the recipient or to a charity or cause of their choice.

This year the award went to the Northern Rivers Vaccination Supporters (NRVS), a grassroots pro-vaccination group of people who live in the northern NSW area, a region that has among the lowest vaccination rates in the country.

Finally, a life membership of Australian Skeptics went to Lilian Derrick, a long-time stalwart of the Skeptical movement in Queensland and secretary/treasurer of the Gold Coast Skeptics.

A full report of the 2014 national convention will appear in the next issue of *The Skeptic*.

## Jinn not the tonic

**SCOTLAND:** According to the *Herald Scotland*, healthcare professionals in Scotland are likely to face an increase in cases of ethnic minority patients claiming to be spiritually possessed.

Staff at Amina Muslim Women's Resource Centre (Amina MWRC) in Glasgow and Dundee say they are experiencing a rise in clients attributing mental health difficulties to supernatural spirits. Smina Akhtar, director of the centre, revealed that 70 per cent of her counsellor's workload since 2012 involves dealing with issues related to the paranormal.

"Many of the women who initially contact us want relationship counselling but after a few sessions they highlight the issue of possession by Jinn (in the Islamic faith,

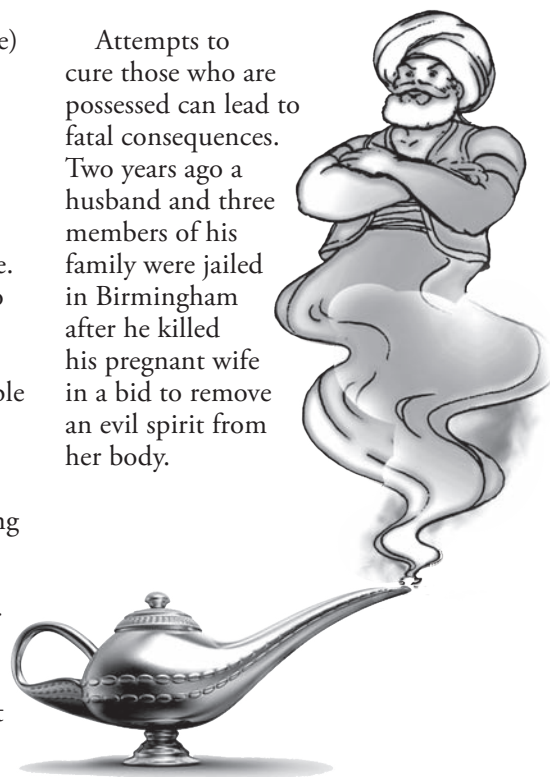
supernatural creatures made from fire) or that someone is practising black magic on their family.

"They do not feel confident in confiding in their local GP, fearing they will be ridiculed. They feel confident in telling us. For us primarily this is a mental health issue. However, you have some people who will blame their predicament on external factors."

Akhtar said she fears that vulnerable individuals will turn to alternative options if their concerns are ignored by health officials.

"More and more people are turning to 'faith healers' who promise to remove Jinn from themselves or their loved ones. They advertise their services on foreign TV channels that are beaming into many Asian households. They give assurances but their help comes at a price."

Attempts to cure those who are possessed can lead to fatal consequences. Two years ago a husband and three members of his family were jailed in Birmingham after he killed his pregnant wife in a bid to remove an evil spirit from her body.



## Revealed: Museum plot to steal Nessie

**UK:** A new book called Britain's Mysterious X-Files claims that newly discovered documents have revealed how the National History Museum (NHM) in London appealed to so-called bounty

hunters to help secure the carcass of the Loch Ness monster.

According to *The Scotsman* magazine, author David Clarke said while researchers already knew about similar

files at the Royal Scottish Museum (RSM) in Edinburgh, the discovery of similar documents at the NHM left him "astonished".

The book claims the files, dating back to the 1930s, show "staff at the institution were keen to steal a march on museums in Scotland and around the world by exhibiting all – or part – of the beast's remains".

In 1934, a year after the first sightings of a supposedly mysterious creature lurking in the loch's depths, the book claims an NHM employee made clear it would be keen to trump institutions such as the RSM.

In a letter dated March of that year, the unnamed official responded to questions about the museum's policy on Nessie: "Should you ever come within range of the 'Monster' I hope you will not be deterred by humanitarian considerations from shooting him on the spot and sending the carcass to us in cold storage, carriage forward," the letter stated, before adding: "Short of this, a flipper, a jaw or a tooth would be very welcome."



## Water energy man dies

**JAPAN:** A Masaru Emoto, who claimed that human consciousness could affect the molecular structure of water, has died. Emoto's ideas included that water could take on the "resonance" of "energy" directed at it, and that polluted water could be restored through



prayer and positive visualisation.

His experiments included exposing water to positive speech or thoughts that he thought would result in "beautiful" crystals when frozen but negative intention will yield "ugly" frozen crystal formations. His ideas were never scientifically established.

He turned down James Randi's Million Dollar Challenge in 2003,

## US belief in the paranormal

**USA:** A recent survey of Americans' fears, phobias and irrational beliefs reveals that almost half of the population believes in haunted houses, alien UFOs, that dreams foretell the future, and that Satan causes most of the evil in the world. Close to 70 per cent believe you can influence the physical world through the power of positive thinking.

The Chapman University Survey on American Fears included 1500 participants from across the nation and all walks of life. The research team leading this effort pared the information down into four basic categories: personal fears; crime; natural disasters; and fear factors. According to the Chapman poll, the number one fear in America today is walking alone at night.

On a more positive note on the paranormal, the survey found that about 20 per cent believed in Bigfoot, 17 per cent believed in fortune tellers' ability to see the future (as opposed to dreams, apparently), and 13 per cent believe in astrological influences.

17 per cent believed in a literal interpretation of the Bible, but 40 per cent believe that God created man "pretty much in his present form at one time within the last 10,000 years". A further 37 per cent believe that "man has developed over millions of years from less advanced forms of life, but God guided this process". ■

## Homeopathic MP "barking mad"

**NZ:** Prime Minister John Key dismissed a Green MP's suggestion that health officials should consider homeopathic remedies to treat the deadly Ebola virus as "barking mad".

Aimee Gulliver of Stuffco.nz reported that NZ Green Party MP Steffan Browning (pictured below) made the suggestion, regarding World Health Organisation (WHO) options for

Browning said "it was probably a bit unwise" to sign the petition. He had signed the petition "pretty late at night", Gulliver reports, and he said he "probably dropped" from the standards expected of a member of Parliament in doing so.

NZ Health Minister Jonathan Coleman said treating Ebola patients with homeopathic remedies was "a wacko idea".

"I don't know what he's thinking; it's very, very dangerous. I think he really needs to engage his brain, it's a really and stupid dangerous idea."

Green Party co-leader Russel Norman said the petition did not reflect the position of the Green Party, and agreed it was unwise of Browning to have signed it.

"I've spoken with Steffan about that and I didn't agree with him on signing that petition," Norman said.

"The Green Party approach of course is to take an evidence-based approach and leave it to the experts at the WHO about making sure we deal with issues like Ebola," Gulliver reported.

The organiser of the online petition is Australian Fran Sheffield of Homeopathy Plus, who said that homeopathy had "a proven track record of treating and preventing serious epidemic diseases," including dengue fever, malaria, and Japanese encephalitis.



treating Ebola, while acknowledging "some people will see it as wacky".

Browning signed an online petition which called for the WHO to end the suffering of the Ebola crisis by testing and distributing homeopathy as quickly as possible to contain the outbreaks.

"Let's be honest," said Key. "This is a serious global issue, and if he really thinks that's the answer I'd love to see the medical research."





# Readers' indigestible

Tim Mendham looks at those 'other' publications, where skepticism is a dirty word.

This issue, we look at a publication and a series of websites that deal with the paranormal. One is a glossy colourful magazine on everything weird and wonderful that actually says very little. The others all focus on UFOs in Australia, but with some aspects that are of great concern when dealing with the public. Read on.

## MYSTERIES OF THE UNKNOWN

### What to make of this?

*Mysteries of the Unknown - Inside the World of the Strange and Unexplained* (Time Life, A\$14.95) is a one-off compendium of articles on a whole range of paranormalities, from ghosts and spiritualists through psychics and psychologists (ie Jung) to monsters and mothmen.

The real mystery is why *Time Life* would put this out.

*Time* magazine is known for its long history of often incisive articles on a range of disciplines, including politics, science and the arts. The defunct *Life* magazine was more 'photojournalism', ranging from intimate and often candid portraits of celebrities to graphic coverage of war and poverty. (During World War 2, it was the first publication in the US to feature dead American soldiers photographed as they lay, without any covering to conceal their identity or their decaying state.)

So what are they doing with a publication on the paranormal?

The Time Life imprint was founded in 1961 as the book division of Time Inc, and while it took its name from Time Inc's two cornerstone magazines, it remained

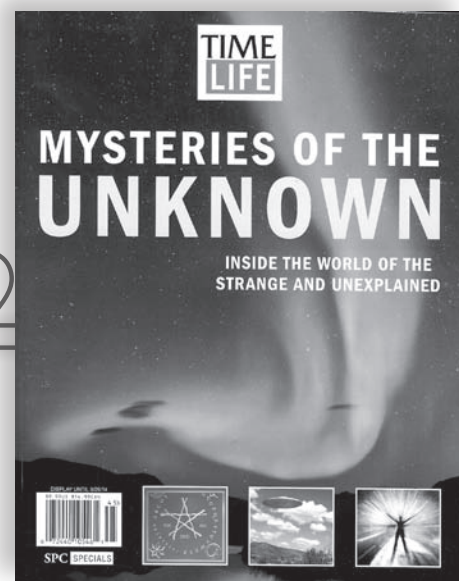
independent of both. It set up shop to publish books and boxed sets of LPs (later CDs) of music. Wikipedia relates a complicated series of divestments and purchases, including a period when it was owned by The Readers Digest Association. The current *Mysteries* magazine itself is published by Time Home Entertainment, which is back under the banner of Time Inc, publisher of the news magazine of the same name. A mystery in itself, but whatever!

Back in 1987 through 1991, Time Life Books published a series of books about the paranormal called *Mysteries of the Unknown*. Each of the 33 volumes in the series focused on a different topic, such as ghosts, UFOs, psychic powers and dreams. The series was very successful - within 15 months of its release, it had broken every sales record for the company.

Now comes a more digestible (no pun intended) 260-page magazine which brings all (or at least most) of those topics under one roof.

Except it's not.

Apart from the fact that you couldn't possibly include all of the detailed info in the earlier book



series in one magazine, the version on sale in Australia is even smaller than that - only 90+ pages. While those layouts that are in the local version also appear in the larger publication, there's obviously a lot that is left out.

But it's even worse. Not only are there whole topics left out, but those that are covered are often cut down versions of their American cousins.

So what we have is an edited version of an edited version, and it shows. Many of the topics only warrant a few hundred words. The selection is also strange: a two-page article on the disappearance of a regiment of soldiers in the World War 1; two pages on flesh-eating animals (hardly paranormal - pitcher plants and red algae); and four pages on Amelia Earhart (even less paranormal); while there is nothing on Edgar Cayce, pyramids, feng shui, I Ching, astrology, prophecy, all of which appear in the overseas version.

One specific aspect that is left out is Australia - no mention of Valentich, the most famous Australian UFO case, and no Yowies.

And even after all that, what there is in the local version is pretty weak. There's the occasional





# UFO SITINGS

**Mysteries of the Unknown** magazine (reviewed to the left) has little on UFOs and nothing on Australian ones. So it looks like it's up to the Australian UFO organisations to cover anything that happens locally.

Fortunately, there's a plethora on offer:

- ACERN (Australian Close Encounters Resource Network – [www.acern.com.au](http://www.acern.com.au))
- AUFORN ([www.aufor.com](http://www.aufor.com))
- Tasmanian UFO Investigation Centre
- UFO & Paranormal Research Society of Australia ([www.ufosociety.net.au](http://www.ufosociety.net.au))
- UFOESA (UFO Experience Support Association - [www.ufoesa.com](http://www.ufoesa.com)) – guestbook seems to be the only part that's up to date
- UFO Research (NSW) ([www.ufor.asn.au](http://www.ufor.asn.au))
- UFO Research Queensland ([www.uforq.asn.au](http://www.uforq.asn.au))
- UFOSA ([ufosa.wordpress.com](http://ufosa.wordpress.com))
- Validate ([www.paranormalnation.com.au](http://www.paranormalnation.com.au))
- VUFOA (Victorian UFO Action – [www.vufoa.com](http://www.vufoa.com))

They are a mixed bunch but what is particularly interesting is the number of organisations offering counselling services for those having trouble telling their stories to others or even those who have been traumatised by 'encounters'.

The VUFOA site describes it thus: "What are you going through? Whether it is ridicule from those around you because of your beliefs or have you had an experience with alien beings, we aim to offer you some comfort and direction on this page. All the pages on our website are important, but none more than this page. It's where you

have come to seek assistance and we know that. Have you had a moment where you have gotten into a conversation with someone only to find them close to tears. Do you know someone you feel may need help? It seems we have a community of like minded people who are suffering in silence. It is clearly not acceptable for us to sit back and leave it to someone else to worry about. This page offers a lifeline to help those that may need it. Please don't hesitate to offer them the gift of this page."

It goes on to say that lacking acceptable proof is "a cross we bare [sic] and yet we all should wear it with pride, we are the New Guard, we are the ones that won't stand for the status quo [sic]. We are brave enough to take on the challenge and should always look proud upon ourselves."

This call to action is a little worrying when you ask what qualifications the members of the site have to treat those who are clearly under stress and who are "close to tears" just discussing the topic. It's only at the end that VUFOA cites the 'support association' UFOESA, offering as a last resort "one of our qualified Professionals (Counsellors/ Hypnotherapists Psychologists, Medical Practitioners and other consultants)".

When you have people on the UFO Research (NSW) guestbook making comments like the following, you know you have some potentially serious problems: "floor gymnastics competitions. But to be everywhere 'beware'! Warmly pursued Hanwei, I do not know to." That's the item in its entirety, and there are many more like it.

More on UFO sites next issue. ■

paragraph in articles that looks at the skeptical view (the US *Skeptic* magazine is mentioned, but not the *Skeptical Inquirer*, and definitely not the magazine you're reading now). But once you get into some areas, in particular the section on ghosts and hauntings, the unnamed author proves to be a hands-down believer. This is evidenced by comments such as: "Skeptics refer to even the most sophisticated operations [of ghost hunting] as pseudoscience. They criticise ghost hunters for flawed logic and mystical trappings. The ghost hunter who claims to have detected an apparition because of a cool temperature in one area of a house is belittled for overlooking other, more logical explanations. His tools and practices are dismissed as 'techno-mysticism', a fusion of scientific method with spiritual belief." Those awful Skeptics; they just don't understand! Just ignore them, as the articles in this section do.

OK, a lot of the paranormal is dodgy, to say the least. But this coverage is ridiculous – superficiality for those with the attention span of a snowball. If you really must have a digest of the paranormal, get the overseas version, or better still, buy the 33 volume set from 20+ years ago. You can pick those up cheaply from eBay. And that's the truth. ■

# IS ANYONE there?



What goes on at a paranormal fair? The Skeptics take a stand ... literally ... at the Australian Paranormal & Spiritual Expo. Here, Jo Alabaster talks the talks; and elsewhere Richard Saunders, Peter Bowditch and Tim Mendham haunt the halls.

Early in October this year, along with my Skeptic Zone cohorts and members of the Australian Skeptics, I was invited to attend the Australian Paranormal and Spiritual Expo in Casula, New South Wales.

It was held in the old, reportedly haunted Casula Powerhouse in western Sydney, and frankly I had utterly no idea what to expect, this being the first event I'd attended based around things we skeptics tend to be skeptical about. I wondered whether my lack of belief in the supernatural and tendency to question paranormal claims would be a source of conflict or hostility, and I wasn't sure how I would feel, being immersed in a group of people with such different beliefs to my own. I took comfort in the fact that Richard Saunders had been invited to speak and that Australian Skeptics had been given a table on the main floor – surely we were welcome.

The expo organisers were kind

enough to provide me with a media pass, so I decided that I would spend the day immersing myself in the workshops and talks that I had access to.

## THE WITCH'S CIRCLE

The first workshop for the day was run by Kylie Allerton, titled "A Tarot Ritual - connecting you with the spirit world". I entered the theatre to be greeted by an interesting scene on the stage - a circular mat was on the floor, surrounded by cushions - and on the mat were an assortment of items: a small cauldron sort of a thing; a little resin-cast human skull; a couple of long bones; some goblet type cups; an incense burner; and a deck of tarot cards.

I took a seat near the front of the theatre and took a moment to take everything in. For somebody who doesn't tend to get too much exposure to the world of spirituality, it was an unusual scene for me to behold. Before

long, the friendly people who were running the expo introduced Allerton.

She is a 'psychic reader' and practising white witch who incorporates crystal balls, the tarot and palmistry when conducting readings. Today she was working with the tarot - and us! The audience, there were perhaps forty of us, were invited to come and join her on stage and create a circle around the mat. It took me by surprise, frankly. I was expecting something akin to a lecture rather than a participatory exercise, but I decided on the spot that I'd take the opportunity to join in and experience everything that I could.

I hoped that nobody would mind a non-believer taking part in what was about to happen. If such a thing as negative or cynical vibes exist, I aimed not to emit them. I did my best to be open to whatever occurred, to join in rather than pooh-pooh things that I don't necessarily believe in.

Down we went, we formed a



seated circle around the mat, some people removed their shoes and got comfortable. Kylie explained that we were going to do some summoning and that she'd give us each a tarot card to use as a portal to the spirit plane.

We began the ritual with some breathing exercises, during which we were to consider a person who had passed away that we wished to contact, and a question that we would like to ask them. The incense was heady and I focused on my breathing, so I didn't really spend a great deal of time paying attention to what the other participants were up to, but the room seemed incredibly calm. Then Allerton began to open a witch's circle.

This isn't a subject that I know too much about, but she recited incantations, blessings and called upon

the spirits of air and fire; we joined in with a little chanting. Bones were struck together, something was set on fire and we were ready. Allerton walked around the circle with a deck of tarot cards held out face down and we were instructed to choose one each.

The person who had passed away who I thought I'd like to have a conversation with was my grandmother, and the tarot card that I had selected was The High Priestess. The character in this card struck me as rather matriarchal - a wise woman, as I considered my grandmother to be. Some others, particularly those who had cards from the minor arcana

**“ I hoped nobody would mind a non-believer taking part in what was happening. I aimed not to emit negative vibes.”**

pictures on the cards, to study the colours and details, and offered to chat with people throughout the day if they wanted a hand interpreting their selection.

Next, we used the cards to create “portals to the spirit world”. We followed Kylie's instructions and examined them with our ‘regular’ eyes, held them to our foreheads and

examined them with our ‘third’ eyes, put our cards down and visualised them with our third eyes, then imagined them growing, to the size of a painting, to the size of a doorway, into a doorway, which we then stepped through.

I found this fairly simple to go along with, it was much like participating in guided meditation. I went with whatever came to mind as we were taken through a scenario of walking into our cards, through a landscape - this was the spirit world - then toward our deceased loved one, who we conversed with. The background of my card seemed to be tropical fruit, so I imagined walking through a plantation of pineapples, which became a very odd forest, where I eventually met my grandmother. I remember my grandmother fairly well, though I'm aware that our memories aren't entirely reliable. I imagined a fairly believable conversation with her (she wasn't a believer when she was alive and acquiesced in our conversation that she was a composite of my memory and imagination). Then Allerton guided us through saying goodbye, heading back across our landscapes, back through our doorways and told us to shrink the cards back down to their actual size again.

The circle was closed and we toddled off with our cards.

### GHOST HUNTERS!

The next session, “Communicating with the Dead - Modern Techniques and Victorian Twists”, was with Rob and Anne from Eastern States Paranormal (geddit? ESP?), a paranormal investigative team based in NSW.



(sort of the equivalent of numbered cards, rather than face cards) didn't see immediate relevance in the cards that they had selected.

Allerton invited us to think about our first impressions on seeing the

**Clockwise** Kylie Allerton calls up the spirits (author seated in the middle); Mitchell Coombes addresses a largely female audience; and Sue Bishop gets energetic.

## ANYONE there?

Continued...

Rob and Anne were very affable speakers and presented us with an overview of their experiences attempting to communicate with the dead and the techniques that they've used to do so.

We were taken through some audio of different techniques they've used in reputedly haunted locations to contact the spirits - singing, stomping, chanting, singing in tones which clash. Rob and Anne played us some recordings of EVPs (electronic voice phenomenon), which are sounds found on electronic recordings that some interpret as 'spirit voices'.

The audio recordings were of varying quality and I cannot say whether or not what we were hearing were the voices of spirits, but I was aware of the concept of pareidolia while throughout this presentation - pareidolia being our tendency to recognise patterns within random stimuli, with or without suggestion. It's an interesting phenomenon: we hear phrases when songs are played backwards, we see faces in the surface of Mars. I feel that a desire or expectation to see or hear something, sometimes combined with suggestion, can account for many things which are heard in EVPs or seen in spirit photography, which was also presented in ESP's talk.

Toward the end, we were given an interesting rundown on the history of different modalities which people have used to attempt to contact the spirit world - Ouija Boards, tipping tables and the like. As a skeptical type, I suspect that the ideomotor effect comes into play when such devices are being used, but I find them to be fascinating curiosities.

Rob and Anne struck me as kind and good humoured people. They were curious about contacting the other side, they were very respectful in their approach and they demonstrated a genuine desire to help others who are experiencing 'otherworldly' concerns.

### CELEBRITY PSYCHIC

After a break for lunch, the drawcard of the expo, Mitchell Coombes, appeared. Billed as "Australia's most trusted psychic medium" and awarded 2011 Psychic of the Year, Coombes is an author, appears on radio and television regularly and was one of the contestants on season one of *The One*, a reality TV show pitting psychics against one another, on which our Richard Saunders was the skeptical judge.

While I've seen broadcasts of many psychic shows on television and YouTube, and have seen Coombes himself on daytime television, this was the first time I'd been an audience member. It was a very different experience. Coombes is a very charismatic speaker; he's high-paced, energetic and very good at engaging



his audience. After he had introduced himself and told an anecdote about a client who wasn't certain she'd had an experience with contact from the afterlife - "of course she had!" - he asked us to help him raise the energy of the room by standing up, stomping our feet, clapping our hands and cheering. It reminded me of being in an evangelical church or a faith healing service - the crowd went wild and the excitement in the room was palpable.

Coombes then seemed to receive messages from the spirit world to be passed on to members of the audience.

I found this part a little difficult. A couple of days prior, I'd been chatting with Richard about the talk he was going to present and one of



the things he covered were questions that psychics can use to gain more information from the audience: "I'm getting an 'A' name", "I'm getting a blue car", etcetera. Well, Coombes did get an A name, but the car (or motorcycle) was red.

The audience seemed to get a lot out of his readings though - there was a lot of laughter, a few tears. I'd recommend that anyone skeptical of psychics attend such a show, as experiencing the emotion in the room gave me a greater appreciation of how psychics can interact with their audiences. Usually when I see readings done, I'm able to rewind, rewatch and analyse while removed from the situation - live shows are a very different experience to witness than recorded sessions.

### ENERGETIC HEALING

Next up was Sue Bishop, presenting a workshop on "Energetic Healing - are your thoughts and feelings making you sick?" Bishop is a 'metaphysician', psychic, teacher and author and is the co-founder and director of the Chiara College of Metaphysics, which offer courses on metaphysics, parapsychology, spiritual healing and intuitive sciences.





**Clockwise (from left)** One standholder with some not-so-paranormal toys (cars, dolls and comics); Richard Saunders goes spooning; and strange fruit, going cheap.

the exercises with good intentions, absolutely wished her well and followed the instructions that Bishop gave as best as I could.

First was an exercise in which we were instructed to take turns channelling white light into our crown chakras, then focusing to make that light either cool fast moving blue or warm slow red, then passing it to our partners, who had to guess what colour light they had been given. My partner did the channelling first and was surprised that I'd guessed correctly that she'd aimed to pass me blue. Frankly, the odds were fifty-fifty to begin with;

This session was the closest the expo came to presenting what I felt was questionable health advice; I did struggle with some of it a little. Sue believes that blocked chakras can be responsible for disease, that tending to the spiritual self can prevent disease from taking hold and that energetic healing can be conducted, attending to a person's auras, to manage their wellness. Sitting and listening to her speak about these things and tell us of how she prevented the diabetes that she had a genetic predisposition toward by making lifestyle changes and letting go of troubles from her past, I frequently wanted to ask her where her knowledge came from and how it was that she knew it to be true - but interrupting her talk would have been very rude. I would be curious to speak with her more about her beliefs in the future, though.

She had us come to the stage for an energetic healing workshop - we were to pair up with strangers and prepare for the first exercise. My partner was a sweet woman around my own age, and I found myself worrying that she would feel that I was being somewhat disingenuous, being a skeptic taking part in something which may be important to her. I took part in



then I took into consideration that cool blue was much more appealing than warm red under the hot stage lights and that my partner had an expression on her face which was somewhat serene and seemed to match better with the former colour choice.

Then it was my turn to pass a colour. I'm not entirely sure what white light, or energy, is - it isn't visible light - but I know that a crown chakra is located around the forehead, so I imagined a beam of literal white light entering my forehead, moving through my body

into my hands and turning a cool, calm, flowing blue. I made a gesture of passing it to my partner and imagined it moving to her hands; she told me it was blue. Again, I'm inclined to put it down to probability, environmental influences and visual cues - and perhaps the way Bishop described the two colours as she was giving us our instructions made one seem more appealing than the other. I didn't have an opportunity to note the trends of the entire group.

Our next exercise was to do the same, but instead of passing a colour, we were to pass an emotion from our memories. Bishop asked us to keep our faces neutral as we recalled a time of joy, to be visualised as yellow, or hurt, which was to be visualised as a hot murky red. My partner went first and I watched her concentrate. Her face did remain fairly neutral, but she took some time before she was ready to pass to me and her body language struck me as quite unhappy. I was actually quite concerned for her - when she made a passing gesture to me, I told her that I felt that things weren't too good for her and asked if she was okay. She was incredibly apologetic and all I could think to do was reassure her that I was fine, just concerned for her, and opted to send her joy in return. She seemed a little fragile and sad to me, perhaps she'd been through hard times, and I hoped that my good intentions were more important somehow than my lack of belief.

Then we moved to the front row of seats, partner number one standing behind partner number two, and performed what we were told was a short energy healing session. There was a lot to it: white universal energy from above; grounding earth energy from below; healing angels standing behind us. Chakras, auras, miasm, many different colours, silver filaments, fohat, akasha and ether, nadis - this was complicated stuff. Bishop talked us through everything, she spoke of energy to visualise, what each aura looked like, that we were to transfer energy from various places through ourselves and to the person we were healing, massaging their auras. The

## ≡ Logical Place

### Confusing correlation with causality

Consider two events A and B. Event B closely follows Event A in time. Does this mean that Event A caused Event B? Possibly, but not necessarily. Both events could have been caused by a third event C, or more likely, the close timing of Events A and B is a coincidence. So not only is causation not the only explanation, it is not even the best explanation.

**Post hoc ergo propter hoc** (Latin: "after this, therefore because of this" - often shortened to **post hoc**) is a logical fallacy that states "Since Event B followed Event A, Event B must have been caused by Event A". It is subtly different from the fallacy **cum hoc ergo propter hoc** ("with this, therefore because of this"), in which two things or events occur simultaneously or the chronological ordering is insignificant or unknown.

Post hoc is a particularly tempting error because temporal sequence appears to be integral to causality. Indeed, if Event A did cause Event B, Event B would probably occur soon after Event A in time. But the reverse connection is not necessarily true - temporal correlation does not imply causality. The fallacy lies in coming to a conclusion based solely on the order of events, rather than taking into account other factors that might rule out the connection.

The form of the post hoc fallacy can be expressed as follows:

- Premise: A occurred, then B occurred.
- Conclusion: Therefore, A caused B.

The following is a simple example: "The rooster crows immediately before sunrise, therefore the rooster causes the sun to rise."

When B is undesirable, this pattern is often extended in reverse: Avoiding A will prevent B. This is the basis of many superstitious beliefs, such as bad luck associated with Friday the 13th or walking under ladders.

- by Tim Harding

## ANYONE there?

*Continued...*

massage was literal - we placed hands on one another, then raised them to where each aura was meant to exist around the body and sort of smoothed them out.

When my partner was being the healer, I sat peacefully in my seat and listened to descriptions of colours and patterns and lights - frankly, it was quite pleasant to just sit passively. When asked how I felt afterward, I truthfully replied that I was ready to get into bed.

It had been a long day and I welcomed more stillness!

Next was my turn to stand while my partner sat. I imagined light coming from above, energy coming from below, somebody standing behind me passing general healing sort of vibes through me. I put my hands on my partner's shoulders, smoothed out what are to me imaginary auras and generally hoped that she was well. She seemed happy afterward.

One thing I really want to say about the energy healing workshop: I thought that it was very much to Bishop's credit that she mentioned several times that one of the things people do when they're experiencing the onset of disease is to dismiss thoughts of going to their doctor, and that this was a problem. I agree with her strongly here - if things are potentially amiss, see your GP!

### THE SKEPTICAL PERSPECTIVE

The last talk of the day was from Richard Saunders; and I'd really like to credit the organisers of the Expo for inviting a skeptic to speak at their event. I feel that it's a testament to their sense of enquiry that they'd include the perspective of a non-believer in their program.

I really wasn't sure how his talk would be received. After introducing himself, explaining his background and what the Australian Skeptics get up to, he posed some questions about the nature of ghosts and spirits and the mechanisms people use to detect and communicate with them, discussed the fallibility of human memory and perception, noted some questions that psychics who aren't on the up-and-up can use to gain information when cold reading, explained how pareidolia works - and it was all really well received. I noticed a lot of people in the audience nodding along in agreement, a few "Ah ha!" moments

and a few giggles at Richard's jokes.

We had a few people approach us afterward to say that they were happy that we were there - including my partner from the energy healing

workshop, who I was glad to have the opportunity to have a bit of a debriefing chat with and let her know that I wished her the best.

I really appreciated Richard's approach to speaking at the expo. Perhaps some people expected a skeptic to be negative and make claims that the paranormal does not exist; there was none of that. He primarily approached the topics that he covered from a consumer affairs angle, with tips on not being cheated by psychics who weren't 'genuine' and gave reassurances that human minds can very easily be fooled.

At the end of the day, I can't honestly say that I saw any evidence of an afterlife, anybody's ability to communicate with those who have passed on, the existence of psychic energy, spirits or the paranormal in general, but I did encounter many people who were welcoming, good-humoured and kind-hearted. I had a lot of fun and look forward to doing it again next year! ■

All photos: Darrin Langbien Photography



# FAIR'S FARE -purchasing THE paranormal

In May this year, and as reported in the pages of *The Skeptic*, ASI committee member and *Skeptic Zone* producer Richard Saunders and *Zone* reporter Maynard travelled to the paranormally-oriented Paracon Australia exhibition and conference at the Old Maitland Gaol, near Newcastle, NSW. Saunders was approached by the organiser Peta Banks who asked if he would be interested in speaking at the forthcoming Australian Paranormal and Spiritual Expo in October.

When Australian Skeptics were invited to participate, part of the package was the opportunity for us to have a stand to distribute *The Skeptic* magazine and to spread the word about the organisation and its aims. We brought copious back issues of the magazine, flyers on the Skeptics and information on our \$100k challenge. We were the only stand lacking a profit motive as we were giving everything away for free; others were less altruistic.

The stand was manned by a number of skeptics, including the three authors of this piece, ASI treasurer Martin Hadley, and committee member Josh Godbee.

There were about 40 stands, ranging from standard trestle tables covered with knick-knacks to small individual desks for the psychics, tarot card readers and clairvoyants, secreted away in a room on the top floor. We had a fairly central position, with a lot of passing traffic.

The attendance was high and constant, which must have pleased the

Peter Bowditch, Richard Saunders and Tim Mendham report on the expo part of the paranormal event.



The paranormal exponents in action.

exhibitors.

*Peter Bowditch:* "The usual sorts of products were on display, with several stands offering crystals (one run by a professional geologist!), scented candles, essential oils, and other symbols of the New Age. Even one exhibitor with Doctor Who and Star Trek toys. I bought a packet of Death Mints in an attractive coffin-shaped container and a blow-up alien, which proceeded to deflate – obviously affected by skeptics.

"There was one stand run by a group of UFO hunters. I was rather surprised

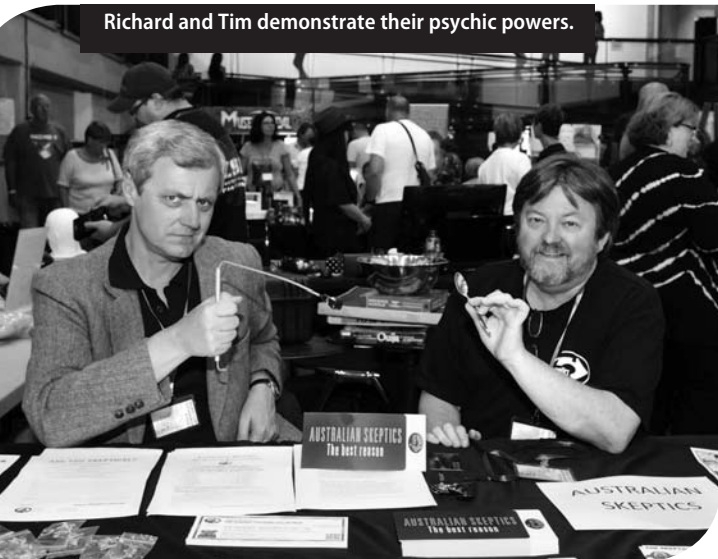
to be recognised from a couple of TV appearances a few years ago, but who knows how far their own fame has spread? One of the featured UFO events had the obligatory photographs of strange lights in the sky, plus a daylight shot of the location. I thought I recognised it, and in fact it was at the end of the road which goes past my front door. I will have to pay more attention to the sky around my place in future.

"What was surprising was the number of people promoting ghost

## Fair's Fare - Purchasing the Paranormal

Continued...

Richard and Tim demonstrate their psychic powers.



tours, including one at my local pub (in six years of living here I have never heard any mention of it being haunted). I happen to like ghost tours, and they can be both fun and informative. There is one in The Rocks area of Sydney, where the first houses in the infant colony were built, which is a fascinating history tour, using the word 'ghost' to attract clients but rarely mentioning them during the night."

*Richard Saunders:* "Rarely in my years with Australian Skeptics have we had such an opportunity to speak directly to so many people 'from the other side'. Most people were interested and friendly and many were happy to help themselves to a free copy of *The Skeptic*, some more than one. There were, however, a few who took exception to our presence with looks of surprise and even disdain. One woman even made a hissing sound at me!

"The questions never ceased and ranged from 'Why are the skeptics here?' to 'There is a cash prize for evidence of the paranormal?' It struck many as implausible that after 30 plus years no one had won the prize. The question that cropped up more than

any other was 'Can you explain spirit orbs?' Explaining that the orbs that appear in photos are the result of a flash from a camera bouncing off out of focus dust particles proved difficult for some people to swallow – orbs are ghosts,

and they wouldn't hear anything else about them."

*Tim Mendham:* "There were various conversations and queries we had with visitors to the expo. Having Richard on the stand was a boon, as many people recognised him as a judge on the TV program, *The One*, and that helped to break the ice with some attendees. A few stood out.

"One attendee showed me a series of photos, one of which, she said, included a 'ghost' in the background. The evidence? He wasn't there

in the other photos. I asked for copies of the photos so we could look at them (and check out the times embedded in the photos' metadata). To date, they haven't arrived.

"A second discussion was with a man whose conversation began with some basic queries about the Skeptics, innocuous enough until he burst into a diatribe about a UFO sighting he had had some years before. The craft had appeared one night about 400-650 metres overhead, he said (curiously specific numbers, we thought). It was shaped like a long oval with rounded ends. We suggested that it sounded like a blimp, but he insisted it wasn't as he had seen one of those. He then continued to describe the sighting, stating that the craft flew above him about twice the height of the building we were in. Again, we suggested that that would only be about 20 metres (being an old powerhouse, the building had high ceilings) and that didn't match his 400-650 metres he had said earlier. That didn't matter, as he knew that it had to either be an alien craft or a government cover-up. No alternatives were countenanced.

"A third person approached us toward the end of the day. She had attended Richard's talk in which he described various paranormal skills, and she was intrigued by his ability to bend spoons. She obviously hadn't paid too much attention, because she seemed devastated when I told her it was a trick. She then rattled off a few more paranormal skills she had seen in the UK; all tricks, I told her. She went away a broken woman, at least for a few minutes. What spoil-sports the Skeptics are."

There were some spouses (mainly men) dragging their feet, who had clearly being towed to the expo by their more enthusiastic partners, and who seemed quite happy to see someone who was not totally convinced of the paranormal.

In summary, the expo was a lot of fun, and although there were occasional pockets of 'health' practitioners, including Reiki ("It involves quantum science"), where the patients seemed (hopefully) to be taking it all with a sense of humour, most of the stands were classic woo doing little harm apart from the amounts of cash passing hands. The crowd were generally friendly to the intruders, the queue for lunch was too long (there are no shops nearby as an alternative) and the entrance fee of \$5 was very reasonable.

As we had none of our collection of magazines and flyers left over at the end of the day, and we hadn't been attacked by anyone (well, not many), the day has to be judged a success. We had polite conversations with many people who, we hope, went away with a better understanding of what skepticism is all about.

Of course we heard some things that we have heard many times before but that was expected - we have been doing this for a long time – but the organisers are keen to have us back next year. We would add balance, they said, and we agreed, though we felt sorry for the paranormalists as the balance was clearly in our favour. ■

All photos: Darrin Langbien Photography





# Meanwhile ...

Eran Segev reports on another alternative lifestyle exhibition, Mind Body Spirit, and witnesses the latest trends in wooishness.

A visit to the Mind Body Spirit Festival (MB\$) never fails to offer insights into the minds and practices of those who promote woo of various kinds. Creative minds, unencumbered by the need for evidence or scientific investigation, can conjure some spectacular inventions that surely make sense in the alternative reality which they occupy.

A visit to the Festival in Sydney in late October offered all that, and more. There were the usual purveyors of aromatherapy, psychic readings of various kinds, diverse gurus, cults and religions, homeopaths, naturopaths and chiropractors; but there were also some interesting new trends.

The main one was the emergence of several devices offering diagnosis of pretty much all ailments using waves sent to the body through headphones. While the subject is wearing the headphones, a computer screen performs all kinds of ‘calculations’ that show the state of various parts of the body. I asked several of those promoting this idea what kind of waves were being transmitted. In one case it was sound waves – which makes sense – but in two other cases they were radio waves! The question of how the body’s response to these waves was being measured, given that headphones are an output device and not an input device, was left unanswered in all cases. The devices were “Russian technology” in two cases and a local development in one. I am willing to bet we’ll see more of this wonderful new technology in the



coming years. It’s just too easy to not tempt those trying to make an easy buck.

An astrologer who offered a yearly forecast provoked me to ask if I could have two: one for 2015 and one for 2013. Contrary to the predictions of my skeptical friends, she was only too happy to go along. Perusal of a sample report revealed why she was not worried about being found out as inaccurate; the report was so vague it could fit anyone, at any time, regardless of what happens. You could die half way through the year and it would still be possible to fit the remaining half to what happens to you.

We are used to the word-salad offered by woo-merchants, as they define and redefine words, mostly scientific sounding ones (quantum, anyone?) to make their specific brand of nonsense sound as if it is grounded in science. In this visit, we were surprised to see a stand promoting “esoteric healing”, “esoteric chakra-puncture” and other things “esoteric”. As the word esoteric made no sense in the context, we asked the rep what it meant. As one called to another to answer the difficult question, we got the following definition: esoteric means ‘innermost’. (To be on the safe side, we googled it. It means

“intended for or likely to be understood by only a small number of people with a specialised knowledge or interest.”)

So after we were blessed and prayed for, drank alkaline water and energised water (but also delicious chai tea that had no claims attached apart from being very tasty) and engaged in numerous conversations with confusing (and very much confused) representatives of various healing methods, we headed out. On the way, we saw a rather deserted stand, promoting “dirty water”. It was not a woo stand; it was World Vision, who were trying to attract attention to the plight of hundreds of millions of people who have no access to clean water. They pointed out that one in five child-deaths in Africa is attributed to the absence of access to clean water. We asked how they were going in terms of donations. They said “not good at all” and told us of a woman who said she couldn’t afford to donate the few dollars it would take to provide a child with clean water for a year. Under her arm, she had an \$80 ‘angel drawing’ from a few booths down. ■



# The Other side of Eureka

In this Classic Catch article, Tony Klein looks at the frauds and falsehoods in physical science, when the “I’ve got it!” moment disappears into history ... hopefully.



Many years ago, before the fall of the Evil Empire, a colleague from behind the Iron Curtain told me that doing research in Science is like chasing a black cat in a dark room. Philosophy, he said, is like chasing a nonexistent black cat in a dark room. And Marxist economics, he added, is like chasing a nonexistent black cat in a dark room and shouting “I’ve got it, I’ve got it!”

I was reminded of all this by the cold fusion fiasco, back in 1989. The question is not why there were so many people chasing this particular black cat, which was fairly quickly found to be nonexistent, but why there were so many seemingly respectable scientists shouting “I’ve got it, I’ve got it!” without properly verifying, in their own laboratories, what was, after all, such an overwhelmingly improbable result.

I say overwhelmingly improbable because we know that from ordinary chemistry to extraordinary nuclear fusion there is a gap of about five orders of magnitude to be bridged between the size of atoms and the size of nuclei and a gap of the same magnitude between

the energy scales involved. (Like the chance of two fleas meeting in a football field!)

Nevertheless, cold fusion was extremely newsworthy. Why?

Newsworthy ought to mean the same as having high information content and, to be strict about it, information content is inversely related to the probability of an occurrence: thus, the more improbable, the more newsworthy. (Mathematically speaking, the information content is proportional to the negative of the logarithm of the probability). So, cold fusion, having such a terribly low probability, must be very high on information content and hence be very newsworthy.

Whoa! There must be a fallacy here somewhere. “Elvis is alive and well and living in Cuba”; “World War II Bomber Found On the Moon.” etc. If

it is known not to be true why should it remain newsworthy? (I failed to get this point across to any of the media people who kept ringing me regularly at the height of the cold fusion furore.)

Why, then, the many false claims?

The original claims may have been just plain mistakes.

They can happen to anyone and they do, even in science, with monotonous regularity. No great harm is done, there may be

**“Why were there so many respectable scientists shouting ‘I’ve got it, I’ve got it’ without proper verification?”**

slight embarrassment, but reputations survive intact (unless stubborn refusal sets in, leading ultimately to unreason, levitation, Tarot cards etc.). The point is that the truth will eventually out, and that is something that we must stress, over and over again, to our friends, neighbours and non-skeptics generally. There is, we hope, in science



if not elsewhere, such a thing as Truth with a capital T.

But what about the erroneous claims which corroborate the original mistake? One may call it the bandwagon effect, but naming it is not the same as explaining it. The lure of instant 'fame', one's name in the papers etc, surely cannot be all there is to it. But don't underestimate the subtle pressure of the media, and, for that matter, of society in general, ever on our tails to lay golden eggs. ("How come such a famous institution as Your University has not yet been able to produce cold fusion? Where is all that research money we gave you?")

The only sensible explanation seems to be wishful thinking. All this is very well documented in the history of science; almost all of us (if we are old enough) can recall cases of wishful thinking producing erroneous results or mistaken theories, each with its own peculiar history and degree of notoriety. Very seldom, however, do they reach quite the level of hysteria that characterised the cold fusion story.

## N IS FOR NANCY

One instance that did is the famous case of N-rays.

The year was 1903. The previous eight years had seen the discovery x-rays, cathode rays, alpha, beta and gamma rays; it seemed that there were no end of rays! Then, a distinguished Professor of Physics and Member of the French Academy, Rene Blondlot, announced the discovery of a new type of ray which he called N-rays, (after the University of Nancy). Supposedly emitted by x-ray sources, N-rays could penetrate many centimetres of matter and made themselves apparent by

increasing the brightness of sparks jumping between pointed wires. They also made fluorescent screens glow, just like x-rays, with which they were sometimes mixed and confused. However, N-rays had all sorts of other bizarre properties: they could be shielded by iron but not by copper; they could be stored in ceramics, such as in bricks; they could be bent by metal prisms, and so on. Furthermore, Blondlot even had photographs to prove it!

Next, it was found that N-rays were emitted by all kinds of things, including the human nervous system... so you start to get suspicious! Nevertheless, all over France, Germany and even England, scientists were falling over themselves in confirming Blondlot's results. Over 300 papers by 100 scientists were published between 1903 and 1906. Blondlot wrote a prize-winning book on his researches - it was translated into English in 1905 and there is even a copy in the Australian National Library!

All along, however, many serious players had trouble in reproducing Blondlot's results. In particular, a noted experimental physicist from Princeton, Robert Williams Wood, crossed the Atlantic specifically to visit Blondlot's laboratory. He was greeted cordially and shown various experiments but, in all honesty, he couldn't see any of the supposed brightening of sparks or screens. What to do? Well, when Blondlot tried to demonstrate the bending of N-rays, Wood, the cunning old fox, took advantage of the darkened laboratory and swiped the aluminium prism from the middle of the

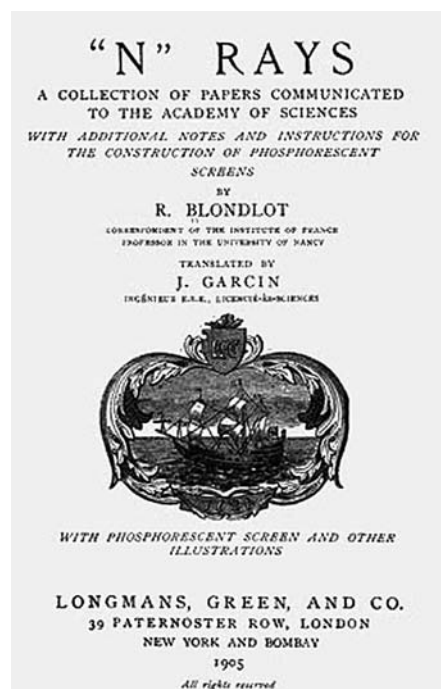
apparatus! Blondlot continued to enthuse about the supposedly shifted spot of light, and Wood said nothing!

Upon returning to the USA he wrote a devastating article, exploding the N-ray myth as a giant hoax or a very bad case of self-deception.

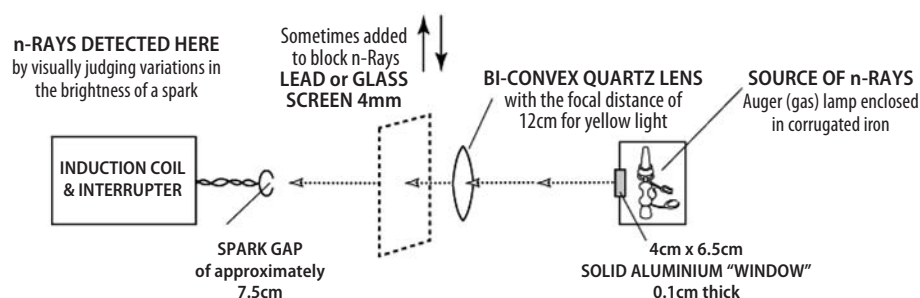
The moral of the story is that all human observers, however well trained, have a strong tendency to see what they expect to see. But what about the photographs? Well, Blondlot had a very helpful and

**Below:** Rene Blondlot, professor of physics and member of the French Academy, and an English translation of his work on N-rays

**Below left:** Set-up for an N-ray experiment, as depicted by Robert W Wood in *Nature*, Sept 1904



## n-Ray Diagram



# The Other Side of Eureka

Continued...

obliging lab assistant who never failed to produce whatever was asked of him. To be kind, perhaps others had confused things with x-rays which definitely exist, unlike N-rays. Anyway, after Wood's denunciation, everyone dropped the subject with alacrity - everyone, that is, except the French, whose national pride was somehow involved. As for poor old Blondlot, who was so very keen to make a significant discovery, he was treated with great kindness and lived to a ripe old age, never wholly convinced of his error.

## WATER ON THE BRAIN

Another famous case, even more closely analogous to cold fusion, is that of Polywater. This was a strange, anomalous form of water, produced by condensing water vapour in fine quartz or even glass capillaries. It was reported to have a density of 1.4, a boiling point of several hundred degrees C and a viscosity similar to that of grease.

Originally discovered by Nikolai Fedyakin, an obscure Russian chemist in the early 1960s, it was espoused by the very distinguished Russian academician Boris Deryagin. With the aid of some helpful assistants who, presumably, did all the experiments for him, Deryagin somehow convinced himself of the reality of this strange substance and managed to infect British scientists with the idea in 1968. They thought that the anomalous water was something like  $H_8O_4$  - a polymer - hence the name polywater. Polywater crossed the Atlantic around 1969; its supposed infrared spectrum was published by a respected American chemist and an incredible bandwagon started rolling. Publication in the *New York Times* and other similar non-scientific journals added great momentum to the story and pretty soon hundreds of papers and reports were being published on polywater.



**Left:** Polywater under the microscope at the US National Bureau of Standards

**Below:** Russian academic Boris Deryagin, promoter of polywater



One bizarre aspect of the polywater story was the claim that it may in fact be the stable form of water and all the ordinary stuff that surrounds us may turn into polywater if 'seeded' by a microscopic sample that may escape from the laboratory. (That turns out to have been the plot of *Cat's Cradle*, a science fiction story by Kurt Vonnegut, published in 1963). Another bizarre idea was that the water present in living cells may actually be polywater, a claim espoused by at least one Australian food chemist. ("Scientists' New Answer to Mystery Polywater" *Sydney Morning Herald*, June 1970). By that time, however, the bubble was well on the way to being burst ("Polywater? There's no Such Thing, Says CSIRO Man" *Sydney Morning Herald*, July 1970).

To cut a long story short, polywater turned out to be a giant furphy, all of its strange properties being attributable to impurities: in some cases silica dissolved from the capillary tubes, in other cases perspiration from chemists' fingers. Read all about it in a very entertaining book by a noted authority on water, *Polywater* by Felix Franks, MIT Press, 1981.

(By the way, an interesting postscript about the credibility of Academician

Deryagin: in the 1980s he announced the synthesis of diamond in table-top apparatus! Everyone said "Oh yeah? More Russian polywater?" Well this time, astonishingly, he was right: One can make thin films of diamond in a microwave plasma, and people are now doing it all over the world.)

The rise and fall of interest in polywater, documented in Franks' book, is very similar indeed to that of cold fusion, except for the time-scale: email and the fax machine sped up communications by such a large factor that, while polywater lasted for several years, cold fusion, at its height, lasted only a few months (although some people thought that there may be some interesting electrochemistry left in what was supposed to have been cold fusion).

Other aspects are also closely parallel: an initial mistaken observation (in the case of cold fusion it seems to have been a hydrogen explosion); a strong wish to believe in the strange results; a very obscure initial publication; an almost immediate "me too" from several laboratories (clearly fraudulent); feverish efforts in very many laboratories to try and replicate the experiment. (I confess





that, in my department too, we had palladium electrodes in heavy water, surrounded by shielding and neutron detectors, in a basement lab, against my better judgement based on theoretical arguments). Then there were too-clever-by-half theories, purporting to explain things; phony claims; premature patent applications and then ... silence. Cold fusion died a fairly sudden death in the serious scientific community; it was left to cranks, electrochemists and cartoonists.

Of course, to be honest, I am rather sorry that this particular cat is nonexistent. It would have made a wonderfully bright table-top neutron source, at the very least, and possibly a good, clean energy source. (No, we don't need cheap energy, we need clean energy.)

I am, however, very glad that, to the best of my knowledge, no Australian researchers were caught shouting "I've got it, I've got it!" At least not to my knowledge, although keen supporters of cold fusion continued to turn up for quite a long time. I heard one of them at the time giving Australian physicists a serve for being so backward as to not be working on cold fusion - the hope for the future.

## THE WIZARDS OF OZ

Mind you, that doesn't mean that Australian physics has not had its share of false discoveries: around 1970 there was the noted Sydney physicist who thought he discovered fractionally charged particles in a cloud chamber experiment. Since fractionally charged quarks had recently been theorised, this discovery caused a sensation when it was announced at a conference in Budapest.

It didn't last long: a perfectly reasonable explanation for faint tracks in cloud chambers was put forward to explain the evidence and other serious attempts to find fractionally charged particles ('free quarks') never did find any. (We know today that quarks are always confined in pairs or triplets, inside other particles.) However, the Sydney professor was so convinced of having been robbed of a monumental discovery, that he became completely

unhinged after his short-lived fame and took up levitation, Tarot cards and the like. In fact, the Australian Skeptics short-listed the publication of his Tarot card experiments for the Bent Spoon Award for 1987. [It was pipped at the post by Adelaide 'clairvoyant' Anne Dankbaar who claimed to have discovered the whereabouts of the Colossus of Rhodes. – Ed]

Another quite well known instance of self-deception in Australian physics was the case of the 'tachyons' discovered in Adelaide, by a young physicist who didn't know any better, together with an old one who should have!

Tachyons are particles which travel faster than the speed of light and are not supposed to exist, according to Einstein.

However, some mathematical fiddling with the theory of relativity does allow a theoretical possibility for the existence of such particles but they would have very peculiar properties indeed. Anyway, the Adelaide team, after causing a medium-sized splash in the journal *Nature*, eventually found a silly instrumental error. After that, the Adelaide tachyon paper was actually retracted, unlike the Sydney quark one. No great harm was done to anyone's reputation but some wags were heard to comment that "a tachyon is a particle ahead of its time".

There are countless other anecdotes about hoaxes, frauds or instances of self-deception (particularly in other fields of science), but I hope that one can draw the distinctions between honest mistakes and self-deception by scientists on the one hand and the crooks and charlatans of pseudoscience such as von Daniken and Uri Geller, who appear to have existed for many, many years.

So, what conclusions can one draw from all these anecdotes? As usual, there are more questions than answers. One very important and complex question is: what is the effect of fraud on the scientific enterprise?

My answer is, that in the long term, the effect is precisely nil! Let me explain. Science is a complex self-adaptive system like human learning in individuals; like biological evolution; like the immune system in vertebrates and, perhaps, like computers generating strategies for games.

All such systems are self correcting or self-healing. Wrong ideas are eliminated; wrong facts are forgotten or actively 'un-learned'; mal-adaptive behaviour leads to extinction; wrong strategies are eliminated. So false science, whether the result of fraud or honest mistake, will disappear in the long run. The trouble is that the time-scale is not defined - the run could be very long indeed. After all, some medieval superstitions, mal-adaptive though they are, survive to this day.

In science, while minor error may persist for quite a while, important things such as new discoveries can be accepted or rejected quickly. The replication of high temperature superconductivity and the failure to replicate cold fusion were both quite quick. An important lesson in this is that deliberate fraud is usually discovered quite quickly. Thus, in my opinion, fraudulent science is a very

high risk operation compared, for example, with financial fraud.

As a scientist, you'd be mad to even contemplate fraud although, paradoxically, if you are

**"One very important and complex question is: What is the effect of fraud on the scientific enterprise?"**

not worried about your scientific credibility, in other words if you are a charlatan or a pseudoscientist, you may get away with it for quite a while, especially if your publicity is good.

For while the scientists are the generators and perhaps the arbiters of scientific truth in our society, the gatekeepers of truth are often the publicists and the journalists. They can do a great deal of damage if they fail in their task because the publicity that is associated with falsehood detracts greatly from the impact of true science. On the contrary, false science can easily

## The Other Side of Eureka

Continued...

lead to anti-science. Thus, I think that the wilful purveying of falsehood and anti-science should be made a criminal offence!

Charlatans and quacks, in common with the perpetrators of scientific fraud, are guilty of what I would liken to well-poisoning - the misleading, polluting or derailment of impressionable minds, and the betraying of truth, to echo the title of an influential book on the subject. Written by two journalists from the *New York Times*, William Broad and Nicholas Wade, *Betrayers of the Truth* (Simon and Schuster, 1982)

concentrates on case studies of various crooks (mainly in the biomedical area!) who tried to profit from fraudulent activities.

Some important issues are well-exposed in this book, including some of the thorniest ones upon which I have not touched so far. For example, why do people engage in fraud? Put very simply, it is a conflict between the dual goals that most scientists have. The advancement of science on the one hand and the advancement of self, on the other.

However, given the very high risk of exposure, the very high probability of comeuppance that scientific fraud has, I tend to think that it is more a

question of psychopathology than of morality that is involved. It's more of a case of mad than of bad!

Falsehood is of no practical value - it doesn't work. If levitation worked we wouldn't need cranes! Nevertheless, new falsehoods are invented daily. Why? This, to me, is one of the most interesting questions: why do false doctrines arise and why do they persist?

A grand old charlatan of the 16th Century, a Swiss quack by the marvellous name of Theophrastus Bombastus Paracelsus von Hohenheim - Paracelsus for short - who may be regarded as the last of the alchemists (or the first of the chemists because, in fact, he carried out a great deal of systematic experimentation), is on record as having said that "Humanity wants to be deceived!" This means

that there will always be a lucrative market for soothsayers, astrologers and other such charlatans: people need their form of quackery for reassurance.

**"Paracelsus: 'Humanity wants to be deceived.' George Bernard Shaw: 'What people want is not truth but certainty!'"**

Perhaps even more to the point is George Bernard Shaw who, in one of his plays, I think, says that: "What people want is not truth but certainty!" Thus, while we scientists struggle to reach better and better approximations to the truth, we may be beaten to the draw by false prophets who offer certainty. Nevertheless, we must have faith: truth will out in the long run! ■

*This article was first published in The Skeptic, Vol 15, No 3 (Spring 1995)*

**Note:** Prior to publication of his article in this issue of The Skeptic, Prof Klein has commented that "quite a few false, or even fraudulent, scientific reports have turned up in the intervening years since the article was first published, including for example a recent case of neutrinos that appeared to arrive in Italy before the time that they left CERN in Geneva, but were found to be due to an instrumental error. There was also a recent case of a premature report of a miraculously effective stem-cell cure in Japan. This turned out to be false too. Both cases received published retractions and the latter case resulted in the unfortunate suicide of the senior author who was simply misled by the erroneous observation of a more junior team-member. There was also an egregious case of fraud a few years ago, from a highly reputable lab in the USA, which caused quite a stir in the world of semiconductor research when its spectacular results could not be reproduced elsewhere. In most such cases the erroneous results simply disappeared without trace, as remarked in the article, whose main conclusions remain unchanged."

About the author:

At time of writing, **Prof Tony Klein**, Fellow of the Australian Academy of Science, was head of the School of Physics at Melbourne University. He is currently Professor Emeritus with the same institution.



### The Skeptics' Guide to the Universe

is a weekly Science podcast talkshow discussing the latest news and topics from the world of the paranormal, fringe science, and controversial claims from a scientific point of view.

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







# Phoney Fauna

Tim Mendham peeps into some of the lesser known corners of fake animals

When Paul Cropper opened the Myths and Monsters 2001 conference, “the first national meeting of Australia’s foremost cryptozoological researchers”, he said that “I think that largely due to the internet, more people are going to find out about our mysterious monsters, and more people who have had experiences are going to be able to report their sightings. So there will be a lot more information circulating.”

But he then warned: “That’s both a blessing and a problem, because a lot of it will be absolute rubbish. I think as researchers we are going to have to become a lot more skeptical – previously reports were much harder to come by, and hoaxes were relatively rare. Not any more.”

Not any more indeed.

The creatures of cryptozoology – cryptids – can be divided into three categories:

- Creatures out of place,
- Creatures out of time, and
- Creatures that never were, or out of legend.

Black panthers wandering the Australian bush are a classic example of the first category. They do exist in some places, but it is unlikely that they do so here.

If we are to believe that the Loch Ness

monster is a plesiosaur, then that fits in with the second category. Plesiosaurs did exist, it’s just that they probably haven’t done so for a very long time.

And then there are the out-and-out monsters who never lived, creatures often out of nightmares or, regularly, misinterpretations of living animals transposed into something less amiable. These include the chupacabra of Central America and points north, dragons and, depending on your inclination, yetis, yowies and Bigfoot.

There are many people who are genuine hunters after unknown animals. In fact, that was the title of one of the first books to deal seriously with the topic, *On the Track of Unknown Animals* (1958 in English, 1956 in French) written by Bernard Heuvelmans, regarded by some as “the father of cryptozoology”.

Since then there have been libraries full of books about creatures of the edge, some serious, some silly, and some that

are just out to make a buck. (On the silly side, Janet & Colin Bord’s book, *Alien Animals*, is credited as a serious study, though any volume that can cite “evidence found in inaccessible places” has got to have a serious rethink of its approach.)

But for every serious researcher there is a serious faker trying to fool them.

Fake monsters have probably been around from the first day there were

monster sightings. Modern fakes may be somewhat more sophisticated than in days gone – certainly in terms of photographic ‘evidence’ – but the audience has

not necessarily kept pace with that sophistication. There is still one sucker born every minute, and one hoax to cater to them.

## THE HAIRY STORIES

When thinking of cryptozoology it’s wise to go beyond the Nessies, Yowies,

“For every serious researcher there is a serious faker trying to fool them.”

# Phoney Fauna

Continued...

Yetis and Bigfeet; give some thought to the timid creatures known as furry trout, jackalopes and flabbits.

In the hearts of Canadians (home of Champ), Americans (home of Bigfoot) and Australians (home of Yowies) there will always be a soft spot for these lesser-known denizens of the kingdom of mysterious animals. Especially as they are, shock horror, clearly and obviously and admittedly fakes that some people nonetheless believed in.

Fur-bearing trout (also known as Beaver Trout) possess thick coats of fur that help to keep them warm in the cold northern waters where they live.

According to legend (and the very informative Museum of Hoaxes, [www.hoaxes.org](http://www.hoaxes.org)),

“the fur-bearing trout was first encountered by Europeans when Scottish settlers emigrated to Canada during the seventeenth century. One settler wrote home remarking about the abundance

of ‘furried animals and fish’ in the new land. Asked to provide more information about the furried fish, he duly sent home a specimen.”

Fur-bearing trout, mounted like fishing trophies of the one that didn’t get away, can now be found on the walls of many Great Lakes tourist venues and hotels.

The Museum says there are other fur-bearing aquatic animals following in the trouts’ footsteps, including the fur-bearing crab. (But the Museum adds that “it should be noted that a fur-bearing lobster found recently deep in the Pacific Ocean off the coast of Easter Island is not considered to be a tall-tale creature. It is a subject of mainstream scientific inquiry ... seriously!”)

The trout, therefore, are tourist products and have been acknowledged

as fakes pretty much from the word go.

Similar tourist products, with mounted heads on many a bar wall, are the American jackalopes. Half-rabbit, half deer, jackalopes were first ‘discovered’ in 1829 in Wyoming. They are known to mimic the singing voices of cowboys, and are fond of whiskey (which is a good way to catch one). A large statue of a jackalope stands in the centre of Douglas, Wyoming, which regards itself as the home of the jackalope. Every year the town plays host to Jackalope Day, usually held in June.

The Museum of Hoaxes says that jackalope hunting licences can be obtained from the Douglas Chamber of Commerce, though hunting of jackalopes is restricted to the hours of midnight to 2 am, and only on June 31.

But what of our own flabbit?



The flabbit first came to prominence in 1985, when the now-defunct Daily Mirror devoted its front cover to it.

The flabbit was first photographed at Colo, northwest of Sydney. Flabbits are described as simply a rabbit-like creature with wings. Many reports were received from local residents having seen the creatures. Two specimens were collected and died in captivity. They were preserved by taxidermist, Allan Green, and exhibited at the Australian Museum, and then at various locations around NSW. Until recently, the specimens resided in a private museum in Bathurst NSW.

“The discovery of the flying rabbit removed murder and mayhem from the front pages of Sydney papers and appeared as the lead story on the



current affairs program hosted by Mike Willesee, who went on to call it one of his stories of the year,” says an unnamed correspondent to Yahoo answers.

“I arrived at this answer as my father discovered the Flabbit!”, they said.

“In late October the flabbits came home to roost. Smelly, moth-eaten and taxed out of existence at Bathurst, they flapped their way into Hawkesbury City Council Chambers to be lovingly cared for in an exhibition either in the new museum or art gallery, but no one knows why.”

Another correspondent to the same site told the sad news that the private museum in Bathurst was burnt down, apparently by jealous rival owners of another private museum in Orange.

“The specimens delivered to the Hawkesbury City Council Chambers were papier maché copies.”

But we can’t leave Antipodean shores without reference to drop bears. These pleasant little creatures only live to drop out of gum trees onto passing tourists and eat their brains.

Sometimes described as the koala’s evil twin, the Museum of Hoaxes says that the only known way to deter a drop bear is to spread toothpaste or vegemite behind your ears and on your neck. It also makes sense not to pitch your tent beneath a tree that contains a drop bear.

“A good way to find out if a drop bear is in a tree is to lie down beneath the tree and spit upwards. If a drop bear is sleeping up there, it will wake up and spit back.”

But is a drop bear cryptozoological? Probably not, or no more than the bogey man; just something designed to have fun at gullible backpackers’ expense, and never thought to be real in the first place.

Or are they?





**Left** The flying rabbit - flabbit - found in Sydney's northwestern hinterland.

**Below left:** Canada's furried fish - more common on walls than in the wild

## FAMOUS FAKES OF FAMOUS CRYPTIDS

The better known monsters feature equally well-known hoaxes.

The first bigfoot hoax, sometimes described as the birth of the legend, occurred in August 1958, when a tractor operator named Jerry Crew working on a construction site in northwest California found a series of massive, 16-inch footprints tracked through the mud.



"Due to the size of the prints," the Museum says, "the media began referring to the creature that created them as 'Bigfoot'. The name stuck, eventually replacing Sasquatch in the popular imagination as the name for North America's legendary ape-man. It was long suspected that Crew's prank-loving boss, Ray Wallace, had created the prints by strapping carved wooden feet to his boots and stomping around in the mud. This was confirmed when Wallace died in 2002 and his family came clean with the story."

Before Wallace, when the creature was still called Sasquatch, there was the story of the abduction of logger/pro prospector Albert Ostman in 1924, for "breeding purposes" Ostman said. But he only revealed his story 33 years later, when interest in Yetis and other hairy creatures was at its height.

Since then, there has been a plethora of Bigfoot stories, including the Patterson film of 1967, the Minnesota Iceman of 1968, the Bigfoot in a Freezer story of 2008, and just this year the story of 'Frank', an 8-foot animal 'killed' by the same man responsible for the freezer example.

Likewise there have been many Loch Ness monster fakes, beginning with the 'Spray' photo of 1933, but most memorably with the so-called "Surgeon's Photo" of the next year. (See *The Skeptic*, June 2012, for the full story.)

## THE SON OF NESSIE

But one story that is rarely told and a cautionary tale for those who believe scientists are always rational and dispassionate professionals – and a fitting conclusion to this brief review of fake fakes – is that of the day that the body of Nessie was found.

We can't tell it better than the Museum of Hoaxes:

"On the morning of Friday March 31, 1972, an eight-member team of scientists from Yorkshire's Flamingo Park Zoo was having breakfast in the dining room of the Foyers House hotel, on the shore of Loch Ness. They were there on a joint mission with the Loch Ness Phenomena Bureau to prove the existence

of a monster in the loch. They had developed a new form of 'hormone sex bait' that they hoped would lure Nessie out of the depths.

"As they dug into their bacon and eggs, the manager of the hotel approached them. Someone had just called, she said, to report seeing a 'large hump' floating in the loch near the hotel. Intrigued, the team put down their knives and forks and walked outside. Sure enough, a large, dark object was bobbing up and down in the waves about 300-yards offshore.

"Terence O'Brien, the leader of the team, immediately swung into action. He directed the team into their boat, and they headed out to investigate. Twenty minutes later, at around 9 am, they returned, dragging behind them a bizarre object. It appeared to be the dead body of the Loch Ness Monster.

"Within hours, news of the discovery had reached the rest of the world. Television news anchors solemnly informed their audiences that the Loch Ness Monster had been found, but was dead. Reporters rushed to the loch to get more details.

"Local residents confirmed that something weird had been dragged out of the water. Robert MacKenzie, a 23-year-old Inverness musician, said, 'I touched it and put my hand in its mouth. It's real, all right. I thought it

looked half-bear and half-seal... green in colour... with a horrific head like a bear with flat ears. I was shocked.'

"Other witnesses told reporters the creature had been between 12 and 18 feet in length and must have weighed up to 1½ tons. They said it had a green body without scales and was like a cross between a walrus and a seal.

"Eventually reporters contacted Don Robinson, director of the Flamingo Park Zoo, who said, 'I've always been skeptical about the Loch Ness Monster, but this is definitely a monster, no doubt about that. From the reports I've had, no one has ever seen anything like it before ... a fishy, scaly body with a massive head and big protruding teeth.'

"The next morning, April 1, the discovery made front-page headlines around the world. The British press dubbed the creature 'Son of Nessie'.

"Meanwhile, the creature itself was no longer at the Loch. After dragging the carcass back to the shore, the scientists from the Flamingo Park Zoo had sent a telegram to Robinson, and had then quickly loaded the body into their truck and taken off, intending to transport the monster back to the zoo for study. Margrete Good, manager of the Foyers hotel, later told the press, 'The zoologists were thrilled to bits.'

"But when the local Inverness police heard that the scientists had hightailed it with the Loch Ness Monster, they were infuriated. These were English scientists, after all, removing Scotland's most famous lake monster, upon which depended a vast, lucrative tourist trade.

"Immediately the police radioed their colleagues in the Fifeshire County police department, explained the situation, and asked them to chase down the fleeing truck and apprehend the monster-nappers. They cited a 1933 Act of Parliament that prohibited the removal of 'unidentified creatures' from Loch Ness.

"Sirens wailing, police cars sped off. They soon caught up with the team of scientists. The frightened zoologists readily cooperated with the police, pulling over to the side of the road, and then opening the back of the truck to show the officers what they were carrying. Sure enough, according to the

# Phoney Fauna

*Continued...*

subsequent police report, lying inside the truck was a large 'green and scaly' creature.

"The police officers, not quite sure what to do next, radioed back to the station for advice. They were told to take the monster to the nearest town, Dunfermline, where it could be examined by Scottish scientists.

"In Dunfermline, the police searched around for an appropriate scientist to examine the creature, and eventually persuaded Michael Rushton, general curator of the Edinburgh Zoo, to come up and look at it.

"When Rushton arrived, he walked slowly around the carcass a few times, poked it once or twice, and then announced his verdict. It was indeed a strange creature, but it was no lake monster. Instead, it was a bull elephant seal, whose natural home was the South Atlantic Ocean, thousands of miles away from Scotland. Furthermore, the body showed signs of having been frozen for an extended period of time.

"Rushton told the press, 'It is a typical member of its species. It's about 3 to 4 years old. ... I have never known them to come near Great Britain. Their natural habitat is the South Atlantic, Falkland Islands or South Georgia. I don't know how long it's been kept in a deep freeze but this has obviously been done by some human hand.'

"How a bull elephant seal came to be floating in Loch Ness remained a mystery until the next day, when a hoaxer stepped forward to confess. John Shields, the Flamingo Park Zoo's education officer, admitted it was his doing.

"Shields explained that an expedition to the Falkland Islands had recently brought the seal back to the UK. It had lived briefly at the Dudley Zoo, but died soon after arrival. When he learned of this, Shields realized it offered an opportunity to prank his colleagues, who he knew were going up to Loch Ness to search for the monster.

"Shields gained possession of the



Son of Nessie - found in March, debunked in April

elephant seal, shaved off its whiskers, padded its cheeks with stones, and kept it frozen for a week. Then he dumped it in the Loch and phoned in a tip to make sure his colleagues found it. He timed the prank so that news of the discovery of the Loch Ness Monster would make headlines on April 1 — April Fool's Day, which happened to also be his 23rd birthday.

"Shields admitted the joke got out of hand when his colleagues decided to remove the dead animal from Loch Ness and were chased down by the police.

"He also noted that the creature wasn't quite as impressive as initial press reports had claimed. It was only nine-foot long and weighed 350-pounds. Still, it had been a very strange thing to find floating in the Loch.

"Police Superintendent Inas McKay of Inverness gave the press the final, official verdict on the incident: 'It's just an April Fool's Day joke.'

"Having determined that the dead animal was not the Loch Ness Monster, the police had no further interest in it. So they returned the carcass to the team from the Flamingo Park Zoo. The team brought the seal back to the zoo, where they put it back on ice and displayed it to crowds for a few days before properly disposing of it.

"But this wasn't quite the end of the story. The prank turned out to have unintended consequences for other visitors to the loch. Two weeks later, 28-year-old Norman Slater, a school teacher from Kenosha, Wisconsin, went

on a fishing trip on the Loch. While floating along, he dipped his hand into the water. He later said that, as soon as he did so, he detected, by means of his extrasensory perception, the presence of six large creatures in the water - a family of Loch Ness Monsters.

"Slater said that he saw a particularly vivid image of a creature 70-90 feet in length, with a large neck and a slim, worm-like body. Its bottom portion was white while its top was dark brown and scaly. He said the creatures 'seemed to be just lying around on the bottom'. Slater also claimed to see images of underground passageways connecting the Loch to the sea.

"But Slater was a victim of bad timing. He complained that, despite the obvious scientific importance of his vision, because of the recent April 1st prank he couldn't find any reporters willing to take him seriously."

Since then, the media have returned to their usual practice - sightings, whether silly or not, have been given equal and undiscerning prominence. And probably always will. Phoney fauna have that sort of fascination. ■



About the author:  
**Tim Mendham** is executive officer and editor with Australian Skeptics Inc.





# Do It Yourself PSEUDOSCIENCE

*Australian Skeptics  
Accepts no responsibility  
for the misuse of these new  
branches of science - you  
have been warned! We have  
reason to believe that the  
authors' names associated  
with the following articles  
may be noms-de-plume. We  
believe this is an example of  
synchronicity.*

## VACUUM POWER: THE ULTIMATE ENERGY SOURCE

by RH von Krankewitz

Vacuum Power is the great universal energy form. It is the most fundamental energy, from which all others derive. Its manifestations have always been with humanity, but only now, with the recent increase in Universal Consciousness following the Harmonic Convergence, allied to the brave efforts of a small group of scientists willing to risk the ridicule of their colleagues, has it come to the fore.

The idea of Vacuum Power is simple. You don't need any scientific training to understand it, and any living being can feel it.

A vacuum is, by dictionary definition, the absence of matter. According to Einstein's theories of

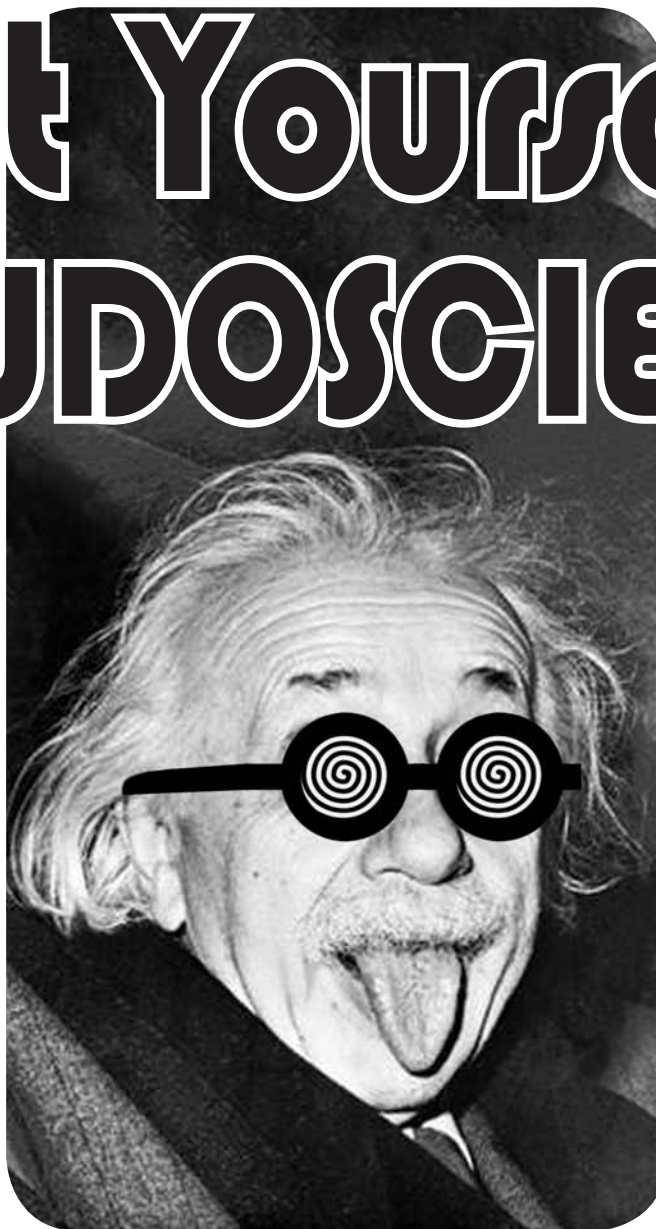
relativity and the equation  $E = mc^2$ , matter and energy are equivalent. Thus a vacuum would also seem to be the absence of energy. This is, however, untrue. Einstein showed only that the change in energy is about two times the change in mass, leaving open the possibility that to zero mass there corresponds a non-zero amount of energy. This is the source of Vacuum Power. It also relates to modern quantum theory, which postulates a "zero point energy" throughout the universe. Thus, the two great physical theories of the twentieth century both allow for Vacuum Power.

The vacuum is the only "pure"

In the Spring 1988 issue we ran a competition for the best do-it-yourself pseudoscience invented by a Skeptic. Here are the results.

state that is possible, and the mystics of the Eastern religions, who will soon be recognised as great scientists, have understood its essential purity over the ages. "The sound of one hand clapping" is a well-known Zen koan, and a massive advance on Western insistence that two hands are needed. The Buddhists were halfway there: Vacuum Power represents the sound of no hands clapping!

Vacuum Power can be understood from many other viewpoints, thus emphasising its great unifying power. Atoms consist of a tiny nucleus, and electrons, which orbit around it. But what composes the great bulk of the atom, through which the electrons move? A vacuum. And it is only natural that 99 per cent of the energy in that atom comes from 99 per cent



# Do It Yourself Pseudoscience

*Continued...*

of its volume: the vacuum.

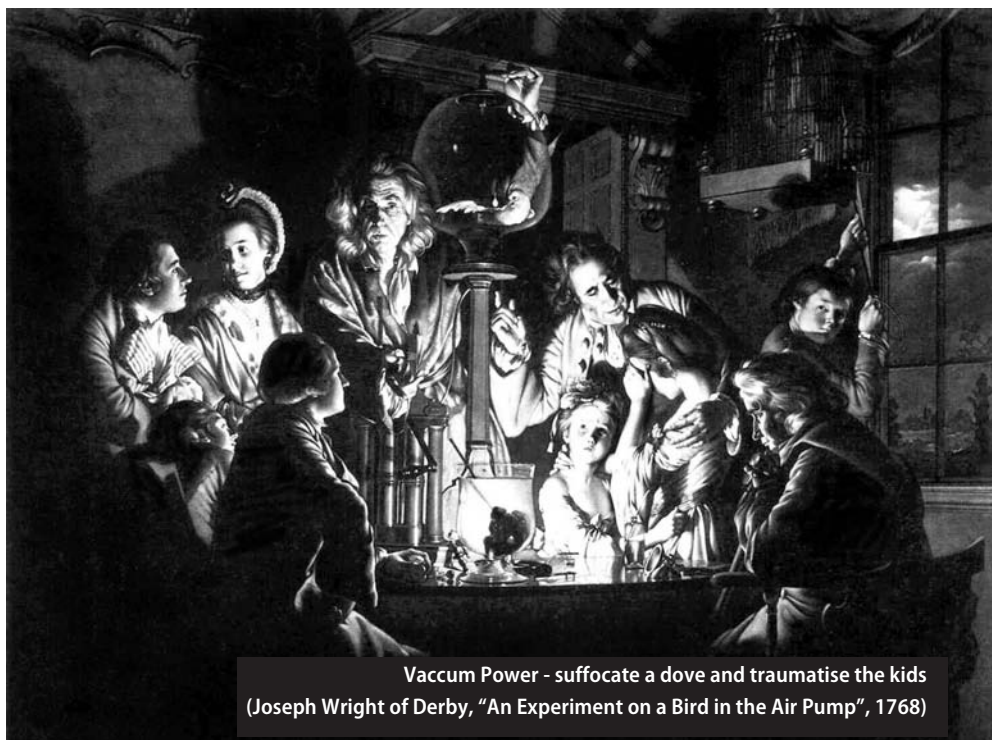
In addition to explaining all the facts of orthodox science, Vacuum Power also rationalises the many observations, which science cannot, or which it narrowmindedly denies. Homeopathy, recently in the news through its rejection by High Priests of orthodoxy in carefully controlled experiments in France, is another consequence. [This is a reference to the 1988 paper authored by Jacques Benveniste and published in *Nature*. – Ed].

Successive dilution of a biologically active solution is practiced until there is almost certainly no active material left in solution. Yet this solution retains its biological activity. This is precisely because there is nothing left: a vacuum of active material, whose associated Vacuum Power effects the cure.

Astrology, too, works by Vacuum Power. Astrology is the effect of the heavens upon a person at the moment of birth. But most of the firmament is the purest vacuum we know, and it is the disturbance of the Vacuum Power Field Configuration by the Heavenly Bodies, which imprints itself on the infant. Small wonder that astrology is today such an important science.

It is also likely that ghosts and other mysterious phenomena are localised perturbations of the Vacuum Power Field; but more research is needed into these phenomena before this can be confirmed.

Can we learn to harness Vacuum Power? The benefits would be great: an endless supply of free, clean energy for mankind in perpetuity, anywhere in the universe. We can see all too easily the damage done by fossil forms of power - the greenhouse effect - and of nuclear power - radioactive waste disposal. Vacuum



Vaccum Power - suffocate a dove and traumatise the kids  
(Joseph Wright of Derby, "An Experiment on a Bird in the Air Pump", 1768)

Power suffers no such disadvantages. Provided only we can make a vacuum pure enough, a vacuum probe can be inserted into it to extract the energy. To date, man-made vacua have been insufficiently pure, but we are currently on the threshold of breakthroughs in vacuum technology, which should make this possibility a reality. Vacua could also be brought to Earth from deep space satellites, which could themselves run on Vacuum Power once free of the Earth's atmosphere. Should an energy probe begin to run critical, air can immediately be let into the vessel to damp it.

A word of warning is necessary here, though it may ultimately lead to further advances. Early this century a massive explosion, centred on the Tunguska region, devastated much of Siberia. The scientists of the day confidently predicted a massive meteorite strike; but no remnants were ever found, and mystery has surrounded the event ever since. Documents newly leaked to me by colleagues inside Russia, in the spirit of glasnost, indicate that a secret research laboratory had been set up in the area to look into Vacuum Power.

Either the Russians had discovered a way of concentrating the power, which then ran out of control and blew up, or the method was perfected and delivered to the KGB, which used it to dispatch the researchers and prevent the method leaking to the West. Doubtless, the CIA knows more about this than it is letting on, and the time has surely come for the files to be declassified. A way of concentrating Vacuum Power would be invaluable.

Vacuum Power will win!

## FROGS CAN TELL YOUR FUTURE

by Dr Rich I.R. Chinwag

Ever since the turn of this century, when physical scientists decided that they understood the nature of electricity, the strange phenomenon discovered by Galvani has gone largely ignored. However, for those who are seeking after the eternal truths of how energy in the universe is connected together, the behaviour of severed frog's legs is a valuable, if hitherto undiscovered, tool.

Some background information is necessary here, so that others may understand the significance of what



I have discovered.

Electricity is known to be one of the fundamental forces of life. All biologically living matter produces electrical currents, as does much so-called 'inert' matter, in which electricity is a manifestation of the common spirit of the universe (from lightning to stars,

many things show the power that is in all things). Galvani in the last century demonstrated the connection between life and electricity when he showed frogs' legs twitching

when connected to a battery; however, this vital discovery was never treated as anything more than a scientific curiosity.

However, electricity is known to be a common force throughout the universe. Galvani missed an overwhelming hint when he first saw the frog's legs dancing to the tune of the all-soul, for he simply thought he had discovered a physical property. Now, with the benefit of hindsight, it is easy to see that he missed out on the spiritual implications of his observations.

The moment of revelation came to me when I was trying to faith heal the toaster by the laying on of hands; I never unplug it when I am doing this, as I need it to be connected to its energy source so as to identify the place where the current is not getting through. Anyway, when the acupuncture needle went in, the toaster objected to my interference in its autonomy, and left me twitching on the floor like one of Galvani's frogs.

When I had recovered enough to think clearly, I realised that I had jumped in the opposite direction to when I had tried to fix the juicer. This obviously had some deeper significance, and so, in the spirit of true scientific enquiry, I decided to find out why.

However, one should always try and avoid gratuitous connection

to electricity, as it interferes with the body's natural processes, and so Galvani's frogs suggested themselves as a way of observing the things that effect the direction of "jump" when external electricity is applied to an organism. Of course, I didn't kill the frogs to get their legs; I had ample

supplies by finding frogs that died of natural causes.

Armed with the frog legs and battery, I went to work, and what I learned amazed me. From

day to day, very slowly, the amount and direction of the twitch varied according to the procession of the stars. This should not be surprising, since the stars produce their own electricity, and this obviously affects us here on earth, since we know that the stars do the same thing. This gives us an extremely powerful tool in the search for truth, since we cannot always view the stars; sometimes, they are obscured by clouds, and anyway, the lights and pollution of our cities prevent an accurate fix of their position.

However, with frog's legs, we can measure the effects that the stars are going to have on our own lives. Here's what you do:

1. Find a frog with the same astrological characteristics as yourself. Since this is not always easy for the nonpsychic to determine, I can supply frogs to order.
2. Put the frog on a macrobiotic diet - not only does this ensure that the frog will be in tune with the whole universe, it also kills them quicker.
3. When the frog dies, cut off its legs and stimulate them with a battery. You must be most careful here, since an artificial battery won't work. The best thing to do is to buy some of the natural wires which I can supply, and put them in a lemon which has been grown without any artificial assistance.

This will ensure the purity, and thus accuracy, of your measurements.

4. The frog's legs should be placed on a chart which I can make up according to your astrological details for stimulation.
5. Then, send your observations in to me for analysis. Although at this point your measurements will be processed by a computer, I can personally vouch for the ideology of the programmer.

A complete frog observation kit costs only \$850. Once you are used to it, there is also a program available for the Apple (Stephen is one of us) Mac computer for an extra \$200. It will prove an invaluable aid in plotting the course of your life, and helping you take your future into your own hands.

Kits, information and a book entitled "Frogs Can Change Your World" are available from Dr Rich I.R. Chinwag.



## Do It Yourself Pseudoscience

*Continued...*

### LINEOLOGY AND OMEGA POTENTIAL THEORY

by Gill Wimeray

Omega potential theory provides the first comprehensive explanation of the source of the cosmic energy which

can be harnessed to promote universal health, well-being and harmonic convergence. As is well known, many scientific claims plausibly postulate the existence of a benign force which pervades the universe and underlies the basic cosmic interconnectedness of everything.

The predicament faced by scientific theories here is obviously comparable to the predicament of phlogiston chemists of the eighteenth century: they are still at a preparadigm stage of theoretical development. Phlogiston chemists were clearly aware that they were on

the brink of developing important insights with the power to transform the world. However, progress was slow and laborious prior to the theoretical innovations of Dalton and Mendeleev.

The importance of the present theoretical innovations lies in the development of the underlying mechanisms of psi phenomena. Only when these fundamental mechanisms have been established will psience develop to its full potential and take its rightful place alongside physics and psychology.

The basic challenge to psi is of course to explain trans-temporal and trans-spatial synchronicity: what are the deep connections which link causally distinct events? These events may obviously be widely separated (temporally or spatially) without attenuating their mutual embeddedness. This of course is similar to the problem which confronted Newton, and calls for comparably bold conjecture to the Newtonian response. (We must be alert to the "psychic apples" which are falling all the time, and whose significance is so easily overlooked. How many times did someone step into a bath before Archimedes?)

The answer to the problem is stunningly simple and extremely elegant. Indeed, it is hard to understand how it can have been overlooked for so long. Once we appreciate the dual role of the 3 Kelvin cosmic background radiation and its relation to the eleven dimensional space-time manifold proposed by super string theory, everything falls into place. This pure cosmic background radiation energy, bathing the universe and extended through eleven dimensional space-time, is the manifold by means of which distant events (eg celestial configurations) affect terrestrial events (eg human destiny). We can call the manifold vector the Omega Potential, following Teilhard de Chardin.

The Omega Potential provides the carrier wave which can be modulated, eg by pyramids, and which can be focused through the 'psychic lens' of gifted exponents (eg Uri Geller), to produce observable telekinetic

## Science with Focus



Plus69/istockphoto



**Conduct your own mouse study at  
[australasianscience.com.au](http://australasianscience.com.au)**



effects (eg starting watches and cutlery deformation). Other means for focusing this energy include crystals, which create natural meridians along which astral travelling (or solar-wind surfing) can most readily be accomplished.

It is, of course, an elementary methodological principle that extraordinary theories call for extraordinary evidence. And what evidence could be more extraordinary than the existence of previous incarnations, astral travelling, meridians, dowsing, clairvoyance and ESP? The very diversity of this range of phenomena demands the unifying

explanation provided by Omega Potential theory.

The power of any theory lies in its capacity to explain, and Omega Potential theory is no exception. Not only does it successfully explain the underlying universal cosmic synchronicity, clearly evident to all but the most dogmatic skeptic, it is corroborated by a number of important predictive consequences. These include an explanation of Bell's Theorem, the

electromagnetic photo-fields effect, the (weak) anthropic principle, morphogenetic fields, N-rays and the distribution of Cepheid variables in

the local galactic supercluster. Proof of these additional results is left as an elementary exercise for the reader. They are certainly an

**“What evidence could be more extraordinary than the existence of previous incarnations and astral travelling?”**

added bonus to the theory!

Just as classical thermodynamics was absorbed into statistical mechanics, and subsequently into quantum theory, so I conjecture the full range of “classical” psychic theories (astrology, tarot, etc) will come, in time, to be absorbed in Omega Potential theory.

Like the special theory of relativity, the basic inspiration of Omega Potential theory was not experimental but the result of a high level theoretical synthesis. (It is of course well known that Kekule solved the problem of the benzene structure with a vision of snakes grasping their tails; the cognate “vision” for Omega Potential theory occurred in the course of untangling a fishing line.) Since Omega Potential theory is based on superstring theory, it clearly follows that the basic means of gaining knowledge of the manifold (eg clairvoyance) and for exercising control over it (eg to promote universal health, well-being and harmonic convergence) is through manipulation of appropriately chosen pieces of string.

The awesome possibilities of these techniques (generically known as “lineology”) are still being developed.

If you want a basic lineology experimental kit to validate Omega Potential theory, just send \$50 (special offer for this month only) to [address deleted as it no longer exists. Coincidence? We think not. – Ed] ■

**Note:** Readers are encouraged to submit their own theories. We will naturally extract a small percentage of any revenue generated from their commercial development. Unless we develop it ourselves in which case you'll get nothing.



# FLYING SORCERY

Steve Roberts searches the skies for evidence of UFOs and a history of hoaxes

UFO hoaxes? Surprisingly, there aren't many.

Take a big bunch of UFO sightings, say over the last 60 years. The bunch will turn out to be much smaller than you would think, given the popularity of the topic. Dismissing those (none) caused by extraterrestrial vehicles and those (many) having a peculiar absence of the expected level of detail and information, we are left with misinterpretations of genuine phenomena ... and a few hoaxes. Sadly for the UFO community most famous sightings have fallen, sooner or later, into this last category. And amusingly, a given incident - Rendlesham Forest of 1980 for example - can be accepted as a genuine UFO event by some groups, and rejected as mundane by others.

The next thing that you will notice from your ever-shrinking bunch of UFO incidents is their dates. There'll be nothing much at all until 1947, and even then not much until two mighty waves in 1952 and 1954, followed by a steady decline with a brief resurgence in 1977, caused by the release of the movie *Close*

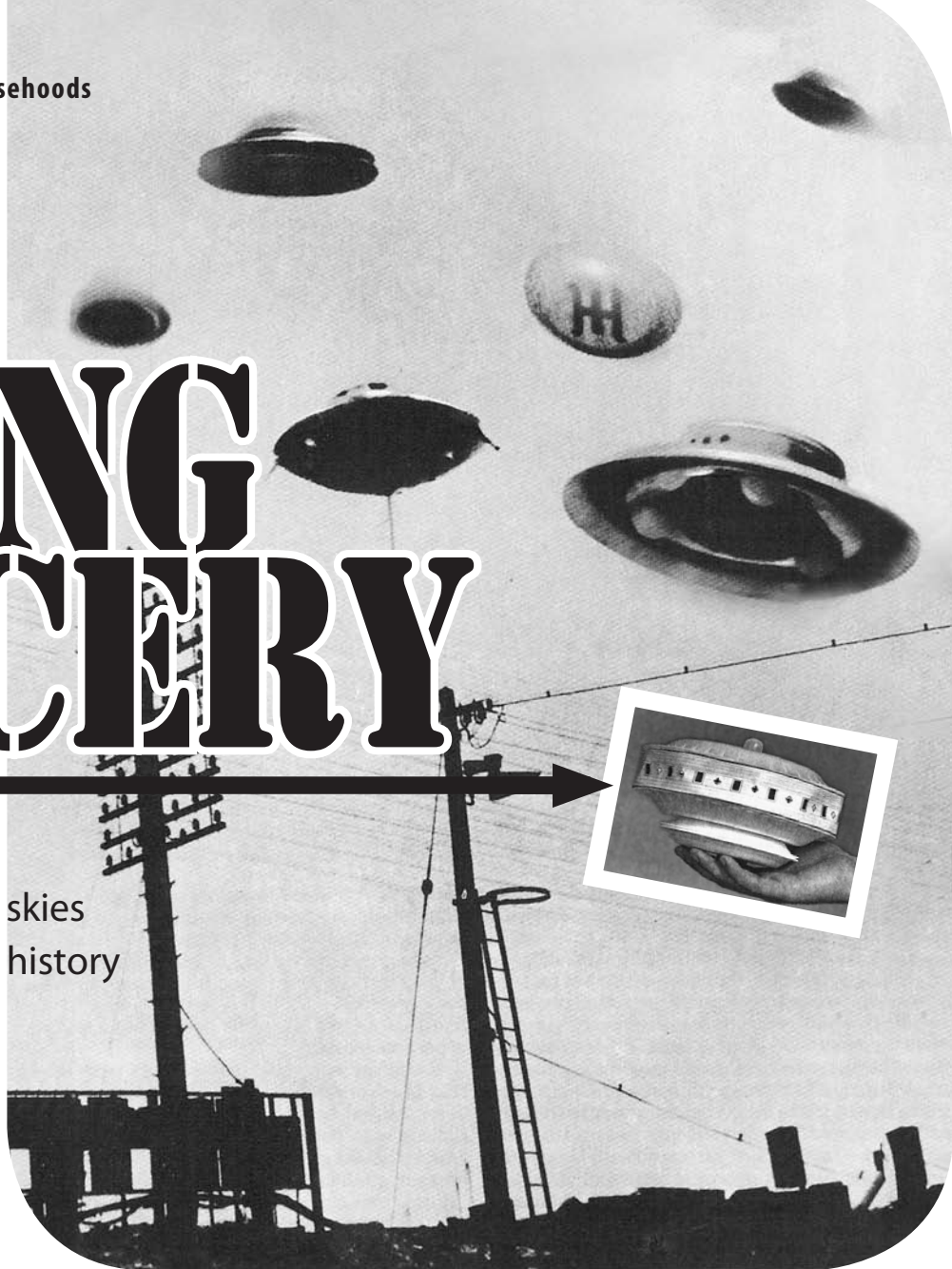
*Encounters of the Third Kind*, and nearly all of these were in the USA. Sightings with associated evidence (typically, a photograph, but usually with an incoherent story) are even fewer. Just one good photo with a plausible story - explaining, for example, why nobody else took the same photo - would still be enough to command serious attention.

Long ago, cameras were exotic toys and it was not very common for an individual to own one (or, if you did, to waste the expensive film and development) until about the 1950s. The Cottingley Fairies of 1917 were taken with roughly 3x4 inch glass plates that ruled out hand-held use and required the subject to pose for a second or so, but were nevertheless usable by complete amateurs; it was parental

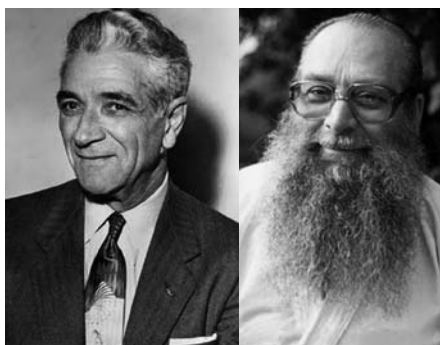
disapproval that stopped the girls taking more pictures.

Some UFOs predate camera ownership, of course, but not many. In 1897 there was a wave of phantom airship sightings, helped along by pranksters releasing hot-air balloons with fires under them. This is an old chestnut, but it was still fooling people in 2012 in Warrnambool, Victoria. In like vein, the Wisconsin UFO club used to meet in a lakeside pub, where they could enjoy beer, hamburgers and pizza, and tell yarns while gazing at the view over the lake. Some locals thought it would be charitable to provide balloon-borne UFOs for them to look at and photograph.

By the 1950s reasonably-priced camera film was in widespread use







**Left to right:** A composite of various UFOs (including the hand-held variety); a still from the alien autopsy film; George Adamski, a man who owned a lamp shade/UFO; and Billy Meier, a man who owned buttons/UFOs (but at least the photos were in focus).

and many hobbyists were developing their own negatives and prints. Some tricks were easy to do in the darkroom, resulting in prints differing from the negatives, and hence from reality. George Adamski couldn't resist casting shadows in his printing process, when he wasn't setting up vacuum cleaners and tennis balls to bolster his UFO stories.

The quality of these and similar pictures now (and then, actually) is truly appalling - fuzzy focus and weird framing - requiring UFO claimants to plead the excuse that they couldn't get the camera ready, even during incidents when there clearly would have been plenty of time to make a better job. Further excuses had to be advanced as to how a UFO could be (badly) photographed, but no attempt made to snap the actual aliens that came out of it.

Very many non-hoax UFO photographs have this fuzzy quality, and there is a reason for this and why UFO events are always at the edge of detection. If the UFO was any further away from being observed or photographed, we wouldn't see it at all; and if it was closer, we'd see the fine details that would give away its identity. It follows that UFO hoax photographs must all be slightly out of focus, and it is a courageous hoaxter indeed who sharply defines his UFO. Billy Meier, for example, has produced some sharp UFO pictures but now the catch is that their context is so far from what he claims they show, that you can't understand what the objects really are (usually: buttons).

After a couple of decades of UFO silliness, the US Government finally commissioned the Condon Report to examine the phenomenon and hopefully dismiss it, allowing Americans to divert their attention to education, citizenship, wars, etc. Among the incidents this report

admitted it could not explain were the McMinnville photos of 1950, which showed a tilted saucer-shaped craft viewed from a farmyard. Years later - and, of course, showing the superiority of private enterprise over wasteful and clumsy governmental processes - private researchers would actually visit that farmyard and deduce the camera position used, and thus show that the pictures had been carefully framed, not taken in haste as in the covering story. The overhead wires from which the UFO was suspended were also noted, and a photograph appeared of the farmer's truck whose tilted side mirror so closely, so very closely, resembled that UFO.

So that one flew away. But nonetheless, 37 years later, Ed Walters took a series of photographs over a period of some months at Gulf Breeze, Florida. These better-quality but still fuzzy snaps were convincing to many - money began to flow in - and indeed so convincing were they to Ed himself that he felt the need to make a completely accurate scale model of the UFO, and hide it in the attic of his house.

A hoaxed picture is worth a thousand hoaxed words, so the UFO stories with pictures were always the best received and believed. But one by one, the guilt-ridden photographers of the 1950s and 1960s owned up, until finally there was only one photo left that had any credibility - that taken by the 13-year-old Stephen Darbishire in 1954. This showed a UFO, of similar design and proportions to George Adamski's, hovering out of focus but neatly placed just above a hedge. And again, of an appalling quality - but, oh joy of joys, this one was British and thus better than the American ones. It was widely claimed that a lad so young would not or could not tell porkies about such a

picture, and for decades it commanded the respect of UFO fans. Darbishire was even interviewed at Buckingham Palace - yes, he even deceived the Queen's husband. Sometimes a story gets so big you can't stop it, but years later and after much stress, he fessed up and this UFO flew away too.

Most hoaxes were done "just for a laugh" and got out of hand, but some were cynical exploitation. The most wonderful of these latter is the alien autopsy film bought in 1995 by Ray Santilli. He also bought some still photos, but chose not to release those, as they showed earthly detail better left fuzzy. The alien 'body' was made of rubber, plus some meat parts supplied by S.C. Crosby Wholesale Butchers of Smithfield Meat Market - they should have sponsored the film.

But usually it's attention rather than money that is sought. Mexico is awash with UFO videos from obscure people. The dream-based "Ninth Planet" (Thiaououba) and "Encounter" (Kelly Cahill) stories made a few bob ... and moreover they were Australian.

Nowadays, of course, not only are cameras universally owned and carried about (which has completely killed off UFO stories), but quadcopters and similar drones have also come well within amateur reach. Fortunately people are more aware than they were ... well, I hope so. ■

About the author:

**Steve Roberts** is made from particles of

extraterrestrial origin. Being open-minded, he actually fell for some of these hoaxes, before he investigated them further, which rather spoiled the fun. He also likes to buy opera houses, and harbour bridges.





# Hits & Myths

Laurie Eddie catalogues some facts that aren't.

Towards the end of World War 2, as the Allies advanced into formerly German held territories they came across the concentration camps where millions of Jews and other prisoners, had been tortured and murdered en masse. Apparently aware that time has a tendency to make people ameliorate the terrible truths of the past, General Dwight Eisenhower, Supreme Commander of the Allied Forces, ordered the Army Media Unit to document the conditions of the camps and their victims. As it turned out, he had every reason to be cautious for, within a few decades, there were already people denying the Holocaust and claiming the concentration camps were benign imprisonment locations.

In 2014 there was a social-media uproar when a photo was released showing Stephen Spielberg posing, rather like a big-game hunter, next to the body of a Triceratops. While many called him an "animal killer" and threatened to boycott his movies, these protestors were unwittingly

demonstrating their profound ignorance, for the Triceratops has been extinct for some 66 million years and Spielberg was actually seated alongside a model Triceratops used in filming the 1993 movie *Jurassic Park*.

These are merely two examples of how easily 'facts' can become contorted and confabulated, and quite often, what people believe to be 'true', can in fact be an erroneous interpretation of events. The following items represent a few examples of how various facts and events have become distorted so that, for many of the public, even though quite erroneous, they are accepted as factual.

## AMERICA BECAME AN INDEPENDENT NATION ON JULY 4, 1776

Although America's founding fathers signed the Declaration of Independence on July 4, 1776, they were in the midst of a war with Britain and were not yet independent. The war continued for a further seven years and independence was not

gained until September 3, 1783 when representatives of Britain's George III and US leaders met at the Hotel d'York in Paris, and signed the Treaty of Paris, officially ending hostilities and making America independent.

## ANGELS OF MONS

This story claims that during WWI a band of angels appeared to protect British troops during the Battle of Mons on the 22-23rd August, 1914. Despite being heavily outnumbered the British were able to force the Germans back, before they were outflanked and forced to retreat. Despite the British defeat, the fact they had held off the Germans was promoted in the British media as a remarkable achievement.

On 29 September 1914, Welsh author Arthur Machen published a short fictional story, *The Bowmen* in the *London Evening News*. The imaginary scenario, set during the British retreat at Mons, described how, after a soldier called upon St George for aid, an army of phantom bowmen



from the Battle of Agincourt appeared, destroying the Germans. Written as a first-hand account, the story had a ring of authenticity and despite later protests by Machen that it was fiction, many believed, and still do, that it was an actual incident.

### BATTLE OF BUNKER HILL

On June 17, 1775, during the American Revolutionary War (1775-83), the British defeated the Americans at what is commonly referred to as the Battle of Bunker Hill; however the fact is, most of the fighting occurred on nearby Breed's Hill.

### BAYEUX TAPESTRY

The Bayeux Tapestry is in fact an embroidered cloth, not a tapestry.

### CAPTAIN COOK DISCOVERED AUSTRALIA

It is generally overlooked that the first sightings of Australia were in 1606 by the Dutchman Willem Janszoon in February or March, and Portuguese Luis Vaz de Torres in October of that year. Other early discoverers were Dirk Hartog in 1616 with other sightings by the Dutch in 1619, 1623, 1627, 1642 and 1696 and even the British in 1622.

### CHASTITY BELTS

The claim that medieval knights locked their wives up in chastity-belts before leaving on Crusades, has now been generally discarded by modern scholars. It appears the myth probably began with French satirists, most likely François Rabelais, (1483 – 1553), who was renowned for bawdy jokes and songs; the story was later popularized by the Victorians.

### CHRISTOPHER COLUMBUS DISCOVERED AMERICA

Apart from the fact that Asians first crossed the Beringian Straits some plus or minus 16,000 years ago, Columbus was also not the first European to discover the American continent. It is now acknowledged that the Norse explorer Leif Erikson, (or Ericson) discovered America at least 500 years before Columbus and there is evidence of a Norse settlement at L'Anse aux Meadows (Jellyfish Cove) on the

northernmost tip of Newfoundland. Incidentally, although during his four voyages, Columbus discovered various Caribbean islands and parts of Central and South America, he never actually found North America.

### CONCENTRATION CAMPS WERE FIRST USED BY THE BRITISH IN THE BOER WARS

Concentration camps were first introduced by the Spanish Governor of Cuba, Don Valeriano Weyler y Nicolau (Butcher Weyler), during the Cuban rebellion in 1897.

### CURSE OF KING TUT'S TOMB

The less said about this farrago of nonsense the better; the so-called curse was the product of random circumstances, sensationalised by reports in *The Times*, which encouraged the superstitious beliefs of a gullible public. In the words of Canadian archaeologist, Donald B. Redford, there is so little evidence of curses associated with King Tutankhamen's tomb, that the so-called claims should be viewed as "unadulterated clap trap".

### DICK TURPIN'S HORSE

Contrary to popular belief Dick Turpin did not have a horse called Black Bess. This piece of fiction was created by Victorian novelist, William Harrison Ainsworth more than 100 years after Turpin died. In this fictional, and quite impossible account, it was claimed Turpin rode 320km (200 miles) overnight from London to York on his horse Black Bess.

### DROIT DU SEIGNEUR

Also known as Jus primae noctis, "law of the first night", this was the alleged right of feudal lords in Medieval Europe to have intercourse with the brides of his vassals on their wedding night. Although there may have been isolated examples of vassal brides being raped by the lord of the manor, the claim that they had a legal

right has been thoroughly dismissed as fiction.

### DUCKS' QUACKS DON'T ECHO

One must ask, what is so special about the quacking sounds made by ducks that should exclude them from the normal physical laws governing all other sounds? The answer is nothing! The fact is that, like all animal sounds, in the proper conditions, quacks echo just like any other sound.

### FIRST WORLD WAR ENDED ON 11TH NOVEMBER, 1918

Although an Armistice (a formal agreement between warring parties to cease fighting) was signed on 11th November 1918, the war with Germany against France, Britain and the United States did not officially end until the 28th June 1919 when the Treaty of Versailles was signed. Incidentally, the armistice was not signed at 11.00am, it was signed at 5.00am, with the agreement it would come into force at 11.00am Paris time.

### GUILLOTIN INVENTED BY THE FRENCH

Although the guillotine is most closely associated with the French Revolution it was not a French invention. Similar devices had long been used in Germany, Italy, Scotland and Persia.

One type, known as the Scottish Maiden, had been in use in Scotland since about 1563, during the reign of Mary, Queen of Scots. A similar device, the Halifax Gibbet, was installed in Halifax, West Yorkshire, during the

16th century. Much later, French surgeon Antoine Louis (1723-1792) with German engineer Tobias Schmidt (who suggested an angled blade) designed a prototype of this device. These early versions were sometimes called a louisette. However, later, after it was advocated as a humane means of capital punishment by French physician Joseph Ignace Guillotin (1738-1814), it became more widely known as the guillotine.





# Hits & Myths

Continued...

## HANGING GARDENS OF BABYLON

Listed as one of the Seven Wonders of the Ancient World, there is no evidence they actually existed. Despite the existence of numerous clay tablets from the period in which they are said to have been built, during the reign of King Nebuchadnezzar II who ruled Babylon for 43 years from 605 BCE, there is no reference to the gardens, neither is there any archaeological evidence of their existence.

## HITLER WAS A VEGETARIAN

Biographers who knew him mentioned his passion for Bavarian sausage, game pie and stuffed squab. The story may have arisen from the fact that he suffered from chronic flatulence, and, on occasions, would go on a vegetarian diet in an attempt to deal with this problem.

## JAMES WATT INVENTED THE STEAM ENGINE

The first 'steam engine' was actually a steam pump. Designed by the French physicist Denis Papin in 1679, it was a closed vessel with a tightly fitting lid that confined steam until high pressure was generated, raising the lid. From this design he conceived the idea of using steam to power a piston and a cylinder. Thomas Savery, an English inventor and military engineer, studied Papin's work and built a steam-driven suction machine for removing water from coal mines. He patented this machine in 1698. In the early 1700s Thomas Newcomen designed a more advanced and more efficient steam pump. In 1765 James Watt improved the Newcomen pump by adding a separate condenser, then in 1781 he designed a steam engine with a rotary motion.

## JESUS WAS BORN ON THE 25TH DECEMBER

We do not actually know on what date Jesus was born. The early Christian

Church considered various dates, including the 12th-13th of July, the birth of Julius Caesar; 6th January, the birthday of Dionysus; or 24th July, the birthday of Horus. The most popular dates, the 25th of December and the 6th of January, were suggested by scholars working back from Easter. Although the actual date of the crucifixion was not known, it was generally thought to be either the 25th of March, or the 6th of April. Since it was believed that Jesus died on the exact anniversary of his incarnation (conception), calculating back nine months from the dates 6th of April, yielded the 6th of January, and from the 25th of March, the 25th of December as the date of the Nativity. December 25 was first identified as the date of Jesus' birth by Sextus Julius Africanus, a Christian Historian in 221, and was later accepted by the Roman Church. Coincidentally, this date was close to the Winter Equinox, (22-23rd December), which, for many early religions, was when their solar divinities were annually reborn.

## JULIUS CAESAR WAS BORN BY CAESAREAN BIRTH

Given the fact that he was born in 100 BCE and that his mother Aurelia lived until 54 BCE when Caesar was 46 years of age, it is an unlikely claim since, given the medical techniques of that period, it is unlikely she would have survived such an operation.

## NELSON'S EYE PATCH

Although usually depicted in paintings wearing an eye-patch, he did not in fact wear one. While he lost the vision in his right-eye in 1794, the eye was not removed and, as it appeared normal, there was no need to cover it. He did, after 1801, wear a green eye-shade, but this was only to protect his good eye from sunlight.

## SAINT PATRICK WAS IRISH

While we do not know whether Saint Patrick was British or Welsh, we do know that he was certainly not Irish.

## SANDWICHES WERE INVENTED BY THE EARL OF SANDWICH

Various forms of sandwich had been around for thousands of years before they were popularised by John Montagu, 4th Earl of Sandwich, who, in the 18th century, had his servants place pieces of meat between slices of bread so that he could continue playing cards without interruption. It is reported that during Passover, Hillel the Elder (110 BCE - 10 CE) ate the meat of the Paschal Lamb between two pieces of flat-bread (matzah). A similar type of food was eaten by the

ancient Romans, and has long been a common form of food throughout Asia, India, the Middle East and Northern Africa.

## SINKING OF THE TITANIC WAS THE WORST MARITIME DISASTER IN HISTORY

Because the events surrounding the sinking of the Titanic, and the loss of between 1490 and 1635 lives, are so well-known, many assume it was the worst maritime disaster ever. However, the greatest loss of life from a ship sinking is believed to be that of the Wilhelm Gustloff, torpedoed by a Soviet submarine in the Baltic Sea on the 30th January 1945, while evacuating German military personnel and civilians from East Prussia. Although the exact death toll is not known, it has been estimated she was carrying around 10,000 individuals of whom only about 1000 survived. In a similar incident, RMS Lancastria was sunk by German bombers off St. Nazaire on the 17th June 1940 while evacuating British troops and civilians. Although her official capacity was 2200 (including crew), due to the emergency she was carrying many more than her normal capacity. In the panic, no exact head-count was recorded and so, while the number of those lost can only be estimated, it is thought to have been between 4000 and 9000 lives.





## SPARTANS KILLED THEIR WEAK OR DEFORMED BABIES

It is generally claimed that weak or disabled babies born to the militaristic Spartans were thrown off a cliff. However, when the pit (apothetes) at the foot of a cliff near Mount Taygete, was excavated by archaeologists in the 2000's when the large number of bones were examined by the Athens Faculty of Medicine, it was discovered none were of infants, they were all males between the ages of 18 and 35 who died in the 5th and 6th centuries BCE. Since it was known that criminals, traitors and prisoners of war were commonly executed in this manner, it seems more likely they were the remains of such individuals. The Romans had a similar practice; traitors were thrown off the Tarpeian Rock, and also army deserters were thrown off convenient cliffs. It appears the Spartan myth was either created by, or popularised by, Plutarch, in the first century CE.

## SUICIDE RATE AT CHRISTMAS

Despite the fact that excessive expectations, financial pressures, family tensions, and for many, just being alone at Christmas, can be quite stressful, there is generally a slight decrease in suicide rates between 24th - 27th December. In the Northern Hemisphere, the suicide rate is highest during Spring.

## SWISS FAMILY ROBINSON

Nowhere in the novel by Johann David Wyss are members of the family ever called Robinson. The name was derived from the fact that Wyss wished to portray in his 1812 story how a fictional Swiss family experienced adventures similar to those recounted in the 1719 account by Daniel Defoe entitled, *The Life and Strange Surprising Adventures of Robinson Crusoe, Of York, Mariner: Who lived Eight and Twenty Years, all alone in an un-inhabited Island on the Coast of America, near the Mouth of the Great River of Oroonoke; Having been cast on Shore by Shipwreck,*

*wherein all the Men perished but himself. With An Account how he was at last as strangely deliver'd by Pyrates.* Defoe's book was itself a fictional autobiography of the title character (whose birth name was actually Robinson Kreutznaer), a castaway who had been marooned on an island near Trinidad.

## TEFLON IS A PRODUCT OF SPACE RACE TECHNOLOGY

Polytetrafluoroethylene (PTFE) or Teflon was in fact accidentally invented in 1930 by Roy Plunkett while attempting to make a new type of chlorofluorocarbon refrigerant. The product was produced in large quantities and widely used, even in the Manhattan Project to coat valves and seals. Registered as a trademark in 1945 Teflon began to be used to coat frying pans in the 1950s, years before the start of the Space Race. The myth probably

developed because it was during the 1960's, around the same time as the Space Race, that it became more popular. The author can recall

seeing the first Teflon coated frypans being demonstrated in Adelaide shops around 1963.

## THOMAS EDISON INVENTED THE LIGHT-BULB

At least twenty-two other individuals contributed to the development of the incandescent light-bulb before Edison. English scientist Humphrey Davy appears to have been the first; he developed an arc-lamp which passed an electric spark between two carbon rods. Although demonstrated to the Royal Society in 1806 it was not a viable product as the light it produced - like that of a modern welding torch - was too intense for domestic use, and the huge amount of electricity it required quickly drained the primitive batteries of the day. Realising

lamp filaments needed to burn in an oxygen-free environment scientists set out to devise a vacuum bulb, and in 1841 British inventor Frederick DeMoleyns was granted the first patent for an incandescent bulb using charcoal heated between two platinum filaments. In 1845 American J. W. Starr received a patent for a bulb using a carbon filament. In 1860 Sir Joseph Wilson Swann developed a bulb using a carbonized paper filament, which, unfortunately tended to quickly fall apart. Others improved the bulbs and in 1877 American Charles Francis Bush was able to illuminate several streets in Cleveland Ohio. Finally in 1879 Thomas Alva Edison, after a great deal of experimentation and access to better vacuum pump technology, was able to produce a reliable long-lasting light bulb.

## 300 SPARTANS DEFENDED THERMOPYLAE

Although this battle in 480 BCE ranks as one of the most courageous defences in history it involved more than just 300 Spartans. Initially the narrow pass at Thermopylae was defended by some 7000 Greeks against a huge Persian force (estimated at between 100,000 - 150,000 men). Betrayed by a local who showed the Persians a path that took them behind the Greeks, Leonidas the Spartan leader, realising they could not prevail, sent most of the Greek soldiers to safety and remained with 300 Spartans, 700 Thespians, 400 Thebans, and a few hundred others, to delay the Persians as long as possible, to allow other Greek forces time to rally against the invaders.

## THOMAS CRAPPER INVENTED THE FLUSHING TOILET

Although Thomas Crapper (1836 - 1910) greatly improved the design of the flushing toilet, he did not invent it. That honour goes to Sir John Harrington (1561 - 1612) who designed and installed a flushing toilet for Queen Elizabeth I (the first Royal Flush). In 1775 Alexander Cummings was granted the first patent for a flushing water closet.



# Hits & Myths

*Continued...*

Although Crapper held three patents for improved designs for the water-closet, including the floating ballcock (a float valve), he never actually held a patent for the flush toilet itself. Incidentally, the term “crap” to refer to bodily waste was not derived from Crapper’s name; it actually dates from Middle English and referred to rubbish, such as weeds or chaff. According to the Oxford English Dictionary, its first use to refer to body waste occurred in 1846, when a privy was referred to as a crapping ken, (a “ken” being a house).

## TOBACCO WAS INTRODUCED INTO BRITAIN FROM THE NEW WORLD

Although generally claimed that Sir Walter Raleigh introduced tobacco into Britain, it actually came from France and had nothing to do with Raleigh. French diplomat and explorer Jean Nicot (from whose name we derive the term “nicotine”) encountered tobacco in 1559 while on a diplomatic mission to Portugal. On his return to France in 1560 he introduced tobacco to that country. An immediate hit with French society, it was named Nicotina in his honour and, as its use spread, the practice crossed the Channel to Britain.

## VIKINGS WORE HELMETS WITH HORNS

This impracticality of this myth is obvious when you think about it. Apart from the difficulty of attaching fragile horns to a metal helmet using primitive technology, imagine a warrior trying to swing a sword or an axe over his head in the midst of battle with horns protruding from his helmet. This myth evolved in the 19th century when Nordic and Viking warriors began to be depicted in art and, in particular, Wagnerian operatic epics. It has been claimed that it was Prof Cale

Emil Doepler, the principal costume designer for Wagnerian operas, who created the entire concept.

## WALT DISNEY WAS CRYOGENICALLY FROZEN AFTER HE DIED

A common myth, it was even mentioned in the television series New Tricks. However, Walt is actually interred in the Forest Lawn Glendale cemetery, along with Lillian (his wife) and Sharon Disney (his daughter).

## WALTER RALEIGH INTRODUCED THE POTATO INTO ENGLAND

Most of the tales we are told concerning Sir Walter Raleigh are untrue. He did not lay his cloak over a puddle for Queen Elizabeth I; neither did he introduce the potato, or tobacco, into England in 1586 as is sometimes claimed. In fact, potatoes were first grown in Europe in Italy in 1585; they quickly became popular and spread throughout Europe and into England. Modern researchers have also pointed out, the potato was not grown in those parts of America which were visited by Raleigh.

## WE ONLY USE TEN PER CENT OF OUR BRAIN

Although in some versions the brain percentage varies, the implication is always that we only use a small amount of our brain and that, with access to ‘special’ training, we can learn to utilise more of the brain and become geniuses, psychic, etc. This myth grew out of early, very primitive brain-mapping procedures, and, as modern imaging techniques now reveal, is complete nonsense. Nature rarely provides organs which do not function at 100 per cent capacity, and, while it is true that we only use some 12 per cent

of the brain for conscious thought, this does not mean the remainder is dormant. The other 88 per cent of the brain is devoted to the subconscious, an area wherein resides innate behavioural patterns, memories and, most important of all, the operation of the autonomic nervous systems, such vital operations as heartbeat, breathing, as well as the incredibly complex endocrinal and homeostatic processes which maintain a constant bodily balance ensuring our survival.

## YOU SHOULD DRINK EIGHT GLASSES OF WATER EVERY DAY

Although deeply entrenched in many alternative dietary programmes this claim is completely fallacious, the result of a media error. In 1945 the American National Academy of Sciences (according to others, the US Food and Nutrition Board of the National Research Council) issued a report to the press suggesting that “A suitable allowance of water for adults is 2.5 litres daily in most instances. Most of this quantity is contained in prepared foods”. Unfortunately the media largely failed to mention the latter fact, that most of the water we require each day was already in our food, and so an erroneous belief was begun. ■



About the author:  
**Laurie Eddie** is president of SA Skeptics.





# Birth of a Notion

Colin Groves, life member of Australian Skeptics, and Ken McLeod, joint winner of the Skeptic of the Year, on how outrage was the spur.

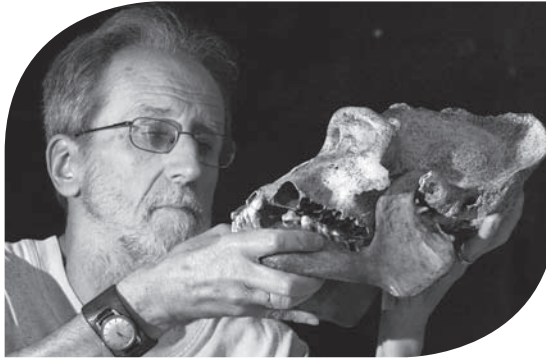
## COLIN GROVES, ANTHROPOLOGIST

It was, perhaps ominously, 1984.

Among the courses I teach at the Australian National University, one is on human evolution, which I find perhaps the most fascinating of all subjects (with the possible exception of all the other subjects I find fascinating). The first semester of 1984 had just ended, I had finished grading the students' final essays, I felt relaxed and benevolent. A student from my class came bouncing up to me in the corridor: "Look at the notice-board", she said excitedly, "There are some films on human evolution being shown in Canberra next Saturday." The films being shown were called "Origins". The blurb about them was not all that specific, but somehow I got a bad feeling about them. Shame on me, I thought: give them a go. So I gave them a go.

The films, five in all, were shown in the afternoon and evening of Saturday, June 23rd, 1984, and were interspersed with raves by a shortish man with a beard (unaccompanied by moustache) and a pride in his own glib eloquence (unaccompanied by tolerance for audience questions). He kept telling us how he had debated many evolutionists, and defeated them. I later learned that his name was Ken Ham.

What I most wanted to see was a film on human evolution, and it was shown just before afternoon tea. We were told that the most famous fossil supporting human evolution, Piltdown, was a forgery. The fact that its unmasking had been a triumph of the scientific method, and that it had been an anomaly all along, was not mentioned. We were told that *Australopithecus* was "just an ape", and were left with the impression that it was known by only two specimens, one



from Tanzania and one from Ethiopia ("Lucy"). And we were left with the impression that Java Man was known by only one specimen, which anyway was just a giant gibbon, and that its discoverer had concealed the fact that at the same site he had discovered two *Homo sapiens* skulls. Now I knew. The film-makers were not fools, they were knaves.

Shortly afterwards (after I had simmered down), I wrote an article in *The Canberra Times* about the event, and shortly after that I ran across an old friend, William Grey, who told me about the Skeptics.

## KEN MCLEOD, CO-FOUNDER, SAVN

I have been around for a long time, and my skepticism has been with me even longer, but it was never a major issue in my life. That is, until I became a search and rescue co-ordinator in the 1970s.

I was conducting a search for an aircraft that had disappeared between Coolangatta and Sydney, somewhere in forests of northern NSW. The search wasn't going too well (this was in the days before satellite-tracking of distress beacons) and any search that doesn't go too well attracts the media like flies to honey. As sure as night follows day, a media article with the words "disappearance" and "mystery" will attract the self-professed psychics and others of that sort like spiders to flies.

In this case, we were assailed by these

Colin Groves and one of his friends; Ken McLeod pleased with the success of Stop the AVN.



cranks with meaningless advice, like "the people on board had eaten onions before the flight, tell the search crews to look for the smell of onions". Well, that narrowed it down to about 100,000 square miles.

Since then, I noticed that any search that ran more than two days brought out the usual suspects. A search for a missing yacht in the Coral Sea had psychics telling the family of the crew that we were looking in the wrong place, and that they were happily resting under the shade of coconut trees. On that advice the family mortgaged their house, hired their own search planes, found nothing and went bankrupt. The Australian Maritime Safety Authority won the Bent Spoon (runner-up) award in 1997 for doing exactly that also.

From that day on, I only became grumpier and grumpier with psychics and cranks.

So when I saw the infamous Meryl Dorey claim on TV that no-one ever died of whooping cough (in a story about the death of Dana McCaffery from whooping cough) and then demanded the hospital records of the baby's death, I became a skeptical activist. Or is that "activist skeptic"? ■

# Neanderthal MAN

Bostijan Savle follows the Paleo way  
to the end of the road

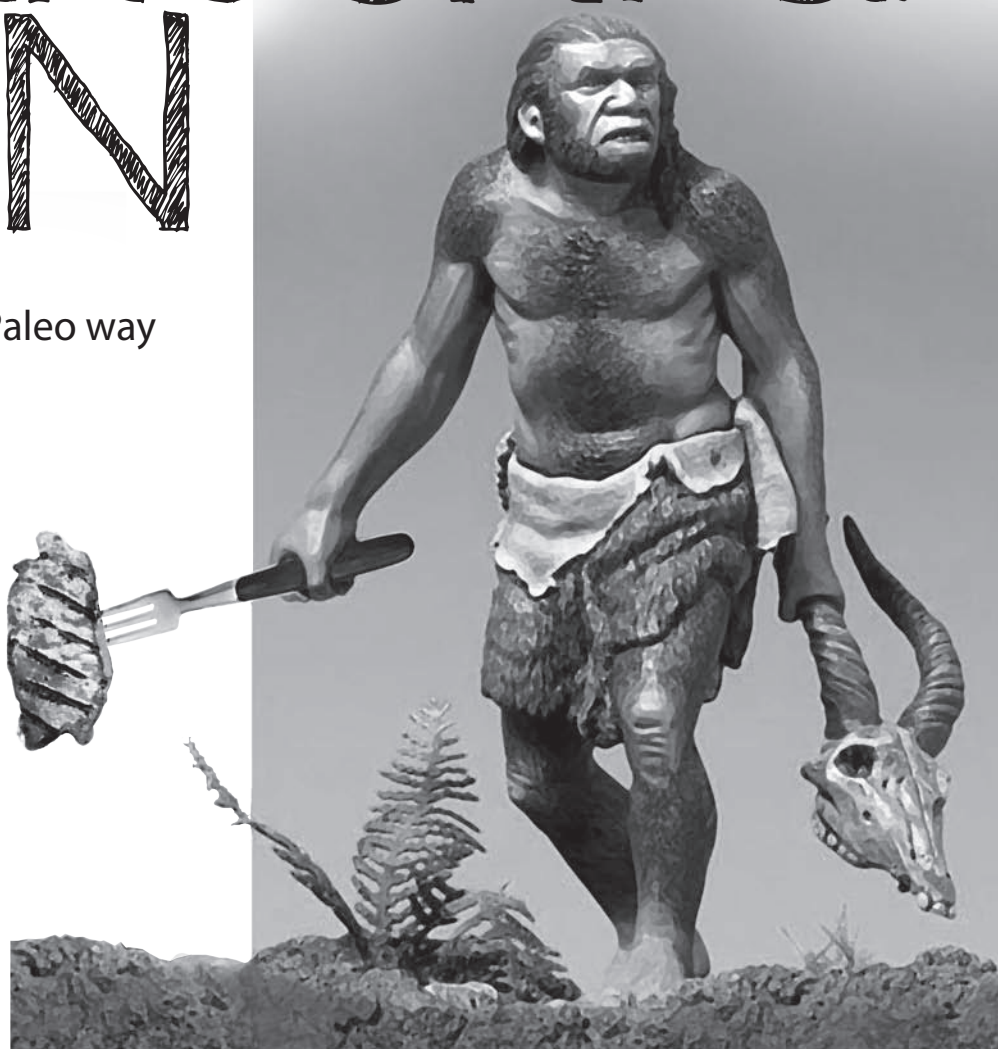
There is a “new” fad diet going around called the Paleo way. I say “new” because according to its proponents it’s been around since the Palaeolithic era. This was a time before humans had become agrarian and were hunter-gatherer types. Paleo proponents suggest that our bodies have not evolved to cope with all of our modern food.

The Palaeolithic diet (also called the Caveman diet) works on the principle that the human body should eat the same diet as our hunter-gatherer ancestors. This includes meat, fish, birds, roots, wild fruits and vegetables, and nuts. Foods that are the products of agriculture such as grains, legumes, all dairy products, oils, salt and sugar are all excluded.

The theory is that the modern diet is associated with obesity, diabetes, heart disease and cancers and reverting to a Stone Age diet for which they claim our bodies were designed would bring an end to modern disease.

Now, granted, that all sounds reasonable. I mean, any diet that suggests that you eat more fruit, vegetables and lean meat can’t be wrong? Can it?

Well this is your typical Paleo hunter-gatherer: Meet Gronk. According to his online profile, he is a tall, lean, ripped and agile 30-year-old. By every measure, Gronk is in superb health: low blood pressure; no inflammation; ideal levels



of insulin, glucose, cholesterol and triglycerides. He and his family eat really healthy, too. They gather wild seeds, grasses, nuts, seasonal vegetables, roots and berries. They hunt and fish their own meat. Between foraging, building sturdy shelters from natural materials, collecting firewood and fending off dangerous predators far larger than himself, Gronk’s life is strenuous, perilous and physically demanding. Yet, somehow, he is a stress-free dude who always manages to get enough sleep and finds the time to enjoy moments of tranquillity beside gurgling creeks. He is perfectly suited to his environment in

every way. He is totally Zen.

Ostensibly, Gronk is “a rather typical hunter-gatherer” living before the dawn of agriculture - an “official primal prototype.” He is the poster-persona for the Paleo devotees’ “Primal Blueprint”, a set of guidelines that “allows you to control how your genes express themselves in order to build the strongest, leanest, healthiest body possible, taking clues from evolutionary biology (that’s the primal part)”. These guidelines incorporate many principles of what is more commonly known as the Palaeolithic or caveman diet which, in one form or another, started to whet



people's appetites as early as the 1960s and is available in many different flavours today.

Proponents of the Paleo diet follow a nutritional plan based on the eating habits of our ancestors in the Palaeolithic period, between 2.5 million and 10,000 years ago. Before agriculture and industry, humans presumably lived as hunter-gatherers: picking berry after berry from bushes; digging up tumescent tubers; chasing mammals to the point of exhaustion; scavenging meat, fat and organs from animals that larger predators had killed; and eventually learning to fish with lines and hooks and hunt with spears, nets, bows and arrows.

Most Paleo dieters of today do none of this, with the exception of occasional hunting trips or a little urban foraging. Instead, their diet is largely defined by what they do not do: most do not eat dairy or processed grains of any kind, because humans did not invent such foods until after the Palaeolithic; peanuts, lentils, beans, peas and other legumes are off the menu, but nuts are okay; meat is consumed in large quantities, often

cooked in animal fat of some kind; Paleo dieters sometimes eat fruit and often devour vegetables; and processed sugars are prohibited, but a little honey now and then is fine.

Claire Hewat, CEO of the Dieticians Association of Australia's (DAA), says: "At first it seems reasonable until you realise that whole sections of the Australian healthy eating guidelines are being left out."

The Paleo Diet is one of the hottest diet trends around, mostly due to celebrity followers and gym-goers, but the country's leading nutrition body is warning Australians it's not all it's cracked up to be.

The scientific evidence to support eating like our Palaeolithic ancestors just doesn't stack up. And Hewat goes as far as to call the diet potentially dangerous.

A recent search for the published studies looking at Palaeolithic diets revealed no more than ten, all with very few participants over very short timeframes, most less than three months. And many people dropped out of the studies, claiming the diet was difficult to follow.

"We all eat, and so to a certain extent, we know what food makes us feel good. But rather than getting on the latest fad diet bandwagon, I urge Australians to become familiar with the Dietary Guidelines and to seek expert nutrition advice from an accredited practising dietician", said Hewat.

She said Palaeolithic diets were first suggested by researchers in 1985 on the basis that current-day chronic disease has

resulted from a gene-culture mismatch and the human body's inability to adapt from Palaeolithic times. Yet Hewat says there are multiple examples suggesting that this is simply not true and that we continued to develop as a race.

"Some proponents of 'Paleo' suggest we avoid all grains, legumes, certain

dairy products, conventionally-raised meats, non-organic produce, and genetically modified and processed foods. This simply isn't practical for many Australians," said Hewat.

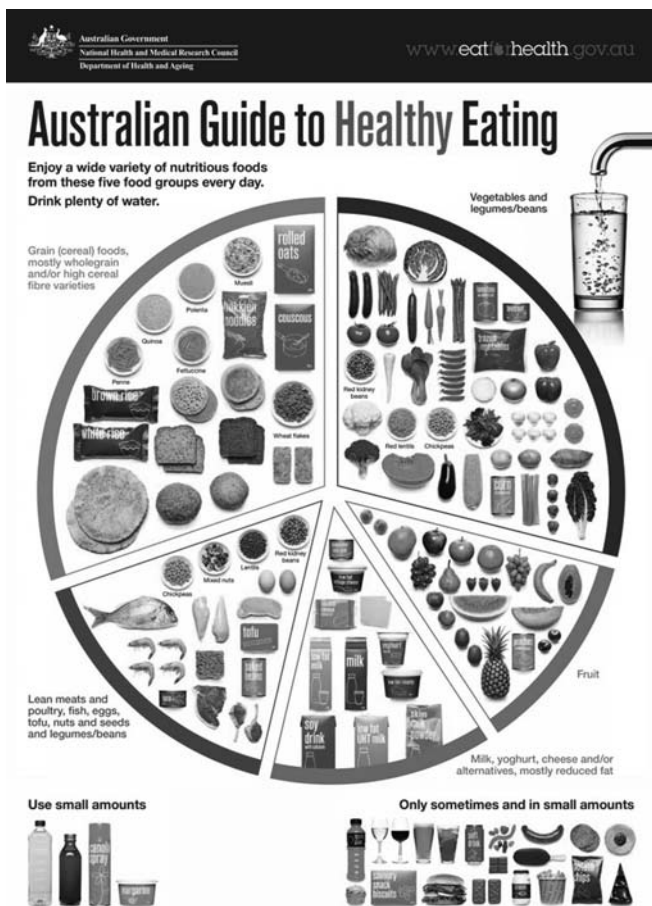
She said an American-based assessment of the Paleo diet suggested we would need at least a nine per cent increase in income to afford this diet.

"Any diet excluding whole food groups should raise suspicions. The idea of cutting out grain-based foods and legumes is not backed by science, and eating more meat than is needed by the body certainly has risks, according to the World Health Organisation," said Hewat.

Paleo can end up excluding nutritious foods because its proponents think that we didn't eat them a long time ago, and so we shouldn't eat them now. Secondly, it's dangerous for your financial future to be forking out big bucks for paleo-approved products, because such things usually don't come cheap.

Eating shouldn't be complex, but paleo is far from flexible. It creates a system of arbitrary, difficult-to-follow rules for eating that can lead to disordered eating. Primarily, it can cause one to obsess over eating the 'right' foods and avoiding the 'wrong' ones. This phenomenon has been coined "orthorexia", which is not yet recognized in the *Diagnostic and Statistical Manual of Mental Disorders*, but enough mental health professionals are talking about it for it to gain some scientific legitimacy. While other eating disorders tend to obsess over calories and body weight, so-called orthorexics obsess over food quality. Again, which foods are right, and which foods are wrong.

Up to this point I have avoided





# Neanderthal Man

Continued...

mentioning any names with the exception of Paleo poster boy Gronk. I'm a chef - I have been on the tools for almost 25 years. I know food. I love food and I love feeding people. I also love astronomy, but that doesn't make me an astronomer or astrophysicist, or a planetary geologist. See, I know my limitations. Don't get me wrong, inside those limitations I am the master of my domain, Hollandaise no problems, medium rare steak? Blindfolded. Bacon? Well I even make my own. However, all that doesn't make me an expert on nutrition or dietetics or other related fields.

## PALEO GURU

A new guru of the Paleo diet fad has hit the scene and his name is Pete Evans. Yes, your favourite celebrity TV chef and co-host of *My Kitchen Rules*. Evans has had a very successful career as a chef and opened several award-winning restaurants. Of late he has been a very active proponent of the Paleo diet and he has also made some extraordinary claims and accusations.

He is also a spokesperson for the MINDD foundation [www.mindd.org](http://www.mindd.org). (The name comes from "treatments for Metabolic, Immunologic, Neurologic and Digestive, Developmental conditions). This is the philosophy of the MINDD foundation: "As a non-profit health promotion trust set up and run by a team of patients, medical doctors and health care professionals, MINDD Foundation is well placed to promote improved treatments for a range of disorders including autism, ADD, asthma, eczema, allergies, food sensitivities, dyspraxia, dyslexia, digestive disorders, schizophrenia, depression and chronic

infections.

"We believe that these disorders are on the rise due to environmental factors such as pollution, food, medications and stress that denigrate cellular health. We also believe that the best health care comes through open dialogue between patients and practitioners.

"Through seminars, conferences, educational materials and healthy products we promote integrative treatments that support cellular health. These cover both traditional and alternative treatments and include Complementary Medicine, cranial sacral therapy, nutrition, Chiropractic care, speech and neuro-developmental therapies, energy medicine, acupuncture, holistic dentistry, Functional neurology, Ayurvedic & Chinese medicine, yoga, meditation, osteopathy, naturopathy, and homeopathy.

"In making informed health choices, we will be making sound choices for our children and our children's children."

So we now seem to be getting to the heart of the issue. A chef since he was 19, Evans' health journey took a turn when his daughter Chilli was born. He goes on to explain:

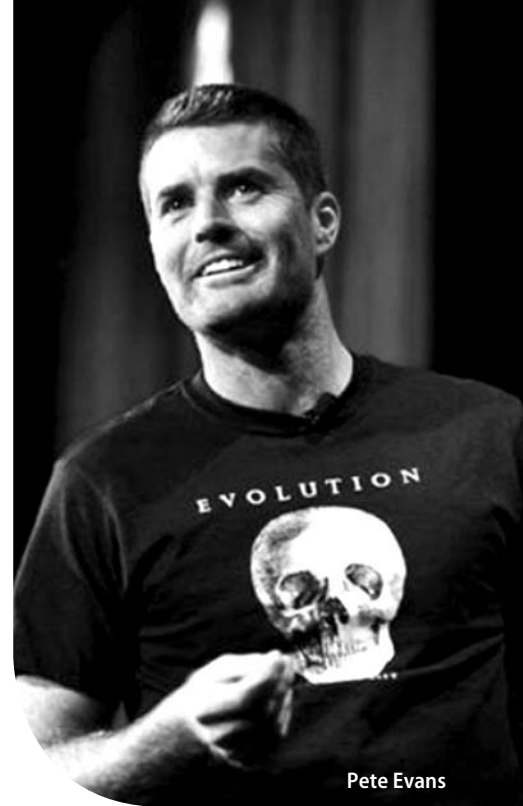
"I would like to explain a little about myself so you can understand where my intentions lay. My first daughter was born over nine years ago and within an hour of her birth the doctor came

and told me that she had a tumor which needed to be removed asap. She had the surgery when she was two weeks old. For the next three years she had to go back every three months for test after test to

see how she was progressing and I am sure I don't need to tell you the pain we all felt.

"One time, about two years later, her blood tests came back and the doctor said he needed to operate again in three months time if her blood tests kept going the way they were. ... At that point we went to see a natural therapist who worked on her holistically, and within three months

**"If it was just the Paleo diet, it could pass. But it's not. The whole ethos is careering into woo town."**



Pete Evans

her tests had reversed, which meant she didn't need another operation. To say that I was amazed at what diet and holistic therapies achieved was an understatement and I became passionate again about health and nutrition. Is she in perfect health at the moment? Not always, but I am aware that diet as well as other factors makes a real impact on her system, and we are constantly doing our very best to keep both children and ourselves as healthy as possible and focussing on healing our guts."

As a parent myself I know the lengths I have gone to in an effort to help my kids, one of whom has learning difficulties, so it's hard to be critical of him for that. However, when the information he is giving out is touted as a cure-all, we swerve into dangerous territory. As mentioned in the MINDD foundation philosophy, Evans feels that a lot of issues can be cured by this change of diet.

## DIET AND AUTISM

He asked this question on Facebook in relation to Autism rates.

"Why has our rate of autism jumped from 1 in 100,000 children in 1974, to 1 in 50 in 2014. Where do you think it will be in another 40 years if it is escalating at this rate? This has grown rapidly since the guidelines have been in place!

"Why is the rate of mental illness

including dementia and Alzheimer's escalated at a frightening rate and we are told by the DAA and Heart Foundation to avoid saturated fat when this is what our brains need to survive and function properly."

Autism is strongly genetic: if you have one child with autism you have a much higher chance of having another, somewhere in the range of 10 per cent, as opposed to 1 per cent for the general population. However, it is not completely genetic. It may be that a child has a genetic predisposition to autism but it may not develop unless something else tips them over the edge.

Here are some 'tip' factors that can slightly increase your risk of having a

children's symptoms improve if they remove gluten and dairy from their diets. Obese, diabetic mothers are marginally more likely to have babies with autism. Also, researchers are looking into the role of gut bacteria contributing to rare cases of regressive autism. However, even if established, it's likely these factors would account for a fraction of autism cases diagnosed each year.

Evans has also recently taken issue with the DAA and its endorsement of the healthy eating guide lines.

"Three months ago, my three dear friends Nora Gedgaudas, enthusiastic fitness expert Luke Hines, and musician Wes Carr joined Nic and I on a national

"So here is the CEO of our national body of dieticians actually approaching the media to create a story for them to share to the masses. The CEO states that the paleo way is DANGEROUS, and get this, because it is too HARD and too EXPENSIVE." [Taken from Evans' Facebook page.]

The Heart Foundation claims the Paleo diet is putting heart health at risk.

"We know that the high level of saturated fat in a diet increases the risk of heart disease," a Heart Foundation spokeswoman said. The Heart Foundation and the DAA have historically kept their distance from diets such as Paleo and Atkins. They suggest a balanced diet that mixes all food groups is the best approach to healthy living.

This was Evans' response:

"This morning we have had the CEO of the Heart Foundation say she does not support the paleo way of life and never will. What is interesting is I have never asked her or her organisation to support it, we do not need a paid for 'TICK' on a way of life that may promote the body to heal itself in the most natural way.

"Today we are sharing a post by Joe Leech. Joe is a dietician and professional health writer. His nutrition advice is based on actual scientific evidence AND common sense; not just what someone else told him to believe. Over to you Joe ...

"The famous Heart Foundation Tick.

"Ever noticed how many high-sugar products have earned that Tick on their label?

"It's on all sorts of 'healthy' foods, including cereals, snack bars and condiments that are between 30-70 per cent sugar. For perspective, jams are around 60 per cent sugar. The reason these foods get the Tick is because the Heart Foundation DOES NOT consider excessive sugar intake a health risk.

"It's unorthodox, but I'm citing my scientific references in this post because some of the media are dismissing Pete's Facebook posts as 'pseudo-science'.

"According to an exact quote from the Heart Foundation, 'existing levels of evidence indicate that there is no direct causal relationship between added sugar



Pete Evans and Stephen Mercola

child with autism: either you or your partner being over 40; an infection during pregnancy; obesity in pregnancy; extreme stress while pregnant (there was a spike in autism cases in New Orleans after Hurricane Katrina); gestational diabetes; premature babies; twins; birth complications; having two babies close together and, possibly, exposure to environmental pollution.

The real reason for the dramatic rise in autism prevalence is pretty simple: we're getting better at recognising the disorder. Couple that with the widening of the goalposts in 1994 to include Asperger's disorder under the label, and we can explain most of the rise.

Does diet play a role in autism? Certainly some (but by no means all) autism parents report that their

tour talking about the Paleo lifestyle which we called 'The Paleo Way'. My intent for this tour was to share rock solid information and to dispel any myths about this way of life. Nora gave a three-hour university style lecture which was cut down from eight hours to present the science behind it so that people could walk away with the confidence that this was definitely not a fad, and to embrace and empower them with knowledge that might just reaffirm or make the people in the audience question current thinking.

"Ok, so here is where the story takes a turn and in walks a new character. ... About a week after the tour I get alerted to a national press release from the DAA whose title of their release is 'Don't Go The Paleo Way'.

# Neanderthal Man

Continued...

and coronary heart disease, diabetes or obesity (with the possible exception of sugar-sweetened beverages)'.  
 "What an exceptionally strange statement. Basically they're admitting added sugar is a health risk, but only if it's bottled in a soft drink - not in a box of Tick-approved chocolate cereal or muesli bars. Then a 2014 review study, which summarised the findings of 39 previous studies, found that regardless of your body weight, high sugar intake SIGNIFICANTLY AFFECTS blood pressure. It also raises LDL 'bad' cholesterol and lowers HDL 'good' cholesterol - all strong markers of heart disease. Sugar impacts much more than just your blood sugar level. And yes, I have cited observational studies - 'observation does not equal causation' - but it is telling data that cannot simply be ignored, like the Heart Foundation is doing." (Taken from Evans' Facebook page)

You can also add some anti-fluoride work he is doing with Fluoride Free WA: "Fluoride Free WA With Australia's Leading Chef, Pete Evans  
 "FFWA President, James Fairbairn, caught up with Australia's leading Chef and exponent of the paleo-diet, Pete Evans this afternoon.  
 "Just as us humans didn't evolve to eat processed cereals and sugars, likewise we did not evolve to consume fluoride, particularly when it is sourced from industrial waste and then added artificially to your water solely to medicate you.  
 "After-all, fluoride is not an essential nutrient and yet the fluoride that the state medicates you with is at a level 250 times that of mothers' breast milk. There are no benefits to add fluoride to your drinking water, only risks, especially for infants ingesting this heightened level of fluoride at such an early age."

And Evans also aligns himself with Stephen Mercola, proponent of

alternative medicine, his own nutrient products, and anti-vaccination campaigns, and the subject of a number of warning letters from the US Food & Drugs Administration.

"The legend Dr Mercola and I have had a tremendous day in Chicago together, We spent six hours starting off with a workout, then fermenting vegies, sprouting seeds, juicing green vegetables and talking all things health and nutrition including saturated fat, grains, dairy, GMOs, organics, sun and vitamin K, etc. The good doctor's website is the largest natural health website in the world.

Check it out! Keep questioning for LIFE!"

So you see the pattern forming. If it was just the Paleo diet, it could pass. But it's not. It is Evans' whole ethos that is careering into woo town. His Facebook page has over 330k likes, and they hang off his every word. So this has turned into a cult of personality.

He is also the author of a book *Healthy Every Day - Delicious Paleo-inspired Recipes for Every Day of the Week*, runs regular classes on the 'Paleo way', and is part owner of an organics/ Paleo shop, BU Organics, in Sydney.

It is the Paleo way program that is his "real passion".

"The Paleo Way is a 10-week weight loss and vibrant health online program which includes fitness tips, interviews with the leaders in mind body medicine as well as the tools for making the change and sustaining it using a simple program that the whole family can enjoy."

Food education and healthy eating are important issues that need addressing. Indeed, the rates of obesity and diabetes are rising, as are chronic health issues. But to say the simple fix is this diet is dangerous and too simplistic, as is some of the reasoning behind this diet.

Pete, as a fellow chef I don't have a problem with you educating Australians about better eating choices or even organic for that matter, but leave the medical advice to the professionals, please.

Lastly I will leave readers with the long disclaimer at the end of Evans' Facebook page:

"The ideas and suggestions written by Chef Pete Evans, on this page are provided as general educational information only and should not be construed as medical advice or care. Information herein is meant to complement, not replace, any advice or information from your personal health professional. These of course are observations, they don't equal causation, but are pretty difficult to ignore. I'm sure the experts will agree. All matters

regarding your health require supervision by a personal physician or other appropriate health professional familiar with your current health status. Always

consult your personal physician before making any dietary or exercise changes.

"Pete Evans Chef disclaims any liability or warranties of any kind arising directly or indirectly from use of this page. If any medical problems develop, always consult your personal physician. Only your physician can provide you medical advice.

"Throughout this page are links to external sites. These external sites contain information created and maintained by other individuals and organisations and are provided for the user's convenience. Chef Pete Evans does not control nor can they guarantee the accuracy, relevance, timeliness, or completeness of this information. Neither is it intended to endorse any view expressed nor reflect its importance by inclusion in this site."

In other words, don't trust me; I'm just here for the program. ■

**"To say that the simple fix [to obesity and diabetes] is this diet is dangerous and too simplistic."**



About the author:

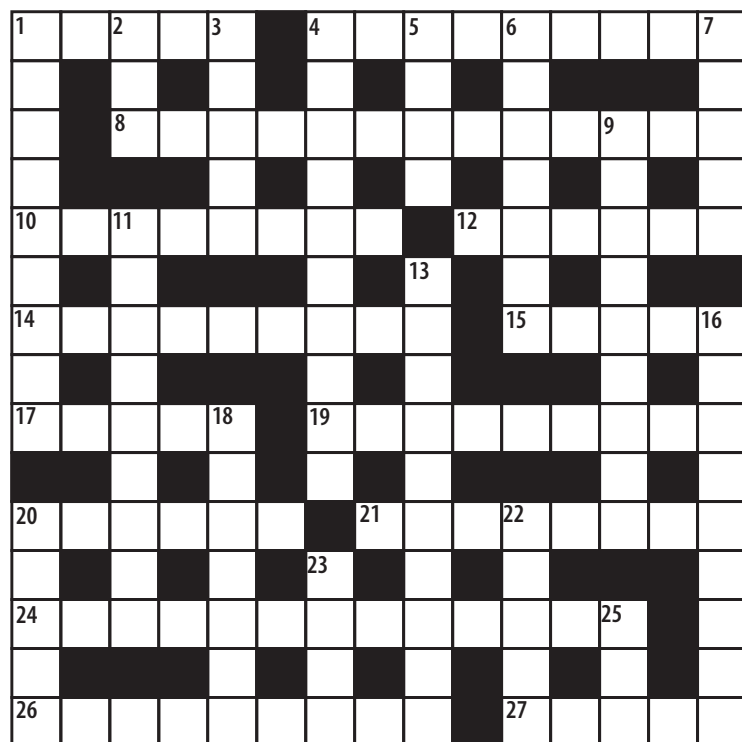
**Bostjan Savle** is a chef, amateur astronomer and podcaster @skeptichief.





# Brain testers

## CRYPTIC CROSSWORD no 24



Tim Mendham + Steve Roberts

## DR BOB'S QUIZ

1. The late Lady Diana Spencer was convinced that she suffered from (among other things) lead poisoning. What gave rise to that belief?
2. What happens if, during a fire in a building, you really do use the lift (elevator)?
3. Given a snake (preferably, a dead one) how should you identify what species it is?
4. In Matthew chapter 8, what did Jesus say in conducting an exorcism?
5. Donald Duck has a middle name - what is it?
6. What is the farthest place (on Earth) from Pitcairn Island?

Answers on page 62

## ACROSS

1. What you see if you look inside the body, why not? (5)
4. Girly dags dance around an old tree. (9)
8. All log coinage hides something to do with the study of heaven's people. (13)
10. Iron hook makes a good diamond. (8)
12. Neil, as mixed with foreigners. (6)
14. Sick of, for example, bad humour. You can't read it. (9)
15. I can't pull a trick. (5)
17. Ground a broken heart. (5)
19. Why nothing evolved into an affectionate name. (9)
20. Cuddles up to Geller's tools. (6)
21. Are nudes found below the surface? (8)
24. Tasmania's boss is explicit about tea-leaf reading. (13)
26. At the height of the day, the Sun's position is that no stone should be turned these days. (9)
27. Can one keep the rules? (5)

## DOWN

1. Is there something missing in the Bible? It's humour. (5,4)
2. Eggs love five to one. (3)
3. Astronomical tribe where atheism is on the rise. (5)
4. Cry over spilt web oil? See the humour in it? (6,4)
5. Covered in gold? Not our responsibility. (4)
6. Each Grail dressed in finery. (7)
7. The 50s mixes us up and sends us to sleep. (5)
9. Fundamentalist just doesn't have it for the makings. (9)
11. Can't hail the right promissory notes. Very funny!(9)
13. Pull north, and draw up to the sky. (10)
16. A thousand in bad reaction to burning. (9)
18. She rang to get wardrobe accessories. (7)
20. South African colour will take you to burn. (5)
22. Moral rule in the thick of it. (5)
23. Eco Al confused with a monster. (4)
25. The down side of a cheat. (3)

# Cognitive Dissidents



Martin Bridgstock ponders whether the 'D-word' should be banned from polite company

Feynman says nothing about denial at all: he is talking about the relationship of science and knowledge. This is irrelevant to the idea of 'denial'.

So Margaret has made a number of important claims, but has backed them with no worthwhile evidence. What are we to do? Well, one of the Australian Skeptics' goals is to follow the truth wherever it may lead (Australian Skeptics 2014). I intend to do that. I will look at Margaret's statements and see how far they appear true, and decide whether the word 'denial' is useful and valuable.

Now Margaret claims that using the term 'denial' prevents rational discussion. I disagree. In every one of the books cited in the table (see p48), the term 'denial' is used, and then there is evidence-based criticism of denialist views. Why? The answer is simple; the denialists themselves cannot be swayed by evidence-based arguments, but other people can. So evidence and rational argument have to be used, not to influence the denier, but for those who might be swayed by the deniers' arguments.

## RATIONAL ARGUMENT AGAINST DENIERS

Let me give you an example. Way back in the 1980s, the Bjelke-Petersen government in Queensland was on the

Recently, Margaret Graetz (2014) attacked my use of the word 'denier'. This set me thinking about some important questions. The first question is, should we use the word at all? And, if we can use it, what exactly should it mean for skeptics and other reasonable people? To avoid long angry polemics, I will not discuss climate change in this paper but will focus on denial of historical issues, AIDS deniers, creation science and the anti-vaccination movement.

First, what do we mean by denial or denialism? A number of skeptics and researchers have written about the topic, and their definitions appear in the Table. They differ in detail, but all focus on the point that denial involves refusing to accept certain propositions which are strongly supported by facts and evidence. From the viewpoint of these writers,

denial is a rejection of reality, or at least of the best evidence that we have about reality.

What reasons does Margaret Graetz advance for not using the D-word? She starts with a paragraph like this: "Anyone who uses the term 'climate change denier' has turned off their skeptical brain. The word 'denier' belongs to ideology and religious fanaticism. It prevents rational discussion." (Graetz 2014: 61)

Margaret then goes on to say that the term has been used inconsistently and to argue that it can prevent the collection of crucial evidence on some issues. She concludes: "Calling people 'deniers' prevents such examination of evidence. Science continually seeks for new evidence." (Graetz 2014: 62)

Then she quotes Richard Feynman, the great scientist, as saying "Science is the organised skepticism in the reliability of expert opinion." But

verge of forcing creation science into the state school science curriculum. I was lent some copies of the creationist magazine *Ex Nihilo*, and I read them. At first glance, the magazines seemed to show that a mass of scientific evidence was just about to sweep away ideas that the Earth was old and that humans had evolved.

It took me weeks to see what had to be done. Wherever the creation scientists referred to scientific evidence, their use of that evidence had to be checked. So I checked hundreds of creationist references to science. And the hideous truth emerged. Virtually all of the references in *Ex Nihilo* were wrong. The creationists altered quotes, tore quotes from context to change their meaning and misrepresented the meaning of evidence.

Of course, I wrote and published many papers about this. The creationists themselves were clearly deniers, although the word was not used at that time. They believed in biblical creation despite – not because of – the evidence, and nothing would change their beliefs. But did that remove the need for rational argument and debate? It did not.

Across Queensland there were large numbers of people who were not deniers, but who might have been impressed with creationist arguments. I envisioned Christian teachers, parents and decision-makers who might have accepted creationist ideas, and so be won over to supporting creation science. I thought about discussions in school staff rooms, across breakfast tables and at barbecues. I thought that many people needed a clear, simple account of what creation science was, what was wrong with it, and what arguments to use against it. The Australian Skeptics agreed, and funded Dr Ken Smith and myself to produce a book which would summarise the case. The book (Bridgstock and Smith 1986) went through six printings and, I believe, repaid the Australian Skeptics many times over. So Margaret Graetz is wrong: identifying your opponents as deniers does not remove the need for evidence and rational debate; it simply means that there is no chance of convincing your opponents, and that your reasoned appeals must be spread more widely.

## DIALOGUE WITH A DENIER

You may think that I am too pessimistic about rational discussion with deniers. Well, this example from my own experience is typical. I had written a rather controversial article, drawing heavily on a distinguished researcher's work. After publication, I received a fairly angry message from a man – let's call him Mr No – who informed me that the researcher in question was 'a nut' and that her work was 'nutty' and had "repeatedly been demonstrated to be false".

Now this might be important. If I had been using the work of an unreliable researcher, I needed to know. So I wrote back politely asking for evidence of the claims. I stressed that the evidence had to be of high quality, such as refereed journals or reputable books – I have been caught too often with 'evidence' from weird websites. To my amazement, Mr No wrote back informing me that I was being 'silly' and that I was trying to save face. I remain mystified about why it is 'silly' to ask for evidence, and how Mr No could discern my motives when we have never met. He also said, initially, that he had supplied such evidence, and then later stated that it was impossible to provide such evidence.

My own reaction to this exchange is simple. If men are from Mars, and women are from Venus, then deniers come from a galaxy far away. The combination of insults and evasiveness is typical. Good luck trying to talk to them!

## THE MOTIVES OF DENIERS

In her attack, Graetz claims that "The word 'denier' belongs to ideology and religious fanaticism."

It is not clear whether the ideology and religious fanaticism belong to the person labelled as a denier, or to the person doing the labelling. In either case, Margaret seems to be wrong. First, if she means that only religious fanatics and ideologists use 'denial,'

then outstanding skeptics like Michael Shermer (2013) and Donald Prothero (2013) must fall into this category, as they both use the term. This seems ridiculous. Alternatively, if she means that the people labelled as deniers must be religious fanatics or ideologists, then it is easy to produce counter-examples.

What counter-examples are there? One appeared when I studied the Australian Vaccination Network's website. A parent wrote that his child had received the MMR vaccine and almost immediately afterwards had begun to show signs of autism. As a result, the parent was now fiercely opposed to vaccination, and felt that there was a 'cover-up' going on. As Prothero (2013: 150) points out, this is misunderstanding what had happened. The first signs of autism often appear when a child is about 18 months old, and this is also a recommended age at

which the MMR vaccine should be administered. The anguished parent had misinterpreted what he had seen. For another example, it also seems clear that holocaust denial – at least partly inspired

by anti-Semitism – does not necessarily stem either from religious fanaticism or ideology. It can arise simply from bigotry and hatred.

My conclusions are that Margaret's arguments against the use of the term 'denier' do not stand up to examination. Use of the term certainly does not remove the need for rational argument and evidence, and it need not imply religious fanaticism or ideology on anyone's part. However, that still leaves the question, is the term useful? Is it one that skeptics might reasonably employ?

## THE USES OF DENIAL

When skeptics are faced with someone who dissents from mainstream views, the normal – and healthy – reaction is to seek to engage in discussion. A skeptic might point to the lack of evidence for way-out claims, and also produce evidence against them. This is the ideal

**“If men are from Mars, and women are from Venus, then deniers are from a galaxy far away”**



# Cognitive Dissidents

Continued...

way in which debate and discussion should proceed.

If we know, however, that a dissenting person is not amenable to reason, then we might adopt a different course. What is the point of producing evidence if we know in advance that a person will not be influenced by it? Indeed, there are very good reasons for not bringing up evidence. I remember being warned not to engage in informal discussion with creation scientists, as they would simply note my arguments, and then develop counter-arguments for the next public occasion. This is where the term 'denier' becomes very useful. It is shorthand for "This person will not be influenced by argument or evidence, so skeptics and reasonable people should react accordingly."

## BUT WHAT ABOUT GALILEO?

One other objection might occur to some people. If we were scientists back around 1600 in Renaissance Italy, might we not label Galileo a denier? He thought that the scientific establishment was wrong. And Galileo, as we all know, turned out to be right. Is there a danger

that, in using the word 'denier,' we will be depriving genuine, evidence-based dissenters their due attention?

We have already seen that deniers hold their views despite powerful evidence to the contrary. What about Galileo? Well, Galileo's main contribution to astronomy was a positive torrent of new evidence. He was the first to turn a telescope upon the heavens and publish what he saw. He reported that the moon had no light of its own, and had mountains. He saw thousands of stars, too faint for the naked eye to discern. He reported the phases of Venus, sunspots and the moons of Jupiter. All of this, in one way or another, constituted evidence against existing ideas about the universe.

In addition, Galileo was not simply denying a particular view of the universe, he was supporting the heliocentric view, which had been put forward earlier by Copernicus and refined by Kepler. And he was able to support his argument with a mass of new evidence. Galileo does not look remotely like a denier, he looks like a scientist involved in the development of a new theory. This means that, provided we are careful, we can distinguish between genuine, if controversial, scientists and deniers.

One last point. Some deniers resist the label because they object to being compared to Holocaust deniers. The latter are certainly a repulsive bunch, but other forms of denial are far more

dangerous. AIDS denial caused the deaths of hundreds of thousands of people. Tobacco denial killed millions, and vaccination denial threatens to do the same. In my view, some other denials are even more threatening. We need to label these people. I am sorry if using the term offends deniers' sensibilities, but then they seem to take no account of mine!

## CONCLUSIONS

I draw three conclusions from this analysis. First, the term 'denier' has an acceptably precise meaning, and researchers on the topic are using it. Second, the term has many advantages; it means that skeptics need not spend time trying to persuade unpersuadable people, though it does not free those skeptics from the duty of producing evidence and rational argument for other people. Third, there are clear differences between deniers and genuine, if controversial, researchers. We must pay careful attention to these differences if we are to use the term. ■



About the author:

**Martin Bridgstock** is a senior lecturer in the School of Natural Sciences at Griffith University and the author of *Beyond Belief*.

## TABLE. WHAT IS MEANT BY DENIAL – SOME RESEARCHERS' VIEWS.

As a defence mechanism, denial is perfectly normal – we use it every day. . . Denial becomes troublesome when the defence mechanism turns into a self-deceptive refusal to accept significant, life-affecting realities that are obvious to the world at large. (Taylor 2008: vii)

Denial or denialism is the automatic gainsaying of a claim regardless of the evidence for it – and sometimes even in the face of evidence. . . Belief comes first, reasons for belief follow, and those reasons are winnowed to assure that the belief is always supported. (Shermer 2013: xiii)

A denier . . . is ideologically committed to attacking an opposing viewpoint, and no amount of evidence will change their minds. (Prothero 2013: 3)

The employment of rhetorical tactics to give the appearance of argument or legitimate debate, when in actuality there is none. These false arguments are used when one has few or no facts to support one's viewpoint against a scientific consensus or against overwhelming evidence to the contrary.\* (Kalichman 2009: 8)

\*This seems to have come originally from a website which is now inaccessible. Kalichman cites the definition approvingly.

## REFERENCES

- Australian Skeptics** (2014) *Our Aims*. (<http://www.skeptics.com.au/about/our-aims/>) Accessed October 23.
- Bridgstock, Martin and Smith, Ken** (eds) (1986) *Creationism: An Australian Perspective*. Melbourne: Australian Skeptics.
- Graetz, Margaret** (2014) *Research Funding*. The Skeptic 34, 3 (September): 61-62
- Kalichman, Seth C** (2009) *Denying AIDS. Conspiracy Theories, Pseudoscience and Human Tragedy*. New York: Copernicus Books.
- Prothero, Donald R.** (2013) *Reality Check. How Science Deniers Threaten Our Future*. Bloomington and Indianapolis, Indiana University Press.
- Shermer, Michael** (2013) *Foreword in Prothero* (2013) pp. xi-xiii
- Taylor, Tony** (2008) *Denial. History Betrayed*. Melbourne: Melbourne University Press.

# ARE YOU SKEPTICAL?

## **Skeptics think critically where there is doubt.**

*The Skeptic* promotes skepticism, reason, science, education, critical thinking and common sense.

## **Skeptics analyse claims.**

*The Skeptic* investigates paranormal and pseudoscience beliefs and practices from a rational and scientific perspective.

## **Skeptics are open-minded.**

But not so open that our brains fall out! An open mind is not an empty head.

## **Skeptics seek the evidence.**

*The Skeptic* publishes findings that are sometimes humorous, often sobering and always fascinating.  
An informative and factual resource for the public and media.

## **We invite you to subscribe to The Skeptic.**

*The Skeptic* is published quarterly by Australian Skeptics Inc.  
Complete and post or fax this form, phone us, or visit [www.skeptics.com.au](http://www.skeptics.com.au)  
Cheques, money orders and credit cards accepted.

Name: .....

Address: .....

Phone number(s): .....

Email: .....

Credit card details (*Visa or MasterCard only*)

Name on Card: .....

Card Number: ...../...../...../...../...../.....

Expiry date: ...../.....

Signature: .....

**Please specify:** 1 year subscription hard copy [ ] \$44.00\*    1 year subscription digital copy [ ] \$22.00

3 year subscription hard copy [ ] \$120.00\*    3 year subscription digital copy [ ] \$60.00

*\*Overseas subscribers please add A\$25pa for airmail (hard copy only)*

**Total enclosed:** \$ .....

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



**Send to:**

The Skeptic

PO Box 20

Beecroft NSW 2119

Ph: (02) 8094 1894

Fax: (02) 8088 4735

email: [orders@skeptics.com.au](mailto:orders@skeptics.com.au)

# CAMPING SKEPTICALLY



**T**ake it from me, a weekend away with a bunch of skeptics is great fun. In September, members of the Brisbane Skeptic Society took to the road and headed west from Brisbane to the Bunya Mountains, about a three hour drive. We had a loose plan of activities, with star watching, movie night, bushwalking and a podcast recording on the agenda. Given the amount of alcohol everyone brought, I was cynical about the chances of bushwalking.

Here is how it went down.

By late afternoon on Friday most of us had arrived at the camping grounds and it wasn't long before Jeanette Lamb had her telescope set up and we were looking at Saturn and its moons. Saturn looked stunning with an elliptical view of her rings. Jeanette is very passionate about astronomy and it wasn't long before she had wrangled kids and adults alike from neighbouring chalets to look

## Phil Kent describes a successful means of getting skeptics together – going bush to watch stars and bad movies

thru her scope. Tony Radlof, another keen amateur astronomer was also on hand to point out heavenly features. As an ordained minister of the Church of the Flying Spaghetti Monster you would think that would have been Joe Bennett's job. The excitement from kids seeing Saturn for the first time was fantastic. This was a great opportunity for outreach as we were asked about our group and chatted about scientific skepticism. We all took turns looking at various astronomical wonders, however it wasn't too long before cold and hunger drove us inside for movie night.

Imagine the scene, a dozen skeptics on couches with a few drinks underway

and then add the 'documentary' *Zeitgeist*. This film is an incredible mish-mash of astrology, religion, politics and conspiracy that doesn't even attempt to make a cohesive story. For me though, the highlight of the night was *Mermaids: The Body Found*. This fake documentary was laugh out loud fun. The premise is that scientists working for The National Oceanic and Atmospheric Administration (NOAA) had discovered remains of an aquatic creature that turned out to be, you guessed it, a mermaid. Add some aquatic ape theory, US Navy cover ups and really cheesy special effects I can highly recommend watching this with friends after a few legally





**Left:** Brisbane Skeptics enjoy the outdoor life at the foot of a waterfall (skeptical about the water).

available mind numbing intoxicants. Next up was episode one of *Ancient Aliens*, which was so boring it wasn't long before most of us went off and talked late into the night. Apparently if you take some historical artefacts that look vaguely like a bird or a plane (but nothing like superman) and make model aeroplanes with a similar design, but with a propeller, therefore aliens.

Surprisingly most of us were up fairly early the next morning and once loaded with enough coffee we headed out for a bush walk. The region around Bunya Mountains boasts some amazing scenery, wildlife and botanical delights. A large Bunya Pine is certainly a sight to behold, even if the nuts are not such a delicacy. Our chosen walking track was a short stroll from the chalet and offered our group several routes according to fitness and enthusiasm. Before splitting into our various directions a waterfall offered a lovely opportunity for a group photo. Take it from me; those wet rocks are very slippery. Luckily the only serious injury was to my pride. Karen Hughes, Jeanette and I opted for the shorter walk and we got to see a variety of birds I can't begin to name, plus a carpet python and a sooty owl, both of which were pointed out by other walkers. We didn't spot a single drop bear or hoop snake, although I could have sworn I

heard the mating call of the Bunyip.

After dinner we jumped into the cars and headed to a nearby lookout for some star gazing and photography. I quickly learned I should have packed some warmer gear. We really have some skilled photographers in our group and I really love the shot that Michael Phillips got of me with the Milky Way in the background. Jeanette did some great light writing. We will share the best photos of the trip at [BrisbaneSkeptics.org](http://BrisbaneSkeptics.org)

That night we were treated to a live recording of Jake Farr-Whartons's podcast *The Imaginary Friends Show* with comedian Nick Morgan-Moore and BSS President Ross Balch. I encourage you to check out the show. More movies and beverages were enjoyed but the night seemed to be winding down by about 10pm until Chris Eichberger and Shosh Grounds met the folks from next door. They were a great bunch of people who we had a lot of laughs with and even talked skepticism; that's another few people who know that actual skeptics are people just like them.

Naturally, some things should be kept for the survivors of such a

weekend, so you will never hear us speak of scrubs, The Krakken, or the scrub turkeys breakfast.

I can highly recommend that you organise a skeptics weekend away for your group. Pick a place, pick a weekend, work out numbers to cover costs and take bookings. Get the word out on Facebook and Twitter.

Camping Skeptically was an event for the Brisbane Skeptic Society members. Our president Ross Balch came up with idea of going camping as a group, looking at the stars and singing around the campfire like the hippies of some bygone era. Some of us (me) are a little more civilised and require running water and proper bed to sleep in as a minimum standard of roughing it. So we found a really good

value chalet to stay in. By sharing the cost, we were able to get the price down to around \$60 each for two nights.

The Bunya Mountains was a fantastic choice for our adventure. It is

far enough away to get away from most light pollution for lovely clear skies, the national park offers plenty of choice for bushwalks and birdwatching and the surrounding towns offer markets and fairs. On the way home we even passed a psychic fair, however we didn't have the energy to stop for a look. The Bunya Mountains accommodation centre has several historic buildings, bird feedings, a restaurant, cafe and shop.

We are already scheming our next weekend Skeptical adventure. ■

**“ The folks next door ... another few people who know that actual skeptics are people just like them. ”**

About the author:

**Phil Kent** is secretary of the Brisbane Skeptic Society and knows a thing or two about goldfish.



# The cycle of life →

Roots – alchemists – Methodics – phantoms.  
And so it goes, the almost inevitable  
realisation that all knowledge is  
connected and connectable.

## LIMBLESS MAN

Delusion is the concept that people strongly believe something to be true in the face of evidence to the contrary, giving rise to false beliefs. One such belief is the 'phantom' limb, where a person believes that they can still 'feel' a limb long after it has been amputated. Prof Vilayanur Ramachandran, director of the Center for Brain and Cognition at the University of California, refers to cases where it is not uncommon for amputees to believe that their phantom limb waves, picks things up and feels pain.

Ramachandran explains that these sensations are a result of an exact representational 'map' of the body, telling the brain how the body is constructed. This is known as the Penfield Homunculus.

[<http://www.scienceagogo.com/news/delusion.shtml>]



**A limbless lady hanging around a French gallery, no doubt looking for her phantom arms. (Venus de Milo, 2nd century BCE)**

## LITTLE MAN

Homunculus (Latin for "little man") is a term used, generally, in various fields of study to refer to any representation of a small human being. Popularised in sixteenth century alchemy and nineteenth century fiction, it has historically referred to the creation of a miniature, fully formed human. The concept has roots in preformationism (that eggs or sperm contained a complete preformed individual called "animalcules", which only need enlarging into a fully formed being) as well as earlier folklore and alchemic traditions. The homunculus has also been compared to the golem of Jewish folklore.



# What goes

## METHOD MAN

Themison of Laodicea (123 - 43 BCE) was one of the most eminent physicians of his time. (Celsus disagreed with this latter assessment.) He was a pupil of Asclepiades of Bithynia, though he differed from his teacher on several points in his old age, and became the founder of a new sect called the Methodic school, which long exercised an extensive influence on medical science. He was perhaps the first physician who made use of leeches. He prescribed darkness, restraint by chains, and deprivation of food and drink for mental patients and the deluded. Juvenal satirised him and suggested that he killed more patients than he cured.



### ROOTED MAN

The concept of the homunculus may have been influenced by earlier folk traditions concerning the mandragora (common name mandrake). Because mandrake contains deliriant hallucinogenic tropane alkaloids and its roots sometimes contain bifurcations causing them to resemble human figures, these roots have long been used in magic rituals and contemporary pagan traditions such as Wicca and Odinism (not to mention Harry Potter). The only part of the mandrake that is not poisonous is the fruit.



Not quite a little man, but the golem appears in the 1920 film of the same name.



around ...

### RENAISSANCE MAN

In *Liber de imaginibus*, Paracelsus (1493-1541, born Philippus Aureolus Theophrastus Bombastus von Hohenheim) denied that roots shaped like men grow naturally, attacking dishonest people who carved roots to look like men and sell them. He clarified that the homunculus' origins are in sperm, and that it is falsely confused with ideas from necromancy and natural philosophy. Paracelsus was a Swiss German Renaissance physician, botanist, alchemist, astrologer and general occultist, who founded the discipline of toxicology.

"Paracelsus", meaning "next [in his status as physician] to Celsus", referring to the first century Roman encyclopaedist Aulus Cornelius Celsus, known for his tract on medicine.

### MEDICAL MAN

Aulus Cornelius Celsus (c. 25 BCE – c. 50 CE) was known for his medical work, *De Medicina*, which is believed to be the only surviving section of a much larger encyclopaedia.

The *De Medicina* is a primary source on diet, pharmacy, surgery and related fields, and it is one of the best sources concerning medical knowledge in the Roman world. Nothing is known about the life of Celsus, though some incidental expressions in *De Medicina* suggest that he lived under the reigns of Augustus and Tiberius; which is confirmed by his reference to Themison as being recently in his old age (though the overlap is debatable).

Paracelsus with a note (from a copy of a lost portrait by 16th century Dutch painter Quentin Matsys)



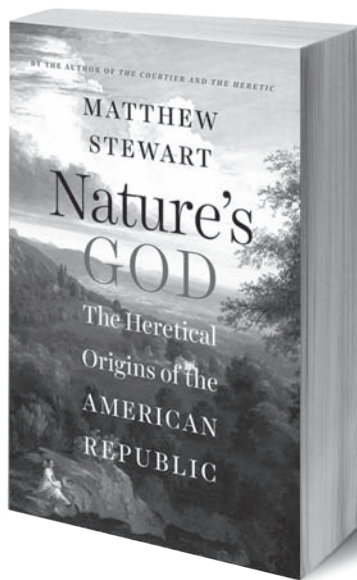


# Philosophical pollies

## Nature's God: The Heretical Origins of the American Republic

By Matthew Stewart

WW Norton, US\$28.95



The United States has no state religion. But, as an American, I know that sometimes some of my fellow citizens forget this. Bryan Fischer of the American Family Association, for instance, insists that the US's promise of freedom of religion applies only to Christians. It's not a rare opinion; Jerry Falwell proclaimed that "our great nation was founded by godly men upon godly principles to be a Christian nation". Well, no. Not if you look at the evidence gathered by Matthew Stewart in *Nature's God: The Heretical Origins of the American Republic*.

There may have been plenty of garden-variety Protestants among those who rebelled against England, but the men who wrote the founding documents and the ones whose names we Americans know best were under the sway of deism, as were others that we don't pay much attention to.

This book is not a study of the degree to which Jefferson, Washington, Franklin and others were heretics in refusing, say, to grant a supernatural nature to Jesus. It is a detailed and lengthy examination of the history and formation over the millennia of the main ideas of deism, and how those ideas played a role in the formation and continuance of the US. Readers ought to come away with an increased awareness of how philosophical ideas really do make a difference in history, and how anyone claiming that a particular Christian sect was favoured by the 'Founding Fathers' just hasn't appreciated the degree of heresy among them.

These founders were not atheists, but they were frequently derided as such by their Protestant brethren. The classical deist position is that that some supreme being got everything started, like getting all the planets going around the Sun, and then withdrew. This creator did not father children, and he specifically did not father one to take a position on the cross to benefit others. He did not interrupt the flow of his creation by any unnatural miracle, either in the

time of Jesus or in the time of later humans who might petition him to change things.

Deists such as Franklin and Jefferson had high respect for the teachings of Jesus, but not for miracles like his virgin birth or his survival after death. The reason the founders often referred to "Nature's God" (that's how Jefferson wrote him into the Declaration of Independence) is that they thought he only operated through the laws of nature, the laws that he had set up for us to understand. Thus, the study of nature, and specifically science, was the proper religious appreciation of the world we live in. Reason and the study of nature could give us insights about charity and justice. The founders who were deists admired their creator, and gave thanks for their blessings, but they were not held in their own time to be the sort of 'godly men' that Jerry Falwell would have admired.

Stewart examines the history of such ideas way back to the ancient Greeks, especially Epicurus. It is a shame that his system of thought has given "epicurean" the meaning of "hedonistic". Epicurus liked pleasure, but he was no sensualist; he favoured moderation and ascetic virtue as heightening pleasure and reducing pain. He felt that virtue could come by attending to our consciences, and favoured pursuit of happiness with the full awareness of the physical world around us and of our consciences. The laws of nature, Epicurus taught, were laws indeed, lawful and not capricious. Like the deists who were to come, those who favored the ethics of Epicurus were thought by others to be mere beasts out to satisfy their swinish lusts, but that sort of pejorative view did not keep the most important philosophers of the seventeenth and eighteenth centuries from signing on as Epicureans, and broadening this way of thought. Many chapters here concentrate on the give-and-take between Spinoza, Hobbes and Locke, plus the poetic expression of Alexander Pope, forwarding the expansion of Epicurean ideas.

It is hard to imagine our current leaders as being inspired by the writings of philosophers and then making laws in accordance with such inspiration, but that is what Stewart shows happened repeatedly, especially in the case of Thomas Jefferson. He read the philosophers in depth, and believed strongly in Spinoza's idea that genuine piety consisted of appreciating and studying nature.

When Jefferson included in the Declaration

“the pursuit of happiness” as one of the self-evident rights, it was the elevated form of happiness of Epicurus, the happiness of virtue, restraint, and temperance rather than, say, the superficial happiness of acquisition or riches. When the signers accepted “Nature’s God” in the Declaration, no one insisted that Jehovah or Jesus be designated by name. Those who wish to find God mentioned as giver of the law of the land in the Constitution will look in vain; those who point out that God is right there in the Declaration usually mean to say that it is their particular God, the God of the Bible. But Stewart shows this is precisely what Jefferson and his fellows did not mean.

The distinction is important. The founders were not just seeking independence for their country but were interested in forming the sort of government that had never been before. Authority had previously come from on high; the king got his authority as a representative of God (and kings tended to like this interpretation). That isn’t the way Hobbes, in particular, worked things out; he saw that the king got his power as a representative of a commonwealth. Spinoza said that “The king’s sword or right is in reality the will of the multitude itself.” When the Declaration says that governments are instituted among men and that they derive their power from the consent of the governed, it made these ideas literal, and represented a topsy-turvy notion that authority came from below, not from above.

Connected to this was the idea that religion could be used to promote tyranny. Spinoza wrote, “The supreme mystery of tyranny, its prop and stay, is to keep men in a state of deception, and with the specious title of religion to cloak this fear by which they must be held in check, so that they will fight for their servitude as if for salvation.” Patriot James Otis wrote that “every devil incarnate, who could enslave a people, acquired a title to divinity.”

The founders distrusted

relying on the supernatural, identifying religion as a private and inward communion one would have with the natural world, and this was one reason they insisted that government could not restrict it or impose an established religion. Jefferson even considered banning clerics from holding office, but Madison persuaded him that the prohibition of the establishment of religion would suffice. It was not priests, prophecies, or scriptures that were going to organise the new political world; look to reason, and evidence, and the world around instead.

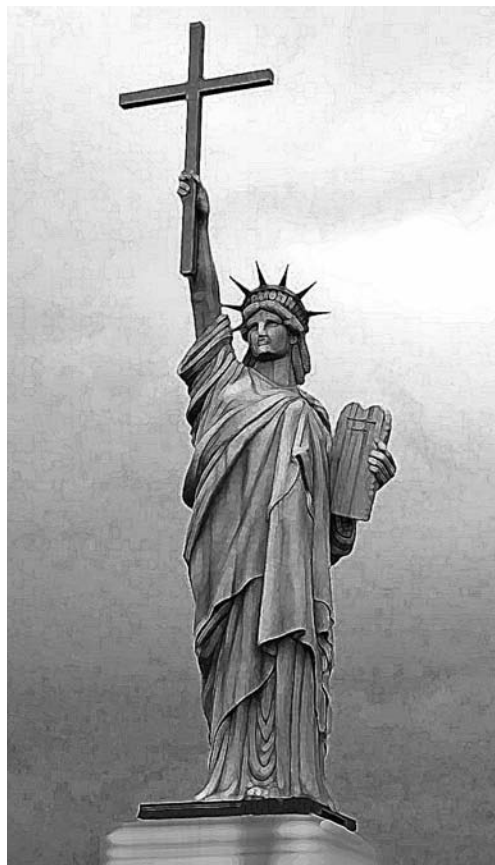
The founders of the nation were religious men, but they all knew that religion had a horrifying history of oppression. The deists promoted as religion, Stewart writes, “that which measures piety in terms of doing good rather than believing rightly; that which imposes a duty on oneself, as opposed to one’s neighbours; and that which builds the bonds of community even while robbing the priesthood of its corrupting political influence.”

Current religious leaders, the ones who stress that their particular Christianity ought to be the belief of the nation, might not accept how much has changed, but Stewart points out that when religion held the power, people took for granted that it would register births, deaths and marriages, it would set days that stores could open, and it would dictate what social behaviours

would be tolerated. It is a triumph of the deists that we now take for granted that civil authorities, elected by the governed, are responsible for such things.

Stewart’s engrossing book is full of insights and warm admiration for the going concern of the US nation, as started by its founders. He quotes Benjamin Rush, who said not long after independence had been won, “The American War is over; but this is far from being the case with the American Revolution.”

- Reviewed by Rob Hardy



# Evolution of an idea

In which is discussed definitions, beliefs, facts und die zehn Gebot

Like many people who deny Evolution and prefer 'Special Creation', I think it is a mistake for scientists to use the word "fact" in the context of evolution and creation myths. The difficulty isn't that evolution is wrong, but that in this context, the whole concept of "fact" loses its common sense "you and me" meaning, and becomes a rather advanced philosophical concept that can't be untangled in any "common sense" way from other advanced concepts such as "belief".

Surely, facts are facts and there is no need for philosophical mumbo jumbo. Well, yes, and no. While we deal with common sense issues, like knowing to come in out of the rain, common sense works and facts are indeed facts. But when we begin to ponder when we should and shouldn't teach science and/or mythology to our kids, then no. We aren't pondering a factual issue, we are pondering a philosophical issue, and if we don't distinguish clearly between fact and belief then we shouldn't be surprised that common sense makes very little sense.

At one philosophical extreme, facts are important and beliefs are unimportant. At that extreme, evolution has always been a fact and has never been a theory. Before it was discovered, it was an undiscovered fact; now that it has been discovered, it is a discovered fact. The scientific theory of evolution is just the way scientists express that fact in words. At the other philosophical extreme, beliefs are so important that there are no facts. At that extreme, evolution is a belief and not a fact; but Biblical Creation is also a belief and not a fact. Between these extremes, there is no limit to the variety of possibilities philosophers can invent. Philosophers can imagine the unimaginable and ponder the imponderable.

We mere mortals don't have the time or energy to ponder imponderables and need something a bit more down to earth.

Science provides one way to bring philosophy down to earth. The fundamental principle of science can be expressed in grand language, but when translated into "you and me" language, the grand pronouncements ultimately mean: "suck it and see". Science is the sanity check that brings philosophy down to earth by conducting

experiments. If the experiment confirms the theory, we accept the theory; if not, then not. For some theories, this works well. For our ancestors, "to catch dinner, run towards small herbivores; to avoid becoming dinner, run away from large carnivores", were theories that were easy to test and to confirm.

In more recent times, some theories have been counter intuitive, difficult to test, and controversial. We were persuaded that the earth goes round the sun only when we were able to measure accurately what the planets were doing. The crucial evidence was complicated: years of measurement and even more years of tedious manual computation to resolve the orbit of Mars, including the discovery that the orbit is not circular but elliptical, a discovery that was shocking even to scientists. The development of the telescope allowed "see for yourself" demonstrations that four of the little points of light near Jupiter move in a predictable way and are unlikely to be anything other than blobs of stuff not going round the Earth, but going round Jupiter. It also allowed dedicated and hardy scientists to peer at the planets for months on chilly nights, eventually to discover and understand the logical subtlety that Venus, like the Moon, has phases, but that unlike the Moon, those phases progress in the 'wrong' order for something going round the Earth, and in the 'right' order only if both Venus and the Earth go around the Sun. Although there have been some Eureka! moments, most of science is jolly complicated and jolly hard work.

Religion provides another way to bring philosophy down to earth. The fundamental principle of religion is rarely expressed, and indeed, varies from religion to religion. Almost all religions hypothesise one or more beings or spirits with one or more supernatural or superhuman powers. Because these entities almost never communicate with you or me, almost all religions also have a hierarchy of more or less human intermediaries who depend upon some form of "Trust me"; sometimes in the form: "I'm a guru, trust me", sometimes in the more persuasive form: "I have a very well equipped torture chamber, trust me".

Almost all religions provide some form of creation myth. For many of us, religious creation myths aren't just "good enough", they are ideal. We can know that some supernatural spirit did it and that if there is something we don't understand, then we needn't fret, because that supernatural spirit does. Successful creation myths have three really important properties:



they are simple, they are authoritative, they are complete. It is not surprising that Biblical Creation is the most successful creation myth ever invented. “God did it” is as simple as we can get; “God is omnipotent” is as authoritative as we can get; “God is omniscient” is as complete as we can get. No other creation myth can beat that. Science can’t either. Science shouldn’t even try.

If this was enough for all of us there would be no problem; well, except for the subtle problem that belief is rather arbitrary and it is easy for belief systems to fragment, leading to factions that will fight brutal and vicious wars to prove that their belief is right and that all other beliefs are wrong.

Sadly or fortunately, depending on our beliefs, there are just a few people for whom simple creation myths are not good enough. We call them “scientists”. Many of them started as devoutly religious, but wanted to know not only that “God did it”, but also how he did it, and when, and why, and why not differently, and what would have happened if, and... For at least a few thousand years, there has been no end to their questions, or to their search for answers.

This is unlikely to change. The majority of us will always need an explanation of the big questions of life that is simpler than science can ever hope to provide. If science tries to meet this need, it will just turn itself into another religion and cease to be science. Unless a massive program of genetic engineering or ethnic cleansing eradicates curiosity, there will always be a few people questioning, pondering and discovering; a few scientists. Many will be atheists, but many will regard their discoveries as gifts from, and celebrations of, their god or gods.

So why do so many scientists feel a need to claim that evolution is a fact and that creation isn’t? Ah. Remember that bit about ‘war’? Some members of some factions sometimes become

very passionate and very determined to prove not only their righteousness, but also their ‘rightness’. One of many problems with our education system is that an extremist faction based in America is very actively campaigning to teach their favourite creation myth as science. Quite rightly, almost the entire community of scientists is horrified.

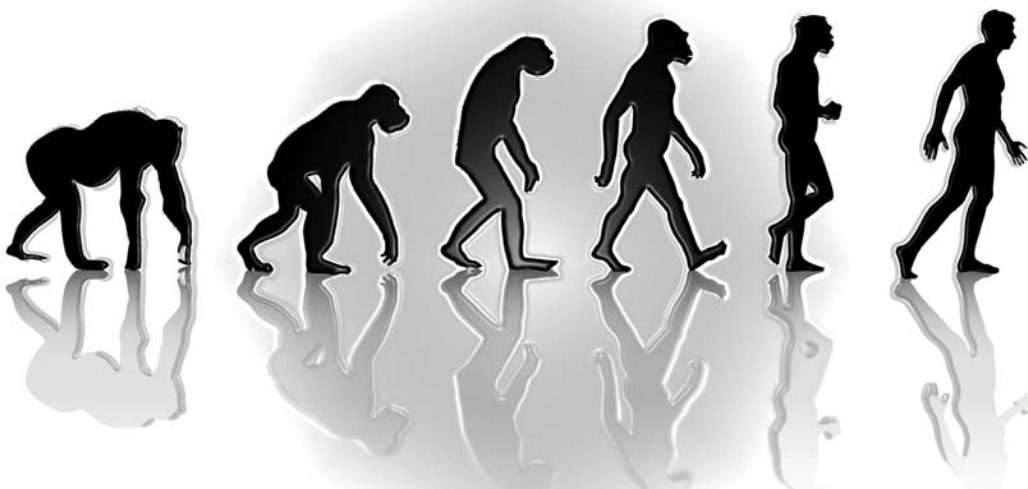
They are horrified for several reasons. One reason is quite trivial, and is probably the easiest to understand. Almost all readers will agree that all the text above is “English”. Perhaps it is not wonderful English, perhaps it is English that might have my teachers wondering where they went wrong, but nevertheless, it is English. Suppose I encounter a teacher who claims that *“Hast du denn ubertreten die zehen Gebot so, fall auf die Kniee und bete zu Gott”* is also English! That teacher might very well be expert in and fluent in German, but if they can’t tell the difference between German and English, then I certainly don’t want them teaching my kid. The passionate American faction is making a blunder at least as naive as this example. Religion is not science; Biblical creation beliefs are religious beliefs, not scientific theories. Teachers who can’t tell the difference should not be teachers.

But the problem is deeper than this. Remember the bit above about why religion is so popular. The three properties important to religion are spectacularly unimportant to science. Simplicity is unimportant; the complexity of sub atomic physics, the complexity of the genome, the complexity of abstract mathematical constructs are all part of the fascination and are not daunting. Scientists are suspicious of authority. “I am an eminent scientist, I must be right” is certain to provoke a flurry of research to disprove that claim. Even the work of Einstein is checked ruthlessly. The scientist who discovers a flaw will not be burnt alive or crucified, but will win acclaim and celebrity. Science will

never be complete, or even close. The most famous “schoolboy howlers” in science are the declarations that “everything has been discovered”.

What can we do?

Curiously, there is a way to teach creation myths in science classes. We could teach many of them. In Australia, it would be very useful



to teach Aboriginal creation myths. This would open opportunities to introduce comparative anthropology, and also to compare and contrast the concepts of superstition and religion, belief and myth.

I think it is futile to seek the impossible. Eradication, of religion or of science, is impossible. Fortunately, it is also unnecessary. The optimum goal is tolerance: "I'll promise not to teach science as religion, provided you promise not to teach religion as science." This is, or should be, easy to achieve. By themselves, neither science nor religion demands that this must be difficult to achieve; extremism does; it is

the extremist, literal interpretation of belief that is dangerous and that needs to be controlled. Extremist religion isn't only bad science, it is also bad religion; it confuses belief with pedantry; it isn't only dangerous, it is also ridiculous. It is best controlled, not by scientists, but by comedians.

"The religious extremists believe what? Yeah. Right."

Keith Anderson  
Kingston, TAS

## Film flames

In which is discussed movies, psychics, beggars and big whales

I'll tell you why people have such an irrational faith in the foretellings of psychics and seers. It's because these harbingers of doom, when shown in literature or movies, are never wrong!

Take *Moby Dick* for example. No, not the whale himself. The book. When Ishmael is walking around Nantucket looking for work, a scruffy old beggar grabs hold of him and tells him not to sail on the "Pequod", because it will be lost and only one man shall survive to tell the tale. (Although why there needs to be one man to survive and tell the tale is a mystery, as the beggar seems to know it already.) Ishmael does not believe him but, sure enough, the ship is lost and only one man survives. Now, you'd think that someone with that clairvoyant ability would have advanced in life beyond the status of beggar. In a more correct version Ishmael would sail on some other ship, and return to Nantucket to find the beggar now fabulously wealthy and owning the whole city.

The seers must always be right, because the reader or viewer needs closure. It's OK to be right but in an ironic way - someone who's been told he'll die at sea sails safely to Vladivostok, but is mugged on the map of the world, laid

out by paving in its main square. An incorrect seer wastes the time and betrays the faith of the audience. Why have a character who says something that is wrong and not needed in the plot, or present something that just isn't so?

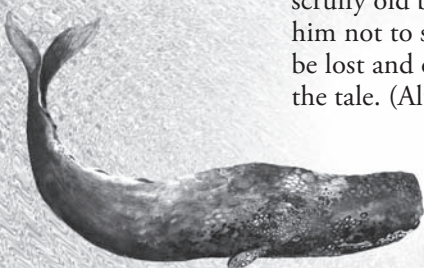
Films that betray and exasperate their audience in this way include *Mulholland Drive* and *Vanilla Sky*. On the other hand, no gadget in James Bond's car goes unused in the respective film.

It's a device often used in stories, plays and films - up front, there's a psychic who foretells doom that turns out to eventuate. But does this happen in real life? Have you ever walked down the street and a beggar has called out "Arrr arrhhh ahaarr, ye better not go into town / there be a letter for ye / ye'll meet a tall dark stranger / an old relationship will be renewed / this be a time for empowering ye'r soul / Venus be in Scorpio, arhh / be ye burdened with any loose change?"

For that matter have you, or has anyone, consulted a psychic who made a useful prediction? But the reputation such people have in stories and films is 100%. I don't know of any other category portrayed so favourably.

What really happens is like this. A mysterious, disembodied voice says "Go to the bank and take out all your money". Then "Go to the casino" and "go to the roulette table". Then "Put it all on red". Then "Oh, shit".

Steve Roberts  
North Fitzroy, VIC





# What you think ...

## Denialism

Two issues ago *The Skeptic* published my 2000-word paper on science denial. In the last *Skeptic*, Mark Lawson and Margaret Graetz attack one paragraph of my paper (about 100 words), describing Oreskes and Conway's (2010) research. This showed that some corporations funded scientists to create doubt about tobacco's dangers and, later, climate change.

Mark questions whether Oreskes and Conway present "any real evidence". There are nine pages of relevant references in Oreskes and Conway's book: Mark should examine them. He also wants to know about 'climategate', which involved climate scientists. Well, six committees on two continents investigated, and found no scientific misconduct (Prothero 2013 pp. 95-96). Mark should examine these findings, too.

Mark claims that he has only heard of one of these scientists. So what? The issue is whether scientists were employed to create doubt, not

whether Mark has heard of them. Mark lists other scientists and cites large sums of money spent for other purposes. These do not bear upon the simple question of whether some firms employed scientists to create doubt. At times Mark seems to accept Oreskes and Conway's argument before making wild statements again.

Margaret attacks me for not defining "climate change denier" and seems to think I must have turned off my skeptical brain. Not so. The term has been repeatedly defined and its meaning is well-known. For example top skeptics Donald Prothero (2013 p3) and Michael Shermer (in Prothero 2013 p.xiii) give similar definitions, roughly that denial is rejecting a proposition regardless of the evidence. It is a legitimate and useful term.

Margaret describes Oreskes and Conway's work as a "paper" when in fact it is a 350-page book. This suggests that she has not seen, let alone read the work and so cannot assess its validity. How can you confuse a book and a paper?

Margaret also lists some questions

which "an Australian Skeptic would ask" about UN and governmental pressure on scientists to produce certain results. The Australian Skeptics actually define their aims as "investigate" rather than question (Australian Skeptics 2014). If Margaret will investigate her questions, she might produce worthwhile evidence. So far, she is simply speculating.

Mark concludes, "even skeptics will believe anything". If aimed at me, this is false. Clearly, I do not believe the poorly-supported claims of Mark and Margaret, among much else. I am sorry that they have not produced any real evidence. Oreskes and Conway did, and so are more credible. Give me evidence and I will look at it, I promise.

Martin Bridgstock  
Griffith Uni, QLD

### REFERENCES

Australian Skeptics (2014) *Our Aims*.

(<http://www.skeptics.com.au/about/our-aims/>)  
Accessed September 20.

Oreskes, Naomi and Conway, Erik M. (2010) *Merchants of Doubt. How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. London, Bloomsbury.

Prothero, Donald R. (2013) *Reality Check. How Science Deniers Threaten Our Future*. Bloomington and Indianapolis, Indiana University Press.

## Other thoughts

As usual, the June 2014 issue of *The Skeptic* contained a great feast of articles to stimulate the reader. But I have three minor differences of opinion.

Firstly, the article "The Water Wizard of Gallipoli" states that "The campaign was one of the greatest Ottoman victories of the war and a major Allied defeat."

This view is referenced in Wikipedia<sup>1</sup>. In fact the total Allied dead were 56,707, and the Ottoman dead 56,643. The wounded and missing were also roughly balanced (a humanitarian disaster to be sure).

No territory was gained or lost. These factors would suggest the strategic effect was approximately neutral in the outcome of the war.

Perhaps the greater loss of shipping on the Allied side would make it a defeat, but I suggest the extreme view of pessimism could be mainly due to the unfulfilled expectations of the Allies.

Secondly, in "Get Knickered", the offenders claim their silver conducting underwear will protect the user by means of a Faraday Cage effect, but the authors say this cannot work without an earth wire. It is true that the cage demonstrated by Faraday had an earth wire, but he used it only for DC. At radio frequencies, an earth

wire is only effective if the connection to an earth plane is less than a tenth of a wavelength long (or so), ie 15 mm at mobile phone frequencies – this would certainly restrict mobility!

I have built and tested such devices (now called screened enclosures) and an earth lead is not essential. Examples are shown in reference 2.

Moreover, the openings for legs and torso are well blocked by body tissue, so conductive underpants would in fact attenuate the RF energy at the gonads.

I agree that in any case the maximum 1 watt from a mobile phone in a pocket would have no effect on the body, so the product is of no value.



Thirdly, in "Creature Features", Myth #3 is that "Some dog breeds bite humans more than others." It states the BAW studies have not shown that 'restricted' dog breeds (ie dogs bred for fighting) are excessively represented in the incidence of dog attacks on humans.

My experience in dog breeding says otherwise, and the figures back this up. In NSW<sup>3</sup> in 2011-12, there were 2498 registered pitbulls (a restricted breed), who made 67 attacks. There were 37,921 poodles, who made 31 attacks. That is a ratio of 33 to 1.

In the USA, newspaper reports from 1887 to 2014 of fatalities due to dog attack are listed<sup>4</sup>. Pitbulls killed 165 while poodles killed 0. An even larger ratio.

Ian Bryce  
Rozelle, NSW

#### REFERENCES

1. [http://en.wikipedia.org/wiki/Gallipoli\\_Campaign](http://en.wikipedia.org/wiki/Gallipoli_Campaign)
2. <http://www.ets-lindgren.com/RFSHieldedEnclosures>
3. <http://tinyurl.com/kppmpdo>
4. <http://tinyurl.com/kahjcsg>

## You gotta laugh

An article in the June 2014 issue of *The Skeptic* described some desperate attempts on how one might use humour when addressing a meeting of anti-vaccination fanatics. The author clearly had no idea what the vaccination-rejection belief system is like. For a start, just saying you're a skeptic would provoke howls of contempt and rage, before they kick you out of the meeting ... despite it being a meeting of (vaccination) skeptics. A pork chop would be more welcome at a bar-mitzvah.

These people do not have any sense of humour at all, which is a pity, because there are some great jokes, even from the days of my own childhood:

- Mummy, mummy can I have a bike for Christmas? - No, you already have your wheelchair!
- Mummy, mummy can I go swimming? - No, iron lungs don't float!
- I know a girl, she is one in a million - she had an adverse reaction to a vaccine!
- Anyone know where I can get chicken pox? It used to be so common. I really want my children to get it, so they don't have to have the vaccine.
- Parents should inform their child's preschool when they vaccinate their child. Then those of us with unvaccinated children can avoid the shedding viruses for a few days.
- Malaria - is this an issue? I've never heard of anyone having it.
- 'Facts' are an accumulation of theories, which are based on hypotheses, which are based on educated guesses that depend on the understanding of the guesser.

Oh sorry, those last four were genuine quotes from anti-vaxers. If you like irony, note that Meryl Dorey sells cosmetics made by L'Oreal, which owns a large share in Sanofi, one of the largest vaccine manufacturers.

Anti-vaxers say the darndest things, so much so that there is no need to make up jokes:

- Flu vaccine is made from nasal discharge.
- The vaccine for Ebola was in the making for a long time and the only way to bring it out was to create an outbreak of Ebola ... anyway, colloidal silver will cure it.
- I got rid of fungal infections, parasites, meningitis, strep throat, tooth abscesses and the common cold all in 24 hours using [a new miracle cure]
- Since starting Natural Autism Treatment, my son has done a complete 360° turn around!

Oh, you gotta laugh. What's in these vaccines, anyway? Well, there's benzene, magnesium stearate, sodium benzoate, phosphates, and huge amounts of lactose ... oh sorry, those were the chemicals in Calms Forte, a

homeopathic product. But whatever is in a vaccine, as anyone who's had one can see, there must be a very small volume of it. Aborted monkey foetuses, pig liver, heavy metals, phenols, mercury and formaldehyde stand aside, there are live viruses of the virulent disease itself that will trigger your immune system. There's aluminium, but an aspirin contains 200 times as much. Formaldehyde content is 1/500 of what human blood produces by itself every day. As for mercury, in those few vaccines that have it at all, you'd need 150,000 vaccinations within a few days to start getting poisoned by it. I don't really care what's in the armful of vaccines that I've had - I've seen pictures of people with the diseases I have avoided, and films of babies with whooping cough.

Anyway, back to the meeting. Before they throw you out, which they will, sniff some pepper then stand up and say "I've just flown in from West Africa and I wanted to share this with you ... atishoo! ... I feel peckish, maybe I have bird flu? ... ATCHOO! ... if there was a shot for Ebola would you want it?"

But what would these people care. The Beerwah High measles outbreak was traced directly to anti-vaxers, this area having only 64 per cent vaccinated below the age of two. During the Bird Flu pandemic, an anti-vaxer seriously wrote that there had been 64 deaths out of 21,752 reported cases of H1N1 in Australia, thus 99.97 per cent had survived so this was "no big threat". Actually, those figures give 99.997 per cent ... and when I looked up the original paper, it was 62 deaths; maybe two more had occurred, but why would anyone who doesn't care about 62 deaths, care about two deaths?

But cheer up. Some people looking at an iron lung in a museum were heard to say: "What is this for?" And *The Onion* satirically lists reasons for and against vaccination

PROS:

- Helps out pharmaceutical industry
- Get to puncture child with needle
- Old family syringe shop depends on it



- Could save a few million children's lives
- Habituates children to the pain of existence
- Flies in face of science by discrediting single unanimously refuted paper from 14 years ago

#### CONS:

- You have to go to a place
- Puts the onus of character-building entirely on sports
- Free lollipops promote unhealthy eating habits
- Child won't get to be the kindergarten's Typhoid Mary
- Without suffering through diphtheria, influenza, and measles, children will become effete, pampered do-nothings
- Bullies parents into slavishly following actions recommended by decades of physicians' peer-reviewed research that establishes an irrefutable scientific consensus

Steve Roberts  
Fitzroy North, VIC

## Placebo problem

I was troubled by Trevor Trahearne's woolly thinking regarding the placebo effect [*The Skeptic*, Vol 32, No 3, p32]. The word "placebo" varies in context; it is not rigidly defined except in research used to test the validity of claims of therapeutic benefit. Until recently it has not been possible to measure objectively changes in emotion and feeling, and regrettably the mental health sector has evolved from a quasi religious approach driven by the (unfounded) theories of Freud, Jung and the like, and has actively resisted the application of objective neurological measurement in assessing psychological benefit. (The US NIH has announced that it will not fund psychological research that

does not include a neurophysiological component.)

When the term "placebo effect" is generally used it means there is no demonstrable objectively-assessed physiological effect. It is a complex mixture of psychological effect, physiological changes secondary to the psychological and random 'noise'. Mostly therapeutic effect must be measured over a long time period, as opposed to the short response in a benchtop experiment. The benefit becomes lost in the noise of natural recovery, regression to the mean, observation bias etc. Researchers well know that when using subjective assessments, if patients believe their experimental treatment is the active one there will be a demonstrable positive effect, hence a control group is essential to negate the belief bias, and such a control group must believe that they may be receiving active therapy.

The term placebo effect is used disparagingly when people claim therapeutic benefit as a means of obtaining money from credulous members of the public. If the remedies were offered for free there would be no concern. There have always been people who provide a quasi-religious interpretation of the physiological disturbances we call disease, before the application of scientific method all health interventions were based on hearsay and often rigid beliefs about the disease process. Medicine before last century was no different from the alt med industry of today, except in status.

The consideration of the use of placebo remedies by the medical profession reflects the diversity in philosophy on the provision of health care. At one extreme it is claimed that the provision of health care is an entirely commercial transaction between a customer and a provider. The usual commercial rules of caveat emptor are applied, and laissez faire rules the society. The other extreme is that the provision of health care is an entirely charitable social function driven by ethical responsibility of the provider for the welfare of the patient; financial reward is an alms-

like reciprocation to the practitioner. Obviously these poles exist only in the rhetoric of politicians. It is clear that the first pole would readily accept psychogenic remedies, and the latter probably would not.

Over the past 100 years or so the increased education of the populace, the application of principles of democracy, and other trends has produced a sense of equity and fairness. It is not regarded as fair if a vendor deliberately conceals defects in a product in order to make a sale, but it still occurs and legislation exists to prevent the extremes of fraudulent commerce (except in health care). Standards are set for minimum levels of education for people to claim to provide services (except in the alt med industry).

Medicine, as a commercial entity has faced competition from the alt med industry which lacks any application of scientific rigour. The scientific education of the public has been allowed to lapse, and virtually any ridiculous claim given media support can attract acolytes. Medicine as a charitable social entity decries the claims of commercial reality and stringently applies scientific method to avoid causing harm through neglect, diagnostic error, and therapeutic inefficacy and applies evidence at every opportunity.

In the 1930s at the General Electric Company factory at Hawthorn an experiment was conducted to try and determine the minimum amount of light that process workers required. But when the lighting level was lowered productivity rose and rose, until it abruptly fell when workers could not see the parts. This occurred because the workers knew they were being observed and assumed it was to determine who would be sacked (a time and motion study). This is an effect frequently quoted in organisational psychology and is akin to the placebo effect. To claim a desirable efficacy of the placebo effect is the same as promoting a reduction in lighting of factories to boost productivity.

What sort of medical practitioner do you want? Do you want your ego massaged with placebo remedies and flim flam, or do you want someone who will tell the truth even if they dismiss your trivial psychogenic symptoms as unimportant? I am a medical practitioner, and prefer the latter, and I deeply resent my Medicare money and private health insurance being diverted to the useless.

David Brookman  
Salamander Bay, NSW

## Selling science to the public

I have to admit at the outset that I'm not a regular reader of your magazine, though I have been given a copy or two over the years.

Not every article is of interest to me, but I guess that's normal for any publication, as you can't please all of the people all of the time.

But one article I did find interesting in your latest issue was the survey by the Australian National University on the public's understanding of science. [*The Skeptic*, Vol 34, No3, p15]

As you highlight, it is of concern that a high percentage of people do not know where to go to get reliable scientific information, and that close to 10 per cent don't trust anyone.

Is this because of the supposed 'horrors' perpetrated in the name of science as portrayed in the media? Or is it that science is just not communicated very well?

I know from experience that many scientists are poor at 'selling' science to the public. Most of them do science because they like science; it's not their role or their strength to be able to present that passion with any clarity for the general public.

That too is normal - those who

enjoy accountancy (there must be some) do it not to present their views; likewise lawyers, diplomats, etc etc. They do their jobs, it's what they like, it's their focus, but that doesn't mean they can talk about it to the lay public.

The few who can do it - David Attenborough, Robyn Williams, Karl Kruszelnicki, etc - are rare beasts indeed. Hopefully they are properly supported - in morale terms and financially - for their efforts and their skills and their obvious passion.

But we need many more like them. Perhaps training in communication should be part of every science course, especially at degree level. The history of science and philosophy used to be a regular on university calendars, perhaps it still is, but is it part of science undergraduate and postgraduate courses?

Anyway, just some thoughts from an occasional reader.

Amanda Mottan  
via email

## CRYPTIC CROSSWORD SOLUTION

N	O	N	O	C	A	N	D	E	A	D	S	T	E	A	N	O	N	O	N
O		O		I		R		R		R									A
I		C		H	I	C		R	A	P	G	O	E	S	S	A	T	A	S
T				T		W		O		G		U							A
A	E	S	R	S	E	R	S	E	N	D	E	S	N	O	O	S	P	O	S
M		N						E		E				A		I			
E		O	V	E	D	O	V	E	L	O	V	E	L	H			E	A	R
R		I						A		I				A					L
C				A	N	T	I	C		E	B	L	E	G	I	B	L	E	L
		A		I				H		W				I					B
S	N	E	I			A			R	O	O	N	I	H	O	K			
L		R		A		T		L		O									C
L		C	A	L		G	I	O	L	O	L	E	G	A	N	A			
U				E		I		E		O									L
L		S	A	S	I	L		G	G	Y				O	O	D	L	O	B

## DR BOB'S QUIZ SOLUTIONS

1. She was stabbed by a pencil at school. Yes, everyone knows pencil lead is graphite, not Pb. At least, most people know that.
2. When the fire alarm is raised, all the lifts will immediately go to the ground floor, open their doors and stay there.
3. Count the scales on its underside
4. "Go". Well, he would have said the Galilean-dialect Aramaic equivalent, which is quite a pity because "Go!" is the shortest sentence in the English language. Unless you count "O!"
5. Fauntleroy. You can appreciate why he did not use it much.
6. Pitcairn Island, if you go all the way round. But halfway, it'd be Doha, Qatar.

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/)





# Local Skeptical Groups

## VICTORIA

### Ballarat Skeptics

Meets the first Friday of the month at Seymours on Lydiard Street  
<https://www.facebook.com/groups/39781220309544>

### Citizens for Science – Mornington Peninsula (formerly Peninsula Skeptics, aka The Celestial Teapot)

Contacts: Graeme Hanigan 0438 359 600  
<http://www.meetup.com/Citizens-for-Science/>  
[www.facebook.com/groups/peninsula.skeptics/](http://www.facebook.com/groups/peninsula.skeptics/)

### Great Ocean Road Skeptics – (Geelong)

Meets on the last Wednesday of each month from 6pm, City Quarter, Cunningham Pier East Geelong  
 Contact: Carolyn Coulson [carolco@barwonhealth.org.au](mailto:carolco@barwonhealth.org.au)  
<https://www.facebook.com/groups/147741491945391/>  
 The Surfcoast Summer Skepticamp is run annually by members

### Melbourne Eastern Hills Skeptics in the Pub

Meets second Monday of each month at The Knox Club, Wantirna South.  
 Contact: Andrew Rawlings  
[mehsitp@codenix.org](mailto:mehsitp@codenix.org)  
<http://mehsitp.codenix.org>  
<https://www.facebook.com/pages/Melbourne-Eastern-Hills-Skeptics-in-the-Pub/19241290737690?ref=ts>

### Melbourne Skeptics in the Pub

Meets on the fourth Monday of every month from 6 pm at the Mt View Hotel in Richmond.  
<http://www.melbourneskeptics.com.au/skeptics-in-the-pub/>

### Mordi Skeptics in The Pub

Meets at 7.30pm on the first Tuesday of each month at the Mordialloc Sporting Club. (\$2 to cover website costs)  
<http://www.meetup.com/Mordi-Skeptics-in-the-Pub/>

## TASMANIA

### Launceston Skeptics

Contact: Jin-oh Choi, 0408 271 800  
[info@launcestonskeptics.com](mailto:info@launcestonskeptics.com)  
[www.launcestonskeptics.com](http://www.launcestonskeptics.com)

Launceston: Skeptics in the Pub  
 1st & 3rd Thursday of each month  
 5.30pm @ The Royal Oak Hotel

Launceston: Skeptical Sunday  
 2nd Sunday of each month  
 2.00pm @ Cube Cafe

## QUEENSLAND

### Brisbane Skeptics in the Pub

Meets on the first Tuesday of each month from 6:30pm at the Plough Inn, Southbank  
<http://Brisbanesitp.wordpress.com> -  
 follow links for Facebook, Twitter and email list

## NOTE: LISTINGS WELCOME

We invite listings for any Skeptical groups based on local rather than regional areas. Email us at [editor@skeptics.com.au](mailto:editor@skeptics.com.au) with details of your organisation's name, contact details and any regular functions, eg Skeptics in the Pub, with time, day of the month, location etc. Because this is a quarterly journal and most local groups meet monthly, it is unlikely we will be able to include references to specific speakers or events.



