Skepticism • Science • Society

The Skeptic
Vol. 31, No 2. June 2011

Chiropractors
Creationists

AMAZING
Encounters

Skeptical
ACTIVISM

Australian Skeptics • www.skeptics.com.au
Skeptical Groups in Australia

**Australian Skeptics Inc** – **Eran Segev**  
www.skeptics.com.au  
PO Box 20, Beecroft, NSW 2119  
Tel: 02 8094 1894; Mob: 0432 713 195; Fax: (02) 8088 4735  
president@skeptics.com.au

Sydney Skeptics in the Pub – 6pm first Thursday of each month at the Macquarie Hotel, corner of Goulburn & Wentworth King Streets in the city (meeting upstairs)  
Dinner meetings are held on a regular basis  
**Next dinner: June 25** - guest speaker food auditor Gary Kennedy.  
Bookings online or contact nsw@skeptics.com.au

**Hunter Skeptics Inc** – **John Turner**  
Tel: (02) 4959 6286   johnafturner@westnet.com.au

Meetings are held upstairs at The Cricketers Arms Hotel, Cooks Hill (Newcastle) on the first Monday of each even-numbered month, commencing 7.00pm, with a guest speaker on an interesting topic. Visitors welcome. For further information visit our website www.hunterskeptics.com.au or contact the secretary at: kevin.mcdonald379@bigpond.com

**Australian Skeptics (Vic) Inc** – **Terry Kelly**  
GPO Box 5166, Melbourne VIC 3001  
Tel: 1 800 666 996   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.  

**Borderline Skeptics Inc** – **Russell Kelly**  
PO Box 17, Mitta Mitta, Victoria 3701  
Tel: (02) 6072 3632   skeptics@wombatgully.com.au

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

**Gold Coast Skeptics** – **Lilian Derrick**  
PO Box 8348, GCMC Bundall, QLD 9726  
Tel: (07) 5593 1882; Fax: (07) 5593 2776  
liderrick@bigpond.net.au  
Contact Lilian to find out news of more events.

**Queensland Skeptics Association Inc** – **Bob Bruce**  
PO Box 3480, Norman Park QLD 4170  
Tel: (07) 3255 0499   Mob: 0419 778 308  qskptic@uq.net.au

Hear Bob on ABC Paranormal Panel - 9-10pm Tuesdays  
Meeting with guest speaker on the last Monday of every month at the Red Brick Hotel, 81 Annerley Road, South Brisbane. Dinner from 6pm, speaker at 7.30pm.

**Canberra Skeptics** – **Michael O’Rourke & Pierre Le Count**  
PO Box 555, Civic Square ACT 2608  
http://www.canberraspkeptics.org.au   Tel: (02) 6275 9699  
mail@canberraspkeptics.org.au (general inquiries),  
arthwolliot@gmail.com (Canberra Skeptics in the Pub).

Monthly talks usually take place on the 13th of each month at the Innovations Theatre at the ANU. Dates and topics are subject to change. Canberra Skeptics in the Pub gather at 1pm on the third Sunday of each month at King O’Malleys Pub in Civic. For up-to-date details, visit our web site at: www.meetup.com/ SocialSkepticsCanberra/

**Skeptics SA** – **Laurie Eddie**  
52B Miller St Unley, SA 5061  
Tel: (08) 8272 5881   laurieeeddie@adam.com.au

Thinking and Drinking - Skeptics in the Pub, on the third Friday of every month. Contact nigeldk@adam.com.au  
calendar/10205558 or http://tinyurl.com/loqdrt

**WA Skeptics** – **Dr John Happs**  
PO Box 466, Subiaco, WA 6904  
Tel: (08) 9448 8458   info@undeceivingourselves.com

All meetings start at 7:30 pm at Grace Vaughan House, 227 Stubbs Terrace, Shenton Park  
Further details of all our meetings and speakers are on our website at www.undeceivingourselves.com

**Australian Skeptics in Tasmania** – **Leyon Parker**  
PO Box 582, North Hobart TAS 7002  
Tel: 03 6238 2834 BH, 0418 128713  
parkerley@yahoo.com.au

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

**Darwin Skeptics** – **Brian de Kretser**  
Tel: (08) 8927 4533   brer23@swiftisl.com.au
The responses to the Judgement Day debacle – both before and after – were pretty predictable. The non-believers, which means most of the world, had a good chuckle, felt sorry for the would-be rapturers, had mock celebration parties (in all senses of the word ‘mock’), offered to ‘help’ the followers by looking after their pets and taking unwanted worldly goods off their hands and perhaps make a quick buck out of it, or just generally were bemused as to why people could be so gullible.

The American Atheists hosted rapture parties around their country but, as reported by AFP, also warned of the danger of following Harold Camping’s predictions.

“We’re going to poke fun at these people, but in the end we need to keep in mind that there are people being hurt here,” said David Silverman, president of the US-based group.

And isn’t that the dual-edged sword of the relation between skeptics and ‘them’?

What do you do when confronted with woo? You might just grin and bear it and shake your head at the silliness of the world. Or you might write a letter to the paper or contact a radio/TV station to express your concern and disapproval. Or you might try to win friends and influence people by correcting their misrepresentations and misunderstandings, but as we all know from various family gatherings and friendly get-togethers round the barbecue, that is also often a way to lose friends and upset people.

Or you might go out there into the wider world and fight the good fight.

In the previous issue I mentioned in this column the need to be active – get off the armchair and do something... anything. This issue we look at some examples of the application of that approach – activism – and how this could and can be done. For instance, you could follow in the footsteps of the indomitable but not over-bearing campaigners, and here I’m thinking of Loretta Marron or the Stop the AVN network (both of whom have received the Skeptic of the Year award). There are many others, of course, who undertake activism with dignity, a modicum of mockery, but most importantly persistence and more persistence.

At the recent TAM Australia conference, a session devoted to Activism 101 covered all of these aspects (except the ‘quiet harrumph and back to your newspaper’ approach). While there was no bomb-throwing suggested, the session covered a gamut of approaches and media and, especially considering the average age of the attendees, the internet and social media – Facebook, Twitter, Meet-Up, blogs, podcasts, vodcasts etc etc – cropped up regularly as positive and effective ways to get the message across.

Do these media only preach to the converted? To a certain extent. But as I can personally attest as the ‘shop front’ of Australian Skeptics Inc and the recipient of much correspondence from skeptics and non-skeptics alike, there is nonetheless still interaction with the broader community through those avenues.

Likewise for activism and the activists themselves, whether it’s debunking, gentle persuasion, mockery, attacks, going through ‘official channels’ or using the media. There are inevitable set-backs, but there are also successes, and it’s the latter, as occasional or few as they might be, that raise the spirits and encourage all of us to continue to be active.

I couldn’t let the opportunity pass without promoting the TAM Oz DVD, which at time of publishing should be out and available to all (or near as). A must for attendees and non-attendees, fellow-travellers, well-wishers, interested parties and activists. I’m sure you’ll enjoy it and find it edifying.

- Tim Mendham, editor
Australia’s first Skepticamp was held on Saturday, April 30, and it was generally held to be a total success. Organised by Jason Brown and a bevy of keen and hardworking volunteers, Skepticamp was held at the University of Technology Sydney over a seven hour period with an audience of approximately 100 people, who were able to attend the event for free.

The concept of a Skepticamp, first undertaken in the US, features mini-presentations running for 10 to 15 minutes from speakers working in parallel sessions. Many of the presenters had never given talks in front of an audience before.

The topics covered a broad range of topics, from clinical trials and genetically-modified foods to skepticism in the Middle East and the parallels between the Biblical gospels and George Lucas’s Star Wars films.

Many speakers – some of whom had only decided to present on the day – took the opportunity to discuss the development, role and nature of skepticism, giving the camp a strong philosophical thread as much as the more specific discussions of scientific and pseudoscientific topics.

Each presentation was followed by questions from the audience, and the rapid turnover of speakers and sessions contributed to a fast-paced and – from the audience’s point-of-view – seamless organisation.

Australian Skeptics Inc was a major sponsor of the event.

Congratulations go to all of those involved, who no doubt worked very hard behind the scenes to ensure a splendid and successful time was had by all.

It is anticipated that the next Skepticamp will be held in Melbourne later this year.

**Distributor off balance**

The Australian distributor of the Power Balance wristbands has gone into receivership.

As reported by *Smart Company* magazine, Tom O’Dowd, the owner of Power Balance Australia, said that sales had “evaporated” following an ACCC instruction in December last year to stop the company claiming the bands could improve balance, strength and flexibility.

The ACCC action followed negative publicity by Australian Skeptics and *Choice* magazine. ACCC chair Graeme Samuel had even gone as far as to suggest publically that the bands were no better than a rubber band.

O’Dowd told *Smart Company* “he had been ‘naive’ in thinking his business would not be subject to laws surrounding the regulation of health products”. Not the only one being naive, apparently, as thousands of the useless bands have been sold around the world.

Nonetheless, at $60+ per band, the medically-disproven products, junked by the ACCC, were obviously too much for the Australian public. Overseas distributors, however, continue to sell the useless products.

**US measles outbreak**

Measles - a disease that was declared eliminated in the USA in 2000 - is again breaking out across the country, in the largest outbreak in 15 years, *USA Today* reports. The disease has been spread largely by unvaccinated travellers.

Doctors have reported 118 measles cases in the USA since January, nearly twice as many as the total for all of last year, according to a recent report from the Centers for Disease Control and Prevention. About 90 per cent of this year’s patients were unvaccinated, and 40 per cent had to be hospitalised for complications.

Most of the patients brought the disease with them from Europe, which is in the throes of a major epidemic, the paper says, with more than 10,000 cases and six deaths in France alone, according to the CDC. Thousands of additional measles cases have been reported across Europe, affecting 38 countries, the World Health Organisation says.

**Skeptics camp out**

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Right Jason Brown (centre) and Dave the Happy Singer (far right) front up to Skepticamp.
Ken Harvey taken to court

Dr Ken Harvey, adjunct senior lecturer in the School of Public Health, La Trobe University, and a regular campaigner against non-scientific products and services, has been put under great personal and financial pressure by a ‘SLAPP’ suit (a strategic lawsuit against public participation) over a complaint he has made concerning a slimming product.

In March 2011 Dr Harvey complained to the Therapeutic Goods Administration (TGA) over promotion by SensaSlim Australia for its weight-loss product that uses a spray to supposedly ‘desensitise’ taste buds and reduce hunger pains. The promotion claims that a research study of over 11,000 people had substantiated the company’s claims for the product.

In his statement to the TGA Complaints Resolution Panel (CRP), Dr Harvey provided a number of reasons why, “in my opinion, the ‘sensational results’ claimed are most likely to have been fabricated. In addition, I do not believe that any of the other claims made for this product are capable of substantiation.”

But before the complaint could be properly considered by the CRP, SensaSlim issued ‘Statement of claim’ against Dr Harvey in the NSW Supreme Court, alleging that his complaint was defamatory and claiming “general and punitive damages for libel in the sum of $800,000”, plus costs.

This action had the effect of stopping the CRP from hearing Harvey’s complaint due to Therapeutic Goods Regulations 1990 42ZCAJ (2), “If, after a complaint has been made to the Panel, a proceeding begins in a court about the subject matter of the complaint, the Panel cannot deal with the complaint until the proceeding is finally disposed of.”

SensaSlim heavily promotes a white paper on the research produced by Dr Matthew Capehorn, clinical director of the National Obesity Forum (UK) and clinical manager of the Rotherham Institute for Obesity.

In a video on the company’s website (www.sensaslim.com.au/default.asp?video=1), Capehorn thoroughly endorsed the product and the research study that was the basis for the claims made.

However, through his lawyers, Capehorn has now written to SensaSlim, claiming it has made “totally untrue statements and allegations” about him. His lawyers add that “SensaSlim induced Dr Capehorn to become involved with its product on the specific representation that extensive clinical trials had been undertaken on the SensaSlim products that conclusively proved the effectiveness claimed for those products. At no time, notwithstanding repeated requests made by Dr Capehorn, have those clinical tests even been made available to him – if, indeed, they exist, or did take place and/or gave the results contended for them by SensaSlim.”

This implies that Capehorn was citing a product trial that he had never seen.

In fact, he substantiates this view as recently as May 28, 2011 in an email sent to SensaSlim franchisees in which he says: “Despite requests, I have never seen evidence of the original clinical trial, and it has never been published in a peer reviewed medical journal. Therefore, the White Paper holds no scientific relevance, until that original trial is published.”

Dr Harvey’s lawyers have filed a notice of motion in the NSW Supreme Court seeking orders to have the SensaSlim claim struck out and the proceedings dismissed because they disclose no reasonable cause for the action. In addition, his lawyers have asked for an order that the plaintiff pay the defendants’ costs. These matters are now before the Court.

However, Dr Harvey is subject to considerable financial expenditure, in order to defend himself and his complaint. The complaint itself has been supported by others, some of whom have issued their own complaints on the product.

He informed us on May 31 that “[SensaSlim] have now applied (at the last minute) to delay court proceedings. I have instructed my lawyers to proceed on regardless.”

Dr Harvey is a particularly busy activist against dubious claims by suppliers of self-proclaimed ‘therapeutic’ goods, in particular those associated with weight loss. Over the last few years, all of his complaints to the Therapeutic Goods Administration and assessed by the Complaints Resolution Panel have been listed as justified. He is also a self-confessed “stubborn bastard”.

In support of his action, Australian Skeptics has instituted a program for individuals to pledge financial support for Dr Harvey should it be required. Anyone interested in pledging support should write to supportken@skeptics.com.au, with their name, phone number, and how much they are pledging.

Australian Skeptics has undertaken this pledge drive because we are concerned at the burden put upon one who has continually called to account those who promote and sell unproven and disproven products that have no basis in science. The suggestion that Dr Harvey could be stymied by such promoters and sellers’ resorting to legal action, and thus protecting themselves (if even for a short time) from due process, must be countered at every opportunity.

Meanwhile, the issues raised have now been ventilated by the ABC Health Report; the Croakey Health blog and Channel Nine’s A Current Affair. The saga continues.
The readers of these pages will recall that on October 14, 2010, the NSW Office of Liquor Gaming and Racing (OLGR) wrote to the public officer of the Australian [anti] Vaccination Network, Meryl Dorey, advising her that: “Compliance Officers from the Office of Liquor Gaming and Racing, a division of Communities NSW, have undertaken an inquiry into Australian Vaccination Network Inc, an Organisation authorised to conduct fundraising appeals under the Charitable Fundraising Act 1991. “As a result of the inquiry, Compliance Officers submitted a report recommending that the Organisation be requested to show cause why its authority to fundraise should not be revoked. Accordingly, by letter dated 29 July 2010, the Organisation was requested to provide reasons why this should not happen. The Organisation’s response was received by the Office of Liquor Gaming and Racing on 26 August 2010. Having considered the report, the matters raised in the Department’s letter dated 29 July 2010, and the Organisation’s written response to those issues, the Minister is satisfied that the authority should be revoked.”

The Minister’s revocation of the AVN’s Charitable Fundraising Authority was published in the NSW Government Gazette on October 14 last year, and Dorey published the letter on her Scribd account immediately after. (Scribd is the equivalent of YouTube for written words rather than video and audio.)

Eagle-eyed members of the group Stop the AVN spotted this, downloaded it, and reposted it on one of its own Scribd account pages. There it remained for six months, without any problem, until April 30 this year. On that day, by Dorey’s own admission, “In two hours, I filed approximately 50 copyright claims against various Facebook members.”

The SAVN member was notified by Scribd that a copyright violation notice had been received about the OLGR letter, and it was taken down. He protested, and eventually the document was restored. This is where it starts to get interesting.

There is where it starts to get interesting.

He also requested a copy from Scribd of the copyright violation notice, and Scribd obliged.

So what do we find in it?

Meryl Dorey begins with the standard claim that she is the copyright owner, as required by the US Digital Millennium Copyright Act: “Pursuant to 17 USC 512(c)(3)(A), this communication serves as a statement that: I am the exclusive rights holder for material held at http://www.avn.org.au and http://www.facebook.com/pages/Australian-Vaccination-Network/55142201924?v=wall&ref=mf; “These exclusive rights are being violated by material available upon your site at the following URL(s): [http://www.scribd.com/doc/51133133/OLGR-Letter-to-AVN-Advising-of-Revocation-14-10-10]; (the letter from OLGR)

“I have a good faith belief that the use of this material in such a fashion is not authorized by the copyright holder, the copyright holder’s agent, or the law; “Under penalty of perjury in a United States court of law, I state that the information contained in this notification is accurate, and that I am authorized to act on behalf of the exclusive rights holder for the material in question; ...”.

Meryl Dorey thus claimed, under oath, that the OLGR letter was subject to copyright, and that she was the copyright owner. How on Earth anyone could claim copyright over a document authored by a NSW government instrumentality is beyond us, but this sort of thing seems to be standard operating procedure over at the AVN.

The full to-and-fro has been saved and posted at Scribd². What an irony.

Readers probably already have their view about how careful Dorey has been with her legal obligations and with the truth in general. Skeptics should allow that she may have advice from a US lawyer that her claim to copyright of the OLGR’s letter, is not perjury under US law.

In Bangalow, the local law for local people defines perjury as making a deliberate false statement in judicial proceedings and Dorey has not done that. However, she should note section 330 of the Crimes Act 1900 which provides: “A person who makes on oath any false statement knowing the statement to be false or not believing it to be true, if it is not perjury, is liable to imprisonment for 5 years.”

Careful now ...

References
A Government Shake-up?

Rachael Dunlop reports on the NHMRC’s draft on homeopathy.

Of all the pseudoscience and magical thinking I have come across in my journey through the wonders of the internet, there remains a special place in my heart for homeopathy. This is because, like ear candles and detox foot pads, it remains one of the most preposterous alternative medicines so far invented.

Which was why I was so pleased to read a recent draft statement from the peak scientific and medical advisory body in Australia, the National Health and Medical Research Council (NHMRC), calling homeopathy “unethical” and “unefficacious” (the latter simply meaning it doesn’t work).

This is the first time the Australian government has made such an unequivocal statement about the pseudoscience of homeopathy and, according to the draft statement, it was motivated to action after a similar move in the United Kingdom.

In 2010 the UK Science and Technology Committee conducted an exhaustive analysis of the evidence for and against homeopathy (known as an “evidence check”) and concluded that homeopathy is scientifically implausible, it doesn’t work and the UK National Health Service (NHS) should cease funding homeopathy at all levels, including any clinical trials. Currently, the NHS spends around 4 million pounds of taxpayers’ money per year on homeopathy. Although the Australian government does not directly fund homeopathy, $3 billion worth of public funds is funnelled into private health fund rebates every year, so if your health fund covers homeopathy, taxpayers are indirectly covering it too.

In case you’re not familiar with homeopathy it was invented around 200 years ago, by German physician Samuel Hahnemann. It’s based on the concept of ‘like-treats-like’, that is, the symptoms of an illness can be treated by minute quantities of the substance that caused it. For example, a homeopathic preparation for insomnia may include miniscule amounts of coffee; or one for hayfever may contain tiny traces of grasses, pollens or animal hair.

Even more bizarre, homeopathic preparations are extremely dilute, often beyond the point where science predicts even one molecule of the original substance remains. For example, a common preparation available in your local pharmacy is known as ‘30C’ and is the equivalent of a dilution of 10^-60. That’s like putting a drop of vodka in a pool the size of the Solar System and expecting you to still get drunk.

Sound crazy enough for you? But, this is precisely what homeopaths believe: the more dilute the substance, the more potent it is. Of course 200 years ago science was still in its infancy and we didn’t know about limits of dilutions, now described by Avogadro’s number or constant. But we do now, and the laws of science predict that if you dilute something to 30C, there’s a pretty good chance there will be nothing of the original substance left behind.

Which left the homeopaths with some explaining to do – and this they did. They claim that the water ‘remembers’ or retains a ‘memory’ of the original substance. Through a process known as succussion, a solution is shaken after each dilution and whacked against a leather-bound item, (sometimes a Bible). It is this process that somehow instils the “memory”.

But the concept of water retaining a memory is scientifically ridiculous, and also conveniently ignores the fact that water somehow ‘forgets’ all the sewage, mercury, dioxins and other nasty stuff it has been in contact with before it ended up in a jar on the shelf of your local pharmacy.

The draft statement from the NHMRC indicates it plans to consult several health bodies before making a decision on whether this becomes an official statement, and this will include the general public.

Importantly, this will not mean homoeopathy is banned in Australia, but if it’s officially declared unethical and useless, there will be pressure on health funds to cease covering it. And maybe, just maybe, we will see it disappear from the shelves of pharmacies where it currently sits alongside science-based medicines which have withstood rigorous testing.

More importantly, the statement sends a clear message to the public that homeopathy is not medicine and should not be used instead of conventional treatment. Perhaps the NHMRC also considered two recent tragic deaths in Australia where homeopathy was implicated: 45-year-old Penelope Dingle, who died from bowel cancer treated with homeopathy; and 9-month-old Gloria Sam, who died from septicaemia contracted from severe eczema, also provided with homeopathic care.

Homeopathy is pseudoscience of the highest order. It has no place in our pharmacies and should certainly not be funded by taxpayers. If the NHMRC draft statement becomes official, it not only makes for good scientific sense, but will also protect consumers. And this can only be a good thing.
Brain testers

CRYPTIC CROSSWORD no 10

ACROSS
1. Big idea man has a very small sausage for a chiropractor. (6,6)
7. Ex-moon? (2)
9. The rule for poor Eastern accommodation. (5)
10. Speaks rubbish on the time for a rocking walk. (7)
12. Tear up your deathly wish. (3)
13. Bovine ails badly having swallowed a type of plant. (6)
14. Basic stuff and back again. (1-1-1)
17. Friendly television system. (3)
18. Conservative declaration of where I was. (5)
20. A fellow representative. (5)
21. Little one found in a topless suture. (5)
22. It’s boredom when one speaks on us. (5)
23. American conglomerate hears of writer’s tool. (3)
24. Scary note of disapproval. (3)
25. Uncomfortably pompous and full of hot air. (6)
27. Fairy French sets you back. (3)
30. In the belly of something as tricky as this. (7)
31. A negative number. (2)
33. Mythical movements under light oats in arrangement. (12)

DOWN
1. He might have a turn but there’s no way he could be a healer. (10)
2. Work by 3dn stirs up nationalism. (13)
3. Have some benders when you go in to teashops. (10)
4. When witchery is a basket case? (5)
5. Trendy way to learn feelings. (9)
6. Used to be the morning test. (4)
8. It’s a bad sign to love blokes. (4)
11. It’s literally hell to confuse, and set negative implication. (6,7)
15. Relatively temporary accommodation. (6,4)
16. Keep measures of pens. (10)
19. The same as an Italic end. (9)
26. Lucky cat found in an X-file. (5)
28. Colloquial opposition caused by drink? (4)
29. Unusual relic dug up initially, it’s said, in Pakistan. (4)

DR BOB’S TRIVIA QUESTIONS

1. What famous opera is said to be about a happy cow?
2. The earliest recorded garden gnome was one placed by Sir Charles Isham in 1847. Why did he do that?
3. What could be measured in units of a “millihelen”?
4. When Sir Cliff Richard is driving his car around London, how does he know that God is looking after him?
5. Among Jesus and his Twelve Apostles, who was the treasurer?

Answers on page 62
Loretta Marron is undoubtedly one of the most committed – and effective – skeptical activists in Australia. In 2007 she was justly named Skeptic of the Year, and she has continued her campaigning against unproven and disproven medical practices and products ever since.

The following is an edited version of her letter of March this year sent to the Federal Health Minister Nicola Roxon, in which she asked that the Royal Melbourne Institute of Technology’s chiropractic paediatric clinic - among others - be closed down pending proper investigation of its practices, particularly “for teaching disproven treatments that target pregnant women, babies, infants and children”.

Her report begins:

In 2008, UK science writer Simon Singh was sued for libel by the British Chiropractic Council (BCC) after giving his correct and honest opinion that many chiropractors were making “bogus” claims.

Here in Australia we watched in disbelief as he nearly lost that battle, which would have meant that even our scientists and health professionals also risked being silenced. It seemed that they too could be sued in the UK if they told the truth.

In many countries, people from all walks of life signed petitions and supported Singh, and in 2010, when the BCC dropped its suit - two years after the case had begun - the fight was over.

This was not just a win for freedom of speech; this was also a win for evidence-based medicine and scientific debate. With the research now available as to what chiropractic can and can’t do, it also highlighted the false and misleading claims made by our own chiropractors on their websites.

I asked myself why some of our chiropractors were actively promoting chiropractic as an alternative to vaccination and to treat pregnant women, babies, infants and children for a wide range of health conditions.

I soon realised that our ‘chiropractic universities’ were clearly implicated.

Universities are meant to contribute to society “through the pursuit of education, learning and research at the highest international levels of excellence”.

It is high time that universities returned to their core principles and dropped pseudoscientific courses which lead to attacks on vaccination and the promotion of expensive, useless and potentially harmful treatments.

This report claims that RMIT’s chiropractic paediatric clinic is teaching inappropriate and potentially dangerous techniques that target pregnant women, babies, infants and children, and requests that the clinic be shut down until such time as evidence can be produced that these treatments support the claims made by the course lecturers.

Parents of sick children are a particularly vulnerable group, easily exploited by chiropractors. Children are not able to make their own decisions and
parents need good information about the benefits and risks associated with the choices they make in their families.

health care. With the growth in numbers of chiropractors promoting chiropractic as a substitute for proven treatments and for vaccination, I believe that a re-education campaign should be urgently initiated to provide information to both consumers and chiropractors as to what they can or cannot claim, based on the balance of evidence-based medicine.

I believe that these teachings are not restricted to RMIT, and would like to request that other institutions offering chiropractic courses, including Murdoch and Macquarie Universities, be investigated as well.

I believe that these organisations are graduating students who continue to make false and misleading claims to patients based on course content and that a re-education campaign be urgently initiated to provide information to both consumers and chiropractors as to what chiropractic can or cannot claim, based on evidence-based medicine.

As AMA president Dr Gino Pecoraro put it, “You’re not allowed to mistreat animals, but humans can be sold worthless promises by charlatans and nobody does anything about it.”

BACKGROUND INFORMATION

In May 2010, the General Chiropractic Council (GCC), a UK-wide statutory body with regulatory powers, issued a “Guidance on claims made for the chiropractic vertebral subluxation complex”, in which it said: “The chiropractic vertebral subluxation complex is an historical concept but it remains a theoretical model. It is not supported by any clinical research evidence that would allow claims to be made that it is the cause of disease or health concerns.”

This document also states that chiropractors “must provide evidence based care, which is clinical practice that incorporates the best available evidence from research”, and that “any advertised claims for chiropractic care must be based only on best research of the highest standard (GCC Guidance on Advertising issued March 2010).”

CODES OF CONDUCT

The Code of Conduct of the NSW Health Care Complaints Commission (HCCC), considered by some the ‘gold standard’ requires that health practitioners “provide services in a safe and ethical manner”.

This code is breached by chiropractors who use spinal manipulation (which can result in adverse events) on children for a wide range of self-limiting and serious conditions including asthma.

Chiropractors are not paediatricians and should not be treating childhood health conditions.

The Code continues, stating that health practitioners cannot “make claims to cure certain serious illnesses”. While some chiropractors’ websites do not make direct claims, they imply in their advertising - statements such as “Why Patients See Us” and “10 reasons parents take their children to see a chiropractor” - that they can cure a wide range of serious health conditions such as allergies, ADHD, asthma and depression.

The HCCC code insists that practitioners “require a clinical basis for treatments”. There is no clinical evidence that chiropractic can treat or cure any non-musculoskeletal condition.

Next, practitioners should “not misinform their clients”. Again, there is no proof of efficacy for spinal manipulation in the treatment of any non-musculoskeletal health condition.

The Chiropractic Code of Conduct (CCC), on the other hand, states that chiropractors are required to: “recognise and work within their limits of a competence” and that are required to “seek advice from or refer their patients to a more suitably qualified practitioner when it is considered in the patient’s best interests”.

Again, chiropractors are not paediatricians and any claims that they can treat childhood complaints such as asthma, colic, otitis media and tunnel vision with spinal manipulations are not backed by evidence-based medicine.

The CCC says chiropractors need to be “Maintaining adequate knowledge and skills to provide safe and effective care”.

There is mounting evidence that treatments offered by many chiropractors, specifically those not relating to non-musculoskeletal conditions, are now considered as either negative or inconclusive. Claiming to treat serious conditions such as asthma, allergies and hypertension put patients’ lives at risk.

The CCC says there is the need to “Consider the balance of benefit and harm in all clinical management decisions”.

Many of the claims relating to health conditions for children, pregnant women and seniors, that spinal manipulation can treat a wide range of health conditions, such as asthma, allergies and hypertension, delay proven treatments and may put patient lives at risk.

The CCC then cites “Providing treatment options based on the best available information” and “Practising in accordance with the current and accepted evidence base of the chiropractic profession, including clinical outcomes.”

There is a mounting body of evidence, including research listed on international Chiropractic Councils’ websites, that many treatments offered by chiropractors are not effective and are linked to serious adverse events.

VERTEBRAL SUBLUXATIONS

The fundamental principle of chiropractic, which continues to be promoted in Australia, is that all ‘disease’ is the result of subluxations of the spine causing pressure on nerves and inhibiting the transmission of the signals which allow the ‘innate intelligence’ of the body to heal itself.
According to Phillip Ebrall, BAppSc (Chiropractic), PhD, FICC, FACC, Assoc Prof of Chiropractic Education and Discipline Head, RMIT: “Chiropractic may well be beneficial in patients suffering subluxation, particularly of the upper neck (cervical spine) that causes altered signals to reach the brain, resulting in mental discomfort, decreased thinking ability, headache and other symptoms.” [Ebrall stood down from his position soon after Marron’s letter was sent, though there is no indication the two were linked - Ed]

For babies and children, claims are made that these ‘subluxations’ are caused by the birth itself. According to chiropractic teachings: “Natural birth can cause subluxations, not to mention a more complicated birth. The most common area for subluxation in babies is the upper cervical (neck) area and the base of the skull. The significance of this area is that the delicate tissues being protected here include the brain stem, which is the switchboard for the organs. This is the reason that babies can experience digestive problems and breathing difficulties and why the immune system can become suppressed.

“Sometimes it is apparent that there is a problem while at other times it isn’t so obvious. The important thing is to have your baby and yourself checked as soon as possible after the birth to help clear subluxations so you can establish breastfeeding and settle into a good routine.

“Regular checkups during pregnancy and after birth are essential for the family.”

Claims are also made that the benefits of pre and post-natal chiropractic care for mother and babies include:

- Normalises hormone function
- Decreases the duration of labour and the intensity of pain
- Decreases medication use therefore a more alert baby
- An alert baby allows easier establishment of breastfeeding

- Decreases the risk of post natal depression
- More active labour and better recovery”.

There is no evidence that the ‘vertebral subluxations’, that chiropractors use spinal manipulation to remove, actually exist, nor is there any evidence to support ‘innate intelligence’. Manipulation does not remove ‘irritations’, change ‘inflammations’ nor can it restore ‘biomechanics’.

“Certainly in Britain, and apparently around the world, the chiropractic profession is unable to police itself. - Simon Singh”

RMIT PAEDIATRIC COURSE CONTENT
In 2005, a newsletter was circulated which announced that “A paediatric clinic has been established at [RMIT’s] Bundoola [teaching] clinic to provide assessment and care of children and infants.”

While the specific details of the paediatric course are not available on line, one of the lecturers has posted information on their website: “My wife, Dr Navine Haworth, is also a board certified Paediatric Chiropractor to help treat children. She is also an instructor at RMIT Chiropractic College and helps run the RMIT paediatric clinic. Many conditions that we often treat children for include allergies, asthma, ‘growing pains’, headaches, ADD, and ADHD.”

PRACTITIONER WEBSITE CLAIMS
Claims made by chiropractors include that 80% of all ill health is cause by damage to the back and that chiropractic spinal manipulation (SM) can prevent, treat or reduce the symptoms of the following childhood conditions: allergies, earaches, asthma, epilepsy, bed-wetting, eye problems (including tunnel vision), Bell’s Palsy, fever, bipolar infection, clumsiness, interrupted sleep, co-ordination problems, irritability, colic, learning & behavioural problems (eg ADHD), congenital hip dysplasia, Myasthenia gravis, constipation, poor posture, cough, seizures, croup, scoliosis, deformatinal plagiocephaly (flat spots on the head), stomach ache, depression, tonsillitis, diarrhoea, vaccine preventable infections, and digestive problems.

Other claims include that SM can prevent, treat or reduce the symptoms of the following conditions:
- anxiety, numbness, arthritis, Perthes Syndrome, bronchitis, repetitive strain injury (RSI), cancer (anecdote), sacro-iliac dysfunction, carpal tunnel syndrome, sciatic pain, chronic fatigue syndrome, sinusitis, diabetes, skin disorders, eczema, smoking and alcohol addiction, fatigue, stress, fertility, PMS, fibromyalgia, thyroid issues, gull bladder problems, TMJ dysfunction, headaches & migraines, ulcers, hypertension, weakness, irritable bowel syndrome, whiplash and neurogenic claudication.

There is no evidence that chiropractic works any better than placebo for these health conditions. 

[Note: Loretta Marron reviewed the websites of 51 chiropractic practices for this report. She adds, however, that “The list of websites was obtained by using searches in NSW and is by no means complete. - Ed]

I asked Dr Simon Singh PhD MBE, the renowned British science writer, for advice. Following the dropping of the libel case brought against Dr Singh by the British Chiropractic Association, a “furios backlash” resulted in the filing of formal complaints of false advertising against more than 500 individual chiropractors within one 24 hour period, with one national chiropractic organisation ordering its members to take down their websites, and Nature Medicine noting that the case had gathered wide support for Singh, as well as prompting calls for the reform of English libel laws.

In a personal email to me Dr Singh wrote: “Certainly in Britain, and apparently around the world,
the chiropractic profession is unable to properly police itself. The good chiropractors and the chiropractic societies seem unable or unwilling to highlight and stop the bad chiropractors who make unscientific claims and who unfairly raise the hopes of patients. Moreover, every medical intervention carries a risk, so those chiropractors who offer treatments that go beyond the evidence are not only hurting patients in the pocket, but possibly also harming their bodies.

“The evidence is inconclusive for cervical manipulation/mobilization alone for neck pain of any duration, and for manipulation/mobilisation for mid back pain, sciatica, tension-type headache, coccydynia, temporomandibular joint disorders, fibromyalgia, premenstrual syndrome, and pneumonia in older adults.

“Spinal manipulation is not effective for asthma and dysmenorrhea when compared to sham manipulation, or for Stage 1 hypertension when added to an antihypertensive diet.

“In children, the evidence is inconclusive regarding the effectiveness for otitis media and enuresis, and it is not effective for infantile colic and asthma when compared to sham manipulation. The evidence is inconclusive for knee osteoarthritis, fibromyalgia, myofascial pain syndrome, migraine headache, and premenstrual syndrome. In children, the evidence is inconclusive for asthma and infantile colic.”

CONCLUSION
Chiropractor websites are making claims that spinal manipulation can prevent and/or treat or reduce the symptoms of a wide variety of both self-limiting and serious health conditions such as allergies, asthma, ADHD and colic and that it can be used as a substitute for vaccination.

Of great concern is that they are targeting pregnant women, babies, infants and children, making claims that have now been disproven, using techniques that have been demonstrated to have potentially serious adverse effects to both mother and child.

As this is a clear breach of consumer protection and puts patient health at risk, I request that the RMIT Chiropractic Paediatric clinic be closed down pending an investigation into its teachings and that other similar universities, such as Murdoch and Macquarie, be investigated.

I would also ask that a re-education campaign be initiated to ensure that the claims made by chiropractors reflect evidence-based medicine and best practices.

Yours sincerely
Loretta Marron

About the author:
Loretta Marron is a crusader against quackery, as well as winner of 2007 Australian Skeptic of the Year award.

MARRON’S MEDICAL CONSULTATIONS

In the course of research for her report on RMIT and other institutions’ chiropractic clinics, Loretta Marron consulted:

**PROF JOHN DWYER,** AO, FRACP, FRCP, PhD, Doc ACU, Emeritus Professor of Medicine University of NSW, Chair of the Australian Healthcare Reform Alliance

**PROF JENNY COUPER,** MB, ChB, MD, FRACP, Head of Discipline of Paediatrics, The University of Adelaide, Dept of Endocrine and Paediatrics, Women’s and Children’s Hospital

**PROF IAN FRAZER,** MB, ChB Edin, MD Melb, Director, Diamantina Institute, Research Leader, Epithelial Cancer Division

**PROF DAVID COLQUHOUN,** FRS, Professor of Pharmacology, University College London, Fellow of the Royal Society, UK

**PROF ALASTAIR H. MACLENNAN,** Head of Discipline of Obstetrics & Gynaecology, School of Paediatrics & Reproductive Health, The Women’s and Children’s Hospital, The University of Adelaide

**PROF CHRIS B DEL MAR,** MA MB BChir MD FRACGP FAFPHM Professor of Primary Care Research, Faculty of Health Sciences and Medicine, Pro Vice Chancellor (Research), Faculty of Health Sciences and Medicine, Bond University

**PROF NIKOLAI BOGDUK,** BSc(Med), MB, BS, PhD, MD, DSc, MMed, FAFRM, FFPM(ANZCA), Conjoint Professor of Pain Medicine, University of Newcastle

**PROF EDZARD ERNST,** MD, PhD, FMed Sci, FSb, FRCP, FRCP (Edin) Professor of Complementary Medicine, Peninsula Medical School, Exeter, UK (and co-author with Dr Simon Singh of the book Trick or Treatment)

**ASSOC PROF JOHN EDEN,** MB BS, MD, FRCOG, FRANZCOG, CREI, Assoc Prof of Reproductive Endocrinology UNSW, Director Barbara Gross Research Unit RHFW, Director Sydney Menopause Centre RHFW Director Women’s Health and Research Institute of Australia

**DR ROBERT H LOBLY,** MB, BS, PhD, FRACP, Senior Lecturer in Immunology, Department of Medicine, University of Sydney, Director, Allergy Unit, Department of Clinical Immunology, Royal Prince Alfred Hospital

**PROF JOSEPH FORGAS,** DPhil, DSc. (Oxon), Scientia Professor of Psychology, FASSA, University of NSW
It’s the #1 most common question I get: My wife, my friend, my mum, my boss is investing their health or their money in some magical or fraudulent product/scheme/belief. What can I do about it?

This is a tough situation to be in. Whether it’s a loved one who’s ill and is being taken advantage of by a charlatan selling a magical cure with no hope of treating the illness, or a friend who’s out of work and is going into deeper debt to buy into a hopeless multilevel marketing plan, it’s really hard to watch. The hardest is when they have a real problem and are expending their limited resources trying to solve it with a medieval, magic-based system that you know can’t possibly help. But all too often, they think it’s helping.

Cognitive biases, anecdotal thinking, placebo effects and cognitive dissonance combine to build a powerful illusion that our brains are hardwired to believe in. At some point, it falls to a caring friend to try and rescue them with a candle of reason.

You’re up against a foe who’s far more formidable than you might think. This isn’t like settling a bet with a friend where you can look up the answer on Wikipedia, see who’s right, and then buy each other a beer. You’re going after someone’s religion. You’re setting out to talk someone out of believing something that they know to be true, for a fact, from their personal experience. That right there makes your task nearly impossible, but it’s worse. Their belief has spiritual underpinnings that make it deeply moral and virtuous.

Imagine if someone came to you and flashed a magazine article that said it’s best to turn your children out into the street and never talk to them again. It’s not only unconvincing, it’s laughable. Your effort to talk someone out of their belief in their sacred cow is likely to be just as laughable.

So what should you do, give up? You may be surprised to hear it from me, but I advise you to do just that, in many cases. Know which battles to fight. Weigh the risks. Consider the context of your friend’s belief: Is he in imminent danger of harming himself or others? Probably not, and if not, this may not be the time to take what might be your only shot. So I want to make this a rule: Before you decide what to do, consider the risks and the context. How terrible are the consequences of your friend’s belief? Think that through comprehensively. Make sure you have a good understanding of the risks to your friend if you do nothing, and the risks to your relationship if you attack their beliefs and (in all probability) fail to convince them. It may well be that this first strategy I’m going to present is the safest.

**Strategy #1: Do Nothing**

Doing nothing now doesn’t mean giving up. When you choose not to confront your friend’s current weird belief, there’s still an effective strategy for helping him out that you can follow. By accepting and tolerating your friend’s weird belief, you’re actually setting yourself up to be in a position of great influence the next time something weird comes down the line. Your friend likely knows that you’re a skeptical person, and eventually he’ll recognize that you’ve been putting up with his weird belief and saying nothing. In fact he may someday ask you, “Hey, you know I believe in this weird thing, how come Mr Cynical Skeptic has never tried to talk me out of it?”

Ask “Is it important to you?”

“Yes.”

“You’re important to me.”

Think what a powerful message that sends. It may sound corny, but it’s a statement that your friend will always remember. You’ve just communicated that your friendship is more important than your “evil debunking hobby.”

You’ve made it clear, unequivocally,
that you don't want such differences to come between you.

And now look at the position you're in. You're trusted. You're an ally at the most important and fundamental level. This is exactly where you need to be if you want to be influential on someone. You can now begin to introduce critical thinking using topics that are more about exploration than confrontation, and this is a journey you should take together. Next time you're in the car together, play a few Skeptoid episodes. Play episodes like The Baigong Pipes, Is He Real or Is He Fictional, The Missing Cosmonauts, and When People Talk Backwards. Topics such as these do not attack or challenge anyone, they instill an appreciation and a passion for the value of critical thinking. Once introduced, I find that most people want more.

Gather every bit of skeptical material you can find that you know will interest your friend, and that does not attack or challenge his belief. So long as you remain a trustworthy friend and not an irrational adversary, you’re in a position to introduce them to the fundamentals of critical thinking, and to the value and tangible rewards of reality. Don’t underestimate the value of seeds that are well-planted in a good environment. If your friend comes around on their own, their growth is far more complete than any that’s forced upon them.

Always remember the story of the little boy who couldn’t get his pet turtle to poke its head out of his shell. He tried to pull on its head, he shook it, he squirted water, he did everything he could think of. But the turtle wouldn’t come out. Then his grandfather took the turtle and placed it on the warm hearth, and within a minute the turtle was out of his shell. The little boy never forgot that lesson.

**STRATEGY #2: THE INTERVENTION**

Sometimes the situation is urgent and you don’t have time to do things the easy way. There might be a medical crisis, an emotional crisis, or a financial crisis, and an immediate intervention is needed. Sometimes a friend’s situation is dire enough that helping them is worth the loss of the personal relationship. In these cases, and probably only in these cases, would I suggest a confrontational approach. And to do this effectively, draw on the established principals of the counselling intervention.

First you want to gather a group of friends or family, and you need to meet with them separately. Try to get a group, but even if there are only two of you, it’s worlds better than just you by yourself. Your next task is to present your evidence to the group that the magical system your friend is relying on is pseudoscientific and cannot help him. Do not expect them to accept what you say at face value, and do expect that some of them might buy into the magical system as well. Be prepared. Show your work. Print out pages from the web. Use the Science Based Medicine blog, use Skeptoid, use Quackwatch, use Swift. Search the best sources and have all your ducks in a row. The most important thing you need to do at this stage is to be certain that everyone in the group is united in their understanding of the useless, pseudoscientific nature of the magical sacred cow.

Tell the group why you’re concerned about your friend and why the help is urgently needed. Be prepared to explain why you feel an intervention is warranted. And this is important: Don’t merely be prepared to show that the magical sacred cow is useless, you must also have an alternative path - one that is proven to provide the kind of help needed - to suggest to your friend. Make sure everyone’s in agreement that an intervention is warranted, and that a better alternative path is needed. If they’re not, only invite those who are to proceed.

The main criticism of counselling interventions is that they are ambushes. Not only is it just plain wrong to ambush someone, it creates the practical problem of putting your friend on the defensive. So I don’t propose making it an ambush. My recommendation, which you may or may not choose to follow, is to call your friend up and say “Hey, Jim-Bob and Bubba and Sally-Sue and I want to come over and talk to you about your cancer,” or your new business, or your psychic friend, or whatever the problem is.

Now, of course, conducting the intervention is up to you. I feel that trusted friends who can speak knowledgeably about the subject carry more weight than showing the printed-out articles from the web, but leave them for your friend to read. Anyway, it’s going to be a really classy hour, it’s not going to be fun for anyone, but with some luck you may just make a big difference in your friend’s life. He may not love you for...
it, but the idea’s to help him, not to win brownie points for yourself.

**STRATEGY #3: BE THERE**

In some cases, doing nothing may seem too slow, and an intervention may be too harsh and unwarranted. In these situations I often recommend that you just “be there” for your friend. Your skeptical cat is probably already out of the bag to some degree, so your friend’s radar is probably already up just waiting for you to launch into him about his sacred cow.

What you may have is an awkward imbalance of a close personal relationship and an ideological divide. This situation gets thrown on me all the time, when I meet someone, or someone introduces me and has told them what I do, I’ll sometimes get “Oh, you’re that cynical person I’ve heard about.” This is, of course, both wrong and insulting. I’ve gotten this so many times that I’ve learned to just swallow it. But nevertheless, the awkward divide exists, and the best way to handle an awkward situation is to openly acknowledge it.

The wording here is difficult to get right, but at an opportune moment you might want to say something like “Hey, I know you’re really into your thing, you know I’m really into consumer protection, so we have a disagreement. If you ever want to talk about it, I’m happy to; but I don’t want it to be a problem, and I’m fine with just acknowledging we have a disagreement and leaving it at that.” The wording that’s hard is declaring your own position. Consumer protection, critical thinking, things that are proven; you want to make your point but you don’t want to choose weasel words that sound insulting.

From that point, you can follow the Do Nothing strategy and introduce articles that you know you’ll both appreciate. This method just fast-tracks it somewhat, in that the door is wide open to discuss your friend’s particular sacred cow at any time. But unless there’s an imminent risk of harm, I tend to always let the friend bring it up, and I never try to drive the wedge or create a conflict myself.

It’s perhaps ironic that those of us who want to provide actual help, instead of magical or imaginary help, are usually considered the bad guys, and we’re the ones who have to tread lightly. But that’s the reality of the situation, and we should take extra care to insure that our influence is a positive one.

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Note: This article is a transcript of an episode of Skeptoid (episode #187, January 5, 2010). It is used with permission and is copyrighted to the author.

About the interviewer: Brian Dunning is a computer scientist, and host and producer of the award-winning podcast, Skeptoid: Critical Analysis of Pop Phenomena (www.skeptoid.com).

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June 11

There has never been a time in history when the public understanding of science and rational thinking has been so important. Science has revealed new challenges for humankind, such as climate change and depletion of resources, while new technologies are often accompanied by ethical and social implications that need to be carefully considered. In response to these challenges, science communicators spend more time trying to carefully explain science and related issues to the public. However, these efforts to make science more understandable are being confounded by ‘wingnuts’ who use misinformation to confuse public understanding of science.

The term wingnuts has been used by a number of people to describe those who propagate misinformation for a variety of reasons. In his book Wingnuts: how the lunatic fringe is hijacking America, John Avlon describes a wingnut as "someone on the far-right wing or far-left wing of the political spectrum – the professional partisans and the unhinged activists, the hardcore haters and the paranoid conspiracy theorists".

This is probably a fair summation of the groups that skeptics often confront. Specific examples include Jenny McCarthy for her misinformed and vehement opposition to vaccines, Suzanne Somers for her advocacy of dodgy and dangerous ‘natural’ therapies, Peter Duesberg with his HIV denialism, and Christopher Monckton for his use of misinformation in opposing global warming.

With wingnuts attacking many areas of science and undermining attempts to educate the public, the question has to be asked – How should we deal with these purveyors of irrationality? Some skeptics advocate an aggressive counterattack – personally attacking the wingnuts in the same way that they have attacked science and science communicators. Others suggest a purely educational and rational approach, relying on the ideal that the truth will win out in the end.

For myself, I see the first approach as dangerous in that it muddies the waters – one only has to look at the mess that has resulted in the climate change debate. Personal attacks from both sides of the debate – accusations of conspiracy, impropriety, etc. – have confused the public and risk having climate change dismissed as ‘too hard’ to deal with. On the other hand, taking a purely rational approach overlooks the fact that human behaviour is not always rational and prone to being swayed by emotive arguments.

In trying to sort out the best way for me to respond to wingnuts, I have developed a list of 10 rules as a guide.

1. Know what you are talking about
   Many wingnuts are well versed in their area of ‘expertise’. Debating them without adequate knowledge of the subject as well as an understanding of the typical wingnut ploys is risky. It is
Turning the Wingnuts

Continued...

worth noting, however, that exchanging views with a wingnut via blog comments does give one the opportunity to do research between exchanges.

USE PRECISE, SIMPLE AND NEUTRAL LANGUAGE
It is easy to be misunderstood, especially via written language. So, one should keep the language as precise and simple as possible. A choice of neutral language helps maintain a calm exchange of ideas. Emotive language can readily escalate an exchange of ideas into an irrational argument. We have over 600,000 words in the English language to choose from, so why not take some care in deciding how we explain things to others.

RESPOND TO RUDENESS IN A CALM MANNER
Some people, including skeptics, see debating ideas as an opportunity to insult others. In my opinion, snide remarks, personal attacks and swearing detract from any rational exchange and serve to both escalate any exchange of thoughts into irrationality as well as hardening the views on both sides of the debate.

When confronted with rudeness, I try to focus on repeating factual information. There is also value in pointing out the rude behaviour. This can be done in an assertive, non-threatening way by making comments about the wingnut's behaviour and not about them personally.

For example by saying “I find it offensive when you claim that scientists are shills for big pharma”, followed by a list of supporting facts, instead of ”you are a rude and obnoxious $@&”. Most people will accept criticism of their behaviour far more readily than what they feel is a personal attack, particularly when the person making the comment ‘owns’ the effect of the behaviour.

It is also worth remembering that it is difficult for someone to continue being rude if you do not reply in kind. If you can maintain being polite to someone who is being rude, in most cases the rudeness will dissipate and one can return to a calm exchange of ideas.

REMEMBER – WINGNUTS ARE PEOPLE TOO
No one is completely rational. We all have our own biases which may result in irrational behaviour. Whether it is a result of our environment or our biology, many of us engage in irrational behaviour without even recognising it. So while we may often assume that a wingnut is being purposely irrational, it is usually the case that they consider their actions to be completely rational. In his book Why We Believe, Michael Shermer describes such behaviour as “intellectual attribution bias” – where those with opposing views typically consider their own actions as being rationally motivated, whereas they see those of their opponents as more emotionally driven.

A simple rule to remember – challenge the ideas, not the person.

ASK QUESTIONS ... AND LISTEN TO THE ANSWERS
When someone appears to express a view counter to what we believe it is easy to respond by bombarding them with counter arguments. However, this will not only put them on the defensive, it also requires that you have understood their point of view correctly (see “Expect Misunderstandings” below). If one takes the time to explore their beliefs further by asking questions, it gives you time to assess the extent of their beliefs, and if done in a friendly manner it also helps establish rapport, allowing for a more rational exchange of ideas. If we leap into an argument with a limited understanding of the other person's position we can find ourselves trying to convince them of something they already agree with.

LEAVE YOUR EGO AT THE DOOR
In my experience, once you start taking comments personally, rationality goes out the window. There are times when the comments of some wingnuts make me furious. At such times the best option is to take time to calm down before responding. Linus Pauling said: “Science is the search for truth - it is not a game in which one tries to beat his opponent, to do harm to others.”

EXPECT MISUNDERSTANDINGS
No matter how carefully we think we have phrased something, those hearing or reading us will often misunderstand at least part of what we have said. So one always needs to be ready to rephrase. In order to clarify what we are saying a number of techniques can be used:

• Counter anecdotes with anecdotes. Follow up by explaining this is why anecdotes are not particularly good as evidence.
• Use analogies to explain difficult concepts.
• Apologise when you make a mistake. While some may view apologising as a loss of face, it can actually establish a better rapport. It is far more honest and trustworthy than trying to cover up or justify a mistake you have made. There is nothing wrong with acknowledging that we all make mistakes.
• Acknowledge points of agreement. In any argument, there are often points that both parties agree on. If we can identify these up front and acknowledge them, it not only makes it easier to explore the points of difference, it again establishes some rapport by saying “Look, there are some points on which we can agree.”
DON’T MAKE THE SAME MISTAKES WE CRITICISE THEM FOR

There is nothing more frustrating than seeing other ‘skeptics’ debate a wingnut by erecting their own strawmen, using ad hominem attacks or other irrational arguments. An experienced wingnut will quickly turn these mistakes to his or her own advantage. It always pays to carefully think through all of your own arguments before using them.

BE PERSISTENT AND DON’T EXPECT TO CHANGE THEIR VIEWS OVERNIGHT

Most wingnuts have spent years developing and reinforcing their positions. Some probably have the psychological equivalent of Fort Knox built around their ideological positions. So if we can’t easily change their minds, what is the point in debating with them?

Debates with wingnuts seldom take place in a vacuum. Whether they are arguing their point via a letter to the editor, on a blog or among a group of friends or workmates, there is always an audience. If their points go unchallenged, some of the audience will be swayed by their arguments. So challenging the arguments of a wingnut is less about changing their point of view, and more about educating any audience they have about the flaws and fallacies of their argument. One should aim to win over any such audience with superior knowledge, civility and by pointing out how your position benefits them.

LEARN MORE ABOUT PERSUASION

Many skeptics have a great respect for facts and rational debate. However, when it comes to making decisions, human beings tend to be more readily swayed by their emotions. Psychologists have spent decades researching how people make decisions. Such research has been embraced and effectively used by marketers and salespeople to get us to buy things we don’t need or want. If the Journal of Marketing Research refers to books like Robert Cialdini’s Influence: the Psychology of Persuasion as “the most important book written in the last 10 years” then perhaps we should also be reading it, not only to help us work out appropriate ways to better present a skeptical viewpoint, but to also immunise us against some of the less scrupulous methods of persuasion.

Some persuasive techniques directly applicable to debating with wingnuts include:

- Appealing to self interest. Everyone naturally looks at how anything benefits themselves. So when we advocate for vaccination use, rejection of dangerous or ineffective ‘alternative medicines’ and other wingnut ideas, we need to focus on the benefits of our positions.
- Creativity. In a world where we are bombarded with many demands for our attention, the creative ideas stand out. One only has to consider the incredible amounts of money companies spend on novel advertising campaigns to understand this.
- Repetition. Many wingnuts rely on the idea that if you repeat a lie often enough it will be believed. If this is the case, then surely if you repeat the truth often enough it will also be believed.
- Soundbites. Many science communicators are now recognising the value of sound bites – short memorable statements outlining key points. Most people are more likely to remember sound bites than the long and complex (albeit more accurate) explanations preferred by many scientists.
- Be positive. It has been demonstrated that most people remember positive messages more accurately. Thus it is more effective to say that “vaccines save millions of lives each year” as opposed to “vaccines are not dangerous”. Over time, a negative message can become confused and may be remembered instead as “vaccines are dangerous”.

A good example of clever use of such techniques was the 10:23 campaign to educate the public about homeopathy. The public ‘overdose’ on homeopathic remedies by skeptics was a creative way to draw the attention of the media and the public to the irrationality of homeopathy. Clever sound bites such as “ten dollars for a teaspoon of water” were not only memorable but focused on financial self interest. The event also caused several homeopaths or homeopathic organisations to state outright that they don’t know how homeopathy works, a remarkable and useful soundbite (for skeptics) in itself.

CONCLUSION

This 10-point list outlines my own approach to wingnuts. Others may have different, possibly even contrary rules. I believe it is important that we, as skeptics, share and discuss these ideas rationally and with the view of what will best encourage better and more rational thinking by the general public.

Whether you agree with all of my rules or not, there is hopefully one thing we can agree on. We cannot afford to ignore the wingnuts.

This article is based on a presentation given at the 2010 NZ Skeptics conference, and originally published in the NZ Skeptic magazine. (www.skeptics.org.nz)

About the author:
Michael Edmonds has been a chemistry lecturer, researcher and more recently manager of programs at Christchurch Polytechnic Institute of Technology (CPIT).
Some readers may have heard about Zack Kopplin, a senior high school student who recently decided that he wanted to be taught science, and not creationism. In Australia, if you were at a private religious school, this would not be an issue, but Zack goes to a public school in the state of Louisiana. In 2008, that state passed a law known as the Science Education Act. On the surface, that sounds nice, but under the covers the Act allows for the teaching of creationism, intelligent design and other non-scientific theories and related garbage.

Specifically, the Act allows for the provision of supplementary textbooks and materials to support the current approved textbooks. This means that biology textbooks that discuss evolution may well be accompanied by another book (or two) with non-peer reviewed material on intelligent design and creationism. We can infer that the law was enacted by political forces attached to Christian evangelists. In the case of the State Education Board of Louisiana, the link was with the Louisiana Family Forum (LFF).

Let’s put this into perspective. If such a law were passed in a state of Australia,
regularly sees the effects on young adults who have not only been through the high school system but also tertiary education with little if any critical thinking skills, initiative and problem-solving ability. Science can assist with these, coupled with a well-rounded education and interests.

The Board voted in favour of Zack, and did not approve additional textbooks, as required under the Act. Subsequently, many professional organisations have supported the decision of the Board in repealing the Act which may be seen in coming months.

I interviewed Zack Kopplin via email.

For the sake of our readers in Australia, what exactly is the Louisiana Science Education Act and how does it work?

It is a stealth creationism law that allows creationism into public school science classes under the guise of “supplemental materials”. These materials don’t need to be approved by anyone, unlike our textbooks, which had to be approved four times by educators and the Louisiana State Board of Education.

This allows for the use of non-peer reviewed books. But, in your opinion, why does the Act need to be repealed?

Basically, jobs. Louisiana students will not get good science-based jobs and be competitive in today’s global economy if we are taught pseudoscience in science classes.

So why did you make a submission to the Board? Did you feel that the teaching of science is that important that you needed to ensure that it was done correctly, without religion, or do you have another reason?

For me personally, there are two reasons. I really wanted to get involved and start building a coalition for the repeal. I also wanted to try to stop the downward tumble that our state has seen since the Louisiana Science Education Act was passed.

You must be happy with the initial result from the Textbook Board in your favour. Did anyone else make any submissions that were in line with your submission?

I know the board was bombarded with emails asking them to endorse accurate and evidence-based science. The Louisiana Science Coalition also came out and testified in support of science.

Has your life changed since your appearance before the Board?

I know that I’m going to keep leading campaigns like this and fight for what I believe in for the rest of my life.

We need young people to continue the fight that people like Richard Dawkins and Eugenie Scott, CEO of the National Center for Science Education, have undertaken. What is your plan now in regards to the repeal of the Act?
Standing UP for Science

Continued...

We’re in the final stretch, and I’m working on educating and organising as many people as possible before the vote. I’m also lobbying legislators.

Are you aware of other states in the United States that have similar Acts?

No other state has passed a similar act, although nine states have tried this year. We’re particularly worried about Tennessee, whose act, which is inspired and based on the Louisiana Science Education Act, has a chance to pass.

Sometimes when these events occur, such as arguments over textbooks and teaching of creationism, certain celebrities come out to either support or make statements against people like you. Eugenie Scott has supported you and the National Biology Teachers Association. Even a State senator, Karen Carter Peterson, has come out in full support of you. Has anyone come out against you?

In Lauri Lebo’s recent Scientific American article, Gene Mills, the president of the Louisiana Family Forum, attempted to dismiss the repeal effort. He seems to think he owns the Louisiana Legislature, but I think the legislature may disagree with him.

So, having finished high school, what now? College? What do you want to do?

I’m still deciding on a college; it is not an easy choice.

Is there anything you wish to say to others in regard to the campaign?

I would encourage everyone to visit the repeal’s website, www.repealcreationism.com, and sign up on our Facebook and Twitter which can be found on the website. Also, please network and share this with your friends and family. It will make a difference.

This law won’t last too much longer. I believe we will repeal it this year, but if we don’t, we’ll keep trying.

For more information, go to Senator Carter’s website: http://karencarterpeterson.com/2011/03/15/senator-peterson-backs-bill-to-repeal-louisiana-science-education-act/

About the author: Geoff Cowan is a member of the Australian Skeptics and the Western Sydney Freethinkers.
Your Stars: JUNE 2011

Aries: 19 April-13 May
In commemoration of your star sign, you decide to upgrade your computer from 32k of RAM to 128k of RAM. Your computer may be out of date, but nowhere near as out of date as astrology.

Taurus: 14 May-19 June
Under the sign of the Bull, you’ll mull over whether to pull a full hull, cull dull gulls, or have a dull null lull.

Gemini: 20 June-20 July
Ah, a split personality. Roses are red, violets are blue, I’m schizophrenic, and so am I.

Cancer: 21 July-9 August
Your constellation does not resemble a crab (Latin: cancer) at all; it resembles the letter Y with a fuzzy patch near the crotch. Well actually, it’s not only your constellation that resembles that.

Leo: 10 August-15 September
You’re always sticking your foot in your mouth, or that might be your tamer. Something’s there, anyway.

Virgo: 16 September-30 October
In your wanderings you come to a flooded part of the road, and as you stand there wondering how to cross, a homeopath comes up and offers to carry you over on his shoulders. But you say “No thanks - that would be virgin on the ridiculous.”

Libra: 31 October-22 November
The scales. Fish have scales - see under Pisces.

Scorpio: 23 November-29 November
On the 23rd of the month you set off from your home to visit a friend, but you are mysteriously and wonderfully abducted by space aliens who have forgotten to perform the customary probing but nonetheless take you on a tour of the Solar System. You witness at first hand the craters and maria of the Moon, the mighty extinct volcanoes of Mars, the variegated scattered rocks of the asteroid belt, the vicious weather and cloud bands of Jupiter, the cracked and icy surfaces of its satellites, the incredible active volcanoes and electrical current loop of Io; and of course the rings and shepherd moons of Saturn and the pocked surface of mighty Titan. Then we come to Uranus and it all comes back to the aliens what they’re supposed to do.

Ophiuchus: 30 November-17 Dec
I don’t know if you have realised this yet, but your star sign has been deleted.

Sagittarius: 18 Dec-18 January
Just as you think you have gotten all your affairs in order, written the reports for work, done all the housework, got the car serviced, tidied up your desk, made the phone calls, wormed the cat, brushed the gerbil, done the gardening and the crossword, prepared and eaten lunch, filled the dishwasher, and written letters of complaint to the newspaper, and you are relaxing with a good book and cup of coffee, you suddenly recall that the bloody astrologer said he could not do the horoscopes this issue and you said you’d stand in. Damn, I wish I had another star sign.

Capricorn: 19 January-15 February
On a European holiday, you visit a nice island in the Trrhenian Sea off the coast of Italy. You visit the Blue Grotto and the Villa San Michele and get the view over the town. Tired and thirsty by the evening you enter a pub, where there is a bad stand-up comedian. Yes! It’s Capri Corn.

Aquarius: 16 February-11 March
Your friend has the same star sign as you - making him or her identical in all respects, of course - but you cannot decide whether that makes you two Quariuses or two Quarri.

Pisces: 12 March-18 April
You are very well balanced; see under Libra.
I was prompted by the excellent effort by Loretta Marron which made both the mainstream (http://bit.ly/eW8l6J) and medical press [see separate article this issue]. For those caught napping, Loretta submitted a letter to the Health Minister Nicola Roxon demanding that RMIT University close its paediatric chiropractic clinic as it perpetuates the myth that there is a reason for chiropractors to even be touching children and babies. For me it also raised the question of what sort of more general child health advice might be given out to parents at such a clinic.

As part of the transition to the new Australian Health Practitioner Regulatory Agency (AHPRA), the regulated professions have been asked to sign up to Codes of Conduct proposed by the new Boards which have been created. A split appears to be looming between the Chiropractic Board of Australia (CBA) and a number of the major professional organisations over the Code of Conduct for registered chiropractors.

The CBA website shows the Code of Conduct, and they have also taken the step of publishing the submissions by organisations and individuals which informed its development. The Code and submissions can be found at http://www.chiropracticboard.gov.au/Codes-and-Guidelines.aspx

While there are the obvious typo corrections and suggestions for rewording the bureaucratic language of the Code, there are also some indications in the submissions of deep division between the CBA and the major chiropractic professional organisations, particularly in the areas of public health, informed financial consent and the use of x-rays.

With regards to public health issues, there appears to be reluctance on the part of the Chiropractic Association of Australia (National) (CAAN) and its state bodies to embrace the fairly uncontroversial proposition that health professionals of any stripe have public health responsibilities with regard to the spread of communicable diseases.

The CAA Victorian Branch submission specifically disclaims such a responsibility: “We note a statement in section 1.2, 3rd paragraph that chiropractors have a role to not only promote health but to protect the health of the community. We would seek some clarification from the CBA as to how it understands that Chiropractors could protect the community’s health.”

**THE IMMUNISATION ISSUE**

The SA branch of CAA (CAASA) submission recommends removing a clause about chiropractors “understanding the principles of immunisation against communicable diseases” because: “Understanding the principles of a singled out particular public health procedure is inappropriate and certainly incomplete. There are many other public health procedures, eg hand washing or equipment cleaning, that are not listed; it is incomplete to single one out.”

The NSW Branch agrees: “CAANSW questions why chiropractors need to understand the principles of immunization against communicable diseases. This is not within the scope of chiropractic.”

The Gonstead Chiropractic Society
is more forthright: “Immunisation has nothing to do with Chiropractic and should not be included in this document. Chiropractors as part of their education are taught about communicable diseases and immune function, they also learn about spinal biomechanics. I see no specific reference to spinal biomechanics in this document yet it has far greater relevance to the practice of Chiropractic than immunisation. This clause does not belong in this document and must be removed. Reference to this topic was made in the first draft and it is still inappropriate.”

The final CAAN submission contains overtones of some of the misrepresentations that the anti-vaccine movement is fond of promiting. Judge for yourself.

“Immunisation is not a central aspect of chiropractic practice. Vaccination does not guarantee immunisation.

“Mandating an ‘understanding’ of the ‘principles of immunisation against communicable diseases’ is a simplistic requirement that will be considered by most of the chiropractic profession as a direct insult towards the right of free will and informed choice.

“In light of recent safety concerns, hospitalisations and deaths from influenza vaccination, a government regulatory body may wish to consider the wisdom of this subsection.

“The issue of vaccination requires consideration of complicated variables, including the virulence of the disease in question, the evidence (or lack thereof) of safety and efficacy of the vaccine in question, the individual health status of the patient and the environmental/ geometrical context in which the vaccine is being considered.”

It may be worth pointing out that while immunisation is not a central aspect of optometry, osteopathy, physiotherapy or podiatry, these Boards have included the exact same phrases in their respective Codes of Conduct without this degree of controversy from a peak professional body. Professionals in these disciplines are presumably content to accept that public health experts know what they are talking about when they make their recommendations.

The submission from the Chiropractic and Osteopathic College of Australasia (COCA) is the lone submission from a peak body which supports the Code in this respect, and indeed calls for it to be more explicit in stating that mass vaccination is a well-established public health tool: “The College can only restate its view, that the Board include in its code of conduct, reference to the need for chiropractors to set aside any anti-vaccination beliefs they have, in favour of the promotion of health and disease prevention through vaccination and to be immunised against relevant communicable diseases.”

To summarise, the Board is trying to get chiropractors to accept that they should be immunised to promote herd immunity and as part of their ethical commitment to their profession’s public health responsibilities. The CAA and its derivatives as well as the Gonstead faction (splitters) vehemently disagree that any such duty of care exists, or that they should even be immunised at all, let alone compulsorily, as is the case for many hospital workers such as ICU staff.

THE PRE-PAID PROBLEM
A second issue of major contention is the requirement under the Code of Conduct for informed financial consent to be obtained for pre-paid courses of treatment. A particular bone of contention is that the Code advises that “agreements should not extend beyond 3 months or 12 visits whichever is the greater, unless there is clear and appropriate clinical justification to support a renewed period of agreement and care”.

It seems not unreasonable to justify ongoing treatment beyond three months, if the fees are to be pre-paid, regardless of the condition being treated, simply because it is hard to predict virtually any health outcome that far into the future, and consumers should be protected from honest errors of prognosis on the part of the health practitioner.

If six months of treatment have been prepaid and the condition has resolved after three months, there should be a mechanism by which the payment could be reviewed, instead of the practitioners just keeping the money. In prolonged rehabilitation from severe injury, for example, insurers will routinely require reassessment against stated treatment goals to be done every few months to ensure that the prognosis is on target, and to make adjustments when circumstances change.

The COCA submission is the only one of the major submissions which seems to explicitly acknowledge this, making the recommendation that a validated outcome measure of some type should be included as part of such treatment courses.

The CAAN submission recommends that the entire section of the Code (3.6), which deals with informed financial consent, be dropped, because “CAAN is unaware of ANY peer-reviewed evidence to suggest that care plans and financial arrangements between practitioners and their clients should not exceed 3 months. Without a compelling, evidence-informed reason to limit the time frames for financial arrangements as suggested in section 3.6 (g), CAAN is concerned that section 3.6 may limit access to care and freedom of health care choice for Australians. CAAN suggests that chiropractors and their patients be free to make reasonable financial arrangements, as long as those arrangements are conducted in line with the above sections of the draft Code of Conduct.”

They could perhaps consider the moral, legal and ethical reasons to limit such arrangements instead of disingenuously demanding clinical reasons to alter such widespread business practices. They want the respectability and gravitas that science provides without having to adjust their view of reality when it conflicts with the findings of science. Business ethics and consumer protection are not inherently scientific fields, but a combination of moral, legal and economic considerations. I would be fascinated to see the ACCC’s attitude to such an arrangement.

THE X-RAY FILES
Chiropractors have used x-rays as part of their clinical assessment for decades, including asymptomatic monitoring of healthy individuals. The Code
Battle of the Chiropractors

Continued...

The diversity of opinion within the chiropractic profession, and particularly between the CBA and the CAA, appears more than trivial. At stake is the potential inclusion within AHPRA of one profession with a dramatically different and even opposing Code of Conduct to the others.

I have discussed only the three most obvious and substantive issues at play, but there are others as well where the CBA and the professional organisations appear to be poles apart (the role of scientific evidence in the chiropractic profession, and public spinal screening being other examples). It will make for an interesting and no doubt challenging few months as the chiropractic profession attempts to unite behind a Code of Conduct which accords even in general terms with the other AHPRA Boards.


CHIRO PRACTICES

Practice #1 – maximise your patient attendance:

Acknowledging Our Great Clients

Over the last five years, Powerful Practices coach and mentor Matt Hodgson has acknowledged someone in his practice for their dedication to their health by rewarding them as Patient of the Month.

He has a small, entertaining questionnaire about how they came into chiropractic, and the changes they have noticed since being under care. He also asks them some random questions about what their favourite indulgence is, their favourite quote, if they were famous who would they be and other questions that give him more personal information.

He then gets a photo of them and puts it together with some of the questions and answers on a laminated page that goes up in the reception area.

This is great as people generally ask what they have to do to become the Patient of the Month!

He gets to acknowledge someone for their dedication to their health and he has a wall full of great reasons why someone should be under chiropractic care.

- Powerful Practices – Practice Pointers newsletter, April 14, 2011.

Practice #2 – maximise your young patients:

The 2011 Building a Family Wellness Practice seminar will take you step by step through...

• How to create that “it’s normal for children to be adjusted” mindset
• How to have the majority of your patients as children
• How to convert your local MD into a ‘serial referrer’ of chiropractic patients (both adults and children)
• How to generate child new patient referrals from hospitals, midwives, health centres, kindergartens, schools, medical clinics... every single day!

- “Build your Practice... with Children and Families!!” – spend a weekend with Dr Glenn Maginness” brochure (seminars running in Adelaide, Auckland, Melbourne and Sydney from April 2 through October 16, 2011).
So many things these days are vacuously labelled “organic”. It’s going to be one of those words that will be lost to the language - its original meaning already has been lost. At least it is not as bad or silly - yet - as “chemical free” and “nuclear free”. Organic chemistry, as I should know because I wasted many years pursuing it, is the chemistry of the compounds of carbon. Benzene, carbon tetrachloride, the CFCs that drive refrigerators and aerosols, cholesterol, fat, nicotine, strychnine, heroin, the AIDS virus - all these are organic compounds. As is carbon dioxide, strictly speaking, and coal. In contrast, inorganic chemistry deals with the compounds of metals; that is, of most of the rest of the periodic table. The major difference is that organic compounds have covalent bonds (with clouds of electrons hovering in the space among the atomic nuclei) whereas inorganic compounds have ionic bonds (with positively and negatively charged atoms attracting each other across empty space).

Now as for food that is ‘organically grown’ - well, all of it is. Only things like pure-silicon crystals for VLSI chips, and exotic metal rods for lasers, are grown inorganically; chew on one of those and you’d never play the guitar again. Likewise all animals are truly ‘organically’ kept and nurtured, however miserable their circumstances.

Ironically, free-range hens are able to eat gravel to help churn food in their innards, and this inorganic material is notoriously denied to cage birds. All teeth and bones are inorganic (CaCO₃ does contain carbon, but only within the carbonate ions), but hair, fingernails, and shit are organic.

“Organic” has come to mean something like “friendly towards the environment”, or more accurately, “believed by some noisy people who haven’t worked through the science to be friendly towards those parts of the environment that they care about”. Plastic bags, despite being made of carbon compounds, are not said to be “organic” because it is believed that they occupy space in landfill (they don’t); whereas those woven green shopping bags do not degrade and do take up some landfill space. Cars, or at least parts of cars, are now said to be “organic” if they can be recycled, as are parts of computers and printers, etc.

You can buy organic beer, and you can even buy organic magnesium chloride! As Bishop Wilberforce might have said in this context, is it the magnesium or is it the chlorine that is organic? One source claims that their MgCl₂ is organic because it comes from the Zechstein Sea (look it up). Now it is perfectly possible (and economic) to take MgCl₂ from seawater, but their stuff must have been dug up by a deep mining operation in Germany or Poland. Another crowd are getting theirs from Israel’s Dead Sea, where they (or anyone else) can harvest it with a front-end loader. The food additive nigrari is often described as “Japanese magnesium chloride”, because the Japanese get it from the sludge left over from extracting salt from seawater, in a heavy industrial process. So what comes from the Dead Sea could be billed as Jewish magnesium chloride?

A year ago, in order to attempt to resolve the widespread abuse of the word “organic”, and for that matter “biodynamic” - and I won’t specifically outline what that latter word describes, because you will not believe me - Standards Australia published an heroic 92-page standard, AS6000:2009, which “Sets out the minimum criteria to be met by operators before products can be labelled as ‘organic’, ‘biodynamic’ and ‘in-conversion’ or any of these ...”. I remark that addressing biodynamicity must have required an understanding of the thought patterns of the late Rudolf Steiner - quite a feat.

AS6000 comes complete with a workbook for helping readers to understand it, and with a set of formal procedures for getting a certification. So now, anything claiming to be ‘organic’ or ‘biodynamic’ is supposed to address and fulfil the requirements of AS6000:2009, but I haven’t seen much progress in establishing conformity.

Steve Roberts is a chemistry graduate who says he had a choice of unemployment or doing something else.
Chris Higgins experienced TAM Australia from a unique perspective, and one that many would covet.

In 2003, James Randi invited 150 skeptics to Florida for the inaugural Amazing Meeting. The conference featured speakers such as Hal Bidlack, Jose Alvarez and Phil Plait, and was an unprecedented success.

Eight years later, TAM has become a truly international event, having expanded to three continents (for now), and attracting some 1500 people to the annual TAM in Las Vegas. I was fortunate enough to experience the recent TAM Australia from a particularly unique perspective, and I hope you’ll allow me a somewhat self-indulgent 2000 words to describe the event to you.

My first “amazing encounter” was at TAM 8 in July 2010. Attending a Vegas TAM had been on my ‘bucket list’ for a number of years (at number four, immediately below “go skinny dipping with Scarlett Johansson and Jessica Alba”), so in March I bought a flight, booked a room at the South Point hotel and begged my bank to increase my credit card limit. They obliged, and a couple of months later I was sitting aboard a Boeing 777 with a small wad of unfamiliar looking currency in my pocket and about 40 packets of Tim Tams in my checked luggage.

TAM truly is amazing, and there are a number of experiences from the event that I will never forget. I stood in the middle of the Vegas desert next to Phil Plait, as he pointed out planets and stars to myself, Rachael Dunlop and Richard Saunders. I got to attend the inaugural TAM ‘Skeptics In The Tub’ (subtract the traditional pub and add a Vegas size hot-tub). I even got to rub shoulders with TAM 8 keynote speaker Richard Dawkins (although as we were the only two people in the elevator, he politely asked me not to stand so close to him). Though, as you can imagine, there is one person at TAM that everyone wants to meet. The man who started it all - James “The Amazing” Randi.

I find the notion of approaching one of my heroes spectacularly terrifying. I wondered what I might actually say to Randi once I got past “Hi, I’m that guy that e-mailed you that time”. What if he was in a rush to be somewhere, and didn’t have time to stop? Would I say something to make myself look like a bit of a tit? A previous encounter with another of my heroes, Derren Brown, had me rambling about airline weight restrictions and my girlfriend’s obsession with shoe shopping while on holiday. I certainly wasn’t in a hurry to make myself look that daft a second time. Despite encouragement from a number of my new friends, I never once got up the courage to wander over and say hi to Randi, eventually giving up and assuring myself that I would do it “next year”.

Come the Monday, TAM was all over and I was sitting in the hotel restaurant with some other attendees when Randi happened to wander past. He stopped for a quick chat, and I finally got the opportunity to shake his hand and say something to him. Like a modern day Moses, the 200-strong crowd parted before him. Randi was called upon at every opportunity to add his views and comments, including the SGU dinner, where Chris Higgins listens intently and admires the view.

"Like a modern day Moses, the 200-strong crowd parted before him"
hand and say hello. We chatted for a few minutes about the upcoming TAM Australia, and Randi revealed some secret details about the event that I was later begged not to mention to anyone. I left the hotel on a massive high, promising myself I’d return to TAM as soon as I possibly could.

THE OZ FACTOR
A few months later I received a phone call from Eran Segev, president of Australian Skeptics, reminding me that while we were in Vegas I had offered to help out with “anything that I could” during TAM Australia. He told me that he had a job for me that meant I would potentially miss some of TAM. This sounded a bit of a shame, but he added that the committee needed someone to volunteer as James Randi’s personal assistant for the duration of the event, and that they wanted me to do it. You’ll need to check with Eran to find out exactly which expletives I used and in what order I used them in, as the remainder of the conversation is a bit of a blur. I must have agreed, because a little over three weeks later I was standing at the Sydney airport international arrivals gate alongside Richard Saunders.

Surprisingly, I don’t remember being star struck. As I shook Randi’s hand and said hello, my mind flashed back to Vegas and the nervous, chubby guy who couldn’t summon the courage to stroll up to him and have a chat (that, and to the awesome seafood bar at the TAM hotel). As we exited the airport, Randi enquired as to what horrific crime I had committed to deserve the punishment of spending an entire week dealing with a cantankerous curmudgeon such as him, before we hopped into a car that took us back to the hotel.

Randi is unlike any 82-year-old I’ve ever met. After flying from Florida to Los Angeles and then on to Sydney, he agreed to accompany us on a stroll through Sydney and the botanic gardens. We stopped along the way to collect a cavalcade of skeptical celebrities including Team Novella, Rebecca Watson, George Hrab and Brian Dunning. I wondered what kind of effect this herd of critical thinkers could potentially have on the city of Sydney. My mind was filled with visions of pharmacies slamming their doors shut as we passed, and shopping mall reflexologists cowering in fear behind drawn curtains. Sadly, none of these events actually occurred, but we stopped for a brief bite to eat and then continued on through the city.

Following the gardens, Randi retired to the hotel for the remainder of the evening, and I jumped at the opportunity to have dinner with George Hrab, Jay Novella and Rebecca Watson, well aware by this stage that my job certainly came with a few awesome perks.

The following day saw us up early to attend a couple of radio interviews at the ABC, which occupied a significant part of the day. Following lunch, I suggested Randi take a couple of hours to relax prior to his evening TV appearance and the Skeptics In The Pub event. He disagreed, suggesting instead that we visit the TAM venue to see how the preparations were coming along. Having worked on the registration desk at TAM Vegas, I knew that the venue was going to be teeming with attendees registering, and organisers charging around at mad pace. Randi refused to take no for an answer, and soon we were strolling up to the Sydney Masonic Centre – fortunately not far from the hotel – where he spent several hours chatting to the few lucky attendees who happened to be in the right spot at the right time.
Randi's official introduction to the TAM attendees at the City Hotel later that evening was truly remarkable. Randi, along with myself and Tim Mendham, were among the last to arrive, following a trip to the ABC for Randi's appearance on The Drum. As Randi reached the top of the stairs, almost every person in the room turned to look, bursting into a spontaneous round of applause. Like a modern-day Moses standing before the Red Sea (minus the sandals, but with a much nicer beard), the 200-strong crowd parted before him to form a sort of guard of honour. (As I write this, I'm kicking myself for not asking him to walk in front of me every time I went to the bar.)

Randi took a seat on a couch, ordered a drink and got down to the job he came to Australia to do – to meet every person who wanted to meet him, to sign autographs, answer questions and pose for photos.

Just prior to 6am the following morning my phone rang. On answering, a familiar voice greeted me at the other end of the line. "Hello Chris, this is James Randi. Are you awake?" As it turns out I wasn't, but a few minutes later I was staggering down the hallway toward Randi's room, wondering what he could possibly need from me at such a hideous hour of the morning. The door opened before I had the opportunity to knock, and Randi gave me a wink and told me that "he knew I was coming". We agreed that this could only be the result of his finely tuned psychic ability, and began making plans for the day.

Suffering from a severe case of jetlag, Randi had been up since the early hours of the morning working on his next book and on his talk for the conference. Somewhere around 4am he had made a list of well-known American terms that he was concerned would get lost in translation...
translation, and we discussed possible alternatives. Randi, if you're reading this, I'd like to once again sincerely apologise for my initial reaction when you asked me if I had “laundry balls”.

I helped him with some issues he was having with his computer - I was pleased to learn that Randi is a Mac, not a PC - and eventually it was time to head off to day one of TAM Australia.

Much has already been written about the events of TAM, so I need not repeat what others have already said, except to say that we looked upon it, and it was good.

Randi took part in a number of talks and panels, and as I'm sure you're aware was very well received. The event featured some truly incredible speakers, many of whom I had never seen before, but spending the duration of TAM Australia alongside Randi was without a doubt the highlight. The role gave me a unique opportunity to meet a number of my heroes, people who I would normally never have encountered, and to spend time with a man who I have admired for years. We spent hours discussing our common interest in conjuring (Randi prefers to be known as a conjurer rather than a magician), and he was kind enough to teach me a number of his own routines. We discussed the contents of his forthcoming book, *A Magician In The Laboratory*. He told me where he finds his favourite lock picks. (I won't spoil the fun for anyone else, except to say that you can find them in cities all over the world, and should you ever be walking along a street with Randi, he's likely to dash into the path of oncoming traffic to collect one.)

During his closing address, Randi stood in front of the audience and thanked them for coming. He thanked the organisers for their tremendous dedication and hard work, and he thanked me for spending the week working with him. It's a spectacularly odd experience, having one of your biggest heroes stand on a stage and mention you by name. I felt my face go red, and I slowly sank into my seat, all the while hoping that the footage would end up on the DVD so I could annoy my friends and family with it for years to come.

**THE POST-TAM EXPERIENCE**

Randi remained in Australia for a couple of days following TAM, taking time to catch up with old friends. If you happened to notice a helicopter hovering above the Sydney CBD the day after TAM, that was very likely Randi and Dick Smith. The night before he left Australia, Randi joined a group of remaining speakers and TAM attendees for a chat and a drink in my hotel room.

He told us a number of stories, many of which we'd heard before, but nobody seemed to care. We were all aware that Randi hadn't come all the way to Australia to give talks or sell books. He came to meet the people who look up to him, to make new friends and to catch up with old ones, and to inspire the next generation of skeptics. And he succeeded admirably.

The next day I accompanied Randi to the airport, surprised at how quickly the week had passed. As we waited at the check-in desk, we noticed that the woman processing Randi's passport was sporting a Power Balance bracelet. Randi winked at me and whispered, “I don't think we'll mention it.” We walked to the passenger gate, Randi shook my hand and thanked me again, and then he was gone.

If you've got any photos of Randi from TAM Australia, there's a good chance I'm in them, standing in the background looking awkward, or pouring him a cup of tea. I missed out on some of the talks and most of the social activities of TAM, but well and truly made up for it by spending a week working with one of my heroes, who I now consider to be one of my friends. Randi is a remarkable man, and it's thanks to him and his organisation that we have the chance to attend TAM. It is a unique and wonderful opportunity to spend a few, short days with like-minded people, and it's one of the few places in the world where skeptics can feel completely free to speak their mind without fear of potentially offending their friends or horrifying their families.

If you can get to Vegas this July for the Amazing Meeting 9, do not hesitate to walk up to Randi and say hello. It's exactly what he's there for, and he is telling the absolute truth when he says that he wants to meet every single person who wishes to meet him. And do tell him I said hello.

Oh, and Eran.

If you ever need someone to do you another ‘favour’, please let me know.

About the author:

Chris Higgins is a web designer and the founder of the Melbourne Skeptics.

"The role gave me a unique opportunity to meet my heroes."
Proponents of global warming sometimes point to remote Easter Island as a society that deliberately destroyed its environment. Unless we lifted our game, we will devastate this world, just like the Easter Islanders did their island – in particular, by cutting down all the trees as part of the effort to carve, transport and erect the statues that are a feature of the island.

After this short sighted exploitation, the islanders fought a series of civil wars in medieval times over what resources remained, with those wars and their aftermath eventually destroying the culture that built the statues.

This rather grim story is colorful and, for those pre-disposed to believe in the evils of industrial development, it has the ring of truth. As a cautionary tale it has the additional advantage that the general public are aware of the Easter Island statues, but only a handful of scholars know anything much else about the island, let alone anything about the theories concerning the statues. So this version of events was seldom questioned.

What happened on Easter Island will happen to us all.

The trouble with this argument is that the above scenario depends heavily on the ideas of Jared Diamond, a professor of geography and physiology at the University of California, and those ideas should properly be seen more as contested speculation, with recent discoveries making them look shaky indeed. This is not to say that Diamond is wrong. As I’m not an archeologist and have never been to the island, I am not in a position to pronounce on any theory concerning it. But I am entitled to complain about the way Diamond has presented his theories - as if they are established fact, rather than his own ideas which require a lot more evidence before being allowed into the text books.

I was certainly fooled when I encountered them in Diamond’s popular book *Collapse: How Societies Choose to Fail or Survive* (Viking Press, 2005). In this book, a follow on from his best selling *Guns, Germs and Steel*, (Vintage, 1997). Diamond presents a number of examples of known collapses of civilisations, including the Norse colonies on Greenland, the Mayas in Central America, the Anasazi in what is now the American South West, and the society on Easter Island.

There is a lot more in the book, including some material on Australia which is there mostly because Diamond has spent some time in Australia, including a sabbatical at the Australian National University. He says that he likes the place. Despite the title of the book he does not think we are about to collapse but believes we are doing various things wrong. However, while his observations on soil and agriculture have some value, some of his comments on politics and history in that chapter can only be described as nutty.

To examine that chapter briefly, at one point he says that Australia’s agricultural productivity was so poor that it had to subsist on “regular food subsidies” sent from Britain which did not cease until the 1840s. What?!

**HISTORICAL HOWLERS**

A quick check of any history text shows that the first governor, Captain Arthur Phillip, did face immense difficulties in getting agriculture established in a different climate and different continent and with an understandably sullen workforce. He hoped that the first and second fleets would have more food instead of, as it turned out, sick convicts. He had to send out twice for supply ships – once from what is now South Africa and another from India – before the situation stabilised.

Diamond seems to have confused all subsequent shipments of convicts, which did end in the 1840s, with food shipments. The suggestion that the
British authorities regularly exported food in any quantities all the way to Australia in that period is absurd.

At another point, he says that the “Australian constitution gives a disproportionate vote to rural areas”. Again, what? The Federal rural gerrymander, which was swept away by the newly-elected Whitlam government in the early 1970s, never had anything directly to do with the constitution. It was arranged through government instructions to the Australian Electoral Office. Perhaps Diamond is confusing the West Australian state constitution, which still deliberately gerrymanders the state upper house towards rural interests, with the Federal constitution.

There is a great deal more I could say. Diamond does not seem aware of the detailed rural production and farm income statistics kept by the Australian Bureau of Agriculture Resources Economics and Sciences, or international comparisons of agricultural subsidies, or of the agriculture trade figures collected by the Australian Bureau of Statistics. Nor does he understand that agricultural economics often dictates that certain products (such as orange juice, which he mentions) are best produced in different countries. If he had taken time to study any of those sources, the reader might have been spared some of his lectures on how agriculture in Australia is too costly to be economic, and that really we should not bother with it.

The problems cited above are not just slips, they are howlers. As a journalist who has written on agribusiness from time to time over the years, I was unimpressed. And this is a best seller? It was arranged through government instructions to the newly-elected Whitlam government in 1972 to gerrymander, which was swept away by the newly-elected Whitlam government in the early 1970s, never had anything directly to do with the constitution. It was arranged through government instructions to the Australian Electoral Office. Perhaps Diamond is confusing the West Australian state constitution, which still deliberately gerrymanders the state upper house towards rural interests, with the Federal constitution.

DUBIOUS CLAIMS

But a look at other sources indicates that the orthodoxy had changed, and that some of Diamond’s assertions are doubtful. For example, he insists that the Greenland Norse did not eat fish, citing as evidence a lack of fish bones in what amounts to Norse rubbish heaps carefully analysed by scholars. He supposes that there was a previously unknown cultural taboo against eating fish.

No other scholar seems to agree with him and, in any case, isotopic analysis of the bones found in Norse graveyards indicate that they did. Further, the analysis shows that more of the Norse food came from the ocean, over time, and less from their farms, as the climate changed, until 80 per cent of their diet was from the sea. In other words, they did adapt. (“C-14 dating and the disappearance of Norsemans from Greenland”, *Europhysics News*, May/June 2002.)

In addition, although there is evidence of individuals being driven to desperation in one excavated farm, in another, scholars, led by Dr Jette Arneborg of the Danish Museum in Copenhagen, suspect that the inhabitants simply packed up what they could take with them and left. (*New York Times*, May 8, 2001. In online comments Arneborg is scathing of Diamond, although Diamond quotes her extensively.)

The black plague in Europe in the 14th century wiped out one third of Europe’s population and offered new economic opportunities, so rather than go native, and the Inuit lifestyle was no bed of roses, the Norse may simply have moved to Greenland’s near neighbour, Iceland. In those days, of course, emigrants did not fill out visa forms or postal change of address cards, they simply left. A point in favour of the argument is that only bodies found in excavated Norse settlements have been deliberately buried and there is no sign of a final collapse. Diamond insists that they had no boats so they could not move, whereas scholars think they did have boats, and he explains away the absence of starved corpses by one means or another. Another strand to the emigration argument is that, at the time, ivory from African elephants was displacing the more expensive ivory from walrus tusks, which was Greenland’s main source of trade at the time. (Scholarly papers have been published in the journal *Arctic Anthropology*.)

None of this is definitive, of course. The mystery of the vanishing Norse colonies will be kicked around for many years yet, but it does make more sense than the failure-to-adapt scenario. This was all known before Diamond wrote *Collapse*, but he does not trouble his readers with the information.

After all that we have finally arrived at the chapter on Easter Island, which is the main source of the sensational theory outlined at the beginning of the article. Magazine articles preceded the book and other scholars – notably academics John R Flennley and Paul G. Bahn who wrote *Easter Island, Earth Island* – have speculated about a collapse in the Eastern Island culture predating western contact. [There was even a Hollywood Kevin Costner-produced film, *Rapa Nui* (1994), which proposed the same ecological disaster theory – Ed]. But most references for the collapse story are to the chapter on Easter Island in *Collapse*. In any case, it is by far the most detailed.

Diamond seems to have spent some time on the island, which is indeed isolated. South America is 3000 kilometres to the East and Pitcairn, the closest habitable island, 2000...
Easter bunnies

Continued...

kilometres to the West. Despite this isolation, quite a parade of scholars have found their way to the island, including others less distinguished than Diamond but with their own theories. Thor Heyerdahl of Kon-Tiki expedition fame in the 1940s claimed that Eastern Polynesia, which includes Easter Island, was first inhabited by white skinned people fleeing from South America who built the statues. That race was conquered by stone age North Western American Indians. Scholars paid very little attention to Heyerdahl at the time, and DNA testing has since conclusively disproved his ideas. In the 1960s Erich von Daniken claimed that the statues were the work of an advanced alien race.

Diamond says that after arriving in 900 AD (or CE in the new style) the Polynesian settlers started cutting down the island’s trees in part to make the ropes, rollers and levers needed to move the monstrous statues that are a feature of the island. This was done, he says, at the behest of their priests and chiefs who wanted to the statues to demonstrate their own power.

When all this destruction caused the island’s ecosystem to collapse, the connection the chiefs claimed with the gods was shown to be false, Diamond says, and they were overthrown by military leaders called Matatoa. The island’s society degenerated into civil war.

The islanders started to live in caves for protection and even practised cannibalism, so that there was only a remnant by the time a Dutch explorer made the first European contact in 1722. As is widely acknowledged the subsequent history of Easter Island is very sad. European contact introduced diseases, and slave raiders took away most of the population that was left.

That is the dramatic tale that Diamond has to tell and there are points in its favour. The island is known to have been covered by trees for thousands of years, but had lost at least a large part of that cover by the time of European contact (the very early accounts are contradictory). It’s known that the islanders started to live in caves. The island is littered with spear points and a human bone, cracked to extract the marrow, Diamond says, was found among a number of other bones. Island folk tales also talk of fighting long ago.

A closer look at the material he presents, however, suggests that much of what he puts forward is speculative. Thus: “The increase in statue size with time suggests competition with rival chiefs commissioning the statues to outdo each other”. He draws parallels between their behaviour and the apparent urge of major Hollywood players to build ever bigger mansions.

CRITICAL VIEWS

Diamond’s theories are also very strongly disputed by academics in that field, notably Benny Peiser an anthropologist from Liverpool John Moores University. Peiser says that the Easter Islanders adapted well to their environment, making statues every few years. The reason they stopped making the statues is the obvious one, the onslaught of European diseases and mass abductions by slave traders which destroyed the society. (From Genocide to Ecocide, The Rape of Rapa Nui, Energy & Environment, 2005.) He says that the islanders tales of fights in the distant past relied on by Diamond for his theories have been shown to be confused communal tales of far more recent fights with the slave trader gangs.

This does not mean the islanders were angels who dared not touch a tree. They certainly helped the deforestation process by cutting down trees There just does not seem to be any real evidence that they blindly cut down everything at the behest of their chiefs, as Diamond alleges. As noted, the island’s culture was all but destroyed, so there is no direct evidence on why the statues were built or over what period, and there are difficulties in carbon dating them. Hunt, a professor of archaeology at the University of Hawaii, who has conducted several digs on the island. He says archaeological evidence clearly points to the main cause of the demise of the island’s tree cover as rats, introduced by the islanders, eating the seeds of trees before they could germinate. Further, at least a part of the island still had trees by the time of first European contact. (American Scientist, October 2006.)

That this does not mean the islanders were angels who dared not touch a tree. They certainly helped the deforestation process by cutting down trees There just does not seem to be any real evidence that they blindly cut down everything at the behest of their chiefs, as Diamond alleges. As noted, the island’s culture was all but destroyed, so there is no direct evidence on why the statues were built or over what period, and there are difficulties in carbon dating them. Hunt adds that the island’s population grew to about 3000 and remained stable, without any sign of a collapse triggered by deforestation.
Hunt’s work is, in turn, part of a
major overhaul of scholarly thinking
about the islands of Eastern Polynesia
in that they now believe the first settlers
arrived in the thirteenth century AD,
or much later than 900 AD date
which Diamond uses (“High-precision
radiocarbon dating shows recent and
rapid initial human colonisation of
East Polynesia”, Janet M Wilmshurst,
Terry L. Hunt and others, Proceedings
of the National Academy of Sciences,
February 1, 2011).
Should that much later date be
accepted, scientists will have to
completely revise what they thought
they knew about the interaction
between humans and the animals they
introduced, with the environment on
various islands.
Diamond has since bitten back,
pointing out, among other things,
that there is evidence that the islanders
affected their environment. Perhaps,
but the original thesis was that they
destroyed their environment through
short-sighted exploitation.
Again, please note, this is not to
say that Diamond is wrong, but only
that the world has paid far too much
attention to his theories. Until he
can point to hard proof, such as an
archeological dig by an independent
scholar which shows substantial
evidence of a collapse of the island
society pre-dating western contact,
there is no reason to pay any more
attention to these theories than, say,
suggestions that the siege of Troy
really occurred in England, or that the
Arc of the Covenant is in Ethiopia.
There is nothing to really contradict
those notions, but not much to
confirm them either.
In any case, as we have seen,
Diamond’s track record in other
chapters in Collapse is mixed, to say
the least. Had he been on the other
side of the global warming debate,
any one of the previously mentioned
howlers in the chapter on Australia
would have spawned whole web sites
dedicated to attacking
the man.

**About the author:**
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Financial Review.

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**The Logical Place**

Seasoned skeptics may be familiar with
two well-known logical fallacies:
1. The Argument from Personal Abuse or
   the ad hominem argument; and
2. The Argument from Authority or
   Appeal to Authority.

When you think about it, these
fallacies make the same error of logic
– they both draw conclusions from the
character of the arguer rather than the
factual premises of the argument.
In informal logic, these are known as
“fallacies of defective induction”, where
it is argued that a statement is true or
false because the statement is made
by a person or source that is commonly
regarded as authoritative or not
authoritative. The most general structure
of this argument is:

**Premise 1:** Source A says that
statement p is true;

**Premise 2:** Source A is authoritative;
Conclusion: Therefore, statement p is true.

**CONVERSELY**

**Premise 1:** Source B says that
statement p is true;

**Premise 2:** Source B is a ‘bloody idiot’;
Conclusion: Therefore, statement p is false.

For example, we skeptics are often
sceptical of conspiracy theories, such as the
so-called Moon landing hoax. Conspiracy
theories like these are often a special case
of the ad hominem argument:

**Premise 1:** NASA claims to have landed
men on the Moon;

**Premise 2:** Governments can’t be trusted;

**Premise 3:** NASA is a government agency;

**Conclusion:** Therefore, NASA’s claim is false.

These arguments are fallacious because
the truth or falsity of the claim is not
necessarily related to the personal qualities
of the claimant, and because the premises
can be true, and the conclusion false (an
authoritative claim can turn out to be
false). If the premises can be true, but the
conclusion can be false, then the argument
is logically invalid. (A logically valid
argument is one where if the premises are
ture, then the conclusion must be true by
virtue of the argument’s logical structure.)

- by Tim Harding
The University of Adelaide’s Bachelor of Nursing’s academic program includes: “Preparation for evidence-based practice the statement that ‘All teaching and learning will be strongly research-orientated and clinical decision-making skills will be evidence-based”. This attitude seems to be borne out in one suggested study program which includes a two-level course on Pharmacology & Complementary Therapies. This

Curiouser and curiouser might be the only way to describe the results of our investigation of the Australian universities not covered in our previous study (Degrees of Woo, The Skeptic, 31:1, p20).

In this part of the investigation, we looked at the course descriptions of the following universities (all members of Universities Australia):

• Australian Catholic University
• Australian National University
• Bond University
• Central Queensland University
• Charles Darwin University
• Deakin University
• Flinders University
• Griffith University
• James Cook University
• La Trobe University
• Queensland University of Technology
• Swinburne University of Technology
• University of Adelaide
• University of Ballarat
• University of Canberra
• University of Melbourne
• University of New England
• University of New South Wales
• University of Notre Dame Australia
• University of South Australia
• University of Southern Queensland
• University of Tasmania
• University of the Sunshine Coast
• University of Western Australia
• University of Wollongong
• Victoria University.

Things we found? Well, some were positive, some intriguing, some a concern, and some downright weird. Several of the institutions we investigated are not included in the following descriptions. This indicates that there were no obvious cases of pseudoscience – it does not, however, mean they do not have any. In Part 1, some instances were missed; see the item at the end of this article for an update on additional woo at RMIT - strange energies and wellness at a former institute of technology.

But listing here does not necessarily mean we are critical of the institution or the course described. Quite the opposite. Individuals may include less-than-proven subjects in their lists of areas of interest as part of a justified and dispassionate researching of the field, which is to be applauded.

Then again ...
covers "the pharmacological treatment of diseases using an evidence based, systems approach. There will also be content on natural remedies and therapies for common conditions" (first level) and "will facilitate student learning of the pharmacology treatment of disease for common pathological conditions using evidence based, systems approach. Natural remedies and complementary therapies for pathophysiological conditions will also be considered" (second level).

The university library's online facility includes links to information on complementary medicine and alternative therapies, primarily journal articles. The veterinary stream of alternative treatments is interesting, having links to "AltVetMed Complementary and alternative veterinary medicine", and "Veterinary Acupuncture - Phil Rogers, Ireland. Includes directory of societies and practitioners". The first of these is in Georgia, USA, and the other in Dublin, Ireland. There are no other veterinary alt med links.

Another link is to an honours thesis on "complementary therapies for improving lactation and treatment of insomnia during pregnancy - what remedies are successful?", undertaken in the School of Paediatrics and Reproductive Health, Faculty of Health Sciences.

The Australian National University must surely have an alternative function that ranks among the strangest offerings in this whole investigation.

The ANU School of Music had among its visiting fellows for 2010 Dr Hazel Hall, BA PhD (Monash), TPTC (Toorak Teachers’ College), and Advanced Dip Naturopath Cert 4 Massage (CIT).

What exactly a naturopath has to do with music is moot, but she is no newcomer to ANU. On the School of Music Open Day in August 2008, she offered two events – a gamelan performance, and lecture on "performance wellness".

A curious example of university wooishness was a paper published in the Asia-Pacific Magazine (No. 2 May 1996, pp. 23-24). The magazine (now defunct) was published by ANU’s Research School of Pacific and Asian Studies.

The article in question was by Peter Raftos, who looked at psychic surgery in the Philippines, under the title "Clever Hoax or Natural Healing?".

"Is psychic surgery a clever hoax, or is it real? The healers and their apologists do not make any claims for miracle cures: while there have been some apparent complete remissions of cancer or polio, any improvement in a patient's condition will, they say, generally come only gradually, after repeated treatment. Also, there are no accurate records available on the results of the treatments offered by the high-profile healers, so it cannot be claimed with any accuracy whether they have managed to cure, alleviate or

CAM CODES

Just for the record, the Australian Bureau of Statistics lists the following fields of research codes:

1104 - Complementary and Alternative Medicine
- 110401 - Chiropractic
- 110402 - Naturopathy
- 110403 - Traditional Aboriginal Medicine and Treatments
- 110404 - Traditional Chinese Medicine and Treatments
- 110405 - Traditional Maori Medicine and Treatments
- 110499 - Complementary and Alternative Medicine not elsewhere classified

Useful to know that CAM has numbers, somewhere.

But on the broader picture, and drawing on the 2004-5 National Health Survey, the ABS includes the following result:

"Did they also visit doctors? One of the concerns regarding complementary therapies is that people may undergo risky treatments, or fail to access proven treatments from the mainstream health system. It is therefore of interest to know whether people used complementary therapists together with, or as an alternative to, the health care offered by general practitioners or specialists. Just under one-third (32%) of people who had visited a complementary health therapist had also visited a doctor in the previous two weeks, rising to 63% who had visited a doctor in the previous three months. Of people who had visited an acupuncturist during the last two weeks, 45% reported that they had also seen a doctor during this time. While these people may have discussed either the same or different conditions with their doctor and complementary therapist, they were nevertheless in touch with mainstream medicine."
The Curiosity Shock

Continued...

worsen the health of their patients to any significant degree.

“Then there is the question of whether or not the healers can literally open a body with their bare hands, stimulate healing or excise diseased parts, and then seal the body without leaving a wound. The converted say ‘yes’, while the sceptical remain unconvinced. [This has to rank among the most naive statements ever put forward by an academic at any level.] Even if the whole surgical procedure is a clever case of sleight-of-hand (material removed from patients often turns out to be pigs’ blood or chicken entrails under laboratory scrutiny), it is possible that the theatrically-satisfying nature of the whole event (it is, after all, a good show) serves to trigger healing mechanisms within the patient. The stage presence or charisma of the healer may also be an aid here.”

He goes on to describe the placebo effect, and then continues: “Many of the patients claim that the treatments do help alleviate the symptoms, or even provide a partial cure. If it is effective, then it may not be the actual techniques employed by the psychic surgeons that induce some degree of recovery but rather the atmosphere within which the whole procedure takes place which makes that procedure effective. And this may shed light on the practices of some Christian faith healers, particularly evangelists: perhaps there is something to it, after all.” Gosh golly, no comment. And this published in the official journal of a school in one of Australia’s leading places of learning.

But one question remains. Is the Peter Raflos of psychic surgery fame the same Peter Raflos who wrote a book titled The Stone Ship (published by Pandanus Books, 2005)? We hope so, because the synopsis from Amazon sounds like a perfect summation of the academic environment: “Set in a university managed by a Kafkaesque bureaucracy, The Stone Ship follows the adventures, misalliances and misdeeds of the suicidal Shipton and the ghost who has saved his life, and who demands a favour in return. Shipton’s experiences within the university are played out on the fringes of an administration that destroys lives with paperwork, rioting librarians who hunt for students, and academics who dwell in the half-light of scholarly delusions. Lurking in these crumbling halls of esoteric learning is a creature whose monstrous malevolence is fed by the corpses of the unworthy. Ultimately, Shipton’s salvation lies in the choice between assimilation or rejection of his surroundings. In this fantastic work of fairy tales turned sour and grown malevolent with age, the monsters are less dangerous than the humans who feed them.”

On a more serious note, Dr Lisa Alleva of ANU’s College of Medicine, Biology and Environment has undertaken research on “Using complementary and alternative medicines to target the host response during severe influenza”. Alleva works as her own post-doctoral fellow on two NHMRC-funded projects. The first examines how traditional Chinese

The name’s Bond ... anti-woo Bond

In perhaps the most positive news we’ve come across in any of our searches, the course description for Bond University’s Bachelor of Biomedical Science has the following: “Biomedical Science is the study of the human body, and its structure and function in health and disease. This structured program develops student knowledge in the molecular, cellular, anatomical and physiological processes of the human body. There is a strong emphasis on developing scientific communication, research and writing skills, high level analytical reasoning and critical thinking.” [Our emphasis]

But wait, there’s more: The Faculty of Law includes a course on “Complementary Medicine: Law, Policy and Ethics Prerequisites”. The course description, and we publish it in full, is as follows: “Complementary and Alternative Medicine (CAM) is consumed or used by a large percentage of population (25%) and involves expenditure in excess of $6 billion in Australia. This form of healthcare that includes chiropractic; osteopathy; TCM; acupuncture; naturopathy; therapeutic massage and homeopathy lacks broad legislative acknowledgement and the support of orthodox medicine. In recent years the legislative obstacles to the provision of this form of therapy have been moderated. This course will approach this subject from an industry regulation perspective. The discussion of CAM will necessarily involve an appreciation of government regulation to the health sector as a whole so that students can understand the role played by this form of health care. The legal framework within which both registered and unregistered CAM practitioners operate will be dealt with including health registration statutes; the Therapeutic Goods Act (Cmth); the common law and civil liability legislation will be surveyed. The application of CAM raises unique ethical and philosophical dilemmas that will be explored. [Again, our emphasis] Where relevant the models of regulation applied internationally will be covered.”

And the espoused learning outcome? “To be able to argue the issues relevant to the legal and ethical dilemmas created by the application of complementary medicine by orthodox medicine practitioners both in Australia and internationally.”

While many universities offers courses that give a professional grounding in fringe medical practices, with the aim of putting practitioners out into the health marketplace, there are no such courses at Bond University. And of all the universities we’ve investigated – and we’ve now investigated all of them within Universities Australia’s coverage – this is the only one which specifically looks at the ethical, legal and philosophical ramifications of CAM, and should thus be applauded for its application of rational and critical thinking.
medicines, for example glycyrhizic acid from licorice root, might be used to treat immune pathology during severe influenza. The second, now completed, project was a 12-month "highly focused" examination of the use of immunomodulatory agents as treatments during severe influenza, and how these might increase resistance to secondary infection. Grant funding from the National Health and Medical Research Council began in 2008 and totalled close to $300,000 over three grants.

None of Alleva’s cited areas of interest seem to be along CAM lines.

An unusual juxtaposition is found the University of Ballarat’s Centre for Informatics and Applied Optimization (CIAO), a “unique research centre, established in 2001 and located within the Graduate School of Information Technology & Mathematical Sciences at the University of Ballarat”.

In an amusingly-titled section “CIAO team climbs the HIL (Health Informatics Laboratory) of health care”, the Centre’s website declares that “Providing adequate health care for all is a significant global issue that is stretching every nation’s resources. There is no doubt that information technologies will be at the centre of any progress. Researchers at UB’s Health Informatics Laboratory (HIL), a group within CIAO, believe we must adopt new ways of thinking about health care. This involves new ways to apply information technologies.”

More on “new ways” later.

The information continues: HIL focuses on “research and development in Informatics to improve health outcomes nationally and globally. It undertakes research using innovative technologies to solve problems in health, with an emphasis on system interoperability, complementary medicine and decision support.”

Complementary medicine and system interoperability? Interesting.

“It is particularly concerned with the practical applications of communications technologies to enable appropriate access to healthcare information by healthcare providers.”

“HIL can provide expertise in the areas of electronic decision support systems and data mining in health, health data and knowledge management, health education, interoperability of healthcare information systems, and complementary medicine.”

There it is again!

Yes, in among data mining, computer games and simulation development for people who stutter, computational intelligence and decision support and, importantly, analysis of polysomnographic data for sleep apnoea analysis, there is: “Complementary Medicine - health informatics for an integration of complementary and Western medical systems, and mathematical model of TCM (traditional Chinese medicine).”

And we thought IT people were so firmly planted in rationality and real-world functionality (World of Warcraft notwithstanding).

Nonetheless, we would welcome seeing HIL’s results on integrating complementary and Western medical systems. We have asked, and will keep you informed.

The University of Canberra has an interesting paper published under its aegis: “Econometric modelling of the impact of the use of complementary and alternative medicines on the PBS” by Sophie Thiebaut, published in June 2008. Thiebaut was a Visiting Research Associate of the National Centre for Social and Economic Modelling.

Just for the record, it should be noted that the Central Queensland
The Curiosity Shock

Continued...

the city than the person, we would hate to think it would do anything other than apply some sort of scientific method.

The School of Health's Bachelor of Health Science has a course on Research and Evidence-based Health, which "provides a foundation for the critique of the research literature and the application of theory to practice. The unit provides students with a solid knowledge base that familiarises them with the foundations of inquiry-based learning so they are better placed to become confident and competent nurses whose practice is informed by evidence. The evidence-based application of research findings to clinical practice is critically reviewed and students are introduced to a range of research designs and methodologies."

In addition, the Master of Public Health degree looks at qualitative research methods: "The unit introduces students to the principles and practical skills entailed in qualitative research, and should equip students either to plan and carry out qualitative research projects, or to integrate a qualitative component into projects involving quantitative research. Topics covered include: the distinguishing characteristics of qualitative research; ethical issues; main methods of collecting data; sampling in qualitative research; sorting, indexing and analysing qualitative data; use of computers, and writing."

Deakin's top nurse

Prof Trisha Dunning, who holds a chair in nursing at Deakin University's School of Nursing, has received numerous highly-regarded awards and recognitions. In 2004 she was awarded the Order of Australia. She is the nursing representative on the Federal Dept of Health's National Medicines Policy Committee in recognition of her expertise in the field.

(For the record, Prof Alan Bensoussan, executive director of the National Institute of Complementary Medicine and previous Foundation Director of the Centre for Complementary Medicine Research at the University of Western Sydney (2001-2008), is the complementary medicines expert on the National Medicines Policy Committee. He has been in clinical practice in Chinese medicine for over 25 years and "an active researcher". He is a member of the Complementary Medicines Evaluation Committee of the Therapeutic Goods Administration, and has served as a short-term consultant to the World Health Organisation.)

Dunning is also a vice-president of the International Diabetes Federation.

Diabetes is a priority in Dunning's research interests, which include the effects of beliefs and attitudes (people with diabetes, their families, and health professionals) on diabetes self-care and health outcomes; nursing management of people with diabetes across the care continuum; medicine self-management, quality use of medicines, and attitudes and beliefs about medicines and how they impact on health outcomes; and complementary therapies and their safe use with a particular focus on diabetes.

She is co-author of the 2010 paper Complementary medicines and other therapies: a balanced perspective, in Conquest, Australian Diabetes Foundation, Melbourne, Vic, as well as Developing and validating a questionnaire to measure spirituality: a psychometric process, published in the Global Journal of Health Science, Canadian Center of Science and Education. The purpose of this latter paper “is to describe the processes undertaken to evaluate the psychometric properties of a questionnaire developed to measure spirituality and examine the relationship between spirituality and coping in young adults with diabetes. The specific validation processes used were: content and face validity, construct validity using factor analysis, reliability and internal consistency using test-retest reliability and Cronbach's alpha correlation coefficient. The exploratory factor analysis revealed four factors: self-awareness, the importance of spiritual beliefs, spiritual practices, and spiritual needs.”

Dunning is also a member of the Australian Aromatic Medicine Association, the peak aromatherapy association in Australia, and the Complementary Therapies in Nursing Special Interest Group, part of the Australian Nursing Federation (Victorian Branch). The CTNSIG “recognises the importance of treating the patient as a whole person, encompassing physical, mental, emotional and spiritual needs. This SIG provides professional development opportunities and a forum for nurses to exchange ideas.”

She is also a member of the International Society of Complementary Medicine Research, an “international scientific organisation of researchers, practitioners and policy makers that fosters complementary and integrative medicine research and provides a platform for knowledge and information exchange to enhance international communication and collaboration.” The ISCMR’s 6th International Congress took place in May this year in Chengdu, China, and its program covered “evidence-based investigations, risk of bias assessment and quality of evidence” plus, perhaps understandably considering the location, a number of sessions on acupuncture and traditional Chinese medicine.

Flinders' woom and molluscs

Flinders University’s Office of Research lists the Australian Spinal Research Foundation's invitation for expressions of interest for grants to support research initiatives.

“Funding will favour those grant applications that contribute to the development of chiropractic in key priority areas. For the 2010 round Research Priorities include: “Fundamental Research - The
Foundation is interested in supporting research that expands our knowledge and understanding of the vertebral subluxation complex.

“Clinical Research - The Foundation is interested in clinically oriented studies that contribute to and expand our knowledge and understanding of the impact of chiropractic adjustments on the spine, nervous system, global health and quality of life.”

It’s too late to apply, though, as applications closed on May 7, 2010. But we look forward with great anticipation to the grant winner’s findings on chiropractic’s impact on global health.

At the same time, Flinders announced a clinical placement scholarship, offered by Services for Australian Rural and Remote Allied Health (SARRAH), which receives funding from the Australian Government Department of Health and Ageing to administer the allied health component of the Nursing and Allied Health Scholarship and Support Scheme (NAHSSS).

The scholarship “supports allied health and oral health students to undertake a clinical placement in a rural or remote Australian community during their degree”. Among topics such as physiology, medical imaging, podiatry and psychology, the NAHSSS Allied Health Clinical Placement is open to individuals studying a degree in chiropractic, and osteopathy.

No homeopathy, but that is alluded to in a past medical biotechnology, School of Medicine honours project on “The Australian Muricidae mollusc, Dicathais orbita [which] produces a range of bioactive compounds. Two of these, tyrindoleninone and 6-bromoisoatin have shown antibacterial and anticancer effects in vitro. Muricidae molluscs are also the source of a homeopathy remedy used for the treatment of gynaecological disorders including chronic endometriosis, polycystic ovary syndrome and cancer of the uterus. To date the compounds from D.orbita have only been assessed against human lymphoma, colon and breast cancer cell lines, but the reproductive toxicity has not been assessed. The project aims to screen the bioactive compounds from the marine mollusc D.orbita on primary-derived human granulosa cells and compare with human reproductive cancer cell lines.”

But not all is lost. Past Skeptic contributor and Centre for Neuroscience life member Prof Marcello Costa has had an article published online (29 March) by The Conversation entitled “A neuroscientist’s view: spare children the manipulations of chiropractic quackery”. Thank you, Marcello.

Among the offerings of the Griffith University Health Service are emergency and first aid, immunisations and overseas travel vaccinations and advice, a confidential needle exchange, and acupuncture. Hopefully they don’t get them mixed up

The University of New England confidently states that: “With the increasing global trend towards the provision of a more integrated and interdisciplinary approach to health care [is there? - Ed], there is a growing need to develop broad based health awards which combine a high standard of practitioner training with a solid foundation for understanding the biopsychosocial aspects of health and illness.”

“‘The University of New England’s Complementary & Allied Health program addresses this need by offering integrated, practitioner-based awards, at both undergraduate and postgraduate levels.”

To the self-asked question, Why Study Complementary and Allied Health at UNE?, the promotion continues: “Complementary and allied health practitioners with vocational section qualifications - including naturopaths, herbalists, aromatherapists, beauty therapists[?], massage therapists, reflexologists, poliatrists [sic], paramedics, ambulance officers - have the opportunity to use their qualifications and professional experience to gain entry into the Bachelor of Applied Health [which, curiously, at time of writing, there is no information about]. Fields of study are designed to encourage the practitioner to develop a critical and informed awareness of their own professional practice, and include current health research; advanced applied physiology in areas such as stress, nutrition and ageing; counselling and communication skills; and exploration of issues such as the role of complementary and allied [...] in ageing and chronic illness.”

Apart from the non-existent Bachelor of Applied Health, the university also offers a Masters of Health Science, which covers epidemiology and biostatistics, but no apparent CAM.

It gets down to brass tacks with the Graduate Diploma and Masters level qualifications in Health Science (Herbal Medicine).

These are “specialist courses designed for graduate health professionals, including naturopaths, doctors, nurses, pharmacists, herbalists, homeopaths and dieticians. ... A framework for professional practice is based on perceived individual patient needs, current scientific research, acknowledgement of herbal medicine traditions and principals of evidence-based practice.” Which may be a contradiction in terms.

This set of courses does not come unnaturally to UNE. The university’s former Pro-Vice Chancellor, Professor John L. Dillon, an agricultural economist who died in 2001, was an “esteemed economist of international stature”), according to a university obituary.

John L. Dillon, an agricultural economist who died in 2001, was an “esteemed economist of international stature”), according to a university obituary published in the year of his death.

While agricultural science might have been his forte (“an agricultural economist of international stature”), the university praises “Dillon’s span of interests [which] went well beyond his chosen profession. His willingness
The University of NSW has one of the strangest additions to the growth of woo in universities.

The Australian Graduate School of Management is one of the leading providers of MBA qualifications in Australia. You would think its ‘we mean business’ approach was also indicative of a ‘no nonsense’ attitude. But strangely, the AGSM’s Managing Your Learning 2010 program, Appendix 5, includes guidelines on how students should present summary examples:

“There is not one right way of representing your summary. It is important to do what works best for you. Here we have represented three ways in which the article on Holism could be represented. Each organises its material differently and selects differing amounts of information to record.

“Organisational intervention

“Health analogy: homeopathy – treating body, mind and spirit not the symptom. Application to business organisation: identify and address the core organisational issues not the quick fix solutions for the symptom (e.g. absenteeism, turnover etc).

“Further analogy: health and illness coexist, not mutually exclusive. Application to leadership: not expect to keep organisation operating perfectly.

recognise all organisms move in and out of peak performance; concentrate on balance.

“Self-care and self-healing: must come from the individual. Application to organisation vis-à-vis role of consultants: consultants can only facilitate the process, cannot heal the problem – this comes from within the organisation that must conduct its own strategic analysis, planning and problem-solving.”

A secret homeopath inculcating Australia’s next generation of business leaders? Well, at least they’ll be totally ineffective.

Perhaps this is influenced by a survey of UNSW medical students in 2004, and summarised in an article by Louise Wright in the July 2004 edition of the university’s Uniken magazine.

Wright says that: “The majority of medical students would like to receive information about complementary and alternative medicine (CAM) in their undergraduate training, so that they can respond to questions from future patients and to understand the treatments some patients may be using.

“This is the finding of a survey of UNSW medical students by the School of Public Health and Community Medicine. Lead author, conjoint senior lecturer Dr Susan Furber, said that the 374 students who responded to the survey showed little knowledge of the effectiveness or potential harm of many of the CAM therapies.

“With community use of CAM on the increase, the limited knowledge of medical students raises important issues,” Dr Furber said.

“These medical students will go on to treat patients who use CAM and they need the tools to evaluate those therapies.”

“In this survey, the twelve complementary and alternative therapies raised were acupuncture, chiropractic, hypnosis, meditation, osteopathy, herbal medicine, naturopathy, spiritual healing (Reiki), homeopathy, aromatherapy, reflexology and vitamin and mineral therapy.

“The majority of students rated acupuncture as being effective, followed by meditation, chiropractic and herbal medicine. More than half did not have an opinion about the effectiveness of the other eight therapies.

“The majority of students also had no opinion about the potential for harm of a total of eight therapies. Nine percent of the students who responded to the survey had consulted a CAM practitioner themselves, most commonly Chinese herbalists and acupuncturists.”

Further on the development of UNSW’s medical students is the fact that three such students, Gabrielle Sidaway, Peter Cattley and Christina Piper, were winners of the 2000 Masters of Chiropractic Best Poster Presentation for “Cystic Fibrosis - Complications Ahead”.

Dr Matthew Leach, a Research Fellow in the Division of Health Sciences of the School of Nursing and Midwifery, lists the following teaching interests:

- Evidence-based practice
- Naturopathic medicine
- Nursing practice
- Complementary & alternative medicine
- Integrative health care

He has published a book, Clinical Decision Making in Complementary & Alternative Medicine, which “differs from other medical texts by introducing a systematic clinical framework for the practice of complementary and alternative medicine. While comparable titles may explore the use or efficacy of specific complementary and alternative medicine interventions, this indispensable textbook highlights evidence-based interventions, while helping practitioners apply them within a clinical decision making framework.”

His LinkedIn page says that he “has a background in nursing, naturopathy and clinical research, and holds a Bachelor of Nursing (honours) degree, a Diploma of Applied Science (Naturopathy), a Diploma of Clinical Nutrition, and a Doctorate of Philosophy (PhD). He has expertise in naturopathy, herbal medicine, and complementary and alternative medicine.”

Throughout his university CV and
Integrative Medicine was cancelled. Swinburne University’s Graduate Diploma of Applied Science in Integrative Medicine was cancelled without any caveats or critical appraisals. While this review of his presentation suggests the following might benefit from a naturopathic consultation:

- **Chronic conditions**: arthritis, irritable bowel syndrome, osteoporosis, eczema, period pain, hypertension, oesophageal reflux, asthma
- **Acute conditions**: colds, influenza, sinusitis, ear infections, urinary tract infections
- **Prevention**: preconception care, stress/lifestyle/diet management
- **General wellbeing**
- **When orthodox medicine fails**

With the reference to “orthodox medicine” he offers a clear differentiation with naturopathy. He includes several sources of information about naturopathy, including the Australian Naturopathic Network, hardly an impartial source, and the MyDr sections of MIMS (http://www.mydr.com.au/complementary-medicine/naturopathy), where the coverage of naturopathy is uncritical, to say the least.

He also includes links to where the audience – aged people – can find a naturopath.

While this review of his presentation is based on the slides alone, and not any accompanying notes or comments, the information that is available appears to be a ringing endorsement of naturopathy, without any caveats or critical appraisals at all.

**Swinburne’s Loss**

Sadly for CAM proponents, Swinburne University’s Graduate Diploma of Applied Science in Integrative Medicine was cancelled slowly and permanently back into shape. Children who have chiropractic care respond best when that care is given early in life, preferably before they are four months old.” The clinic’s name is attached to the information sheet.

Chiropractic assistant position at the Back to Balance chiropractic clinic in West Hoxton, Sydney, which in addition to chiropractic offers acupuncture and psychology services. The latter covers “Maternal Minds pregnancy support counselling services. Maternal Minds is committed to providing specialized counseling support to women that have concerns about their current pregnancy or a pregnancy that has occurred in the last 12 months.”

Last year, it advertised an associate position at the Pure Wisdom Chiropractic & Lifestyle clinic in Wonthaggi, Victoria. “Our principal chiropractor, Dr Sarah Pearce (formerly Martin), is fully booked with a waiting list of new patients, and ... is looking to reduce her hours and physical workload and bring another inspired, passionate family chiropractor on board to serve this hungry-for-health community. We utilize a variety of techniques, including diversified, SOT, TRT and CBP. The centre currently holds weekly workshops, seasonal food cleanses, offers homeopathy and massage, and is constantly evolving.”

The department’s employment opportunities page does have a caveat: “The Department does not endorse or ratify the following advertisements. It is the responsibility of the applicant to carry out their own research as to the bonafides of the below employers.” Publication on its site, however, does imply some sort of endorsement, or at least it publicises operations that are not diametrically opposed to its own.

**MACQUARIE’S RETURN**

For the record, Professor Stephen Thurgate, Executive Dean, Faculty of Science at Macquarie University, did respond to our earlier request for comment on that university’s chiropractic courses, but too late for it to be included in the first part of this investigation (see Degrees of Woo, The Skeptic, 31:1).

He writes: “Thank you for your letter and for the opportunity to respond. As a University at the forefront of research and teaching in Australia, we offer rigorous, high quality courses. Our chiropractic science students are well trained in the fundamental relevant sciences (physiology, anatomy, biochemistry, biophysics, radiology, etc) together with units in chiropractic methods and clinical practice. Our students are taught to understand that science proceeds only on the basis of evidence. While we understand the questions you raise in relation to the history of chiropractic, we are confident that our graduates have been taught those techniques that are known through science to be beneficial.”

Curious then that the university’s Department of Chiropractic, with its emphasis on “techniques that are known through science to be beneficial”, includes on its employment vacancies list (at time of writing), the following advertisements (http://www.chiro.mq.edu.au/AboutUs/employment): Associate position at the Chiropractic Domain Mount Gambier, SA. This clinic runs a range of “Kiro for Kids” services and publishes a number of information sheets, including one for treatment for ‘Heads out of shape’, the condition experienced with some infants apparently following extended periods of sleeping on their backs: “When a child is put back into structural balance with gentle, safe, chiropractic adjustments the natural growth of the brain will push the head...
The Curiosity Shock

Continued...

as of December 2006. The course had interesting aspects, including “opportunities for students to conduct research projects within a Masters course or at a PhD level. The selection of complementary therapy research will be based on intensive examination of the scientific evidence in each area in order to identify promising lines of inquiry. The guarantee of scientific validity of the Graduate School’s research comes from a commitment to rigorous scientific method at all times.”

The aims included:

• Having an overview of current evidence-base in complementary medicine and enhance ability to critically appraise medical and scientific literature.

• Graduates will develop skills to determine which patients will require a particular type of complementary therapy and to integrate this with orthodox medicine.

• Provide limited clinical training which will emphasise the importance of health promotion.

• Teach basic skills in various clinical techniques involved in complementary medicine which can be applied in the community.

That second and fourth aims imply that a decision on the complementary techniques covered has already been made, despite the “commitment to rigorous scientific method at all times”, and that CAM methodologies are accredited and endorsed by the course providers.

The University of Tasmania’s School of Psychology, within the Faculty of Science, Engineering & Technology, seems to be a little hotbed of research into the paranormal.

Scattered references allude to an interest in parapsychology, including investigations of psi powers, precognition and reincarnation.

A Masters thesis lodged in November 2010 by Roderick Garton (BA Macquarie Uni, BA Hons Uni of Tasmania) covers “Precognition priming and sequential effects on visual work recognition”.

In this thesis, Garton opens with “Psi research (encompassing parapsychology and psychical research) increasingly offers the following proposition: Future information that persons have not or could not have inferred or incurred on the basis of past information can inform their present experience and behaviour. ... The hypothesis that is being increasingly offered, in psi research, is that precognition normatively functions in perception and cognition as it is classically conceived – not in anomalous experiences, not as supernatural or paranormal happenings, but as information that ordinary perception and cognition utilises if not depends on. It is this normative frameworking of precognition in particular, and psi hypotheses in general, that is pursued in this thesis, and specifically as it is operative in recognition.

After a criticism that “Responding to such reports [of psi results] has involved many unscientific but abiding approaches” - referring to what might be called ‘establishment’ non-parapsychology researchers - he says that “The offer of precognition as a normative operation opens up a new and more scientifically worthy approach to the question of what to do about ESP and how to decide about it.”

One of Garton’s supervisors on his thesis was Dr Jurgen Keil. Keil himself has had a paper published in the Journal of Scientific Exploration, 24:1, pp67-73, 2010 on “A case of the reincarnation type in Turkey suggesting strong paranormal information involvements”. The introduction to this paper begins with: “Cases of the reincarnation type (CORTS) indicate that some children, shortly after they have started to speak, convey paranormal information about persons who had died before these children were born. ‘Paranormal information’ implies that these children had no normal access to the information that they revealed.”

Another supervisor for Garton was Dr John A Davison, who is listed as coordinator for “The Social Processes group ... engaged in research on conflict resolution and utilises the school’s audio-visual facilities to record outcomes in test situations. Research is carried out in other areas related to peace psychology, families, dreaming and parapsychology.”

If these investigations follow strict scientific method and have found evidence of paranormal abilities, then we would obviously love to hear about them.

For the record, Dr Krissy Wilson, who has regularly written for this magazine and presented to Skeptical audiences, is listed on the university’s “find an expert” service as having expertise in parapsychology. Wilson says she is not a parapsychologist, has informed the university of this, and in fact left the university 18 months ago (see her article in this issue on her experiences there). She also says she knows nothing of the Social Processes group.

While on the subject of University of Tasmania, its School of Pharmacy lists information on various alternative medicine areas (http://www.pharmacy.utas.edu.au/cmed/topics.htm). Some of these are highly critical, including the section on chiropractic and osteopathy which includes comments such as “There is no evidence that subluxations actually occur or that impairment of nerve outflow is a major contributor to common illnesses or that chiropractic treatment alters the position of any vertebrae and thus change nerve outflow.” In what could be described a balanced report on results gathered, the section says “The best evidence for chiropractic and osteopathy is in the treatment of low back pain. Overall, it can be described as moderately conclusive in favour of manipulation. The extent of benefit is probably the
same or small compared to traditional care.”

On homeopathy, the section says: “There is no good evidence of efficacy in spite of a large number of trials and meta-analyses. ... In general, the older, and less rigorous meta-analyses were more likely to show some benefit for homeopathy. Cucherat et al. considered that some homeopathic treatments were more effective than placebo but the strength of evidence is poor because of the poor quality of the trials. They also found that the better quality trials were more likely to give negative results.”

On aromatherapy: “Evidence - There is little objective evidence to support the usefulness of aromatherapy for any condition”.

The recommended reading list for the University of Wollongong’s Master of Science (Midwifery) 2009 curriculum (still on the university’s website) includes one of the most worrisome volumes on any academic list: Geraghty, B 1997, Homeopathy for midwives, Churchill Livingstone, New York.

At the same time, the university’s healthcare clinic recently offered “health and medical services provided including optometry, dentistry, naturopathy and homeopathy”. It is pleasing to tell you that the homeopathy services are no longer offered.

We’re not sure if the science reading list still includes the homeopathy guide, but surely there is something here about the sharing of information between the left hand and right hand.

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RMIT’s Wonky Wellness

Tim Mendham reports on RMIT’s wellness courses.

In the last issue of *The Skeptic* (31:1, p22) we reported on the response to our queries on chiropractic courses at the RMIT University.

Professor Margaret Gardner AO, Vice-Chancellor and President, RMIT University wrote to us stating that: “As a global university of technology and design, RMIT is committed to an ethic of rigorous scientific enquiry. Our academic staff, whether conducting research or learning and teaching, operate within a methodology that is evidence-based.”

With these comments in mind, it is a concern therefore to find some additional courses currently carried at RMIT - not mentioned in our earlier article - which seem to involve areas that are less than “rigorous” or “evidence-based”: ‘Wellness’ courses offered within RMIT’s School of Health. (http://rmit.edu.au/wellness).

The Wellness section “aims to be a world leader in the wellness field offering a postgraduate degree, undergraduate elective courses, single courses and short courses in the wellness areas. ... with graduates gaining professional qualifications as well as personal wellness skills. ... Wellness graduates are employed in a variety of sectors including the spa and wellness industry, mainstream healthcare, complementary healthcare, the corporate sector and in private practice.”

We asked Prof Gardner for a comment on these courses, all of which are offered online. At time of writing, we had not received a reply. The following is the substance of our query to Prof Gardner, including our comments on some of the courses:

Some elements of the courses offered in the Wellness category seem to verge dangerously close to the pseudoscientific, if they don’t topple completely into it.

The following courses are offered in 2011:

- Introduction to Aromatherapy - a ‘medical’ modality which features unsupported claims with little efficacy, and certainly no better than placebo.
- Introduction to Mindbody Wellness, which includes elements of “the power of intention and love in mindbody wellness” – hardly a topic prone to scientific rigour.
- Introduction to Wellness and Complementary and Alternative Medicine (CAM) – the specific forms of CAM are not mentioned on the website, but considering the aromatherapy course above we would assume that many are on the fringe of accepted science.
- Introduction to Happiness and Positive Psychology, which refers to “the emerging science of happiness and positive psychology”, which sounds like new age motivational courses, many of which lead to cases of disastrous emotional instability in subjects.
- Health Enhancement and Lifestyle Management, which includes reference to “personal interventions that enhance and complement health in areas such as ... spiritual ...”. This particular aspect would sound more appropriate to a theology course than a school of health.

In addition, there are other courses which were apparently last offered in 2010:

- Applied Eastern Anatomy, which refers to the “acupuncture meridian system” and “chakras”.
- Introduction to Energy Medicine – this reeks of every form of new age pseudoscientific nonsense: “To explore ‘energy medicine’ one must utilise [sic] scientific exploration carried out across a multifaceted scientific bandwidth including detailed work from the fields of mathematics, biology, chemistry, psychology and physics and quantum physics. Study in this field requires a truly holistic scientific exploration where laws of nature are integrated at a deeply fundamental level ... they seem to operate under hence [sic] unknown principles governing quantum mechanics and non local Universe principles.”

We await Prof Gardner’s reply.
The cycle of life

Doomsday cults – dissonance – fables – floods. And so it goes, the almost inevitable realisation that all knowledge is connected and connectable.

WHO’LL STOP THE RAIN

Later mythographers filled in details or added postscripts to the original account by Hesiod. For example, Apollodorus and Hyginus each make explicit what might be latent in the Hesiodic text: Epimetheus married Pandora, the couple had a daughter, Pyrrha, who married Deucalion. However, the Hesiodic Catalogue of Women had made Pandora one of the daughters of Deucalion. The 15th century monk Annio da Viterbo credited a manuscript he had found to the Chaldean historian of the 3rd century BC, Berossus, where Pandora was also named as a daughter-in-law of Noah; this attempt to conjoin pagan and scriptural narrative is recognized as a forgery. Deucalion and Noah were both mythical figures associated with a devastating flood.

THE END OF THE WORLD AS WE KNOW IT

There are various definitions for ‘end of the world’ predictions. The Harold Camping/Family Radio campaign regarding Judgement Day is just the most recent example of religion-based ‘apocalypticism’, a term which originally referred to a revelation of God’s will, but now often refers to belief that the world will come to an end some time soon. This belief is usually accompanied by the idea that civilisation will come to a tumultuous end through a catastrophic global event. ‘Millenarianism’ is the belief by a religious, social, or political group in a coming major transformation of society. The various ancient flood stories – Gilgamesh, Noah and the Ancient Greek version Deucalion – are examples of millenarianism.

Rats and people come to love things for which they have suffered.

- Leon Festinger

“Rats and people come to love things for which they have suffered.”
CALLING OCCUPANTS OF INTERPLANETARY CRAFT

A classic study of a group with cataclysmic predictions was published in the book *When Prophecy Fails: A Social and Psychological Study of a Modern Group that Predicted the Destruction of the World*, by Leon Festinger and others. Festinger and his associates read an item in a local newspaper headlined “Prophecy from planet Clarion call to city: flee that flood.” A housewife from Chicago, given the name Marian Keech (real name: Dorothy Martin, later known as Sister Thedra), had mysteriously been given messages from alien beings on the planet Clarion. These messages revealed that the world would end in a great flood before dawn on December 21, 1954. Mrs. Keech had previously been involved with L. Ron Hubbard’s Dianetics movement.

DID YOU EVER HAVE TO MAKE UP YOUR MIND

From his work with this group, Festinger (1919-1989) developed the theory of cognitive dissonance, an uncomfortable feeling caused by holding conflicting ideas simultaneously. The theory proposes that people have a motivational drive to reduce dissonance by changing their attitudes, beliefs, and actions. Dissonance is also reduced by justifying, blaming, and denying. A related term, cognitive disequilibrium, was coined by Jean Piaget to refer to the experience of a discrepancy between something new and something already known or believed. A classical example of cognitive disequilibrium (and the origin of the expression ‘sour grapes’) is the fable *The Fox and the Grapes* by Aesop (ca. 620–564 BCE).

TELL ME A STORY

The Greek Aesop or Esop was, by tradition, born a slave. Although known for the fables ascribed to him, Aesop’s existence remains uncertain and no writings by him survive. Numerous fables appearing under his name were gathered across the centuries and in many languages. In many of these tales animals speak and have human characteristics. The anonymously authored *Aesop Romance* (usually dated to the 1st or 2nd century CE) begins with a vivid description of Aesop’s appearance, saying he was “of loathsome aspect ... potbellied, misshapen of head, snub-nosed, swarthy, dwarfish, bandy-legged, short-armed, squint-eyed, liver-lipped - a portentous monstrosity” or, as another translation has it, “a faulty creation of Prometheus when half-asleep.”

“I’m not a genius, and I pray all the time for wisdom.”
- Harold Camping

“Destroy the seed of evil, or it will grow up to your ruin.”
- Aesop

Two and a half years ago I arrived in Tasmania from the UK to take up a position of lecturer in Psychology at the University of Tasmania. Emigration to Oz had been a major goal for some time and as soon as I got my PhD I applied for jobs. Within a year of being doctored, as it were, I was settling into my new office on the Launceston campus of UTas.

My field of expertise is in the psychology of belief: why we believe in weird and wonderful things - ghosts, psychic powers, talking to the dead, conspiracy theories and other assorted pseudoscientific claims. As it turned out, Tassie was the perfect location for my particular area of interest.

To most mainland Australians, Tasmania is a weird, slightly unsettling and rather backward, freezing cold lump of rock at the bottom end of the good bit. Well, yes. That pretty much sums it up. However, this odd little island is a psychologist’s dream. When I first arrived I thought I had landed in belief heaven. Every day since, I have ridden through the valley of the beguiled, I have danced in the fields of delusion and dallied with the mentally alienated - and that was just the UTas staff room.

As someone who spends her professional life investigating and commenting on bizarre claims of the paranormal, psychic powers and other hokum, you would think that little would surprise me. However, I have had some of the strangest experiences and encounters of my life over the last two years.

If I may use some professional jargon, Tasmanians are, well, a funny bunch. The first thing you notice that is frankly deeply disturbing for an English girl is how friendly and helpful everyone is. I recall the first time I walked down a street in Launceston during my early weeks in Tassie and a girl approached me and asked if she could help. As a Londoner, I immediately assumed she was about to stab me in the eye but soon realised she was just trying to give directions to a hapless Pom to clearly didn’t know where she was. Then there was the truly miraculous moment when a strange man approached me as I struggled to pump up my tyres at a petrol station. Within what seemed mere seconds he had pumped up three tyres, and replaced another that was near flat with my spare. As I watched, it occurred to me that he might actually work for the petrol station but while I searched my bag for payment he bid me a cheery see you later and sped off. This single act of altruism impressed me hugely.

One explanation for such wanton acts of kindness might be explained by the fact that Tasmania is quite a religious place. Indeed, one of my recent studies has looked at the range of religious beliefs and denominations in Tasmania. After extensive scientific research my conclusions are that there’s a lot of it about. Over 500 Tasmania residents took part in a series of studies that I ran where residents were asked a variety of questions concerning their beliefs in psychic powers and related paranormal phenomena.

As someone who spends her professional life investigating and commenting on bizarre claims of the paranormal, psychic powers and other hokum, you would think that little would surprise me. However, I have had some of the strangest experiences and encounters of my life over the last two years.

A separate study required respondents to answer questions about their religious beliefs and practices and the results were most interesting. Not only is the state surprisingly religious but the range of denominations is ‘impressive’. Respondents variously described themselves (to name but a few) as Christians, Muslims, Buddhists,
Satanists, Anglicans, Atheists and Wiccans. Until I began this research I didn’t actually know what a Wicca was. However, I discovered the intricacies of the Wicca way of life during one excruciating evening spent with the Pagan Society. It was one of the strangest evenings of my life.

ENCONTERS WITH ALIENS
The Pagan Society meet in Launceston in a British pub called The Cock and Bull. That alone is material enough. Not surprisingly, my talk did not go down too well. Being told by an academic Pomme Smarty pants that you are suffering from delusion and dependence on prescription and non-prescription drugs is not what you want to hear, so I could understand their antipathy. The only thing that impressed them was when I told them that in a ‘previous life’ I had been a professional actress and my one claim to fame being that I once played a prostitute on The Bill. Somewhat bizarrely, at this they broke out into spontaneous applause.

I was as disappointed as I was surprised. I thought that Pagans would be rather a fun bunch, up all night, cavorting about in the moonlight, ravishing each other at dawn. Apparently not. They are in fact at home most nights watching reruns of The Bill! At another point in my talk one particularly enthusiastic member of the audience stood up, pointed at me and declared, “You’re an alien elemental from another planet!”

Belief in the paranormal was shown to be as ubiquitous as religious belief. Of the respondents who completed the questionnaires, 40% reported that they believed the paranormal is real, 22% claimed to have seen a ghost, 8% have seen a UFO, 23% have had a psychic experience, 7% can communicate with the dead (whether or not the dead reply was not specified), 16% visit fortune tellers, tarot readers etc, 7% claim to be psychic, and my favourite statistic ever, 2% of respondents claim to have actually met an extraterrestrial. Every house, church, bridge, pub and lawnmower seems to be haunted. Alien invaders are everywhere it seems, and you can’t step out of your house without bumping into a psychic!

Then there is the equally mysterious politics of the place. No, I am not referring to the shenanigans of Messrs Giddings, Brown and Hodgman et al, but the office politics that pervades all areas of human professional life, but nowhere (in my experience) is it more overt than in a certain academic institution in Tasmania. When it comes to office politics within this bastion of academic excellence, it is really quite simple. Everyone in Hobart hates everyone in Launceston and everyone in Hobart also hates everyone else in Hobart.

The main problem is the prevalence of academic dinosaurs who have rarely left the state, never mind seen anything of the rest of the world, who use the same lecture notes that they used in 1974, tolerate no-one under the age of 104 and for whom the term “flexibility” is an incomprehensible and unacceptable suggestion. In 10 years or so in this business, the only ghosts, spooks and psychic powers I have encountered have only been in the minds of the believers and the only truly scary things in the universe are fellow academics.

THE LOWS AND HIGHS OF TASMANIANS
So, back to my research interest - why do we believe? Why do people believe in ghosts? Alien abductions? Talking to the dead? This is a complex question and, in my view, probably the wrong one. What we should be asking is why it is that some of us doubt? How is that some of us do not believe?

There are of course a plethora of complex reasons both psychological and in some cases physiological but environmental factors are of note. Tasmania’s geography and history make it a unique environment and one especially likely to induce all kinds of superstitions and beliefs. What is certain is that there continues to be an unending fascination for all things paranormal.

To a large extent I blame the media. On any given evening on TV in the UK, the USA and here in Oz, there will be some program that portrays a sympathetic view of psychic powers, spiritualism or similar psychic nonsense. Even current affairs programs are under its spell. I was recently wheeled on as the voice of reason on an episode of Today Tonight to pass judgement on a 6-year-old ‘psychic’ who had clearly been coached by her deluded mother. I described said brat as the “Bindi Irwin of the paranormal”. Fortunately I quite enjoy reading hate mail.

Now I have lived here long enough to know that for most mainlanders Tassie is a bit of a joke. But don’t listen to them. Most of those with such negative views won’t actually have been there. Go for yourself. If the supernatural isn’t your thing, then let the natural wonders of this unique island lure you into a visit. It truly is a beautiful place.

Yes, it is cold and what would truly be ‘spooky’ is if some bright Tasmanian spook introduced central heating! Double glazing, alas, is still science fiction in Tassie. However, Tasmania is beautiful. The mystical nature of the light as it changes over the hills and skyline are as close to any god that humankind might worship. The wonders of the real world are more mysterious, beautiful and awe-inspiring than any imagined paranormal nonsense that we can dream up.

Alas, humankind is not so beautiful or easy to live with, and after two years of good behaviour I was let out of Jurassic Park and am now lecturing and working on writing projects in the balmy warmth of the big island. But I have an enduring affection for Tassie, and would recommend a visit to anyone. Just please, save your money and don’t do the ghost tours.

About the author:
Dr Krissy Wilson is a lecturer and psychologist, now working at Charles Sturt University.
Looking for Leprechauns

Michael Wolloghan finds the little people in Ireland, not to be sure to be sure.

Dublin is one of Europe's most fascinating and impressive cities. It's full of beautiful sights, wonderful people, and, of course, brilliant dark, full bodied stouts. Locals claim it's "a place that makes virtue out of vice".

After embarking on a pub crawl, touring the Guinness Storehouse and viewing the Book of Kells at Trinity College, I decided to do something different while in Ireland's capital city.

The National Leprechaun Museum is situated in the cosmopolitan heart of Dublin. It's a surreal Disneyland for leprechaun lovers. Interesting enough, it is the first ever tourist attraction completely dedicated to Irish mythology and folklore.

Tom O'Rahilly, director of the museum, explained to me how the museum came about.

"I had the idea in 2003; it came in a flash early one morning. I had just celebrated the opening of a design show in London and was taking stock of all the work and effort that had gone in to making it happen. At this time I was working on a series of projects about how people react to objects and context. Suddenly leprechauns hopped into my head! Two ideas about Leprechauns and people were quickly formulated - I wondered how they came to be in Ireland and what they were all about.

"Of course, it took a lot of work to realise the idea of the museum but the concept was formed at that point."

The museum is described as "a story of 12 chapters taking you to the heart of Irish cultural identity and imagination. Each chapter reflects Irish mythology, or recreates experiences typically associated with leprechauns". Naturally, this is a pintful of marketing hype, but isn't too far from the truth.

After perusing the tacky memorabilia in the museum foyer – which included a Homer Simpson leprechaun and a mock leprechaun uniform - our young, spirited guide welcomed us to the museum. He explained that the wily leprechaun was a rarely discussed character in Irish folklore until it was exported to America.

Apparently, the leprechaun image was heavily distorted by advertisers and Hollywood producers in the 1950s into a jolly, pipe-smoking red bearded man, sitting on his pot of gold at the end of a rainbow, clad in a green coat and hat, chortling "to be sure, to be sure".

We were told that when Walt Disney visited Ireland in the 1940s, he bizarrely aspired to capture a leprechaun but wasn’t successful. However, he did later make the children's film Darby O’Gill and the Little People in Belfast.

Our guide sadly explained we wouldn’t see any real leprechauns romping around the museum. The tour group mildly chuckled before entering through a long widening tunnel which acted like a remarkable optical illusion. The idea was to give you the illusion of gradually shrinking to the size of a leprechaun as we entered into the 'fairy world'.

This led us into the first of a series of rooms winding through the museum.

One contained massive over-sized furniture representing a giant’s house. Another room contained a slightly eerie but informative audio-visual display about
Irish mythology. This room dovetailed into a passageway with a ceiling of upside down umbrellas before reaching a whimsical set of sheer, transparent rainbow patterned string curtains.

Pushing through the curtains I arrived into a circular room with a small pot of gold in the centre of it. I smiled wryly and had my picture taken.

Short, simple museum text displays explained how the word leprechaun comes from the Irish Lú Chorpain, meaning small body, and that leprechauns live in secluded spots, usually small holes in the ground. I learnt that female leprechauns exist but are seemingly more elusive and harder to catch than the males.

Other displays informed us that leprechauns originally came from a mythical land under the sea and that the first recorded sighting of a leprechaun was in the 8th Century.

Wandering through the rest of the unconventional museum didn’t take long. I sat in the ‘storytelling room’ which had images from Irish myths brightly projected round its walls and listened to a tale being spun by a narrator. I read the story of Tom Fitzpatrick who thinks his fortune is made when he captures a leprechaun and pressures him to reveal the hiding place of his gold, but the leprechaun cleverly dupes him.

Overall, I enjoyed the museum but was a bit perplexed by the experience. I was expecting a bland provincial museum but was surprised to discover it was high tech and sophisticated. Of course, the museum milks the appeal of leprechauns for all it’s worth but it’s an impressive little enterprise.

Naturally, museums can be infinitely diverse in the way they can make unique contributions to the public by collecting and preserving bits of cultural heritage. However, this museum is more of an aesthetic experience than an exhibition and it abstractly shows how mythology can be used to keep people in touch with their culture and teach the values of that culture.

Critics of the museum claim it promotes a negative Irish stereotype. Director Tom O’Rahilly responds to these allegations - “The Leprechaun was seen as an easy way to characterise Ireland and the Irish. I believe the leprechaun is a more complex character than is popularly represented. It is easy to be offended when a character is taken out of context. The museum is an attempt to resolve this.”

Regardless of these debates, the leprechaun, in whatever form it may take, will still continue to be loved. As O’Rahilly succinctly put it: “Leprechauns remain popular for a number of reasons. A small creature, they have a curiosity value they are always connected with a story and usually a treasure. They are adept at exploiting the foibles of humans who try to capture their prize. So in essence small, clever, rich and magical - what’s not to like?”
Deep time is so fundamental to the earth sciences that it is unsurprising that one of the first evidences of it has an iconic status among geologists.

The evidence is the angular unconformity at Siccar Point, on Scotland’s south east coast, found by 18th century gentleman farmer and amateur geologist, James Hutton. Unconformities are common, and the one at Siccar Point quite ordinary, but its historical significance has made it one of the world’s most celebrated geological formations.

AN ABYSS OF TIME
Hutton’s friends were impressed. John Playfair wrote of their visit in 1788: “What clearer evidence could we have had of the different formation of these rocks, and of the long interval which separated their formation, had we actually seen them emerging from the bosom of the deep? … The mind seemed to grow giddily by looking so far into the abyss of time.”

Figure 1 shows what they found. The upright beds are Silurian greywackes and shales. Hutton knew these must have been deposited originally as horizontal layers. Overlying them at almost a right angle are gently dipping red Devonian sandstones. The bottom layer of these is a breccia full of broken fragments of the underlying Silurian rocks in a red sandy matrix. This, Hutton realised, was an ancient land surface where once the upright Silurian strata had been exposed and eroded, and onto which the red sandstones were deposited.

These rocks indicated a sequence of events far longer than the Biblical 6000 years. Firstly, rocks had to be eroded to generate the sediments deposited on an ancient sea floor. These were then hardened into rock, folded until the beds were upright, elevated and eroded to create a land surface. Onto this eroded surface was deposited another generation of sediments, creating the beds of red sandstone. These too hardened into rock, were tilted slightly and eroded to expose them, and the underlying rocks, once more.

IF IT DOESN’T FIT, DENY IT
As this challenges a young earth, creationists must deny it. Enter Tasman Walker, an Australian engineer with a geology degree, and employee of Creation Ministries International, with his critique, “Unmasking a long-age icon”.

Walker's article postdates one by David Tyler and is more detailed. Walker's article is dealt with here, although some of what follows applies also to Tyler's. Walker attempts to explain the feature in terms of a year-long Noah's flood, while Tyler views the flood as an earlier event with subsequent layers a record of recolonisation. Both are young earth creationists.

After a preamble about Hutton, and his “faulty assumptions” (ie Hutton followed the evidence, not the Bible), Walker’s technical discussion begins with “The lower rocks”. He correctly identifies them as alternating greywacke and shale, but asserts that in greywackes the sediment was “deposited so rapidly that it did not have time to sort into different sizes”, but then says it is sorted into different sizes, with the coarsest particles at the bottom (graded bedding).

He claims the greywacke beds sit “one on top of the other – without any sign of a break in deposition”. What does he think the shale beds are? After contradicting himself about graded bedding, and forgetting about the shales, he triumphantly concludes that “the fast deposition processes operated continuously while the whole rock deposit was formed”.

DO THE SUMS
Greywackes are turbidites, formed by the accumulation of sediments on the edge of an underwater slope. Eventually they become unstable, avalanche down the slope and fan out across the ocean floor below. As they settle, the coarsest particles deposit first, the finest ones last.

Turbidite formation is rapid. For example, a 0.27 metre thick Californian turbidite could have formed in as little as 20 to 52 minutes. Turbidites are deposited quickly, but with lengthy time intervals between them, which Walker denies. No sooner had one turbidite settled than the next one arrived, and so on in rapid succession, until the entire sequence was built up, he thinks.

It is a thick sequence. The turbidites at Siccar Point are part of the Gala Group. This, the Hawick Group to the south, and Ordovician turbidites to the north, straddle southern Scotland. The Hawick Rocks alone are over 3km thick.

Using the faster rate of deposition above (20 minutes for 0.27m), with no breaks, depositing the Hawick Rocks alone would take 154 days. How long for the entire Ordovician and Silurian
animals formed delicate branching structures that sank to the bottom on death. The Southern Uplands have an abundance of graptolites, and the Gala Group contains four species of Monograptus distinctive of it.

If turbidite deposition was continuous, then it is odd that graptolites occur throughout the entire Ordovician and Silurian sequences instead of being carried to the bottom and buried early on. It must have been raining graptolites throughout the entire period. Where did they all come from? And why only particular graptolites in particular rocks? Silurian graptolites are only found in Silurian rocks, not Ordovician ones, or Devonian ones, and so on. How were they so efficiently segregated, without a single one out of place anywhere in the world?

**ERRORS ONE ON TOP OF THE OTHER**

Walker’s errors pile up faster than a creationist’s turbidite. His next victim is folding. The rocks “were folded while they were still soft and contained abundant water”, he says, because “the beds do not indicate evidence of brittle fracture. So they must have been folded while still plastic.” But rocks also deform plastically under pressure and temperature; they don’t have to be soft and wet. Even so, the Gala beds contain faults in the axial regions of the folds, so brittle fracture did occur where bending was most intense. Walker’s claim is both false and irrelevant.

When he comes to the junction between the Silurian and Devonian rocks, Walker declares that the contact is “clean” and “straight”, with no differential erosion resulting in raised ribs of harder greywacke protruding into the overlying beds. Tyler says the same, and both make a great play on this, thinking that it rules out slow weathering of the underlying rocks on an ancient land surface.

Playfair was a better observer: “The rugged tops of the schistus are seen penetrating into the horizontal beds of sandstone …”. Modern geologists agree. See figures 2 and 3.

Turning to the upper rocks, Walker describes the breccia immediately overlying the lower rocks as containing sequences combined? Piling up the lower rocks alone could occupy more than Walker’s one-year time scale.

**PESKY FOSSILS**

Walker ignores the fossils. The top surfaces of the greywackes commonly show trails and burrows of sea-floor animals. There is an example just 500m from Siccar Point.

The first turbidite avalanche would have buried these critters, leaving none to make their marks on subsequent flows. Yet they are as common in the upper parts of the sequence as the lower. Creationist John Woodmorappe imagines them burrowing upwards to escape each layer deposited on top of them. After months of continuous upward burrowing to keep pace with the endless succession of new layers, the poor things must have been worn out. How they managed to find time to make horizontal marks on the tops of the layers, while hiding their upward escape tunnels, is a mystery.

Graptolites also prove lengthy breaks in deposition. These floating colonial
Rocks in their heads

Continued...

numerous angular fragments of the lower ones orientated by strong water currents. Correct. The breccia was probably formed by flash floods in a semi-arid environment.

“The breccia covers a huge geographical area”, he says of this basal member of the local Redheugh Mudstone Formation, known from three outcrops a few kilometres apart. The Old Red Sandstone (ORS), as the Devonian sediments of Britain are called, contains beds “so amazingly uniform and parallel that they can be visually traced for huge distances”, he claims without stating his source. Its “physical characteristics … point to exceptional depositional processes, quite different from the sorts of processes that we see happening on the earth today”, he gushes.

What is exceptional about deposition in rivers, lakes and dunes? He then resumes the fantasy that the beds “were deposited one after the other without significant time breaks between them”. His ‘evidence’ is some beds and fossils that possibly were deposited quickly. We saw earlier that episodic deposition, with long time intervals between each episode, is common. He obligingly tells us that the ORS sequence is 7km thick. Do the sums.

There “is no evidence of ancient soil layers, or of organic matter incorporated into a soil or of plant roots”, he insists. At Siccar Point, patches of calcrite, a calcareous soil horizon typical of arid environments, are present. Walker knows this but, without offering evidence, attributes it to groundwater.

Calcrites are common in the ORS. Examination of the calcite component proves the surface origin of one at Carnoustie, near Dundee11. Another, at Milton Ness, further north, contains roots12. Another, just 12km SE of Siccar Point, is full of plant fragments8. Calcrite at Siccar Point is fatal to Walker’s account of the Silurian rocks being planed off then immediately buried again. Calcrites throughout the ORS destroy his notion of continuous deposition.

Walker’s comedy continues with the assertion that animal tracks in the ORS prove rapid deposition. So, a great flood has obliterated everything for hundreds of kilometres around, dumped kilometres of turbides over a huge area, and is now depositing the ORS, and land suddenly pops up, animals appear out of nowhere in this muddy wilderness, go for a stroll, then their tracks are buried. This repeats for however many footprint-bearing beds there are before this land submerges again, and the flood resumes. It is hard not to laugh.

The stupidity continues with: “There are no canyons or valleys cutting across the beds.” There’s a very nice valley at Crooked Haven, NE of Milton Ness8. Indeed, there are entire topographies buried under further unconformities within the ORS, complete with calcrites11.

I could continue with the Carboniferous rocks, which overlie the Devonian, and the many problems they present, but that would be cruel.

CONCLUSION

Walker’s article on Siccar Point is sloppy, superficial and incompetent. In an email he told me he has not visited the site. Instead he relied on photographs, correspondence with people who had visited, and a tiny fraction of the literature. The rest appears to be made up. I found the same when I investigated his writings on another famous geological icon, Northern Ireland’s Giant’s Causeway. Although he has been there, he still wrote a load of error-riddled rubbish about it11.

Every branch of science that touches on the subject indicates deep time – biology, astronomy, geology, physics, chemistry, and more. We are indebted to James Hutton for his brilliant insight. An insight founded on reason and evidence, not a load of bogus assertions based on a few photographs, inadequate homework, and a dogmatic commitment to a Bronze Age myth. Siccar Point remains an icon, not just of geology, nor even of long ages, but of all of science.

References


About the author:
Dr Stephen Moreton is a Scotsman and a chemist, but managed to fit in two years of geology at Edinburgh University.
Once upon a time

The Genesis Enigma
By Andrew Parker
Vintage Books, A$21.95

How active should an atheist be in urging believers to reconsider? Through a combination of shyness and apathy, I have become a small ‘a’ atheist. I don’t crusade, but I’ll explain my beliefs if someone raises the subject.

Over the years I have gotten to know many worthy Christians. The professional ones and many of the amateurs are driven to minister. When they minister unto me, I regard them as fair game for polite questions about how they see it all stacking up.

Maybe I do not understand some of the more sophisticated parts of the answers. If I allow for that, I can still assure you that it is fascinating to hear how believers give quite different answers on even the most basic issues.

Despite centuries of dogma intended to unite them, stances are as diverse as reactions to a provocative work of art.

As a relationship develops between me and a believer, sooner or later my atheism is discovered. The unspoken reaction that I often detect is positive and friendly; along the lines of: “Thank you Jesus, for this opportunity to bring this ignorant person closer to you.” Then they discover that my atheism follows years of sincere belief. That is greeted with less enthusiasm. Can the soufflé of conversion rise twice? There are then tactful explorations of whether I was the victim of a bad priest. No problems there! So then I get the blame in that I must have suffered some bad experience that has made me angry at God.

A subject that often comes up is the factual accuracy of the Bible, especially the creation stories. On this, many believers take the creation stories as allegorical; others preclude any wriggle-room and insist literally on a real Adam, Eve, beguiling serpent etc. “If it is written as having happened, then that is exactly how it happened.” God is not permitted to be allegorical, though when his son was among us, he often spoke in riddles and aptly used fiction to make his points. Who cares whether there really was a Good Samaritan?

God has avoided many opportunities to give us a message that required no faith to accept as divine. The text of the Bible did not materialise by His hand. Instead of, say, blasting it into a cliff-face, it was entrusted to various humans. One after another raised a hand and said, in effect: “God has just told me this”. Christians reject the idea that Mohammad heard from God (or one of his representatives) so why believe other human authors, notably Moses when he claims he’d been told how it all began?

A common reply is along these lines: “Many Biblical prophecies can only be explained as divinely sourced. If at least those parts of the Bible came from God, then you can accept that the others did too.” Believers claim that thousands of prophecies have either been fulfilled in a way consistent only with divine intervention; or are yet to be fulfilled. Not a single failure is conceded.

When we have that bold assertion and we need only one decisive fulfilment, how can there be so many atheists? One prophecy, explicable only by divine hand, would give us a world filled with believers. We could account for atheists by using Richard Dawkins’ branding of those who reject the basic tenets of evolution – ignorant or insane.

The answer is that there has never been a clear enough fulfilment and the area is riddled with difficulties. To mention a few:

• The making of accurate predictions is something we all do occasionally. It is the full time job of many to make predictions with far greater specificity than what was considered good enough to be included in the Bible by the human editorial team.

• For some reason God refrained from a plain language policy. The alleged predictions are usually opaquely worded and permit a proliferation of interpretations, as with the works of Nostradamus.

• There is often no timeframe. Such prophecies cannot fail; they remain unfulfilled.

• When the prophecy is about a general change and has no timeframe, then eventual fulfilment is certain. More floods, more pestilence.

• The ‘bleeding obvious’ is not excluded. What generation has been free from “wars and rumours of wars”?

• The timing and authenticity of predictions and the fulfilments are often problematic. It hardly helps when you need faith to accept that the events even occurred, before you get to consider their significance.

• Aware of Old Testament prophecies, Jesus was in a position to engineer fulfilment of some of them, perhaps assisted by gospel writers tweaking the text “that it might be fulfilled which was spoken of the Lord by the prophet”.

H
Believers see fulfilments that confirmed the divine status of Jesus. However, this escaped the attention of the majority of contemporary witnesses who knew their Bibles and should have been in a position to make a good call. Generally, they did not buy it. Nor were they convinced by the brief presence of the supposedly resurrected Jesus. The riposte, that the Jews were looking for the wrong kind of messiah, overlooks how God’s chosen have had many generations to reconsider. Not even the power of prayer has moved them. Throughout centuries of masses on Good Friday, Catholics beseeched God to convert the “perfidious Jews”. Eventually, this was softened to “faithless Jews”. Now simply “Jews” is enough to convey the same message. They remain an inconvenient embarrassment to believers in a divine Jesus.

Aside from the prophecies, the Bible comprises messages between people and descriptions of events which are either supposed to have happened or are allegorical. All that material is taken to be divinely guided. Again, we see the restraint of God. He has refrained from inspiring a single line of text that was beyond the imagination or knowledge of people at the time. The content may be very interesting, but nothing is surprising. There are no animals or places as yet undiscovered; there is not a single bit of new science or mathematics.

Having a Bible that consists of what humans either knew or could make up does not preclude the possibility of divine inspiration. The other side of that coin is that many arguments have been launched by believers who think they have found something in the text, beyond human ken.

Courtesy of one of my Christian mates in ministering mode, came The Genesis Enigma by Andrew Parker.

Parker is no young-earth creationist. He writes as an experienced scientist. He does not think the fossil record is a comprehensive God-given hoax. The text of this book hums with his love of science and his wonderment at the workings of his God. We are treated to many genial ramblings through scientific or historical areas. There is some trading of precision for readability but many would find interesting new material here.

The feeling emerges that a foundation is being laid to make good the book’s claim of connecting Genesis to reality. When they come, the connections are problematic. The text of Genesis is twisted and the supposed matches are at best controversial.

For example, we are told that the first thing created was light, which corresponds to the creation of our sun. However, Genesis firstly gives us heaven and earth with the spirit of God moving “upon the face of the waters”.

Or take first life, on which Genesis is specific. What was the first living thing that God created? How many of us could answer that it was “grass, and herb yielding seed after his kind, and the tree yielding fruit”. Seagrass! No, the previous verse is: “And God said, Let the earth bring forth grass.”

Parker tells us that relatively early on, life forms achieved photosynthesis. These forms became chloroplasts, “the photosynthetic factories of plants”. The author can then plead with us in italics: “It is extremely appropriate that the author of Genesis chose plant life for his third stage in his creation account (ie life) – it accords particularly well with the science. In fact, he could not have chosen better.”

In other words, Parker argues that the human author of Genesis received a message from God about the very early emergence of photosynthesising forms, but in any event chose to write that the first life was grass and fruit trees.

This book is subtitled “Why the Bible is Scientifically Accurate”. It turns out that the only scientific accuracy in Genesis is in depicting the perceptions of a typical person from one area at that time of human history – geocentric universe etc. Maybe all our evidence of cosmology, geology and natural history – all our science – is a God-given hoax. An honest creationist will own up to believing exactly that: right through to decoy fossils and light created already on its way to us from distant stars!

In that case the Bible could be correct and science is wrong. But to try to match science and Genesis like Parker does is hopeless even on metaphorical levels. The world has developed continuously, not in ‘days’ or stages like the jerking changeover of a digital clock. The order of earth, sun then moon is wrong. Almost all of the contents of the universe (apart from dark matter) is dismissed with “He made the stars also.” Supposedly after the grass.

It would not be often that a skeptic would ask: “What is a good gift for a creationist?” This book is the answer. The author’s imaginary parallels between Genesis and reality will do the creationist reader no harm. The many pages of scientific content will do them good. Trusting a Christian author, they may persevere and learn something.

Reviewed by Martin Hadley
Where the wild men are

Tracking the Man-Beasts
By Joe Nickell
Prometheus Books, US$19.00

Joe Nickell, arguably the most experienced paranormal investigator in the world, will be familiar to anybody who reads the Skeptical Inquirer magazine. His latest book contains the current thinking behind many enduring mysteries and a surprising number of hoaxes. This is not a big book, but it is written in an entertaining and economical style. Every chapter is well referenced for the astute investigator to seek the evidence for themselves. This is a much more reliable source of information than you will find in random blogs and will hopefully encourage more fieldwork from a younger generation.

Part 1 and 2 feature Monster Men and Hairy Man-Beasts respectively. Joe reports genuine cases of human genetic anomalies as well as blatant frauds. For those who have ever wanted to know what ever happened to that tall hairy guy from the seventies, Mr Sasquatch, you can read about it here.

Like the rest of us, the big fella has changed over the years but the biggest surprise was reading about how Joe and his wife, Diana Harris, chased the elusive creature in 2008. This strikes me as a particularly bold venture. I’m told that only those who fail to find Bigfoot survive the attempt. He now supposes it was a black bear with mange, making it even more daring.

Part 3, the Supernaturals, dares to explore werewolves, vampires, and a range of other monsters. The historical werewolf cases are explored, including the “Beast of Gévaudan” and several lesser-known encounters that are no less intriguing. Vampires, by contrast, seem bland as Joe moves from what he calls “folklore to fakelore”.

The Chupacabra gets a mention as the new myth on the block. If you haven’t been keeping up with this latest beastie, Joe will quickly bring you up to speed. It is somewhat disconcerting to read how credulous news stories can evoke such public fear and a belief that persists today. Our faded hero from the seventies, Mr Sasquatch, can only envy at how easily mange can make a monster.

Part 4 updates us on Extraterrestrials, with the Mothman muscling in on the puny Greys for celebrity status. It is interesting to see how the popular image of aliens changes over time, suggesting they are a product of society rather than a race of space tourists. This field is particularly prone to hoaxes, as listed. This must be a constant source of frustration to people who would like to see the alien hypothesis taken seriously.

Finally, part 5 is all about Manimals, returning to age-old myths and the perennial hoaxes that have plagued otherwise intelligent people for centuries. Between the classical myths and gaffed (faked) hybrid creatures are the sideshow ‘freaks’ that were often embellished to amaze the public. Surprisingly, Joe quotes P.T. Barnum claiming that people enjoy being fooled. Like foxes in a hunt, I suppose.

Unlike the Monster Hunters Handbook by Ibrahim S. Amin, Tracking the Man-Beasts is not a practical manual. It feels more like cautionary tales from a man who has seen it all before and has much wisdom to impart. It has more in common with Haunted and Mysterious Australia by Tim the Yowie Man because both books are grounded in reality, entertaining, and encourage further investigation. While Tim’s book comes across as a glossy travel guide to weird Australia, Joe’s book is truly international.

Throughout this book, Joe updates familiar cases. Old hoaxes are laid to rest as people admit culpability, sometimes decades after the event, while other cases can be explained as honest misperceptions (owls figure prominently). Joe also details the proponents of some monster theories. In this regard, the book would be of value to people who are inclined to believe in monsters because Joe directs the reader to the best sources available even though he might disagree with their conclusions. This seems to define Joe’s approach as an investigator, rather than a mystery-monger or so-called debunker.

Regular readers of Skeptical Inquirer will be familiar with Joe’s investigations but this is more than a cut-and-paste of old material. Each case seems to be revisited rather than reprinted because each case, no matter how old, seems to be updated with fresh material. If you have never read any of Joe’s investigations, this book is possibly the most definitive collection you will find. Even if you are familiar with Joe’s work, the book is full of surprising new developments.

Highly recommended.

- Reviewed by Philip Peters
Look and learn

Scientific Paranormal Investigation: How to solve Unexplained Mysteries
By Benjamin Radford
Rhombus Publishing, US$16.95

This is a book about getting out there and looking ... and knowing how to do it. And its title pretty much sums up what the book contains.

Here are numerous investigations the author has either participated in or studied. In many instances, he has worked alongside noted paranormal investigator, Joe Nickell, whose own book on 'unknown' animals is reviewed elsewhere this issue.

What makes this book particularly interesting are the instruction lists scattered throughout on what you need to have, research you need to do, and actions you need to take if you want to investigate the paranormal. And Radford covers a lot.

The author is managing editor of The Skeptical Inquirer, and an investigator for the Committee for Scientific Inquiry since 1997. He has therefore been exposed to a lot of claims over the years. And it shows. In these pages, you will find investigations of haunted houses, lake monsters, psychic 'detectives', crop circles, yetis, white witches of Jamaica, and on and on. There's even a psychic cat, who turns out to be a more quick-reflex cat (or probably does – we'll never know).

Radford takes a fairly gentle approach to claimants. He interviews quite a few, but he never lampoons them. Rather he outlines what his explanation is and how he came by it. This is more for the reader's benefit than the interviewee, who has normally disappeared into the background by the time Radford completes his investigations and assessments.

There are also short essays by other investigators, such as Randi, Nickell, Martin Garner, Ray Hyman etc.

But it's not the cases he investigates which is the stuff of the book, it's the scientific approach he uses. It's not always a barrel of fun; in fact, Radford is pretty matter of fact about the list of prerequisites he gives, as he is about the investigations themselves. But this book will give you an idea of all that you'll need to pack in your bag before you head out on the road to investigate.

- Reviewed by Tim Mendham

Nasty Nazis

Hitler’s Master of the Dark Arts: Himmler’s Black Knights & the Occult Origins of the SS
By Bill Yenne
Zenith, US$21.00

Readers fascinated with the occult and the paranormal would be interested in this book. Essentially it is about Heinrich Himmler, the creator of the SS. A small man with poor vision who completed a degree in agriculture, he became one of the most feared men in history. With a hard core interest in mythology and German folklore, Himmler set out to create an organisation based on occult practices and mystical thinking.

The book not only looks at the beginnings of the Nazi Party in Germany between WW1 and WW2, but also at the doctrine and dogma that was the foundation for the belief system developed by the men who eventually formed the SS.

Formed as Hitler’s personal body guard (‘SS’ is the abbreviation for Schutzstaffel, ‘protective squadron’), recruits were selected not only for their leadership potential and good health, but for their ‘Aryan’ background - blond and blue-eyed with German family background that could be traced back 150 years with no Jewish relatives.

Thus, unlike the then German Army, the SS was formed to be of an overtly pure heritage that could not be polluted. But, in forming an organisation such as the SS, it would need a belief system and set of values that transcended the enemies it wanted to remove from German life. As a result, Himmler, the former trainee...
farmer and vegie grower, became the most feared man in Germany and eventually Europe for over a decade.

Himmler saw his SS as a collection of Black Knights descended from warriors, and as a result formulated a belief system based on visions, runes, Germanic myths and dreams. The influence of the paranormal on this belief system resulted in Himmler himself thinking he was descended from an actual king of Germany who had been dead for over 1000 years.

Rituals for the initiation of SS officers were developed and held in castles purchased for the sole reason of enhancing their esteem. There is much macho myth about what went on. Some have suggested, perhaps wildly and certainly without hard evidence, that some of the rituals involved the beheading of officers and drinking blood from their severed heads, with members accepting death in preference to any other option. All good gory stuff, but it might be too much, even for the SS.

But they were more assuredly involved in many other matters. The SS had its own archaeology department which looked for artefacts, including the Holy Grail. Yenne states that the movie *Raiders of the Lost Ark* was not far off some of the things the SS did. Expeditions to such places as Tibet, Greenland and the North Pole were conducted with the sole goal of locating and proving the strength and origins of the Aryan race. A potential trip to the South Pole to demonstrate German scientific capability and to search for further evidence of racial origins was cancelled due to the outbreak of WW2.

The first chapters of the book concentrate on the problems faced by Germany after the end of WW1 and the rise of the Nazi Party. But equal time is given to the people who would eventually influence the beliefs of Himmler and SS.

It is of interest that the symbol of the SS is taken from a set of runes that were developed by a Guido Karl Anton von List. von List stated that his runes came to him in a vision, a recurring theme for all the people involved in the formation of the SS’s belief system of the SS. List developed a concept of mysticism based on Norse and Germanic culture; the Christian and other gods were pretenders to his god of the Vikings. List is also known for his book *Theozology* (1905), a pseudoscientific treatise that the Aryans were descended from gods, and everyone else was descended from sea-monsters or apes.

Other sections of the book are devoted to the spiritual side of the SS, including the development of the Black Knights and the castles and rituals adopted. One of the ‘chaplains’ of the SS was Karl Maria Wilgut. He was the architect of the pagan thinking for the SS which lead to many of the more bizarre rituals that have never been published. As usual with all mystics, Wilgut thought that his powers were descended from an ancient civilisation, untamed by the Roman occupation. He also had a female companion who channelled for him, talking to dead kings and other assorted characters.

Castles all over Germany, purchased with SS funds, were used as training and meditation centres, while mystics held seminars and conducted tours of places of interest with relevant associations.

The SS followed the standard development of a cult, an occult or mystic group, with additional features that few cults have. Firstly, it had Hitler, no doubt one of the greatest communicators of the last century. Secondly, Germany suffered badly from the Depression and the payment of war debt as a result of WW1. It needed someone to blame for all its issues and problems. In these circumstances, a belief system based on visions of racial superiority and authority, with a touch of mysticism thrown in for good measure, was ripe for exploitation.

Bill Yenne is a prolific author of military and historical books. He is also a contributor to books on the two World Wars. This book is no doubt a result of much of his research. The reviewer was taken aback by the collection of images that are contained in the book, many never published before.

With the rise of neo-nazi groups, the book provides an excellent understanding of their basic doctrine. It also demonstrates the exploitation of a people by a cult - how to solve all your problems by accepting your heritage, regardless of how silly it sounds. The book also describes the development of a cult from its beginnings to its eventual demise, demonstrating how destructive and inhuman a cult can be. If you share an interest in cults, this would be a suitable place to start your research.

*Reviewed by Geoff Cowan*
A big pizza pie

The Book of the Moon
By Rick Stroud
Doubleday, A$52.95

Being an astronomy fan from way back, I have always been interested in books about space and associated science. This book is a good contribution to the field – well-written and presented, it is highly readable and demonstrates impeccable research.

Stroud is a film producer responsible for the well-regarded British TV show, Brideshead Revisited, and the less-regarded but long running soap, Coronation Street. With this background, it is curious as to why he would write a book on the Moon. He says that his interest in the Moon started as a 9-year-old, and when he had the opportunity to make a documentary for NASA, his interest was reinvited. This book is a spin-off from that film.

Skeptics will be interested in this for a number of reasons. Firstly, it looks at the science of the Moon and the astronomers who observed it from ancient times to today. One particular chapter discusses every probe, both manned and unmanned, that went to the Moon with statistics and facts together with images of the men who walked there.

But what makes this book complete and of interest to the readers of this journal are those chapters following the discussion of astrophysics and astronomers. Chapter 3 looks at all the gods and myths relating to the Moon in a concise summary that would make any other book on astronomy turn its pages in shame.

Stroud also discusses the effects of the Moon on gardening using the new-age theory of biodynamics. He does not support these theories, but discusses the sway that influential people have had using the Moon for their irrational theories on growing food and breeding animals.

Two additional chapters look at how the Moon influences the use of magic, theories on werewolves, madness and on science as a whole. The chapter on magic addresses the Moon’s role in the occult, astrology, alchemy and the telling of fortunes.

A final chapter in this broad-ranging book looks at how the Moon has influenced culture from food to movies, offering a capstone to the whole discussion.

If I can make a number of criticisms, more images of the actual Moon itself would have been useful. The book has a excellent discussion on the naming of all features of the Moon and the 'naming rights' by the USSR and the International Astronomical Union. An atlas of the Moon, highlighting the naming conventions and the names that were eventually settled upon in the 1960s, would have helped.

Additionally, a map of the landing and crash sites of all the USA and USSR probes would have assisted the reader in the history of the 'space race'. Stroud goes to great pains to ensure that the book includes images of all the astronauts and probes, as well as myth-related subjects, but the lack of an atlas was evident after a few chapters. I needed to refer to another book to get the full impact of what Stroud was describing.

This book has a place in the skeptic’s library - it speaks to the interest we have in science in general, especially astronomy and spaceflight, but also weather, geology and history. The summary of facts, stories and interesting trivia would be of interest to all those with a fascination for the Moon, but it also appeals to our desire to learn about irrationality. The section on biodynamics is informative and complete in demonstrating how Rudolph Steiner influenced a generation of farmers in food production. Steiner’s ideas were not actually based on spirituality, as he claimed, but on how people have been growing their food for thousands of years, as ill-founded as his ideas were.

The Book of the Moon is a one-stop shop for all the information that you will ever need in relation to our major satellite. But an additional book containing images of the features will no doubt be needed for complete enjoyment.

- Reviewed by Geoff Cowan
What you think ...

Climate Response to Lawson

Mark, I’m sorry if you are upset [The Skeptic, 30:1, p60 – at the time-gap inherent between issues in print publications - Ed]. However, not having a base of common facts prevents meaningful discussion.

On the properties of carbon dioxide and climate sensitivity, I think you were and are giving a partial and incorrect account.

Your Lamb reference (figure 114, p.307 of the 1997 Routledge edition I have to hand) is based on work by Ramanathan and Augustsson from 1977. It is of interest that you use this model-based study for support, given your previous problems with models. It does not support your contention that the carbon dioxide effect is saturated.

On page 308, Lamb writes “Others professionally concerned with the CO₂ problem suggested that the warming effect might be no more than one-tenth to one-fifteenth of Plass’s figure; but recent studies with the most sophisticated models, which not only allow for atmospheric transport of the CO₂ and heat about the world but take at least some formal account of exchanges with the top layer of the ocean and possible effects on cloud cover, have pointed once more to a greater warming, between 2.0 and 3.5 degrees C, for a doubling of the atmospheric carbon dioxide to 600ppm.”

In the first paragraphs of the Lorius paper, he wrote: “The radiative forcing resulting from doubled atmospheric CO₂ would increase the surface and tropospheric temperature by -1.2 degrees C if there were no feedbacks in the climate system. ... But there are many possible feedbacks which may occur in response to an initial forcing.”

The figure for CO₂ alone is a useful metric, but feedbacks happen that amplify its effect.

Knutti and Hegerl’s 2008 review is a good overview on data and model-based constraints to climate sensitivity which gets us back to 3±1 degrees, feedbacks included. This is where the weight of evidence rests.

Paltridge’s estimate for sensitivity is extremely low if inclusive of all feedbacks. The argument based on decreasing humidity in the upper atmosphere leading to an overall negative water vapour feedback and a lower sensitivity for CO₂ on p69-72 is based on his paper which was inconsistent with the overall evidence as reviewed by Dessler and Davis.

“A classic misdirection”. The information you were after was in the second reference provided; the first dissected the “CO₂ is saturated” canard.

As far as CO₂ trends go, why are you assuming linearity? Is there some economic or population growth cause to these trends? Is there a much larger feedback, such as the water vapour feedback that would require completely different models of the CO₂ climate problem.

REFERENCES

Degrees of Woo

In the article “Degrees of Woo” [The Skeptic, 31:1 p24] Prof Nicholas Klomp of Charles Sturt University discussed aspects of complementary medicine.

Surely these prerequisites and/or credit benefits, we asked, could easily be seen as endorsements by a noted Australian institution that such ‘studies’ have validity, when in fact they are not without serious question.

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

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

His logic is extremely poor. Try substitution, where appropriate, of the words “safe breaking.” Then he seems to be expecting to be lauded for teaching known safe-breakers how to do it better.

“But”, the Prof might argue, “we know that safe breaking is unacceptable.”
Degrees of Woo
Continued...

That is my case, with one caveat - that it is well known that Asian students contribute high fees to university coffers. A professor who selects or condones courses because they are money spinners should hand in his/her badge.

Geoff Sherrington
Donvale VIC

The BS scale

Most of you are aware of various scales used in science as a shorthand for comparing the intensity of processes - the Richter scale for earthquake, Kelvin scale for temperature (and its subset Celsius) etc. What I propose is a scale of falsity for writers to indicate the reliability of assertions that propose is a scale of falsity for writers to

 quake, Kelvin scale for temperature of processes - the Richter scale for earth-

I modestly propose this scale to be called the Brookman Scale; that it shares an acronym with the faecal output of the furry rodent that deposits chocolate eggs for ‘good’ children to binge eat.

Truth, of course, is temporally dependent, so the scale would have to be qualified by the time in which the estimate was made. My existence is currently reassuring but proving my existence in the future will become more problematical. My DNA might be preserved and linked to descendants, but otherwise I will become a name that declines with use and is forgotten in the ebb and flow of cultural conflict.

I modestly propose this scale to be averaged. Each statement can be given a scale of likelihood based on refutable evidence. This scale can then be added and averaged over the whole text. Such a scale can be wonderful for markers of higher degree theses and a BS score level can be set as a standard for each ‘academic’ discipline.

For example:

• Chinese Herbal Medicine - 65 BS
• Chiropractic 95 BS
• Osteopathy - 95 BS
• Reflexology - 99.9 BS
• Pure Mathematics - 0.01 BS
• Sociology – 60 BS
• Medicine – 25 BS
• Physics – 1 BS
• Freudian psychology – 70 BS

I hope to see this scale propagated through all forms of publication. If the use becomes widespread and some editors refuse to adopt the scale, then deciding what to read will become easy. Simply refuse all publications that have a BS score above your desired level.

David Brookman
Salamander Bay NSW

CRYPTIC CROSSWORD SOLUTION

DR BOB’S TRIVIA SOLUTIONS

1. Lohengrin (Sorry).
2. He believed gnomes were real, and he hoped it would entice them to appear.
3. Beauty. Helen of Troy had “the face that launched 1,000 ships” so 1mH would be enough beauty to launch one ship. Negatively, -1mH would sink one ship, or launch one ship the other way.
4. When he comes to the notoriously jammed M25 ring motorway, there are no other cars in his lane.
5. Judas Iscariot

You can see more like this, every month and going back some years, at www.skeptics.com.au/features/dr-bobs-quiz/
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