

# the skeptic

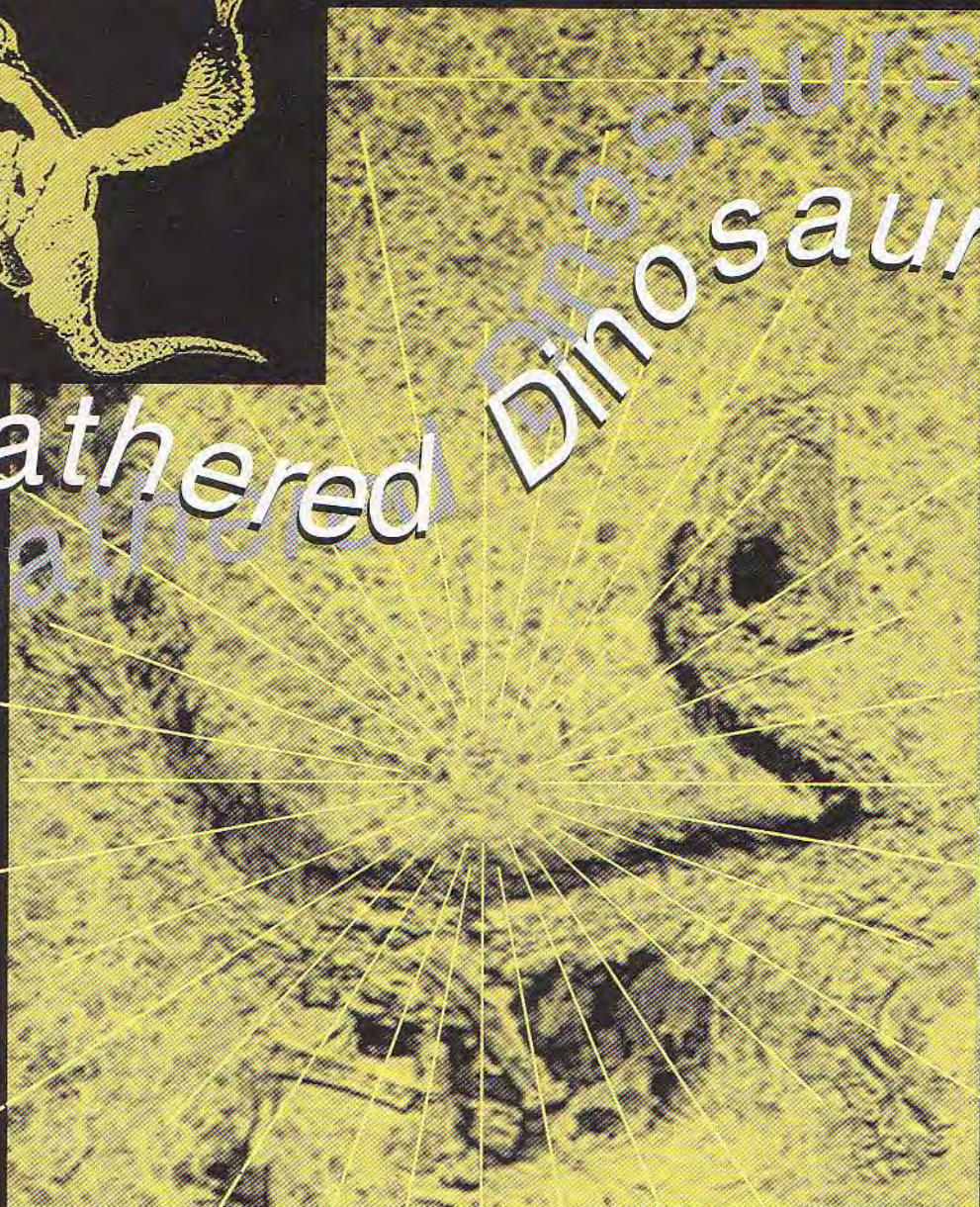
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A journal of fact and opinion



Feathered Dinosaurs!



Leave Creationism  
grounded



# the Skeptic

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## Editor

Barry Williams

## Contributing Editors

Tim Mendham  
Steve Roberts

## Technology Consultant

Richard Saunders

## Chief Investigator

Bob Nixon

## All correspondence to:

Australian Skeptics Inc  
PO Box 268  
Roseville NSW 2069  
Australia  
(ABN 90 613 095 379 )

## Contact Details

Tel: (02) 9417 2071  
Fax: (02) 9417 7930  
e-mail: skeptics@kasm.com.au

## Web Pages

*Australian Skeptics*  
www.skeptics.com.au  
*No Answers in Genesis*

<http://home.austarnet.com.au/stear/default.htm>

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## Editorial consultants:

Dr Stephen Basser (medicine)  
Dr Richard Gordon (medicine)  
Dr William Grey (philosophy)  
Prof Colin Groves (anthropology)  
Mr Martin Hadley (law)  
Dr Colin Keay (astronomy)  
Dr Mark Newbrook (linguistics)  
Dr Andrew Parle (physics)  
Prof Ian Plimer (geology)  
Dr James Popple (law/computer sci)  
Dr Alex Ritchie (palaeontology)  
Dr Steve Roberts (chemistry)  
Mr Roland Seidel (mathematics)

## Branch correspondents:

ACT: Mr Peter Barrett  
Darwin: Mr Simon Potter  
Gold Coast: Mr John Stear  
Hunter: Mr Michael Creech  
Qld: Dr Linda Shields  
SA: Mr Allan Lang  
Tas: Mr Fred Thornett  
Vic: Mr Grant Stevenson  
WA: Dr John Happs

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## Skeptics around Australia

**New South Wales**  
Australian Skeptics Inc  
PO Box 268  
Roseville NSW 2069  
Tel: (02) 9417 2071  
Fax: (02) 9417 7930  
skeptics@kasm.com.au

**Hunter Skeptics**  
PO Box 166  
Waratah NSW 2298  
Tel: (02) 4968 9666  
Fax: (02) 4952 6442

**Victoria**  
Australian Skeptics (Vic) Inc  
GPO Box 5166AA  
Melbourne VIC 3001  
Tel: 1 800 666 996  
Fax: 03 9531 6705  
contact@skeptics.com.au

**ACT**  
Canberra Skeptics  
PO Box 555  
Civic Square ACT 2608  
act@skeptics.com.au

**Queensland**  
Australian Skeptics (Qld)  
PO Box 6454  
Fairfield Gardens QLD 4103  
Tel: (07) 3255 0499  
qskeptic@uq.net.au  
**Qskeptics eGroup**  
(To subscribe send blank message to:  
qskeptics-subscribe@yahoo.com)

**Gold Coast Skeptics**  
PO Box 8348  
GCMC Bundall QLD 4217  
Tel: (07) 5593 1882  
Fax: (07) 5593 2776  
lmderrick@telstra.easymail.com.au

**South Australia**  
Skeptics SA  
PO Box 377  
Rundle Mall SA 5000  
Tel: (08) 8272 5881  
Fax: (08) 8272 5881  
laurie\_eddie@senet.com.au

**Western Australia**  
WA Skeptics  
22 Esperance Street  
East Victoria Park WA 6101  
Tel: (08) 9448 8458  
wa.skeptics@australiainmail.com

**Tasmania**  
Australian Skeptics in Tasmania  
PO Box 582  
North Hobart TAS 7000.  
Tel: (03) 6234 1458  
sharples@netspace.net.au

**Northern Territory**  
Darwin Skeptics  
PO Box 809  
Sanderson NT 0812  
Tel: (08) 8932 2194  
Fax: (08) 8932 7553  
dwnskeptic@ais.net.au

**Borderline Skeptics**  
PO Box 17  
Mitta Mitta VIC 3701  
Tel: (02) 6072 3632  
wombat@albury.net.au

# First the Good News

As Skeptics we have become accustomed to facing the accusation that ours is a negative trade; that we are a bunch of humourless nay-sayers whose only contribution is to debunk and rebut other people's cherished beliefs. Although that has never been true, it remains a commonly held belief among far too many people. It is, therefore, with some pleasure that we can report on two recent events that show just what a positive contribution active Skepticism can make to the intellectual health of society.

In 1995, shortly after we became the beneficiary of a substantial bequest from the estate of the late Stanley Whalley, we announced the establishment of the Australian Skeptics Science and Education Foundation (ASS&EF) and that one of the purposes to which the money would be put was in encouraging young people to take an interest in science and critical thinking. One result was the establishment of the Australian Skeptics Eureka Prize for Critical Thinking, one of the annual Eureka Prizes administered by the Australian Museum; another was a major sponsorship of the Exploratory hands-on science exhibit at the Stromlo Observatory in Canberra.

## Good News 1

Less well-known was a decision the Foundation made to sponsor a young student who was just commencing his studies at the University of Queensland. He came well recommended: he had been a volunteer at the Queensland Museum from the age of 15 and had been given a glowing testimonial to his abilities and enthusiasm by the then Curator of Fossils at the Museum, and prominent Skeptic, Dr Ralph Molnar. The ASS&EF was so im-

pressed with the young man that they agreed to subsidise his education expenses for the three years he needed to get his science degree.

Subsequent events have shown that their judgement of the young man's potential was well justified. He published his first scientific paper at 16; at 22 he became Australia's youngest museum curator, when he joined the Qld Museum's Department of Palaeontology in 2000; he has been intimately involved with the discovery of one of the largest dinosaurs ever found in Australia. His name is Scott Hocknull, and on January 24 he was named Young Australian of the Year for 2002.

Our sincerest congratulations go to Scott, a very worthy recipient of this award, and we hope to have a piece from him in the next issue (his busy schedule permitting).

## Good News 2



*Sinornithosaurus*

Our second good news story has a connection with the first. In July the Australian Museum will be mounting the largest dinosaur exhibition ever held in Australia. Called "The Chinosaurus Exhibition", it will feature many of the most exciting palaeontological finds of recent years, stemming from discoveries made in China.

These discoveries have caused a rethink of many long-held opinions about the ancient reptiles, none more so than a number of different species of dinosaur fossils showing clear evidence of animals that were covered in feathers. The only previously discovered examples of feathered dinosaur fossils had been a couple of specimens of *archaeopteryx*, which have been known for around a century. These really are exciting finds, adding fuel to a long-running a debate in palaeontological circles about whether or not modern birds are direct evolutionary descendants of dinosaurs. Until recently, the evidence has been both circumstantial and equivocal, although the trend has been in support of the hypothesis. However, these new discoveries have changed all that, and now the evidence is far stronger than hitherto had been the case.

Interesting, perhaps, but what does it have to do with Australian Skeptics?

When the Museum contracted with the Government of China for the exhibition, none of the feathered specimens was available. This was most unfortunate, given their importance to the new understanding of dinosaur evolution and the exhibition would have suffered for their absence. Later, when the Chinese authorities changed their minds and agreed to allow some of these rare specimens to be part of the exhibition, extra money was needed, but by that time the Museum had committed all their available funds. Deciding to seek sponsorship for these important specimens, the Museum Director, Mike Archer, approached the ASS&EF, which agreed to become a sponsor of a feathered dinosaur.

This is a singularly appropriate sponsorship for the Skeptics, as one

of our principal concerns has always been to counter the influence of religious fundamentalists on our education system and particularly on the teaching of science. These 'Young Earth Creationists', in endeavouring to keep their followers in ignorance of the evidence that really exists to underpin scientific theories of the evolution of species (and much else) have put up perennial strawman arguments along the lines of "There is no example of one species changing into another species" and equally fatuous questions such as, "Of what use is half a wing?"

Such propositions have never been scientifically valid ones, but they have had a superficial plausibility for the unsophisticated followers of this anti-scientific cult. The dinosaur specimens sponsored by the Skeptics in this exhibition, showing different transitional species on the road from reptile to bird, will serve to graphically expose such creationist rhetoric for the specious nonsense it always has been.

The Skeptics sponsorship will receive substantial acknowledgment in the exhibition and, as is the case with any dinosaur exhibition, it will be a major crowd puller, especially from among the ranks of school children. This example of our commitment to scientific education and critical thinking and to the exposure of pseudoscience should give us all a great deal of satisfaction with a job well done. The letter (below) we received from Mike Archer explains in more detail.

Dear Barry

*Sinosauropteryx* is regarded as a basal coelurosaur on the basis of its skeleton and skull – ie, something very similar to *Compsognathus* (the 'Compsies' of *Jurassic Park* that attacked the little girl on the beach). Coelurosaurs contain all of the bird-like theropod dinosaurs including *T. rex*, which is also a basal coelurosaur.

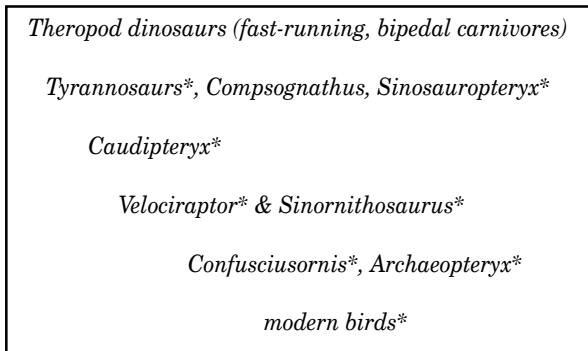
*Caudipteryx* is probably an oviraptorosaur, another bird-like group that were higher within the



*Sinosauropteryx*

Coelurosauria (related to or a member of the oviraptorosaurs), but just left of the line that led to the true birds. *Sinornithosaurus* is related to the group that contains dromaeosaurids, troodontids, velociraptors, utahraptors etc – all mean suckers but probably all feathered or furred.

If we were to do a nested set of relationships among coelurosaurs leading to more and more bird-like beasts (based on the phylogenetic overview of Xing Xu et al. (2002, *Nature* 415 : 780-84), noting (\*) things we have as specimens, casts or reconstructions



for this exhibition, it would be something like this:

Mind you there are now at least 44 genera of coelurosaurs not counting

all of the genera of birds which are obviously also coelurosaurs (just as we are chimps). Hence the subsets above are a tiny bit of the dino to bird story which contains many more branches and weird digressions. But these will represent most of the major branches in the production of birds from early coelurosaurs.

All of this radiation took place in the Jurassic and Cretaceous with some lineages surviving longer than others, hence things like *T. rex*, while an archaic coelurosaur, actually survived until the late Cretaceous. After all, who was going to be game enough to tell it to 'drop dead!'.

The only things we have had in Australia before that are part of this story is a cast of *T. rex*, casts of *Archaeopteryx* and a specimen (in Waren Sommerville's collection) of *Confusiusornis*. So these specimens will really be a major first for not just Australia, but the whole Southern Hemisphere – thanks to the Skeptics!

Cheers,  
Mike

### Crossing borders

Incidentally, this is the most "multi-national" edition of *the Skeptic* we have ever produced, with contributions from Canada, Namibia, the UK and the USA.

### Apology and explanation

Finally we must apologise for the slight delay in the publication of this issue, and make brief mention of a (related) matter that readers might have noticed in the media. It concerns a man from Queensland, Graham Cooper, who has been remanded in custody after having been charged with a number of alleged offences against Australian Skeptics and Dick Smith Foods. We regret that we cannot comment further in view of charges pending against Mr Cooper, but we hope to be able to discuss it in more detail in the next issue.

**Barry Williams**

# Communiqués from the Front

## Strange propinquity

Further proof, if proof be needed, that astrology is a load of bunk. Recently, while conducting research for a US colleague, we discovered that the Creation Science Foundation formally changed the name of its marketing arm to Answers in Genesis on November 10, 1997 (see “Dropping the Pretence” by Alex Ritchie, 17:4 p13). This could be considered (and astrologers do so consider it) as the birth date for AiG, which is located on the south-western outskirts of Brisbane. Astrologers assert that dates and locations are both important elements in their prognostications, so it seems a trifle curious that the Editor of *the Skeptic* was born on that date (albeit some decades earlier) at a place not 70km distant from the AiG (alias CSF) HQ.

Anyone suggesting any similarities (apart from a shared disdain for astrology) between the Editor and Answers in Genesis will be hearing from our solicitors.

the wood had not been fully reduced, a very important caveat for anyone silly enough to want to walk on coals. Do it properly and physics will protect you from harm; do it wrong, then you are forced to rely on mysticism (nowhere near as reliable a protector as physics) and you will get burnt. What price the insurance premiums for the next company to plan a fire walk?

There is a rather deliciously ironic footnote to this story. The session took place at a part of Port Stephens known as Salamander Bay. The salamander, as every well-read Skeptic would know, was a mythical lizard-like creature which lived in fire

## Fried sole not on menu

Is our Editor psychic? We can hear plosive exhalations of “Pshaw” echoing around the land as readers assimilate the absurdity of this question – but consider this:

In early February, our Ed contributed a *Naked Skeptic* column to the March issue of *Australasian Science* (a fine journal) in which he discussed fire walking, explaining the physics that allowed it to happen and dismissing new-agey notions about “motivation” and “mind-over-matter” as having anything to do with it. He concluded that, while a knowledge of physics reduced the risks of the undertaking, it was still a foolish thing to do, and opined that the recent dramatic increases in premiums for public liability insurance would probably see an end to this activity. This, he as-

serted, would be a triumph for economics where mere rational thought had failed.

Move on to the other end of February and a story hits the news outlets around the nation about a group of executives from the KFC franchise attending a motivational course at Port Stephens, NSW. Part of the course consisted of a “bonding session” in which 30 managers walked across a bed of coals, as a result of which all of them suffered from varying degrees of burns. This session was organised by an unnamed company, but it is fair to speculate that it was probably one that believed its own semi-mystical hype rather than one which understood physics.

Work Cover and the KFC franchise company are both reported to be conducting investigations, but it is fairly obvious what went wrong. Clearly the fire had not burnt for long enough and

## Out of Africa

Those who still aren’t convinced that safe walking on hot coals depends on physics, should take note of pictures from Goma, in the Republic of Congo.

The volcanic eruption in that tragic locality has left lava streams throughout the town, with TV images showing distraught townspeople walking across the solidified surface of the streams, as they try to salvage some of their belongings. They walk quickly, not stopping, on a surface that would surely be well above the temperature that would sear flesh if the contact was maintained for any length of time. There are no signs of New Age ceremonies, nor of expensive motivational speakers giving these people knowledge or training in exercising “mind-over-matter”, simply the drive of necessity coupled with the well established laws of physics.

### Disc-gusting

The Qld Dept of Fair Trading has just successfully prosecuted a man, Vivian Lloyd Tuckey, for selling the “environmentally friendly” Stereo Laundry Disc that, he claimed, created an electric charge in the water, dispensing with the need for detergent in the washing machine. Tuckey was fined \$10,000, for two admitted charges of false representation, but as it was estimated that up to 10,000 people had coughed up \$89 each for these fraudulent gadgets, that still left a healthy profit.

Still, it’s nice to see regulatory authorities sometimes acting in the public interest where pseudo-scientific scams are concerned, even though the wages of sin still seem to be far more profitable than the dole.

### Spots down

More good news from another front of the war against unreason. Campaigns for increasing the rate of immunisation of children have brought significant results, with the NSW Health Dept advising that no case of measles has been reported in the state since last October, the state’s longest measles-free period in history. Nationally there have been only 135 cases recorded, down from the most recent peak of almost 5000 cases in 1994. Will this cause the anti-immunisation cranks to shut up? Don’t hold your breath.

### Ah Feng

However, not all is rosy, as we hear reports from the US about the influence superstition has over brains. Voters in Sausalito, CA, have rejected a proposal to build a new \$7.8 million police and fire building after a campaign alleged the facility would violate the town’s *feng shui*. Meanwhile, the police force remains located in portable trailers, where they have been since a flood destroyed their former HQ.

If anyone is tempted to shake their head at the whackiness of those Californians, another story comes from far more staid Boston, where a couple sought to renovate their home, but were refused planning permission when neighbours claimed that the placement of a new entrance would interfere with the neighbours’ *feng shui*.

### Psychic phoney

Better news from the US is that a hotline ‘psychic’ who trades under the name Miss Cleo has been accused of false advertising, fraud and other unlawful business practices, by the Federal Trade Commission and that her Psychic Readers Network was to be closed down. Among the evidence presented was that “psychics” employed

athletes to improve their performance in a range of sports.

Perhaps this is a case where Skeptics should actually endorse some of the fruits of alternative medicine. If we encouraged manufacturers to make homeopathic steroids, hormones and stimulants, then athletes would suffer no malign side-effects and would stand no chance of being disqualified after drug tests, while sporting administrators would be reassured that their sports were clean. As far as we know, there is no test that will show someone has been ingesting distilled water.

### Doc up the pole

Fred Thornett, the man who put mania into Tasmania, reports:

Readers will be pleased to note that Dr Bryan Walpole, former President of the Tasmanian Branch of the AMA and Committee Member of the Tasmanian Skeptics, has taken up a 14 month appointment – with no possibility of parole – as the medical practitioner at the Antarctic Division’s base on Macquarie Island.

As the island has only about 40 full-time staff, all of whom are fit as bull elephant seals when they arrive, it seems likely that he will need one or two other activities to fill the long, dark winter evenings. Being a scientist at heart, Bryan will undertake one or two research projects. He will also accept responsibility for what must be about the most important role on the island. He will make the beer, using his long established home brew skills!

But this is not all! Bryan is also Flag Monitor and is now fully qualified to identify the flags of Australia and other countries whose ships visit Macquarie Island. And there is yet more! Bryan has undertaken a special training course so that he can fulfil another of the essential needs of the 40 stalwarts who will over-winter with him. He will be the official hair-cutter! Thus, I reckon, Bryan will become the first genuine Barber-Surgeon to walk the land for about 200 years.



Prasad Golla & John Blanton, of the North Texas Skeptics, view a new movie. Reproduced with their kind permission.

by the “service” read from pre-written scripts. Maybe our local regulatory authorities could take the hint, and investigate similar practices among Australian “telephone psychics” that we exposed several years ago.

### Homoeo on the track (& field)

That indefatigable challenger of quackery, Cheryl Freeman, has told us of a local outfit advertising “homeopathic human growth hormone”. As readers with sporting interests will know, HGHs, along with a variety of anabolic steroids and stimulants, are the bane of administrators, because of their claimed widespread use by some

## Farewell to Australasian Post

Mark Plummer, a founder of Australasian Skeptics, and first Editor of *the Skeptic*, mourns the passing of a publishing phenomenon.

February 2, 2002 saw the last issue of *The Aussie Post*, which started in 1864 as a weekly newspaper, *The Australasian* and which later transformed into *The Australasian Post*, was Australia's oldest continuously published weekly magazine.

The last issue contained a full page of advertisements from "Australia's Best Psychics" and a page of the "Stars with Ariel - *Post's* fair-dinkum astrologer". If any of them foresaw the demise of their paper none of them went public prior to February 2, 2002. Perhaps a numerologist should have found significance in the date of the last issue 02/02/02!

For years *The Post* featured Aussie clairvoyants including John Pinkney and Tom Wards. Perhaps now is an appropriate time to confess to a hoax I played on John Pinkney and *The Post*.

Almost 20 years ago I found myself over-nighting in a small NSW country town. After dinner, having nothing better to do, I wandered across the road to the local cemetery to photograph some ghosts. Setting up the camera on a tripod, I took time exposures of the tombstones. While this was going on, I stepped in front of the tombstone and held my detachable flash at arms length in front, with the flash pointed at me. Closing my eyes I fired the flash. The results showed a white torso hovering above the ground. I sent the results to John Pinkney who was clearly excited by them and made an appeal in the *Post* for the photographer to contact him.

Meanwhile, I had involved another Skeptic into the hoax. Barry Williams, then running the NSW branch of the Skeptics, rang Pinkney, purporting to be an interstate truck driver named "Bill". In accents that would have made the late Chips Rafferty sound like an Oxford don, Barry (Bill) told

Pinkney that he had snapped the photos while stopped in the town for the night, and it wasn't until he had the pictures developed that he realised that he had captured some ghostly images. Barry had to pretend that he was often on the road and couldn't be easily contacted (it was pre-mobile phone days) because Pinkney was keen to do a face-to-face interview. It seems he fell for the trick, because he

No one did, but now a list of these items has been published, including among the mysteries that remain unsolved, not only that quintessentially Australian children's story, but even thanking the editor of this journal for his help.

## Some neck

Sometimes random acts of kindness can lead to unintended consequences. It happened this way.

The sole fruit of the loins of the editor of this journal, finding herself in a greengrocer's emporium, was confronted by an advertisement for a beverage, "Ginger Neck Tar", that was new to her. Noting that the beverage consisted of "lemon, honey and water" and knowing that her sire had a fondness for ginger drinks, she purchased him a 375ml sample.

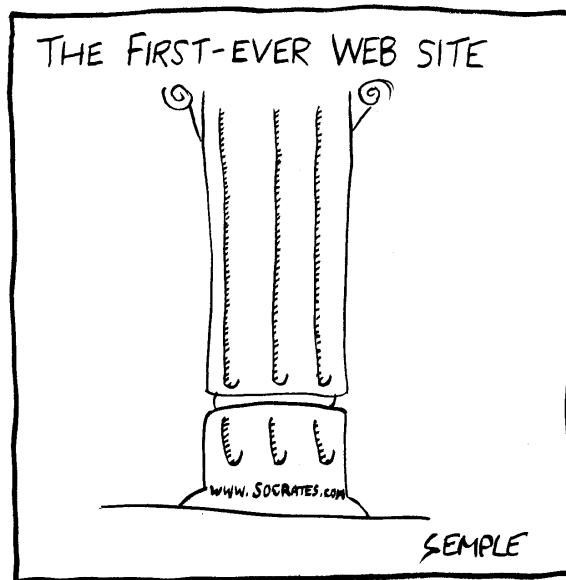
It was a thoughtful act, however, as she is a solicitor she probably should have paid more attention to the small print. The first clue was that the drink was produced in Byron Bay, the second was that the water involved was "filtered 'Grander' energised water".

Nevertheless, odd claims are one thing, the proof of the beverage is in the drinking. The editor, true to the Skeptic's code, sampled the product and can confidently state that in all his years of ingesting strange fluids, including inadvertent sips of petrol when syphoning activities went amiss, and sampling Ian Plimer's home brew, he has never tasted a more revolting liquid.

Be warned.

## Fruity query

One of life's mysteries. Would one of our botanist/horticulturist subscribers care to advise why, while one can buy any number of delicious varieties of peaches and nectarines from greengrocers, it is almost impossible to buy a decent apricot?



shortly thereafter published the pictures in the *Post*, labelled as the "best" ghost photographs he had ever seen.

One thing I will miss about the *Post* was the wonderful jokes. The last issue did not let me down with a cartoon of a clairvoyant and her customer. The customer asks "So, where did you learn to read palms?" to which the clairvoyant replies "In a hand book"

## Pudding

Some time back an Internet list discussion discussed various "historical mysteries" that had not yet been resolved: Atlantis, Avalon, the Flying Dutchman, the Giant Rat of Sumatra, Jack The Ripper (who was he/she) – that sort of thing. Some were genuine mysteries, while others were simply fantasies dressed as fact.

With tongue firmly in cheek, we introduced Norman Lindsay's *Magic Pudding* to see if anyone would notice.



# Coals to Newcastle

**In which our intrepid ballonaut reports on his visit to the Rationalist conference in India**

New Delhi's Gandhi Peace Foundation was the venue for the Third International Rationalist Conference from February 8 to 12 this year. The president of Rationalist International, Mr Sanal Edamaruku, invited two very jetlagged Richards (Saunders and Lead) from the Australian Skeptics to join a distinguished group of international and Indian speakers. If any readers have a favourite faith healer, one specialising in healing the arthritic knees of overweight crusty editors of *the Skeptic*, a certain Barry would like to be able to travel long distances again. Sanal had specifically requested Barry's presence at the Conference as the elder statesman of the Australian Skeptics.

Barry is one of only three Australian Honorary Associates of Rationalist International (another is Mike Archer

of the Australian Museum, a familiar face at Skeptics' gatherings). Other distinguished Honorary Associates include such luminaries as Sir Hermann Bondi, Prof Richard Dawkins (UK), Prof Paul Kurtz, James 'The Amazing' Randi (US) and Dr Richard Leakey (Kenya), all of



*Richard Lead, wit, bon vivant, world traveller, accountant, treasurer. Need we say more?*



*Secretary General, Sanal Edamaruku, opens the International Rationalist conference*





*The Balloonaut at the conference venue*



*A glorious edifice spoiled*

whom are well known in Skeptics circles.

To quote from the Conference program:

*Rationalist International, associating the most prominent rationalist thinkers of our times, was founded during the First International Rationalist Conference in December 1995. As a forum for rationalist ideas and positions of worldwide concern, it aims at representing the*

*rationalist view where public opinion is formed and making the voice of reason heard and considered, where decisions are taken which will shape our future.*

As expected, the quality of the Conference speakers was first class. In addition to the Indian Rationalists, there were speakers from Bangladesh, the UK, the US, New Zealand, and of course, Australia, representing their respective Skep-

tics, Rationalists, and Humanist groups. The five-day Conference was at a high level, and both Richards came away filled with new knowledge and enthusiasm for the cause.

Most readers are no doubt annoyed that many Australian health funds pay benefits for acupuncture, homoeopathy, and similar alternatives to medicine. Well, take a deep breath – American trauma nurse and Rationalist Jan Eisler told the stunned Conference that most



*Richard Saunders presents the Great Skeptic CD to Sanal Edamaruku*



*Will international relations survive a Richard invasion?*

## The Lead Balloon



Superstition abounds in shop fronts and in thousands of newspaper classifieds like that below.

**WANTED beautiful, tall girl for Agrawal Airan boy 26/176 working as Supervisor in Tata Chem Ltd. Babrala Budaun UP. Send biodata horoscope full size photo (R) to [REDACTED]**

American health insurers now pay a benefit to Christian Scientist practitioners who *pray* for the recovery of a policy holder!

The Indian Rationalists and Skeptics are true heroes. In Australia, about the greatest risk active Skeptics take is having some sad loser set up an Internet hate page dedicated to them. In India, the godmen, gurus, fakirs, and other miracle workers earn a very good living while surrounded by poverty. They guard this income with jealousy and violence. Sanal and his team are hated by these scamsters, and receive regular death threats. More than one critic of India's leading godman, the notorious Sai Baba, has ended up murdered for his trouble. Despite this, Sanal and his team of hundreds

beliefs and superstitions.

Amid all of this, your correspondent's paper was called 'Scams I Know.' It really did feel like taking the proverbial coals to Newcastle, but interestingly, the financial scams so prevalent in Australia (and outlined in *the Skeptic* over the years) were not known in New Delhi, not even the ubiquitous Nigerian letter scam.

Richard Saunders spoke about his creation of the *Great Skeptic CD*, and gave an

of Rationalists regularly travel to the rural heartlands of India, demonstrating the 'magic' used by the godmen to deceive the uneducated villagers and to relieve them of what little money they have.

The highlight of the Conference was the 'Miracle Exposure' demonstration by Sanal and his volunteers. We witnessed Sanal and his team producing 'holy ash' and other objects from thin air (Sai Baba's stock in trade), eating fire, pushing a steel spike through both cheeks (it's not an illusion or a trick – it really does go right through!), producing fire by mental powers, producing balls from the stomach, levitating before our very eyes, and similarly useful party tricks. Sanal detailed to the Conference the scientific explanations of these tricks, just as he does to the Indian villagers who would otherwise be trapped by their blind

hilarious demonstration of a divining rod (actually, a wire coat hanger) finding those international speakers with Delhi belly. Richard now qualifies for the Australian Skeptics' \$100,000 prize.

Out in the streets of New Delhi and Agra, every street scam imaginable was tried on the two Richards, and for me it was a hoot matching wits, and swapping insults.

The Australian Skeptics donated ten copies of the *Great Skeptic CD* to the Indian Rationalists, to their enormous gratitude. *The Skeptic* is held in high regard by the various Indian groups, both as a source of technical information and for our humorous and irreverent approach. May we never change.

### Next...

The 4<sup>th</sup> World Skeptics Convention will be held in Los Angeles in June. I have been honoured with an invitation to present a paper to the plenary session on the opening night of the Convention. American magician, sceptic, and scambuster Bob Steiner, who wowed us all at the 3<sup>rd</sup> World Convention in Sydney in November 2000, is also presenting a paper at that session. All Australian Skeptics are invited to join me, and let's see how well the Usanians can party.



Nothing to declare but our genius!

# Bill to Provide Protection – Or will it?

On February 14, 2002 the *Therapeutic Goods Amendment (Medical Devices) Bill*, was introduced into the House of Representatives for the first reading, by the Minister for Therapeutic Goods, Trish Worth, and has now passed, unobstructed, to the Senate.

What has happened to me is a denial, I believe, of my rights to be fully informed of a proposed national medical Bill, to specific details of the Bill and its application to matters of concern to me; a denial of my rights to submit my concerns and questions for assessment to an independent parliamentary committee and to participate in public debate during the lengthy and obligatory period of public discussion. At this late stage, any concerns and questions I have are now left to assessment and response from an individual in the Therapeutic Goods Administration (TGA), who can override any concerns I might make to the media, the Minister and politicians generally.

The Bill will introduce a new globally harmonised system for the regulation of medical devices in Australia, which is now a member of the Global Harmonisation Task Force (GHTF), along with the USA, Canada, Japan and the European

Union. Approved devices will be registered as medical devices in five new Classes on the Australian Register of Therapeutic Goods (ARTG). Each class will have its own level of compliance and devices will be assessed according to their risk to the user. The TGA plans to implement the new system in 2002.

What was not mentioned in the September 1999 media releases (listed on the TGA website) when the Bill was first announced and the period of public discussion had begun, was that the Bill also applied to unscientific and bogus 'health' devices widely used in the alternative health and integrative medicine industry – the types of devices that were subjects of my previous *Skeptic* reports.

The TGA website, the public information forum on the Bill, makes no specific mention of 11 alternative therapy devices in the all-important introductory sections on "devices, examples and classes". Readers of the site could assume that the introductory statement that begins, "A medical device is: any instrument, appliance ..." applied only to genuine medical devices (such as the examples given of heart monitors and syringes).



Cheryl Freeman, a former nurse, is a leading advocate for the exposure of pseudo-medical devices and treatments.

## Bill to Provide Protection

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I have now learnt that this is incorrect. There have been no media reports (of which I am aware) and no public discussion on the new Bill and how it will apply to a vast range of allegedly “advanced scientific health screening/diagnostic and treatment / curing devices” that form an integral (and highly acclaimed) part of the billion dollar (+) alternative health and integrative medicine industry in Australia, said to service up to 70% of health consumers. Also no alternative health groups are listed among the industry bodies consulted by the TGA in the preparation of the Bill. (Refer: [www.health.gov.au/tga/docs/html/medinfo.htm](http://www.health.gov.au/tga/docs/html/medinfo.htm)).

### Remaining concerns

Since first learning of the Bill and its application to alternative therapy devices in a letter from a TGA branch director (Dec 10, 01), I have sought to obtain more specific details and answers to many questions. The TGA letter stated that:

*Many of the currently excluded devices of the sort mentioned in your letter will be classified under the new system ... claims must only be ‘allowable claims’ which are specific for the ‘intended purpose’ of that device ... TGA will liaise with state authorities regarding practitioners using alternative therapy devices.*

However, my further questions were not answered. The main one being:

*Will the new system be a revamp of the previous seriously flawed and dangerous ARTG –AUST L listing system for these devices?*

Finally the TGA advised in a letter dated February 13, 2002 (the day after a media reporter contacted the TGA and the day before the Bill was introduced into parliament):

*This new legislation is designed for therapeutic devices as a whole, including alternative health devices. ... for supply in Australia, devices will have to be included on the ARTG. Sponsors (distributors - manufacturers) will have to declare*

*that they have scientifically validated clinical evidence to substantiate therapeutic claims.*

To me, this claim is at total odds with the TGA website which states under:

### **What are the main changes?...**

*Each device class will have minimum requirements for safety and performance that must be met, which indicates different levels of compliance for each class.*

### **Exclusion test**

If the new Bill restrictions are intended to act as an “Exclusion Test”, then it is fair to surmise that none of these devices would pass the ‘validated scientific evidence test’. If not, they would then, theoretically, be banned from sale in Australia. But doing so would put our new devices regulations at odds with other member countries of the GHTF, where the bogus devices industry is flourishing and where some dangerous devices, such as the CRT 2000 and LISTEN, are promoted as “FDA and European Union Approved” or “Registered as a medical device in Canada”.

These facts would indicate that seriously flawed medical devices regulations apply in these countries, so it would be no bad thing if Australia’s regulations were at odds with them, but read on.

In itself such an ‘Exclusion Test’ would have merit, amounting to a unique and major federal government crackdown on the alternative health industry; one unprecedented in the history of healthcare in Australia. The ramifications would be far-reaching, forcing all state governments to legislate to close-down thousands of existing health-medical-dental-chiropractic clinics and businesses promoting, using or selling these unproven devices. The entire industry would be devastated. The fall-out would include practitioners, many from the top echelons of the industry and their peak industry bodies, who would be required to

either produce scientifically validated evidence that their devices do what they claim for them, or to publicly admit to deceiving and exploiting their clients, patients, health funds, insurance companies and government AUSTUDY grants bodies, for decades. Victims could sue for damages and demand refunds.

Given the risks this industry poses to health consumers, one would expect a government proposing such changes to be morally obliged to inform the public. One would also expect such profound changes to be the subject of much government publicity, yet there has been only deafening silence. No such announcements have been made.

One is forced to wonder if all these ramifications have been considered by the regulators. Or is it that the system, in practice, would mirror the unsatisfactory approach used under the previous ARTG-AUST L System, which paid only lip-service to scientific validity?

### **ARTG-AUST L System**

If the Bill was not intended to act primarily as an “Exclusion Test” then what are the specific details of the Bill and its classes? Through Senator John Tierney, I have compiled a comprehensive list of issues and questions for the Minister, Trish Worth, which will help to determine, among many other issues, if the new system has a class for devices defined in similar terms and levels of compliance as the AUST L system. If so, it will thereby expose major flaws and loop-holes in the new system.

Under this flawed system, these devices were listed without any requirement for proof of efficacy. In the previous Act they were defined as:

*... devices that emit, measure or absorb vibrations, waves, particles or energy, and non-invasive locators of or stimulators for acupoints or energy meridians; and devices that improve comfort, enhance relaxation ... ease minor aches and pains, fatigue ... or stimulate circulation via heat or massage.*

All well and good, however, dan-

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gerous pseudo-diagnostic and -therapeutic devices such as the LISTEN, CRT 2000, Dr Royal Rife and Dr Hulda Clark 'cure' devices identified as electro- acupuncture locators - stimulators, temperature recorders, frequency generators or neuro-muscular stimulators gained listings and were then illegally and dangerously promoted and used as detailed in my *Skeptic* reports. They were reassuringly labelled as "TGA APPROVED." In 1998 the system was abolished when it was finally acknowledged by the TGA that:

*The claims implied a level of endorsement by the TGA.*

However, no official public health warnings were ever issued by the TGA, despite compelling evidence being submitted. None of the device sponsors was required to publish retraction or apology notices so there has been no public education. There were no requirements for compulsory warnings to be posted on all existing devices, promotions or in clinics.

### Public Rights

While I have been denied my rights, so too has the public. Even more disturbing is that politicians in both Houses could have passed this Bill, originally scheduled for debate in Spring 2001, apparently unaware of the full content and application of a Bill that would become law in Australia.

It is highly likely that most politicians (except those who have since received submissions from me) know little or nothing of the bogus, globally expanding, devices industry, the risks it poses to health consumers, or details of the adults, children and babies who have become victims of this industry – or of our previous seriously flawed and dangerous ARTG-AUST L devices system and why it was abolished. Therefore it is crucial that legislators take extreme care when passing laws for new regulations for fear the new system may duplicate the gross errors and failings of the previous system.

How could this happen in a demo-

cratic society? What has happened to me has left me shocked, disappointed and disillusioned in the legislative processes that have allowed this to happen. I believe, even at this late stage in the passage of this Bill through Parliament, that politicians and the people they represent, the public and myself, are entitled to all the facts about this Bill.

### Public Appeal

I appeal to the Minister, Trish Worth, to respond, using my questions as a guide, and to publish all the facts on the TGA website.

### Footnote

*It is now two years since Cheryl Freeman first drew the attention of the regulatory authorities to the proliferation of dubious "breast screening" devices and more than a year since she did the same for a wide range of "diagnostic and treatment" devices for which there is no evidence of scientific validity. There are few signs that any action is being taken to regulate the claims made for these devices, and "clinics" that promote them are still advertising and promoting their use for highly suspect purposes.*

*She is right to wonder if the new legislation will have any more effect on the promotion of pseudo-medicine than had the previous laws. We will continue to support her demands for action until the regulators start to regulate.*

### Stop Press

*As we go to press, there is considerable media comment on the apparently inaccurate results of pap smear tests given to thousands of women by some pathology laboratories in NSW and Victoria.*

*If these allegations prove to be true, then the authorities have responded properly, albeit tardily. Federal and State Health Departments are advising women to have new tests and are contacting medical practitioners to check with patients who might have been subjected to inaccurate results. If the laboratories are found to be negligent, then their*

*accreditation might very well be withdrawn. This is the response we have every right to expect from regulatory authorities whose sole purpose is to protect the health standards of our community.*

*What a pity then, that precisely the same vigilance and standards are not applied by the same authorities to various "alternative" techniques, such as the "breast screening" devices that Cheryl Freeman has exposed in her articles in the *Skeptic* and in submissions to these same authorities. The operators of these devices purport to do precisely what properly established pathology laboratories really do, and much more. They claim, not only to be able to detect cancerous growths, but also to be able to treat them. There is no scientific evidence to support these claims, nor is there any other reason to suppose that they are valid tests.*

*If a laboratory using scientifically based medical technology is found to have breached the standards laid down, it is perfectly proper that it should be held accountable, and it will be. Should we, therefore, expect any less vigilance from our statutory authorities when non-scientific bodies purport to be able to achieve the same ends by different means?*

*People who have been misdiagnosed or mistreated suffer the same risks, regardless of the techniques used. Why, then, the reticence of the authorities to hold those claiming to be able to produce the same (or superior) results to a lesser standard?*

*If the new legislation referred to in Cheryl's article above will do the trick, then that may be the answer. But, based on past experience with other legislation in this field, we could be excused for thinking that is a very big "If".*

***When will the authorities act to regulate the alternative health industry at the same level and hold it to the same standards as they do with the orthodox health industry? We should require nothing less!***



# Science, Skepticism & The Simpsons

A science teacher finds inspiration in an unlikely source



David Davies has been teaching science for more years than he cares to admit. He is currently at Warrandyte High. He is also a member of the Australian Skeptics (Vic)

This article is based on part of a talk David Davies gave at the Skeptics Science Symposium in July 2001. It outlines how he uses videos and demonstrations to get students and adults to think more skeptically about some commonly held beliefs.

All my teaching comrades have been there before. Period 6, stinking hot and your year 9 science class more or less successfully managing to enter the science room without too many fatalities. Suddenly, someone spots the TV set up at the front. Can we watch a video sir? Well OK, but only if you listen carefully first! (27 students instantly think: video = bludge)

First, some questioning from me and ensuing discussion on “which way does water spiral when it goes down the plug-hole?” Almost all think it goes in one direction in the southern hemisphere and the opposite way in the northern hemisphere, but they can’t quite remember which

way. Most adults think the same way. I have even heard quite a few science teachers say the same thing, but they add that the “Coriolis Effect causes it” to make it sound more authoritative.

I’m one of those growing number of people who are convinced that most of the interesting and important phenomena in life have been explored and explained in one of 2 TV programs: *Seinfeld* and *The Simpsons*. So what does *The Simpsons* have to say about vortices in water?

I proceed to play them the first 10 minutes of the episode “Bart vs. Australia” (\$19 at K-Mart for a tape with 3 other episodes). It’s very funny, contains some **appalling** American attempts at Australian accents and even has a guest appearance by Adolph Hitler! Lisa Simpson (the smart one) explains that in the northern hemisphere water always goes anticlockwise down plugholes and toilets because of the Coriolis

Effect. Poor neurone-challenged Bart refuses to believe her; “no way; water doesn’t obey your rules – it goes where it wants – like me!”

So Bart does what any good scientist should do. He organises some experiments and in doing so sparks an International Incident. Much to his disgust his enquiries show “she’s right; stupid Lisa science queen”.

I stop the video at this point (to the obligatory protests). Is Lisa correct? Does it go clockwise in the South? “Of course” they chorus – “that’s what we told you at the start! Can we watch the rest of the tape now?” Brooke and Josh are, thankfully, a couple of sceptical voices – “why don’t we try it?”

### **To the sinks!**

We organise a quick class experiment with 8 sinks and then discuss the results. Hmm! 3 clockwise, 4 anticlockwise and 1 no vortex. Not what Lisa says! We brainstorm possible reasons:

water still moving after filling;

different sinks;

removing the plugs starts the water rotating; etc.

So how can we improve the experiment? We decide that:

the water should be left for 20 minutes to stop moving;

the plugs should be on strings and removed carefully to minimise disturbances;

each trial should be repeated;

other things like baths, toilets and kitchen sinks should be tried;

At this point I hand out (to the expected group groaning) the homework sheet I’ve previously prepared. This sets out how, in one week, they have to conduct three trials of four different sinks, etc. at home, with appropriate words about how to not waste water!

Only a few minutes left. Time to pack up and start thinking about how to con the science co-ordinator into truly believing it’s his shout at the pub.

## **Results**

I repeated this lesson with my other Year 9 classes. Interestingly, the results were:

Clockwise: 31%

Anticlockwise: 42%

No Vortex: 27%



*Brave David practising what he teaches on a bed of nails. The disembodied feet belong to the Skeptic Editor.*

These results came from over 500 individual trials. I suspect that I am at least partially responsible for Melbourne’s current water shortage.

The students were interested, two weeks later, to hear the final overall results. If anyone else does this, I would be very interested to hear their results. (You can contact me at [ddav@warrandytehigh.vic.edu.au](mailto:ddav@warrandytehigh.vic.edu.au)). Bart seems to have won this time!



*Lisa: the Skeptical Simpson.*

## **The Coriolis Effect**

This is caused by different rotation speeds at different latitudes and is a very real effect, but can usually only be noticed in bodies of fluid that are many kilometres wide (eg cyclonic weather systems) or in smaller bodies after very, very careful preparation.

In sinks and bathtubs it is completely overwhelmed by unpredictable factors such as friction, small preexisting water movements and the container shape. Many of my students got varying results with the same sink!

## **Other Lessons**

I have a general goal to demonstrate to others the importance of adopting a skeptical approach to various claims that they will inevitably be exposed to in life. The power of science is that it can be a very good bullshit filter if claims can be tested by good experimental methods.

Throughout the year I regularly throw in lessons on topics like:

Fire-walking;

Lying on a bed of nails;

Spoon bending;

Psychic surgery;

Mind reading;

Smashing concrete blocks with the hands;

Molten lead on the tongue;

All of these involve video snippets and demonstrations. I attempt to show that, with a sceptical approach and some basic science, seemingly mystical things can be explained by science – but this is starting to sound like another article!



# When Saints Become Sinners

**Any ideology, not simply religion, can cause good people to do bad things**



*Bruce Wildish is a Canadian writer. He has published articles on the relationship between science, skepticism, humanism and religion in Skeptic and Free Inquiry.*

## **Abstract:**

Secularists often accuse religion of corrupting the morality of good people. While there is certainly historical evidence for this position, a famous experiment suggests that science is also culpable in this respect.

Physicist Steven Weinberg has said: "With or without religion good people can behave well and bad people can do evil; but for good people to do evil - that takes religion."<sup>1</sup>

A casual survey of their literature will show that many humanists, skeptics and freethinkers are of the same view. And it's not hard to see why. Under religion's tutelage society has been subjected to slavery, witch hunts, inquisitions, wars, crusades, jihads, ethnic cleansings, terrorism, hate crimes, bigotry, discrimination and all shades and forms of political extremism. Countless millions have been persecuted or killed as a consequence. And in the wake of the terrorist attacks of Sep-

tember 11, 2001 the relationship between religion and the doing of evil has become of particular significance to Americans, forcing even believers to confront and struggle with its implications. Unless one is prepared to adopt the absurd view that the countless individuals responsible for all such religiously-motivated atrocities were and are evil by nature and have simply exploited religion as a means to realize their perverse desires, one is forced to confront the fact that there is something about religion that can drive normal people to do evil.

But Weinberg claims more than this. His statement indicts religion as being uniquely capable of perverting the moral character of otherwise decent people and thereby makes it responsible for many of history's most notorious evils. His statement, as phrased, implies that no other social institution or agency has within itself the mechanisms or facilities for encouraging or manipulating the average person with good



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character and intentions into committing an act of wilful evil. While not losing sight of religion's obvious and rather notorious culpability in this regard, the basic falsity of Weinberg's claim is not hard to demonstrate. More significantly, the evidence against his claim carries very special implications for humanists, skeptics and others who value the importance of science for the betterment of human society.

### The Milgram experiment

In the early 1960s psychologist Stanley Milgram conducted a series of experiments to study the relationship between obedience to authority and personal conscience, the goal being to provide some sort of explanation for the frequency with which many people throughout history have acted contrary to their consciences and popular morality when pressured to do so by others. The experiment, which has since become a classic in its field, was conducted as follows:

A number of volunteers, a mix of male and female, were brought into a laboratory to participate in what they were told was a scientific study of memory and the effect of negative reinforcement: did the fear of pain improve one's capacity for accurate recall? Their responsibility, as teachers, was to read a series of word pairs to another volunteer, called the learner, and then test the latter's memory by repeating one of the words in each pair and asking for the matching word. In the event of a mistake, they were to administer an electric shock to the learner, increasing the level of the shock with each mistake made. These shocks were transmitted through a control panel containing a series of levers and switches labelled 15 to 450 volts and having warning labels ranging from "slight shock" at one extreme to "Danger: Severe shock" and simply "XXX" at the other. The teacher and the learner were separated from one another by a partition or wall and communicated through an intercom.

Those familiar with this experiment will recall at once that the

so-called learner in each case was not a volunteer at all but merely an actor whose job it was to deliberately make errors when providing responses to the teacher's questions and to feign pain and alarm as the teachers administered the required shocks. The true purpose here was to observe the behaviour of the teachers under these conditions: how many of them would keep administering shocks against the protests and pleas of the learners, solely at the insistence of the scientists in charge of the experiment? How far up the shock scale were they prepared to go?

The results were alarming<sup>2</sup>. Sixty-five percent of all of the teacher volunteers obeyed orders to punish the learner to the end of the 450 volt scale, even when the learner pleaded for the experiment to end and feigned great physical suffering and even unconsciousness, and none of the volunteers stopped before reaching the 300 volt level. To be sure, many of the teachers protested their situation and showed visible signs of stress at being ordered to keep administering the shocks, yet they did so all the same, solely because the scientists involved impressed upon them the necessity of honouring the demands of the experiment.

Humanists and skeptics should keep the results of this fascinating and important experiment in mind when rushing to condemn religion alone for its power to manipulate and coerce normal people into acting contrary to their conscience and doing acts of evil. The volunteers in this experiment, average people all, willingly inflicted what they believed to be harm and pain on other human beings solely because they were told to do so by someone who they perceived as having the authority to demand this of them – someone whose authority derived not from religion, church or scripture, but from the power and prestige of science. And they did this not in the service of something as profound as the cause of righteousness or the fulfilment of the will of God, but

merely to further the expansion of our knowledge about human behaviour. That so many average people were willing, even reluctantly, to inflict harm and suffering on others for the cause of science is evidence that science too has within it the very same means as religion for motivating good people to do evil.

### Perversion of authority

Milgram demonstrated that most human beings have a very strong tendency for allowing others in authority to control and influence their own behaviour, especially when such authorities are able to create the impression that they are acting in the service of larger goals and interests. It is a tendency so deeply embedded in the human psyche that it often overrides the force of our own beliefs and consciences, making it possible for us to act in manner that is in complete contradiction to our normal perceptions of right and wrong. In the end it matters little what form that authority takes: any social institution or agency that commands the respect of the public by creating the impression that its aims are ultimately noble and in the best interests of the public – religious, philosophical, political or scientific – carries within it the power and potential to motivate and manipulate people to act in any manner it deems necessary. And when such institutions come under the control or influence of a relatively small numbers of individuals with a common vision or objective, the circumstances have arisen by which a minority can control the behaviour of the majority.

That religion has demonstrated this point in so appalling a fashion can be explained by the fact that for so much of its history it has not been an exercise of personal piety but has instead been rigidly institutionalised and mired in rigid tradition. The Christian religion provides a perfect example. Though it seems, like many religious movements, to have begun as an effort on the part of a small circle of people to promote personal piety and righteous behaviour on the part of individuals for a particular

## When Saints become Sinners

end<sup>3</sup>, it quickly adopted the trappings of a formal organisation and later degenerated into a rigidly bureaucratic, tightly hierarchical oligarchy centred on an authoritative body of sacred texts and traditions. Independent thinking was discouraged and the right of dissent all but eliminated. It is in religions free of such controlling dogmas and personalities, where the emphasis is on the betterment of the individual and society rather than on the slavish following of rules and the submission of the will of the individual, that one can see proof that the religious impulse need not be expressed in a manner that is socially detrimental<sup>4</sup>.

More relevant insofar as falsifying Weinberg's claims is concerned is the fact that the worst atrocities and moral offences of modern times, catastrophes which very obviously involved the conscription of the consciences and wills of a great many otherwise decent "average" people, were not religiously motivated, but were instead the product of secular political and philosophical ideologies. The innumerable horrors inflicted upon the people of Russia and its environs by the Bolsheviks and their Communist offspring, and the unspeakable atrocities committed by the Nazis are two of the most striking examples. In each case the ability of small cabals of individuals to create powerful authoritative institutions and political structures for the manipulation and control of others by promoting the idea that they were acting in the service of a noble, higher end and were furthering the interests of those who they wished to control, provided the means by which their perverse goals could be realised.

### Ideology and belief

In his book on this complex and difficult subject<sup>5</sup>, philosopher Jonathan Glover identifies what he calls the two critical "moral resources" necessary to prevent the conscription of the masses into acts of barbarism. The first is a strong moral identity: one must have a clear definition of oneself as a moral being committed

to not mistreating or harming others in the furtherance of any ideology. The second is an awareness of the importance of certain "humanistic" responses that should guide one's approach to the treatment of others in all contexts, ie responses whose merit and benefits address common human needs and reflect pan-human experiences: sympathy, empathy and respect. Evil flourishes and succeeds when these human responses fail and when the moral identity of individuals is subverted. In the case of religion, as with politics and philosophy – and even science for that matter – the road to barbarism begins when people are manipulated into deriving their moral identity from a specific ideology and when they allow themselves to be governed by belief rather than by knowledge derived through reasoning and facts. Ideology and belief together forge a terrible power that effectively subverts careful moral thinking and allows individuals to disregard or even disengage their normal human responses.

Skeptics and humanists must not lose sight of the fact that science has within itself the very same capacity and power as religion to accomplish this result. While most of its advocates and practitioners regard science more as a process or system for the study of the world and not an end in its own right, it is also a human institution and is thus possessed of the same hierarchies, authoritative structures, power politics and ideologies as any other human institution. And like religion it has its share of disreputable adherents and practitioners, some of whom – a minority, fortunately – are quite capable and willing to encourage or do harm in the service of what they regard as the larger cause of science.

These facts are complicated by another: technology. Science has at its disposal a number of very powerful tools and resources for the furtherance of its ends. It is not hard to conceive of ways in which some of these could be used by scientists themselves to do great harm – developments in genetics being one obvi-

ous example. It is therefore critical that the champions and promoters of science not ignore the lesson of the Milgram experiment, lest they risk falling into the same trap that religion so often has, that of wilfully abrogating the minds and wills of people in the service of their own goals and beliefs. Science's single best protection against this pitfall is to recognise its capacity in this respect and with that in mind to be vigilant in ensuring that the work of science is always coupled with the core principles of humanism.

### Notes

1. Weinberg, Steven. 2001. A Designer's Universe? *Skeptical Inquirer* Vol.25, No. 5: 64-68.
2. Milgram, Stanley. 1983. *Obedience to Authority: An Experimental View*. New York: Harper/Collins.
3. In the case of Christianity, Jesus sought to promote a particular vision of Judaism in order to create the conditions by which the Kingdom of God might be realised, the Kingdom being a new world order in which he and his followers would rule in justice over the rest of mankind from a restored Jerusalem.
4. If anything positive can be said about New Age and nature-based spiritualities, it is that they succeed where traditional religion fails in fostering among their followers a religiosity that is personal and experiential as opposed to one that is grounded in the authority and dogmas of institutions and their scriptures. Among the larger religions Confucianism deserves mention as one that is more concerned with individual piety and ethics than dogmas.
5. Glover, Jonathan. 2000. *Humanity, A Moral History of the Twentieth Century*. New Haven: Yale University Press.



# Story of a Sound Skeptic

A prominent Skeptic recounts how he developed a brand new science.

**Editorial note:** *In the wake of the spectacular Leonid meteor shower last November, NASA radio and TV gave prominence to Colin Keay's work on explaining the mysterious sounds heard by some observers to accompany their sightings. We thought it timely to ask Colin to recount how he solved a scientific mystery first recognised as a problem almost three centuries ago.*

Ninety minutes before sunrise on the morning of April 7, 1978, the dark moonless sky above eastern New South Wales became as bright as day when a large meteor fireball passed above Sydney and Newcastle before vanishing over the sea. To my immense regret, I slept through the event. The first I knew about it was breakfast radio and TV going crazy because hundreds of witnesses jammed their phone lines with reports verging on the apocalyptic in tone.

A friend at the Australian Museum phoned asking me to check whether the fireball might have dropped a recoverable meteorite. So, as a meteor scientist, I advised the media that I would welcome reports from eyewitnesses.

Initially I concentrated on determining the fireball's trajectory, which soon indicated that any possible meteorite from the fireball would

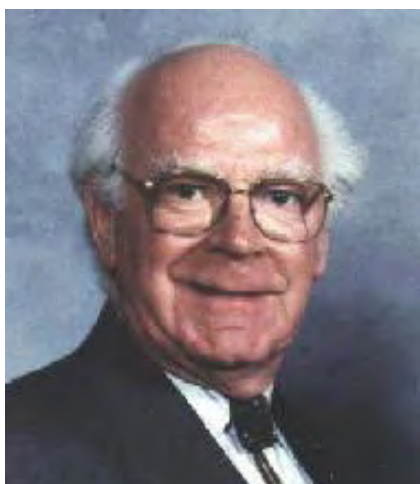
have fallen well out to sea and not be recoverable.

## Strange sounds

However I was intrigued by the number of reports from observers who described sounds heard simultaneously with their visual sighting. These strange sounds were quite distinct from the sonic booms and rumbles heard a minute or more later.

At first I followed tradition and wrongly dismissed the former sounds as a psychological effect. But a couple of people claimed to have heard the sounds before sighting the fireball. Precognition? Hardly. So the seeds of skeptical doubt were sown in my mind and I determined to follow the matter through, despite discouragement from other meteor scientists claiming that it was a matter best left to psychologists rather than physicists. The situation was that psychologists weren't interested and many meteor scientists had in the past tackled the anomaly without success.

Some history is in order. In 1719 a huge meteor fireball blazed across the English sky. Edmund Halley, of comet fame, reported some eye-witnesses "hearing it hiss as it went along, as if it had been very near at hand". But Halley had been one of the first to determine that



Colin Keay is a physicist and astronomer and President of the Hunter Skeptics.

such fireballs occurred at high altitudes and this one was a hundred or more kilometres distant from the people reporting the hissing sounds. Knowing that sound cannot travel instantaneously over such distances he dismissed such claims as “the effect of pure fantasy”. One cannot really blame Halley for his dismissive attitude – the solution to the anomaly lay beyond the scientific knowledge of his era.

The mystery of the anomalous sounds remained for centuries while the false psychological explanation held sway. There was no lack of effort to seek a solution, which clearly involved significant transfer of energy by electromagnetic radiation of some kind. Searches of the spectrum led meteor scientist Gerald Hawkins to declare that “Meteors therefore show a surprisingly low efficiency in converting kinetic to radio energy.” (A detailed summary of attempts to resolve the mystery are set out in my paper “Progress in Explaining the Mysterious Sounds Produced by Very Large Meteor Fireballs”, *Jour. Sci. Exploration*, Vol 7, No 4, pp. 337-354, 1993, and to some extent on my web-site at [www2.hunterlink.net.au/~ddcsk](http://www2.hunterlink.net.au/~ddcsk) ).

### Difficulties

At this point it is appropriate to summarise the difficulties that, before 1980, faced any investigator studying the anomalous sounds from meteor fireballs:

1. The sounds are rare. Few people have ever heard them. Nor had anyone ever been fortunate enough to have a recorder in readiness to capture the sounds or suggest the agent generating them.
2. They are evidently capricious. Not all witnesses in a group may hear them.
3. Their propagation is instantaneous, implying transmission of energy at the velocity of light. However no electromagnetic disturbance had been known to produce sounds except for electrostatic brush discharges. Such discharges do not

propagate over distances of up to 300 km.

4. No electromagnetic disturbance of sufficient magnitude had ever been detected from meteor fireballs.
5. No physical mechanism was known for producing strong electromagnetic radiation from meteor fireballs.
6. The method of conversion of electromagnetic radiation into sound was obscure.

Adding to these constraints I took the view that any resolution of the problem should not invoke phenomena unknown to science and should as far as possible satisfy Occam's Razor. I was simply being a skeptic.

### Further research

In his memoirs, Edward Teller remarks “Science is a pyramid of puzzles”. In which chamber of the pyramid might I find my solution? About fifteen months after the fireball event I was fortunate enough to be working in the Herzberg Institute of Astrophysics, a section of Canada's National Research Council akin to our CSIRO.

Their wonderful library resources, ready access to experts in relevant fields and great encouragement for research left me no excuse for failing to make progress. It took about three months to arrive at a physically viable explanation satisfying all requirements. Thus the new science of geophysical electrophonics was born (the term electrophonics was first applied to the problem of anomalous sounds by Professor Peter Dravert in Russia).

Incidentally, at that time I joined CSICOP, my sponsor at the NRC being a keen member.

Without going into detail, I soon concluded that the electrophonic energy transfer could only be by electromagnetic means and sought to eliminate those regions of the spectrum where there was no evidence for such emissions from meteors. It became clear that very low frequency (VLF) radio waves could not be ruled out. Noting that that frequency

range roughly corresponded with acoustic frequencies in the range of human hearing made it evident that a simple transduction process (involving no change in frequency rather than frequency conversion as in a crystal set) could deliver sound from the VLF radio energy from a meteor fireball.

The next problem was to discover the way a meteor could generate VLF emissions. Electrophonic “pop” sounds sometimes heard when a meteor explodes were clearly similar to those known to occur with atmospheric nuclear tests when its exploding ball of hot plasma suddenly perturbs the geomagnetic field. But explaining the swishing sounds lasting three seconds or more from large meteor fireballs demanded a different approach.

After much scratching around I found inspiration from Fred Hoyle's sunspot theory in which violent motions within the sun tightly twisted the solar magnetic field, creating sunspots. The trapped energy is released in strong flares and radio emissions associated with the spots. In the case of a large meteor fireball there is a large fraction of its energy in the turbulent plasma trail following it. This traps and scrambles the geomagnetic field before the energy is released as VLF waves, as required.

### A clue

Here is where the research value of an organisation like the NRC is so important. I arrived just after a leading atmospheric physicist while working there produced a paper showing how the flight parameters of a meteor fireball are related to the turbulent wake it produces. It all fitted nicely!

Determining the nature of the transducer(s) was the next problem. I was fortunate in following my stay at the NRC with several weeks as visitor in the physics department at the University of Western Ontario where I had access to an anechoic chamber and suitable equipment to test human response to electric fields varying at VLF frequencies. I tested

44 volunteers (impossible these days!). Three of the volunteers were markedly more sensitive than the others. I traced their sensitivity to their hair styles! A charged plastic comb can make hair stand on end. In this case the varying electric field made the subject's hair vibrate, generating a swishing sound.

### Publication

By that stage the six points listed above had been met. I then wrote a paper for the journal *Science* (vol. 210, pp. 11-15, 1980), noting that the work I had done could also explain the mystery of auroral sounds. Thus was launched the new subject of geophysical electrophonics.

I was most gratified a year or so afterwards when my ideas about the generation of VLF waves from meteors were upheld and elaborated by the eminent Russian meteor physicist Vitaly Bronshten.

In later experiments in an anechoic chamber at the University

of Newcastle, a graduate student and I tested many mundane materials, like typing paper and foliage, finding that they, like hair, could produce faint sounds when excited by VLF electric fields.

Because of the rarity of the phenomenon, the verification of my work took a further ten years. While visiting Nagoya University in Japan in 1990 I was shown chart records of the VLF emission from a meteor that had produced an electrophonic sound. Its spectrum lay in the range of audible frequencies.

Since then there were few other records until the Leonid display last November generated many electrophonic sound reports and some direct records, that indicated I should not have dismissed the plasma expansion mechanism for other than explaining popping sounds. The Leonids travel at 71 km/sec and possess over ten times the kinetic energy of the average meteor. The entry of a larger than average

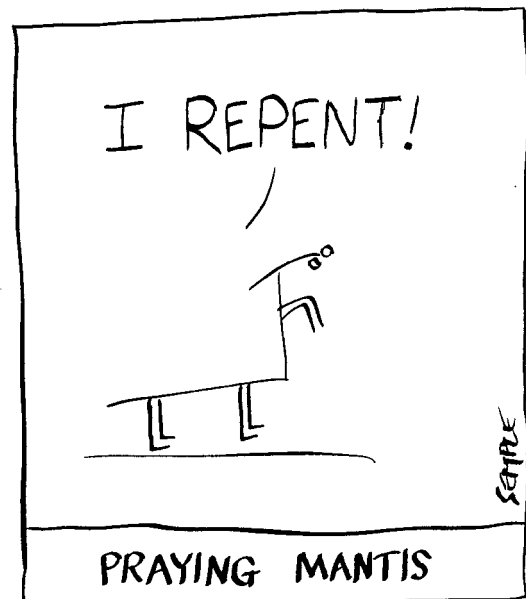
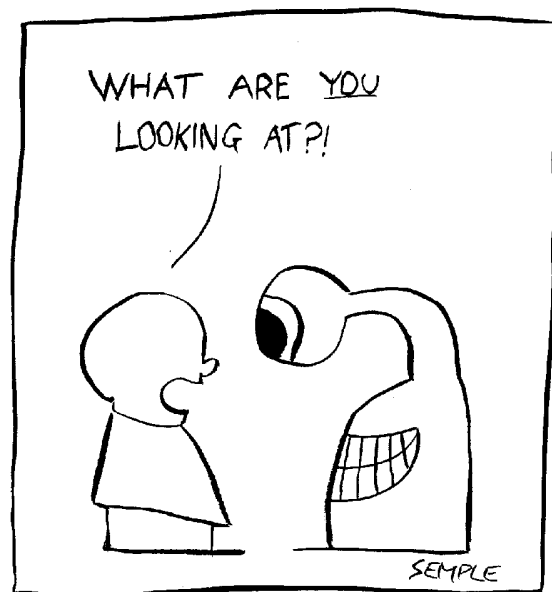
Leonid is almost like a drawn out explosion in the upper atmosphere, producing continuous electrophonic hissing sounds lasting for up to a second or so, as heard by some witnesses.

Some of the scientists who observed the Leonids claim to have evidence that my explanation of electrophonic sounds is incorrect. They have yet to present their case and it will be interesting to see how they have improved on my work. That is the way science progresses. I don't believe my work has been totally worthless, but we shall see. At the very least I can claim that my sceptical approach took the problem out of the imprecise sphere of psychology and planted it firmly in the realm of physical science.

For anyone wanting more details, a complete bibliography of my publications on geophysical electrophonics may be found at my web-site.



## Odd Views



Michael Semple is a young cartoonist who has offered us a selection of his work. We are delighted to use some of his off-beat example here and elsewhere. Thanks Michael

# Balls

or

## How to emasculate a persistent myth

### The Bulldog Baronet aims a broadside.

One of the rare pleasures I derive from my onerous duties as Cultural and Intellectual Advisor of the Editor of this illustrious journal (a thankless, if not pointless, task) is that I get to read the electronic communications while he is in one of his not-infrequent incapacitated states. One such communication is that which follows:

#### A History of Balls

*Did you know, in the mighty British Navy at the time of Empire-building, every sailing ship had cannon for protection. Cannon of the times required round iron cannonballs. A ship's master wanted to store the cannonballs such that they could be available for instant use when needed, but in a manner that would not let them roll around the gun deck.*

*The solution devised was to stack them up in a square-based pyramid next to the cannon. The top level of the stack had one ball, the next level down had four, the next had nine, the next had sixteen, and so on. Four levels would provide a stack of 30 cannonballs. The only real problem was how to keep the bottom level from sliding out from under the weight of the higher levels. To do this, they devised a small brass plate*

*referred to as a "brass monkey," with one rounded indentation for each cannonball in the bottom layer.*

*Brass was used because the cannonballs wouldn't rust on the brass monkey, but would rust on an iron one.*

*When temperature falls, brass contracts faster than iron. As it got cold on the gun decks, the indentations in the brass monkey would get smaller than the iron cannonballs they were holding. If the temperature got cold enough, the bottom layer of cannonballs would pop out of the indentations, spilling the entire pyramid over the deck. Thus it was, quite literally, "cold enough to freeze the balls off a brass monkey".*

*And so, another familiar phrase became part of the language. Now, aren't you glad you took the time to read this historical piece? And you thought this was going to be a "dirty" story – shame on you.*

This story has been around for a long time, but it seems to have gained new impetus, for it was recently directed to Skeptics Central from divers diverse sources. What a splendid instance of how the English vernacular acquired one of the many colourful phrases that makes it so



(Not a recent photo)

Author, Sir Jim R Wallaby is descended from a long line of sea dogs. For once he is barking up the right tree.

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much fun to speak and so demanding for aliens to understand.

There is, however, just one paltry hitch that detracts from its beauty – it is simply not true. Rather than “A History of Balls”, it might more properly be labelled:

### A Load of Balls

There are any number of ways for a Skeptic to approach a topic like this. A Skeptic with the linguistic proclivities of the admirable Mark Newbrook might be inspired to search through the lexicographical literature to discover when the phrase was first used; someone with the engineering and scientific adeptness of the estimable Ian Bryce might be tempted to conduct an investigation into the differential coefficients of expansion of brass *vis a vis* cast iron.

And sometimes (and this is one of such times) an element of serendipity plays a hand.

### A voyage of discovery

Let me begin with a brief historical excursion, the point of which shall emerge anon.

I am a man of broad literary tastes, one who regards sleeping as a waste of good reading time. It has even been suggested that the labels of condiment jars do not escape my scrutiny if nothing else is available – literature, biography, science fiction, crime fiction and various items of whimsy are all grist to my mill. However, apart from a youthful dalliance with the *Hornblower* novels of C S Forester, I have normally avoided historical fiction. This remained the case until a year or so ago when I finally capitulated to the blandishments of sundry friends and henchpersons and agreed to dip into the works of one Patrick O'Brian.

O'Brian wrote 20 novels about the life and escapades of his two main characters, Jack Aubrey, a RN cap-

tain and Stephen Maturin, a ship's surgeon and spy working for the Admiralty, during the period encompassing the Napoleonic wars. It is a truly extraordinary body of work which has attracted a cult following and is full of well-researched detail about life in the Royal Navy of the age. As literature, it ranks far above novels with similar themes and some critics have even nominated it as among the finest works of historical fiction written in the 20<sup>th</sup> Century, one even claiming that if O'Brian's characters met Jane Austen's in the



*A frigate action - Cochrane aboard the Pallas.*

street, they would acknowledge each other instantly.

Be that as it may, it certainly fired up my enthusiasm, and not only did I voyage with a full spread of canvas throughout the entire *oeuvre*, I also immersed myself in reference and other volumes concerned with the world of the sailing navy in the late-18<sup>th</sup> – early-19<sup>th</sup> centuries. Among these were Brian Lavery's superb *Nelson's Navy* (Conway Maritime Press, 1989), a vast compendium of all you could possibly want to know (and quite a bit of what you probably wouldn't) of the ships, men and organisation of the Royal Navy at the

peak of its powers; *A Sea of Words* by Dean King (Henry Holt, NY 1995), a specially written lexicographical companion to the O'Brian books, which explains for the lay reader many of the unusual or specialist terms used in the novels; *The Oxford Companion to Ships and the Sea* (Peter King, Ed. OUP, 1988); and a couple of biographies of Lord Cochrane.

### Tacking at a tangent

If I might be permitted a momentary diversion here, Thomas Cochrane, heir to the impecunious and idiosyncratic Earl of Dundonald, was an astonishing man of his era; inventor, radical MP, naval reformer, and one of the most brilliant tactical naval commanders of any age. His exploits as a frigate captain form the basis of many of the fearless adventures of Forester's and O'Brian's heroes (not to mention those of lesser writers in the genre). In the fiction, however, they tend to be down-played more than a little – the reality of Cochrane's life was far too improbable to be the stuff of believable fiction.

At the height of his renown he was dismissed from the Navy and Parliament following a financial scandal in which he was (falsely, as it was later proved) implicated.

In 1817 he was employed as naval commander by the rebellious colonists in Chile and Peru, where he was instrumental, together with the liberators, Juan San Martin\* and Bernardo O'Higgins, in ending Spanish rule in that part of South America. In 1823 he was engaged as Admiral-in-Chief by the newly inde-

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\* General San Martin is the national hero of Argentina, for which information I am indebted to Juan de Gennaro of the Argentine Skeptics. If anyone can enlighten me as to why a street in Ku-ring-gai Chase in Sydney is named Liberator General San Martin Drive, I would be most grateful.

pendent Brazil, assisting it in consolidating its autonomy from Portugal, and in 1827 he led the naval campaign associated with Greek attempts to gain independence from the Ottoman Empire.

In each of these cases he was cheated out of his agreed fees. His name cleared of the earlier scandal, he was later reinstated into the RN and died, a much honoured admiral, in 1860.

### Back on course

That is mere scene setting and explains why, when I came across the anecdote about the origins of “brass monkeys”, my skeptical antennae twitched uncontrollably.

At first blush this is a seemingly uncontroversial story, one with a superficial plausibility and it is not the sort of thing that would usually attract the attention of a Skeptic. So why do I question it?

Five years ago I would very likely have ignored it; I might even have believed it, but when such a tale crossed the bows of one so recently steeped in the lore of nautical affairs, it rang many alarm bells.

As it happens, refutation of many of the elements of the story require no particular expertise, while others need only a little research.

So let us analyse.

*A ship's master wanted to store the cannonballs such that they could be available for instant use when needed...*

One is compelled to ask, “Why?”. We are talking here about an era in which ships were completely at the mercy of the wind and where precipitately violent engagements were inordinately rare.

In most cases of single-ship actions, one ship was trying to initiate action while the other was trying to avoid it. Often this took the form of a stern chase lasting for hours (even days).

In stern chases most vessels could bring only a couple of strategically sited guns to bear (these guns were known in bluff – though hardly imaginative – nautical terminology as

“stern chasers” or “bow chasers”, depending on their location in the superstructure) and there was plenty of time to bring up shot from the storage areas below decks (where it acted as ballast) in time for the action.

Fleet actions were much the same. At Trafalgar (the textbook case for sailing naval actions) Nelson split his fleet into two divisions and, in light winds, sailed towards the line of the combined French/Spanish Allied fleet for almost an hour before any British ship fired a shot. During this time his ships were exposed to broadside fire from the numerically superior enemy (33 – 27) and, although naval cannon were fairly inaccurate at their full range of around 2000 yards, they suffered quite a bit of damage as a consequence\*\*.

Nelson's tactical doctrine of battle, which he communicated to his captains in the famous advice “No captain can go far wrong if he places his ship alongside that of an enemy”, was to close the enemy as quickly as possible and to fight at point-blank range (“half pistol shot” or less than 100 yards).

The best trained RN crews were capable of firing an average of three rounds in five minutes – the French and Spanish navies could usually manage two or fewer. Thirty balls per gun would represent almost an hour's worth of broadsides (more likely two hour's worth, as it was rare for a ship to fight both sides at once).

Incidentally, in the six major fleet actions of the Revolutionary/Napoleonic wars, the British fatalities (in

total fewer than 1,500) averaged only about one sixth of those of their opponents. The reason? In action, RN ships fired into the hulls of their opponents, while the French and Spanish fired at the rigging. This is not a testimony to excessive blood-thirstiness on the part of the British, rather it reflects the difference between offensive and defensive warfare, and the British were usually on the offensive. I will resist the obvious slur here, merely pointing out that the British were forced onto the offensive by their status as a maritime colonial power. Their Continental opponents needed only to maintain a fleet in being, posing a *threat* to Britain's colonial interests for them to be forced to either blockade or attack.

Nor can we disregard the fact that there is more than one element involved in discharging a cannon; it also needs a propellant. In the guns of the time this was provided by gunpowder contained in canvas bags. The junior member of each gun crew was responsible for bringing these powder charges up from the magazine, situated below the water-line (usually not far from where the shot was stored), one at a time. On a wooden ship with tarred rigging, where fire was the most feared hazard, you most definitely did *not* keep ready charges beside the guns, especially when in action.

*... but in a manner that would not let them roll around the gun deck. The solution devised was to stack them up in a square-based pyramid next to the cannon.*

In fact, the practice in the RN was to keep the guns loaded at all times, and, when action was imminent, to store ready shot in indentations in the *wooden* hatch coamings or in *wooden* troughs along the bulkheads between the gun ports. When a warship was not in action and in heavy weather the guns were lashed hard up against the bulkheads (see illustration over) to prevent them running across decks that would rarely be level, usually heeling over, pitching, yawing or rolling (and often all

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\*\* Nelson is credited with one innovation which was to have a curious historical echo one and a half centuries later. At longer ranges his ships would attempt to fire glancing shots which skipped from the surface of the water; he believed that this increased their chances of holing enemy hulls near the water-line. It is the same principle employed by Barnes Wallis in WWII with his “dambuster” bombs.



at once), to prevent damage from “loose cannon” (Aha!).

The thought of “pyramids” of far more mobile 12, 18, 24 or 32 pound balls of cast iron sitting on the decks of a ship under way in such conditions, beggars belief and invites derision.

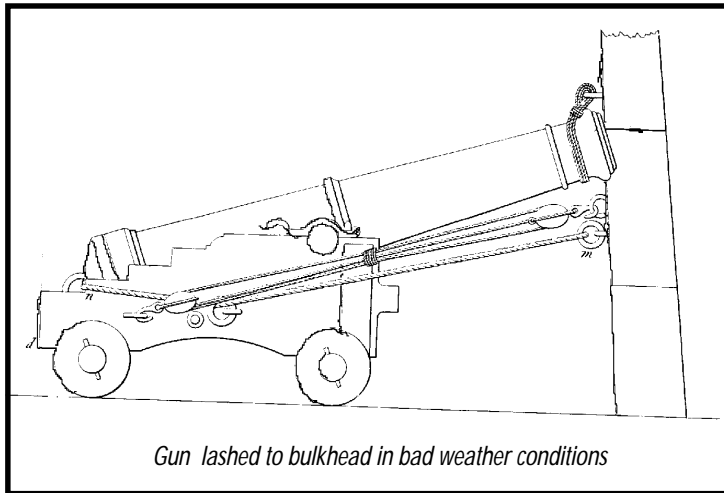
Furthermore, there was the question of space. By far the most common ships-of-the-line at the time were Third Rates. These two-decker 74s, so named because they carried 74 guns on two gun decks (actually 56 guns on the gun decks and 18 on the quarter deck, poop and forecastle). Each gun had a crew of six or seven (depending on size of the gun), which along with such odds and sods as the captain, officers, cooks, carpenters, marines and the like, meant that a 74 had a complement of around 600 men. With the gun deck typically 168 ft long and around 35 ft wide (headroom was typically 5ft) this gave a living space for 500 men of 6000 sq ft, in a vessel of 1600 – 1800 tons.

Sailors slept, ate and performed most of their off duty activities on the lower gun deck (the upper gun deck was largely open to the elements). For sleeping, each sailor had a hammock slung in a space 14 inches wide, and for messing, tables were lowered on ropes from the overhead. Include in this space there were 28, 9 ft long guns (32 pdrs, with a bore of around 6”) plus all the paraphernalia associated with them, as well as hatches, companionways, bits of three masts passing through the decks, and what have you, and it is obvious that 28 pyramids of cannon balls, measuring around 2 ft on a side, sitting on their little brass plates might add a modicum of discomfort to an already highly uncomfortable existence.

*Brass was used because the cannonballs wouldn't rust on the brass*

*monkey, but would rust on an iron one.*

Iron balls would (and did) rust wherever they were stored in a nautical (wet, salty) environment and this was a constant problem. On an open deck they would certainly have been more exposed to the elements than in the hold. Arguably they might not have stuck to a brass base because of rust (though the effects of corrosion caused by electrolysis be-



*Gun lashed to bulkhead in bad weather conditions*

tween dissimilar metals is another matter) but nothing in this story suggests why the iron balls would not have rusted together with each other.

*When temperature falls, brass contracts faster than iron. As it got cold on the gun decks, the indentations in the brass monkey would get smaller than the iron cannonballs they were holding.*

Oh, yes? This assumes that the tolerances to which these purported “monkeys” were built would be very tight indeed, a highly dubious circumstance given the manufacturing technology of the time. It also assumes that temperature drops would be both very rapid and very, very substantial – highly unusual and unlikely.

### Voyage's end

As I said previously, there are many ways for a Skeptic to tackle a tale like this (or any other story), although a useful place to start any

investigation is with the maxim, “if it sounds like crap, it probably is”.

It doesn't require a great deal of erudition to observe some obvious flaws in this story, and once you give it any serious thought it begins to unravel like an untarred rope's end. Nevertheless, it *could* be a true story – history abounds with cases of bloody silly ideas that don't make a lot of sense in retrospect<sup>\*\*\*</sup>. So just because it *seems* irrational to leave cannon balls lying around in pyramids or on brass plates, does not mean it never happened.

Let us look, then, at some other sources. In all the reference books I have accumulated, or have read, on naval matters in the past year, not one mention is made of brass monkeys, nor is there any description of cannon balls being stored in pyramids on deck.

Further, a check of the excellent Urban Legends

site [www.snopes2.com/](http://www.snopes2.com/) reveals that the term seems to have originated in the mid-19<sup>th</sup> Century (when naval guns had evolved to fire shells, rather than solid round shot) and was not always confined to either cold or balls (eg “hot enough to scald the throat...”, “cold enough to freeze the ears...”).

As a result of our investigations and learned deductions, I think we can safely conclude that this rather pretty story is nothing but unblemished fable. Which still leaves us with a puzzle and one that is unlikely ever to be solved. Who made up this story in the first place, and why?

As for me, I'm off to splice the mainbrace before the Editor sentences me to be lashed around the fleet.



<sup>\*\*\*</sup> When it is realised that the daily “grog ration” in RN vessels at this time was either two gallons of beer or half a pint of rum (or other spirits), all manner of irrational behaviour can be explained.

# Jerry Andrus

## Skeptical Illusionist

Our roving correspondent  
talks to another  
distinguished  
Skeptic



Richard Cadena is a computer expert who is currently residing in his native USA

Jerry Andrus is an illusionist, skeptic and magician whose optical illusions have been featured on television shows and exhibits all over the world. He is a CSICOP fellow and invents, writes and occasionally lectures on the subject of cognitive science. He has a wide range of interests, including writing poetry, building his contraptions and battling the paranormal. He is best known for his mind boggling illusions and magical inventions.

When one enters Jerry Andrus' home, it is a step into a house where most living space is occupied by inventive gadgets. In fact, entry through the side door is required as the front area is filled with stuff. Stuff it is, as there is no easy way to describe all of the items that lurk in hallways, ceilings and floors. Three examples, the first a technological one. Jerry has rewired his computer keyboard so that each thumb and a roll of each wrist can perform different functions. His computer is setup over his treadmill so that he can exercise at the same time. But this isn't just a software mapping of his keyboard; no, he has rods that push the key combinations he wants connected to a wrist holder or thumb pad. His keyboard looks like a game of Twister that lasted too long.

The second speaks volumes about Jerry's philosophy. He built his own

slide projector, with a loading facility, just so he could see what it involved.

The last is practical. Jerry replaced his toilet with a slightly larger one which, in the confining walls of his bathroom, wouldn't allow the door to open completely. However, by cutting the bottom part of the door and affixing it with a spring, when one opens the door to get inside, the top part of the door glides over the toilet and when closed the bottom joins the top to provide a completely closed door. It is simply amazing, this self-named Castle of Chaos.

**Richard Cadena:** *How long has your home been known as the Castle of Chaos?*

**Jerry Andrus:** Probably 50 years.

**RC:** *When did you start your skepticism?*

**JA:** When I was in the 7th grade I started to reason, by my standards.

**RC:** *When did you begin your love of magic?*

**JA:** As a kid I did make a box to vanish the family cat, but other than that I didn't start magic as a child. I think the fact that I don't think there is anything paranormal is what influenced me. If I could produce something that looked like it

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was paranormal, or if you could produce something that looked like it was, I was much more fascinated by it. When I was stationed near LA in World War II, I visited a magicians' hang-out in Hollywood. I'd try to impress them by showing them things and they would show me things.

**RC:** *You've got a lot of inventions or tinkering. When did you start?*

**JA:** Ever since I was a kid. I invented a projector using part of my mother's binoculars to project the funny papers onto the wall.

**RC:** *You are best known for your illusions. When did that aspect enter your inventions?*

**JA:** If I see something that fools me it interests me, and I'm not talking about magic. Once I was in Japan at the top story of a building and I saw what apparently was a round gondola, maybe a mile away, moving slowly. It was so far away I couldn't see the cables. There was a big tall building that I thought it was going to go behind but it didn't. It went on my side of it, because it was a toy balloon maybe 500 feet away floating horizontally. We are on automatic pilot basically all the time. We normally don't have to say, "I wonder what that is"? Our mind will identify a car or a house. You don't look at the front of a house and wonder if it is a movie facade. It is one of the reasons I am fascinated by magic. Our human mind interprets the sense data and tells us what we are seeing. It is a guess, and it is usually right. When we believe in the paranormal or see something, our mind interprets it as being paranormal. Of course it depends on our backgrounds.

**RC:** *Your illusions have the added quality of not only tricking you but you can actually touch them and hold them and they still fool your brain.*

**JA:** Right, there is a tactile part. Exactly. It shows us that if we can

even be fooled by something that we know what it is and hold in our hand, how much easier is it to be fooled by some charlatan or UFOs or whatever.

**RC:** *You've seen how people's view of the paranormal has changed over the years.*

**JA:** From my perspective, I think it has gotten worse. I'm not saying that people are more intelligent than they used to be, but we have a lot more knowledge than we used to have. You would think that due to that we



Jerry Andrus

would be less apt to accept the paranormal.

**RC:** *When did you start your association with CSICOP?*

**JA:** I've known Ray Hyman for a long time. Ray Hyman, Martin Gardner and Randi started something years ago which eventually became CSICOP. Ray has been involved in it from the beginning, even before the beginning you might say. They made me a fellow. It wasn't something I strived for but I was happy that they did.

**RC:** *Some of your illusions are in various cities around the world.*

**JA:** There are some in Switzerland, Finland, Canada and one in Orlando, Florida, which is turning the wrong direction (laughs).

**RC:** *Does it still work?*

**JA:** Well, the after effect is shrinking

which isn't as powerful as expanding. I told them when they first put it in and I thought they would change it but the last time I saw it, it was still going around in the wrong direction.

**RC:** *How is it that these other countries hear about your work?*

**JA:** I was on a program in England which an agent saw and she got me bookings in eight different countries doing optical illusions.

**RC:** *I wouldn't want to describe them as Rube Goldberg type devices because they are so functional.*

*Whereas the classic Rube Goldberg device is wasteful, it does a lot of functions to put toast in. Does this all come naturally?*

**JA:** I've got a lot of strange things. I've been fooling with mechanical devices all my life.

**RC:** *You also have huge bound volumes of writings.*

**JA:** I've written down thoughts for many years. I also have a list of words that I have invented.

One time (this is not my normal demeanour) I went to the doctors and the nurse asked me, in front of all the other patients, what my condition was and I replied "Well, I don't know if I have Gastrophelia of the Comerglot or not". When I came back out I told the nurse "No, I didn't have Gastrophelia of the Comerglot". (laughing)

**RC:** *What are some others?*

**JA:** Monometric Nunosis, Equas Noxious, Copeculum, Dermiuculary, Profanosis, Ouinticular, Sumerify, Tarsial, Vibronics, Purpltuity, and Hyperquential.

**RC:** *Do they have definitions?*

**JA:** I have invented over 4,000 new words but have given definitions to very, very few. (pulling out his 'dictionary') Some of them are:

Heliitis – A person who has that, thinks they are the light of the World.

## Jerry Andrus

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Ridgidicular Cognosis – Someone with frozen focus as they judge things.

Polycranial Fridgidosis – Frozen brain, as to not accepting any new ideas.

**RC:** *Back to the paranormal, what area of the paranormal do you find the most harmful?*

**JA:** Boy, that is a tough question. I hate it when people are making money that don't believe it. If we believe everything is going to better in the great beyond then we don't say "this is the only chance we have".

**RC:** *What do you think will be the situation in two hundred years? Will there be the need for skepticism or will the paranormal be widespread?*

**JA:** What puzzles me is that it used to be easy to believe in astrology and the paranormal before we had the scientific knowledge that we have today. Now you would think it would be much harder. If I ask for proof, the paranormalists say it is beyond the normal. Then I say wait a minute, you say it affects the normal. They persist in belief with no proof. Right now, today, people believe with no proof. So, maybe 200 years from now they will still be doing the same thing.

**RC:** *What do you think the Skeptics number one task should be?*

**JA:** Our purpose should not be to tell someone that they are stupid because they believe in baloney. Our purpose should be to get them to question and see the truth.

**RC:** *You have a great way of putting why your illusions can fool people, would mind repeating it for me?*

**JA:** I can fool you because you are a human. You have a human mind that works no different from my human mind. Usually when we're fooled, the mind hasn't made a mistake. It has come to the wrong conclusion for the right reason.

**RC:** *Thank you for your time and the tour of The Castle.*

**JA:** My pleasure.



*Jerry Andrus trapped inside an "impossible" crate.*

# Unconditioned Reflex

**Is reflexology just a placebo, or is it, as a recent Scottish trial suggested, more? An argument for skepticism in clinical trials**

It seems paradoxical that advances in medicine have coincided with an increase in the popularity of alternative methods of treatment. There are many possible reasons for this, including a distrust of science, searches for methods with fewer side effects than the conventional treatments, and the attraction of the mysterious (for a more detailed discussion, see Spencer, 1999). The availability of an abundance of questionable treatments makes it increasingly more important to be able to distinguish between science and pseudo-science and an international network of Skeptical organisations serves this purpose (for more information visit [www.csicop.org](http://www.csicop.org) and [www.skeptics.com.au](http://www.skeptics.com.au)). It appears that even results appearing in reputable scientific journals must be treated with scepticism (see, for example, Levi, 2000 and Altman & Dore 1990).

## Reflexology

Reflexology is labelled as an alternative medicine and involves the massaging of feet to diagnose and cure diseases. It is based on a belief that different parts of the foot correspond to certain parts of the body by 'reflexes' that run along the body and

terminate in the feet. For example, the big toe is thought to correspond to the head and thus considered to be a 'reflex area' for the head. Therefore, by manipulation of the feet a reflexologist can supposedly heal and alleviate pain in other parts of the body. Allegedly the ancient Chinese and Egyptians practised reflexology, and it remains popular in Holland (Carroll, 2000). (Hodgson (2000) states that the practice is over 4000 years old; however, other sources claim that reflexology was developed by an American surgeon in the early 1900s, for example see Rowlands 1997, Buchman & Sabbagh 1993, Raso 1994, or Butler 1992)

As with many alternative treatments proponents of reflexology apparently regard it as a panacea; as noted by Hodgson (2000), its effects have been investigated for a number of medical problems including pulmonary function, diabetes, chest pain, constipation, and sinus arrhythmia (these studies will not be considered here). Despite the lack of scientific research on the use of reflexology in cancer care, Hodgson (2000) recently investigated the impact reflexology has on cancer patients' quality of life and concluded that "reflexology does have an im-

*Paul Brown is an Australian statistician, now living in the UK. The all-white photograph of Paul can be explained by the foggy weather there..*

## Unconditioned Reflex

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pact on the quality of life of patients in the palliative stage of cancer". Provided here is a critical discussion of the methods adopted for this trial and hence alternative explanations for the results are presented.

### Methods

Twelve patients in the palliative stage of cancer were randomly assigned to receive either placebo or reflexology. Patients completed two quality of life visual analogue scales (VAS); one prior to treatment and one after treatment. Treatment was three sessions of either reflexology or placebo over approximately a one week period (treatment was applied on days 1, 3 and 5). Patients were not told what treatment they were receiving (ie, patients were blinded) and the same reflexologist applied both treatments.

These three techniques adopted by Hodgson are the main ingredients of a clinical trial; ie, blinding of patients and/or doctor, use of a placebo control and randomisation (see Spencer 1999 for a discussion of each). They are used to enhance the comparability of treatment groups. As explained below, although Hodgson relied on these techniques the trial lacked the rigour necessary to reap their benefits.

Obviously it was not possible to blind both patient and doctor in this trial and thus it was single blind (it has been shown that trials that are not double blind tend to give exaggerated results; Schulz *et al*, 1995). Blinding is important in assuring that the trial is unbiased (Chalmers *et al*, 1981). Blinding is especially important in this trial as our primary measure of efficacy (ie self assessment of quality of life VAS) is subjective and easily influenced by factors other than treatment.

There are a number of ways that patients could become unblinded. For example, if patients have access to information about reflexology they could potentially determine what treatment they are on. Or patients may have communicated with one another and compared treatments

(patients were not segregated; Hodgson, personal communication, 2000). Also, we are told that "the reflexologist made social conversation with the participants" (Hodgson, 2000, p35). The reflexologist was unblinded and therefore should not have communicated with the patients. Subtle cues given by the reflexologist may enable the patients to guess their treatment group; we can not be sure that introspection by the reflexologist about such cues will enable him to correct for them.

If some patients discovered what treatment group they had been assigned to, then the results will be biased and difficult to interpret (patients may tend to assess their quality of life as poor if they know they are receiving the placebo treatment; see Schulz *et al*. 1995). It is difficult here to convince the reader that blinding was maintained. To demonstrate that blinding had been maintained throughout the study patients could have been asked to guess what treatment group they had been assigned to. A simple statistical test could then be used to determine if patients were able to recognise the placebo treatment (note this would not be a powerful test given the small sample size). Also worth noting is that Hodgson was unblinded; as Spencer (1999) has noted, in order for it to be effective, blinding should be such that no one connected with the trial can influence the results. This can cause problems in the interpretation of results as explained below.

### Placebo

Placebos have had an important impact on clinical research (Shapiro & Shapiro, 1998). Reflexology was compared with a placebo control so that if an improvement in quality of life was observed for the reflexology group, comparison with the placebo would help establish if the improvement was actually due to the reflexology (as explained later there may be other reasons why a patient's condition will improve during a trial). The only information we are

given about the placebo is that "it might be, for example, gentle foot massage that does not stimulate reflexology points" (Hodgson, 2000, p35). (We would hope that the placebo was more adequately defined than this.)

If the treatment groups were not treated identically, aside of course from the application of treatment, the results may be biased. For example, if the social conversation between the (unblinded) reflexologist and patient (instigated by the reflexologist) was different for the two groups then the results will be biased (although this effect would probably be negligible).

### Suspicion of bias

There are other reasons to suspect that bias has contaminated the results. For example, Hodgson was unblinded and also communicated with the patients (Hodgson, 2000, pages 38 and 35 respectively) when asking them to complete the VAS. It might be conjectured that a patient's response is highly dependent on the time lapsed from receiving treatment (the soothing effects of a massage are most intense immediately afterwards and may quickly wear off). We are only told that "within 24 hours of completion of the [treatment]" patients completed the quality of life VAS (Hodgson, 2000, p35). Whether the VAS was completed on the day of treatment or the following day will seriously affect the patient's response. Thus, if the time from treatment to assessment of quality of life is not similar for the two treatment groups the results will be biased. (It is the responsibility of the author to convince the reader that these biases do not affect the results, or if they do exist the author should interpret the results with this in mind.)

Each of the 12 patients (five females, seven males) was randomised to one of the treatment groups: placebo (6) or reflexology (6); although it is recommended (Altman & Dore 1990) the method of randomisation was not specified. Randomisation is

employed to remove any subjective element from the allocation of patients to treatments which may incur a bias and to (hopefully) produce groups of similar composition. However, given the small sample size of this trial it is not very unlikely that randomisation would lead to, for example, all males in one treatment group, or patients with large tumour sizes assigned to one group. If this is the case, then any difference observed between treatments may simply reflect the importance of these confounding variables. Therefore, the characteristics of patients in the two treatment groups should have been compared by Hodgson so that the reader could better judge the reliability of the results (Altman, 1985).

The data was destroyed after completion of the study (apparently for ethical reasons) and thus it is no longer possible to obtain this information (Hodgson, 2000, p34).

This was not necessary (for the sake of confidentiality the patients could simply be assigned arbitrary labels) and we must wonder why Hodgson felt the need to destroy the data. For these reasons, and those given above, the results must be interpreted with caution. (Hodgson did not highlight any of these issues as potential problems or recognise that they should be taken into account when interpreting the results.)

### Interpretation of results

The results from the trial are summarised in Table 1 below (Hodgson, 2000, p36). A single statistical test (Mann-Whitney U test) was performed for each of the 18 components with a significance level

of 0.05 used for each test and it was noted that: "Only one of the components was considered to be of significance, namely breathing with a p-value of 0.026. Constipation was nearly significant with a p-value of 0.056" (Hodgson, 2000, p35).

Where there are multiple tests it is incorrect to highlight just one or two results, ignoring other results with larger p-values (Gore & Altman, 1982, pages 19 and 71; Meier 1975). If one performs multiple testing the overall probability of committing a type I error (ie rejecting a true null hypothesis) will be inflated.

To illustrate this point consider the following: If the 18 tests were completely independent the probability that at least one would be statistically significant at 0.05 purely by

chance would be  $1 - 0.95^{18} = 0.60$ . Therefore, although the tests are not independent, it seems obvious that the overall probability of obtaining only one significant result can be explained by chance. Meier (1975) has suggested that such results should be treated as tentative (hypothesis generating rather than hypothesis testing) and emphasis should be placed on the overall result.

A simple approach for controlling the overall type I error is to divide the overall significance level by the number of tests which will be performed and use this reduced significance level for each individual test (referred to as the Bonferroni method; eg, see Lee *et al* 1980).

Thus, here we should use  $0.05/18 = 0.003$ . Using this significance level we note that there are no significant differences between the treatment groups for any of the components considered. It can be argued that with this reduced significance level the tests are too conservative (ie more likely to accept a false null hypothesis).

However, it should be noted that although constipation has a low p-value, this is not consistent with the results of another similar study. (According to Hodgson (2000), Long Yun (1993) provides the only other study on the effect of reflexology on quality of life components for cancer patients. In this study two out of 12 patients (16%) in the reflexology group reported relief from constipation. The effect of reflexology on breathing was not considered.) Also worth noting is that some patients were taking laxatives for

Table 1. Change in VAS (mean and total) for both groups after receiving three sessions of treatment over approximately one week

Component	Placebo (n=6)		Reflexology (n=6)	
	Total	Mean	Total	Mean
Appearance	-4.0	-0.7	2.5	0.4
Appetite	1.0	0.2	17.5	2.9
Breathing	0.0	0.0	13.0	2.2
Communication (doctors)	0.0	0.0	6.5	1.1
Communication (family)	0.0	0.0	3.5	0.6
Communication (nurses)	0.0	0.0	4.5	0.8
Concentration	-1.0	-0.2	1.0	0.2
Constipation	-3.0	-0.5	34.5	5.8
Diarrhoea	-2.0	-0.3	16.5	2.8
Fear of future	0.0	0.0	14.0	2.3
Isolation	-1.0	-0.2	0.0	0.0
Micturition	8.0	1.3	1.0	0.2
Mobility	-2.0	-0.3	4.0	0.7
Mood	-4.0	-0.7	3.0	0.5
Nausea	-3.5	-0.6	11.0	1.8
Pain	-2.0	-0.3	13.0	2.2
Sleep	6.0	1.0	5.0	0.8
Tiredness	12.0	2.0	14.5	2.4

constipation (Hodgson, 2000, p38) and we are not told what percentage of these patients were members of the reflexology group (again, this information is unavailable because the data was destroyed).

However, the overall result is highly significant according to Hodgson;  $p$ value=0.004 (Mann-Whitney U test). As explained above, this may be due to imbalances between treatment groups with regard to important prognostic factors, unblinding of patients or treatment groups being treated differently by unblinded investigators (it is worth noting that two patients in the reflexology group experienced improved communication with doctors while no patients in the placebo group experienced such an improvement; Hodgson, 2000, p37).

The overall result of a statistically significant difference in quality of life between the two groups is therefore untenable. The improvement in quality of life experienced by both groups can be explained in a number of ways. For example, patients tend to join studies when their condition is at its worst and thus we would expect an improvement anyway (what statisticians refer to as the regression effect; see Kruger *et al* 1999). Another explanation of the results is the willingness to please of patients in clinical trials (Vandenbroucke 1997); ie, patients know they are in a trial and want to please the investigators by reporting an improvement. In some studies patients have reported improved health although there was no objective change in their physical condition (eg, Beit-Hallahmi & Argyle, 1997). (See Spencer 1999 for other possible explanations.) Because a legitimate comparison cannot be made with the placebo group, the influence of these factors cannot be understood. Thus, based on the results presented, Hodgson's conclusion that "reflexology does have an impact on the quality of life of patients in the palliative stage of cancer" seems unjustified.

### Quality of life

Reflexology is traditionally used to diagnose and cure disease. It was used by Hodgson to investigate neither purpose. Instead, the trial examined the impact of reflexology on cancer patients' quality of life. The study failed to produce convincing evidence that reflexology leads to a genuine improvement in quality of life. It was argued above that the evidence claimed by Hodgson is obfuscated by possible biases inherent in the data, induced by unblinding of patients, differential treatment of groups by unblinded investigators, and prognostic factors being disproportionately represented in the groups.

The improvement in quality of life observed for both groups may be partially due to factors other than treatment, such as the 'regression effect' and patients' 'willingness to please'. For these reasons we cannot make any firm conclusions based on the data and the observed association between reflexology and improvement in quality of life is tentative at best (ie, we must await the results of larger confirmatory trials, especially since published small trials are more likely to have spurious positive findings; Begg, 1994). Hodgson noted that there is a "plethora of anecdotal literature to support the use of reflexology in cancer care" and that "the findings of this study support their anecdotal findings" (Hodgson, 2000, p34). It is the opinion of this author that Hodgson's results also have about as much scientific worth as these anecdotal findings. In general, reflexologists who have seen first hand that it works, may fail to consider the possibility of the placebo effect, misdiagnosis, spontaneous healing, patient expectation etc (see Spencer 1999).

### Worth of the trial

Was this trial worth the effort? A Bayesian analysis requires us to summarise (statistically) our belief in the treatment before the trial. Thus, if we follow Bayesian reason-

ing we would not conduct a trial on reflexology in the first place, because of the lack of a credible prior hypothesis (Vandenbroucke 1997). Reflexology is based on the unconvincing notion that each part of each foot is a mirror site for a part of the body (the conflict between this belief and our background scientific knowledge cannot be disregarded). From a Bayesian point of view, when there is no credible theory underlying a trial the results remain uninterpretable (for example, see Berry 1993). (Note that we may simply be testing which of two massage techniques is more pleasing.) However, a Bayesian analysis will introduce the subjectivity of expert opinion which clinical trials are employed to obviate.

If we wish to investigate the impact of reflexology on quality of life via a clinical trial, greater care should be taken to minimise bias so that the advantages of a clinical trial can be fully exploited (eg, blinding, randomisation and use of a placebo control); see Resch & Ernst (1996). It is easier said than done to ensure a high quality trial, but if we are uncertain as to whether the advantages of a clinical trial will be realised, for example a 'large enough' sample size may be unattainable, then one must raise the question of whether or not the trial should be conducted. (Hodgson's trial has only obscured our understanding of reflexology as a treatment and we might be better off if it had not been conducted: poor quality underpowered research will add little to our knowledge.)

### Need for care

On a more general note, it is vitally important that alternative practitioners take greater care when investigating the worth of unconventional treatments, if they wish to be taken seriously by the wider scientific community; especially considering that some have been responsible for deaths and serious injuries of patients (Ernst, 1996). (Although some feel that clinical trials are not appropriate for testing a number of alternative medicines and this au-



thor agrees; see Vickers, 1996.) For example, the possibility of bias should be highlighted and relevant information should be reported so the reader can properly judge the reliability of the results. As Altman (1982) has recognised, the proper use of statistics is not just a scientific issue but an ethical one. He notes the following possible consequences of bad research:

I. Patients used in the research will be put at risk or inconvenienced for no benefit.

II. Other resources will be diverted from more worthwhile uses.

III. Other patients may subsequently receive an inferior treatment either as a direct consequence of the findings of the study or possibly by delaying the introduction of a better treatment.

IV. Other scientists' research may be affected.

V. If the results go unchallenged the researcher(s) involved may use the same substandard statistical methods again in subsequent work, and others may copy them.

It is likely that many readers of medical journals (especially non-statisticians) prefer to ignore the statistical details and assume that the authors have competently handled the analysis. It is strongly advised that when interpreting the results of a clinical trial one applies the same skepticism which has been illustrated here. After all, what is science without skepticism?

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# Words from the Fringe (and beyond)

## More gleanings from the linguistic outlands

### The latest Reverse Speech incidents

David Oates' Reverse Speech continues to spread its baleful influence in the USA. Jane Curtain and I have recently been asked for information by someone who is concerned that it is being taught at Southern Oregon University (by an enthusiast with whom we have corresponded).

We also heard from a man who reports that after attending an RS course his wife analysed their infant daughter and decided that the child was saying (backwards) that her father had sexually interfered with her. The mother reported her husband to the relevant child protection agency and when that failed she sought custody of the child and tried to have him banned from having any access to her. We cannot get involved in American litigation; but we provided all the information we have.

This shows again that even something as apparently harmless as linguistic pseudo-science can be very damaging indeed in some situations.

### Bryant on Sanskrit

I have now read Edwin Bryant's new scholarly book on the debates involving the original location of Indo-European-speakers, the date and manner of their arrival in India and the place of Sanskrit within IE.

Bryant is fully aware of the vast body of fringe and semi-fringe (and mostly nationalistic) Indian work on these topics; he identifies my sparring-partner Oak as among the most extreme and as scarcely requiring any serious comment. He does argue, not altogether implausibly, for an Indo-European homeland closer to India than most scholars now posit; but he gives much less comfort to the extremist Indologists than some of them apparently anticipated before publication! And his own case is by no means completely clear-cut. Some of the philological arguments against the early-C19 view that Sanskrit is especially close to Proto-Indo-European are stronger than Bryant suggests, and his new points do not demolish them.

Where Bryant certainly **is** correct is in stating that a decipherment of the enigmatic Indus Valley script – as Dravidian, IE, or something else again – would be a very important factor in the solution to this problem. If the language is IE, then IE speakers were in the sub-continent too early to permit the mainstream scenario of an 'Aryan Invasion' of India in the mid-late 2<sup>nd</sup> Millennium BCE. This scenario has also been attacked by Indian authors on non-linguistic grounds, notably involving references in the Vedas to a river which



*Mark Newbrook is a professional linguist who may be shortly returning to his native northern England. Eee bah gum.*

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(if correctly identified) had long dried up by that date. However, most mainstream scholars believe that the IV language was probably Dravidian, which fits in better with an Aryan Invasion at some date or other in that millennium and with our overall picture of the period. The Afrocentrists go the same way, but for rather different reasons: they see the dark-skinned Dravidian speakers as representing an early African diaspora! Of course, IV could represent a language of yet a third family. Early Munda? Sumerian, perhaps? (There clearly was contact with Sumeria.) Something not otherwise known? But at present there is no answer: none of the amateur decipherments published to date is at all persuasive.

### Tasker, Fell, Fischer and The Disk

John Tasker in New Zealand (see last instalment) was unhappy that I am as skeptical as I am of the works of Barry Fell, the zoology professor turned arch-epigraphist who started a vast tradition of non-mainstream decipherment in New Zealand and the USA.

He suggested that if Fell's decipherment of the Phaistos Disk (not again!?) should prove similar to that offered more recently by Fischer this would vindicate Fell on a broad front. He called upon me to compare the two versions, suggesting that this would be the greatest intellectual challenge of my life. Hardly! Fell's full decipherment is not that easy to access, but he read the Disk as a mix of Anatolian and Polynesian. (Polynesian in early Crete?)

Yes: Fell was a hyper-diffusionist, as are his surviving followers.) Fischer's decipherment, on the other hand, involves an otherwise unattested dialect of Greek, as discussed by me in these pages in 2000. They are not the same at all. And if they had been, surely someone would have noticed this by now; Fischer first published his interpretation in 1984! In any case, a decipherer could be largely right on the Disk (unique) but wrong elsewhere.

Tasker also seemed unaware that the Disk has attracted at least 40 supposed decipherments. One recent web-based enthusiast is among the most bombastic, seeking cooperation with professional academics but asking other amateurs not to bother corresponding with him unless they broadly agree with him, since otherwise they are (as a matter of clear fact) on the wrong track!

Jane Curtain suggests that those who dug the Disk up in 1908 should have buried it again at once, so as to prevent all the nuttery which has grown up around it!

### Yet more from New Zealand

Joan Leaf (see last instalment) has now published a book about Churchward's lost continent Mu, the motherland of humanity sunk beneath the Pacific! Even Africa was first settled by Muvians, she claims. For all her expressed modesty, she is not genuinely receptive to serious criticism of her hyper-diffusionist ideas. And she comes up with all kinds of nonsense, including Churchward's old one about the Greek alphabet as recited being really a poem in Mayan. She thinks Mayan was the language of Mu and hence the ancestral language of humanity. What, not Sanskrit?! Her C19 hero Tregear (*The Aryan Maori*; remember the cow-dung?) traced even Maori to Sanskrit. Leaf is an old lady who by all accounts is very sweet and has led a fine bi-cultural life in Northland; sadly, she risks making herself into a laughing-stock.

I viewed a video of a 2000 TV documentary in which fringers, moderate non-mainstreamers and skeptical mainstreamers all had their say about NZ's past. The case for brief Polynesian visits around 2000 BP (as per those rat bones) appeared arguable (though by no means water-tight). But the real fringe material, which included a quixotic performance by Barry Brailsford, mostly appeared non-rational (lots of stuff about how things 'feel') and at times incoherent.

Alan Seath kindly lent me a disk copy of Martin Doutre's book *Ancient*

*Celtic New Zealand*, where my interest in the NZ scene began back in July 2001 (I will not pay \$NZ75 for this stuff!). I did searches for *language*, *linguist(ic(s))* and *tongue*, but found nothing of real interest.

Doutre seems to accept Brailsford's novel New-Age notion of the Waitaha (see last instalment). He makes some vague, loose claims about links between Maori (Polynesian?), Egyptian and/or languages of the Americas and Celtic Europe, and has some very casual references to the claims of earlier fringe writers (notably Fell, on alleged Numidian script in NZ; but mostly he does not even name his sources!). In places he is just impressionistic (more about how things 'feel'). There is also some lunatic/quasi-C18 philology involving more words which have known etymologies and meanings and are unrelated. Doutre does not even understand points as basic as the fact that Yiddish vocabulary is mostly taken from German, which should therefore be cited instead. His linguistic material, at least, can safely be ignored. Seath himself knows his astronomy. His own claims (astronomers in NZ in 2225 BCE) are based on his archaeoastronomical work and inevitably are not supported by texts or artefacts from the period. They are more solid than Doutre's, but on the evidence I have seen so far (more to come) I am still not at all convinced.

### Old-time religion and language

Another item on the helpful Psychoceramics list involved an apparently anonymous posting promoting the ideas of Jordan Maxwell. Maxwell and his colleagues Paul Tice & Alan Snow are inspired by the late C19 diffusionist writer Gerald Massey, who believed he could trace all religions back to a small number of linked cults (stellar, lunar, solar).

Massey was enthused by the then quite recent decipherment of the Egyptian hieroglyphs, and merged the genuine knowledge that was emerging from Egypt with the early modern fantasies – now largely de-

bunked – about Egyptian mystery religions of vast antiquity.

Many others have adopted similar views, including the well-known John Allegro (mentioned in the Psychoceramics posting) and also the late Robert Lawlor, who combined his beliefs about Aboriginal yugas and the virtues of training toads to be astronauts with support for Schwaller de Lubicz's strange notions about the allegedly pervasive occult symbolism to be found in the design of Egyptian buildings.

Maxwell himself focuses mainly on the religious issues in the usual historical revisionist manner, finding a huge number of possible links but arguing persuasively for very few.

However, this tradition also includes a three-volume work published around 1940, apparently anonymously. This book has the overall title *Priesthood Of The Ills* and contains a large amount of non-standard philology, adduced as support for these diffusionist theories of religion. The book is summarised in the post on Psychoceramics.

I sincerely hope that no-one with any influence to wield (or with a worthwhile life to enjoy or waste) takes this material seriously! It is on the level of Guido von List's crazy philology in *The Secret Of The Runes* and similar British Israelite proposals.

The fringe writer quoted on Psychoceramics believes that there is a Language Conspiracy, which involves (a) keeping humanity divided by forcing many mutually unintelligible languages on us and (b) blocking us from discovering the original ('true') meanings of words.

This suggests that all changes in the meanings of words are somehow illegitimate, which of course is nonsense (see also later!); but these people believe that the meanings of some of the key words in ancient languages were very different indeed from those of the English words normally used to translate them. This has been concealed by the forces of Evil.

These 'true' meanings are implicated in huge numbers of unrecog-

nised links between languages. But these guys will help you get it straight! It seems that focusing on pronunciation rather than spelling will do the trick: you can then **hear** which words are **really** connected, because they **sound** similar! Once again, 200 years of scholarship is simply ignored. Examples of the far-out philology on request.

Maxwell himself makes a few unintentionally entertaining statements about language matters. At one point he re-analyses the Hebrew phrase meaning 'Noah's Ark' as Sanskrit (yes, it had to turn up!), falsely claiming that Sanskrit is very much the older language. Elsewhere he reports an interview he had with Alan Snow, in which he himself puts it to Snow that Americans are taught that Hebrew is a 'perfect' language, the original god-given language of humanity. Snow does not correct him by pointing out that this is taught, if at all, only by extreme fundamentalist Jewish and Christian teachers; nor does he present the view of Hebrew taken by linguists and by most academic Hebraicists (ie, it is a language of great religious significance but in terms of its linguistic structures and its historical origin it is in no way unique or even unusual). He merely discusses his own theories of the origins of the Pentateuch and how he thinks the detailed linguistic evidence supports these views.

### Worse yet!

Yet more from Psychoceramics! Edo Nyland, a former Dutch forester and an amateur anti-uniformitarian 'linguist', has wasted his retirement on a vast project involving the 'theory' that almost all languages were concocted out of Basque roots - analysed in terms of (a) a highly speculative system of syllable patterns and (b) alleged close links between Basque and a primeval 'Saharan' language. Much of this exercise is seen as part of a really huge Catholic Church conspiracy (again?!) during the Dark Ages, aimed at obscuring the true history of humanity and concealing the replacement of ancestral

goddess-worship by artificial religions with male deities.

Nyland apparently started from some obscure etymologies in Homer, and went on from there to Ogam script (which he wrongly describes as a language) and eventually to Basque and the development of a novel general account of early human language.

The basic idea is reminiscent of Kaulins (almost everything is really Latvian), Oak *et al.* (Sanskrit) and the crazy Hietbrink (Nyland's own native Dutch!), all referred to in my earlier contributions; but Nyland is unusual in (a) not himself being of the favoured language background and (b) claiming that most non-Basque languages were initially not real at all. He has read more widely in linguistics than most fringers and cites in his support not only other fringers but also very controversial near-mainstream figures (such as Gimbutas and Landsberg).

But he has clearly misunderstood the genuine mainstream positions of Ringe and other scholars (whom he despises) on the nature of historical linguistics; he actually represents his own work as more scientific in character than theirs! I will not dignify his proposals with a detailed critique, but any reader confronted with the material can respond with the following summary comments:

- 1) The analysis of words and syllables into Basque roots involves huge amounts of extrapolation, in respect of both forms and meanings; on this basis, similar cases could be made out for almost **any** language as the source, and none of these could be 'disproved';
- 2) The 'theory' implies that vast numbers of etymologies, synchronic analyses (grammar etc), genetic links between languages etc which are very well-established are all either concocted or simply illusory;
- 3) There is no known case of even one entire language being concocted along with an extensive literature; the requirements of the Church would not be sufficient to warrant

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labour on this scale, even supposing that it was feasible.

In the absence of clear evidence that these events actually occurred, the proposal can thus be eliminated by Ockham's Razor. In addition, Nyland's reliance on fringe sources - and occasionally on religious texts - generates various factual errors. Most of the content of the book is available free on the web. But if you look at this material, **please** do not take it seriously...!

### But we know that no words have true meanings...

Apologies to Led Zeppelin! Recently I have e-talked with two thinkers who have come quite separately to the view that each word has one or more 'true' meanings, which are or should be given in dictionaries.

One is 'Lola', on the atheist list: her comments are not very clear, but she apparently believes that the etymological origin of a word indicates its 'actual' meaning. The other is Rohan McLeod, who attended a talk I gave: he wants to start a whole new branch of linguistics called 'ontolexics', providing detailed advice as to which of the 'essential' meanings of each word should be used with each group of interlocutors.

This project would require socio-linguistic surveys on a scale which could not be afforded, doubtless revealing huge amounts of variation which would render the task impossible. It also assumes that existing ways of resolving semantic confusion are less successful than they are.

But in any case it is very clear that words simply do not have 'actual'/'essential' meanings (as opposed to other meanings which they may acquire for some language-users). They may have a range of meanings, some related and some not (in the latter case we linguists think of them as sets of separate words which happen to have the same form, as in *high-street bank* and *river bank*). They may be used with different meanings within different groups of language-users; and they may change meaning over time. In many cases, indeed, the earliest

known meaning (in the relevant language or in another) and/or that suggested by the etymology (**not** necessarily the same!) are no longer relevant.

Now of course it is confusing to use words in markedly novel ways without giving due notice. And some meanings of words are more 'core' (basic, widely-shared etc) than others. And there are legitimate stylistic constraints on word usage (in a review I would not use the term *bummer* to describe a theory I did not like, but in the pub I might). But there are no 'true' meanings that somehow 'ought' to be used rather than others, in an absolute sense. How could there be?

### And what about reforming English spelling...?

The proposed spelling reforms of 'Tom Hardwyck' (not his real name) were featured in *The Australian* on 17/12/01, and he too has a book which can be downloaded free. His system is basically phonemic, with all the usual problems (see my earlier comments); it is no worse or better than earlier proposals of its kind. Some of these (eg those which I still discuss off and on with Doug Everingham *et al.*) are very much alive, but Hardwyck is apparently not aware of them; he talks as if no-one has ever thought of this before! And his attitude to scholarship is one of determined ignorance!

I sent him detailed critiques of his ideas, but he showed that he was interested only in support by telling his front-man Georg Geiger to send me a brief and naïve reply (which did not address any of my points) in the 'mistaken belief' (Geiger's words) that he would be more 'diplomatic' than Hardwyck himself would be.

Later Geiger put me in touch with another critic of Hardwyck, one Nick Wade, who rightly slams Hardwyck's level of discourse but is himself utterly naïve in sociolinguistic terms and apparently wants to reform and unify pronunciation so that spelling reform will then be easy. Geiger had implied that he would have no more to say unless I forgot about my own

major points and did some more detailed things which I had in fact already done (eg, suggest improvements to Hardwyck's system on the assumption that it is acceptable in principle; I had sent a whole list of these!); but after a long gap he re-surfaced and asked me to go through Hardwyck's book making the necessary changes, and also to state the 'parameters of mainstream English pronunciation' in such a way as to help Hardwyck & Co. in their task. I thanked him for his more positive attitude but pointed out that I had given him the necessary info for the former and that the latter was impossible. He still does not seem to appreciate the full depth of my disagreement with Hardwyck and himself - and with Wade.

### Graphology and its critics

Recently, I had an encounter with a graphologist called Robert Gronbeck, who apparently publishes in the New Age press. He was happy to be quoted as saying

- a. that his reaction to critics was to stop the interaction at once;
- b. that he was not interested in intellectual discussion (I had suggested that he read Beyerstein & Beyerstein's book);
- c. that he was mainly interested in 'helping' people and happy to be paid by firms for working with their employees (but not if they were critical)!

### Envoi x 3:

1. Viewzone, who once reported me to Monash, are apparently on the verge of bankruptcy after allegedly being swindled (I will not cry)!
2. The late Neo-Velikovskyan linguist Roger Wescott seems to have made only rather general catastrophist comments; at any rate, that is all I can locate at present!
3. Read Alex Buzo in the current *Quadrant*, then my letter of response in the next one (March).



# “Healing” by the Sea and in the Mountains

**Karen travels far afield to investigate more claims based on nothing much at all.**



*Karen Stolsnow, who studies linguistics when she is not testing new age claims, is currently a resident of the New England area of NSW.*

*The Manly Daily* regularly features an intriguing array of claims in classified advertisements under the *Health / Lifestyles* section. Most of these ads for alternative therapies guarantee a ‘result’ and claim to provide immediate relief from such serious problems as post-traumatic stress disorder, schizophrenia and even dyslexia, with the promise of a quick-fix, assuring a constant queue of desperate, distressed patients. The ads do not reveal much about the processes of the ‘treatments’ although most allude to the employment of Psychotherapy, NLP (Neuro-Linguistic Programming) therapy or Time-Line therapy.

One of the most effusive of these ads is reproduced here:

Other practitioners advertise in the same column and promise relief from such diverse problems as panic

attacks and chronic pain, gambling, smoking and alcohol addictions, or to help the patient achieve weight-loss and even assisting in ‘psychic development’. Of course, these ‘guarantees’ are of dubious validity, given that precisely what is to be deemed a

‘result’ is open to a wide range of subjective interpretation. Nor do any of these practitioners agree to refund the service fee should their therapy fail, thereby making any advertised ‘guarantee’ redundant.

### **A trial**

I phoned Mr Young to learn more about his practices and promises. When asked what complaints he could help me with, he replied, “Everything. I don’t even need to know what

your problem is. We go back to your birth and deal with everything.” Asked what exactly it is that he does, he inquired, “Ever heard of

### **Gordon Young**

*BA Hons. BA Dip. Ed. Dip C.H.  
NLP Practitioner*

*Can your life be changed in 1 or  
2 sessions?*

**YES**

*Everything from trauma, stress,  
anxiety, depression, grief,  
self-esteem to phobias & dys-  
lexia*

**SIMPLY CALL**

**9977-XXXX or**

**0418 XXX XXX**

**AND DISCOVER HOW**

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Tony Robbins?" I replied that I had, to which Mr Young said, "I do what he does".

I had visions of being treated to an office display of fire-walking, until I realised that Mr Young probably meant that he emulated peak-performance speaker Anthony Robbins' techniques of NLP and motivational lecturing.

At \$120 per hour, Gordon Young's fees are not modest, particularly given his assertion that he would need to see me for "at least two hours". I politely and reasonably asked whether he offered a discount to students. He was most reluctant to give a discounted fee, as if merely asking this of him displayed a flagrant lack of commitment to his treatment. "If you don't want to pay the fee I request, then subconsciously you don't want to get better. Anyway, I can command much more than I'm asking you for."

I repeated that I was very short of money and could he reconsider my situation, as I was very serious about trying his therapy. Mr Young responded with, "If you *are* serious about getting help you'd beg, borrow or steal to have the money to receive my treatment." He then assured me that no other practitioner could *guarantee* treatment within the first appointment and that his therapy is "... well worth the small fee. It's unlike anything you've ever seen or experienced."

After a little more haggling and his constant iteration that he might not be able to help me now, as I was clearly not dedicated to healing, we settled on a two hour session of NLP and Time-line therapy for \$200. Fortuitously, he was able to see me that very afternoon!

### What is NLP and T-LT?

The concepts of Neuro Linguistic Programming (NLP) and Time-line therapy (T-LT) are very similar and often overlap in theory and practice. T-LT, also referred to as 'linear memory storage', was developed in 1985 by American Hypnotherapist, Tad James, who professes to be able

to initiate fast, effective and long-term changes in behaviour using his techniques of autosuggestion. T-LT claims to work on the unconscious level of the mind to release the effects of past negative experiences and 'inappropriate programming'. NLP was devised in the seventies by two American men, Mathematician Richard Bandler and Linguist John Grinder. A site, [www.nlp.org](http://www.nlp.org) states:

*It allows you to change, adopt or eliminate behaviors, as you desire, and gives you the ability to choose your mental, emotional, and physical states of well-being. With NLP, you learn how to grow from every single life experience, thus increasing your ability to create a better quality of life.*

The site likens NLP therapy to reprogramming the brain, just as one would programme a computer.

### Keeping an appointment

I visited Mr Young's at his home, from where he operates a company, Curved Solutions, that offers services in Psychotherapy, NLP and T-LT. He greeted me, dressed as the consummate professional in a business suit and tie (but with no shoes!) Contrary to his phone protestation that he didn't need to know of my condition he immediately asked me what my problem was. I replied that I would be moving to England in November and wanted to make certain that I was healthy for the journey. He immediately interpreted this as hesitation on my part, with a deep-seated disinclination to move. I demurred, yet he still seemed convinced that he could help me with my 'problem'.

I was then asked if I knew anything about NLP to which I replied that I knew of it and happened to be in the midst of completing my Honours degree in Linguistics. He now appeared a tad apprehensive, but persisted with a rather simple statement. "So, if you're studying Linguistics you'll know that communication is very important."

I figure that my admission rather

spoil the potential of his routine and 'treatment', but I was still witness to a fascinating, although useless, display of his 'healing'.

Before he began the session, Mr Young regaled me with some of his past 'successes' and assured me of his abilities. "What you will witness may seem strange but just run with it. It makes sense. I've been treating a friend of mine who has cancer – with astounding results".

Mr Young explained that his friend had a very poor immune system of "0.5" since commencing chemotherapy (without being precise about the lab values he explained that this was below the normal range) and that after a single appointment with him, her level rose to the figure '2' – at the lower end of the safe range. According to Mr Young, during a session of NLP psychotherapy his patient had focused on the figure two as a health goal she wished to attain. Within three days of the session her immune system had reached the desired '2' - much to the consternation of her doctors. "They attributed it to her medication but I know better!"

However, another patient of Mr Young's, also suffering from cancer, had not experienced success with NLP/T-LT. He defended his failure to cure this woman by questioning the sincerity of her desire to recover. His stated opinion was that this woman deliberately refused to heal. He maintained that the sick woman revelled in the new-found attention she received from her friends and family, because of her illness, and that subconsciously she did not want to heal. The woman did not respond to treatment because, "... she didn't want to get well and lose all of that attention she started to receive... and therefore the *reason* for that attention. No one can help her."

I argued that the very action of her seeking help supported her seriousness in overcoming her illness. "But not on a subconscious level", he countered. Mr Young presumably relieved the terminally ill woman of hundreds of dollars for several un-

productive sessions before reaching this conclusion.

### The "treatment"

Getting down to business, Mr Young said that we were going to try to uncover the source of my 'problem'. Instructing me to extend my left hand and arm, he asked me to watch the palm of my right hand until a prism appeared. This prism would hold the secret of any discontent and illness I might suffer. After a few minutes of complete silence and no sign of any prism, Mr Young asked me if I could see anything. To his frustration I replied "nothing". He told me to persist in staring at my bare hand and after a few more minutes of mentally twiddling my thumbs I gave him a way out, telling him that although I couldn't 'see' anything, I was, quite naturally, 'having thoughts'.

"Ahh! Then that's the form your subconscious has taken to reveal to you your problems. What *are* these thought then?" At this point I complicated matters by saying that my thoughts were that there was *no* problem. We then repeated the entire process with my right hand with similar non-results. Despite his various methods and attempts to elicit my 'problem' Mr Young again stated that he didn't need to know my 'problem' to be able to heal me. Using psychotherapy and T-LT, he would 'heal' me and 're-teach' me how to think. "I'm going to have a chat to your unconsciousness. I'll be saying some stuff that might sound odd but it makes sense to your subconscious state. Your consciousness can hang around if it wants to."

With that kind offer and Mr Young's amateur techniques of hypnotherapy my consciousness *did* monitor things. He asked me to stare at a point in the room at which I chose a particularly fetching potted plant with attractive purple flowers. He suggested that I could feel a growing tiredness and that I could feel a desire to close my eyes. I did so. I was asked to envisage a time-line of my life and upon this line to see my past, present and future. I

was then told that during the session we would be releasing the negative emotions from my time-line.

When was my first experience of anger in life? "Was it before, during or after your birth?" Giving the only possible answer I could, I responded, "after birth". I was then directed to return to this earliest moment of anger and clutch at this emotion, to embrace it, forgive it and cast it away, watching it plummet as I seized every moment of anger from my time-line and discarded them, leaving a past, present and future free of anger.

### Negative emotions (and then some)

I was then asked to open my eyes and asked how I felt. I replied that I was feeling angry, at which Mr Young chuckled and assured me that this was "perfectly normal." (As I was being scammed at \$100 per hour?) "It's some residual anger that you're feeling." I asked him about the likelihood that a person could experience an emotion *before* birth or indeed recall an event *during* birth. He confidently answered that many of his patients have their first encounter with negative emotions before their birth, in a previous life. Throughout the course of reincarnation, they are inclined to accumulate negative emotions as 'excess baggage' and carry the troubles of their previous life into their current life. Therefore, NLP and T-LT are effective techniques for eliminating the build-up of these detrimental emotions and ensuring that a person can better cope with or even avoid these emotions in future. "You'll always handle anger better now." It's that simple... in cases where anger management is required, orthodox counselling recommends commitment to weeks of cognitive behavioural therapy courses whereas Mr Young advocates a 5-minute bout of day-dreaming, visualisation and auto-suggestion.

As for the notion that a person could experience negative emotions during their birth, Mr Young informed me that birth is a traumatic

episode. This ordeal can arouse many negative emotions that can be harboured throughout our lives as scars. He couldn't explain to me how a person could determine whether their experience was prior to, during or subsequent to birth. "You just know."

The process of 'negative emotion cleansing' was repeated three times to 'release' any 'fear, anxiety, sadness and guilt' I have or would have experienced. Each time I was asked quite seriously to recall the initial incident of each emotion - whether it was before birth, during birth or after birth. At the conclusion of this exercise Mr Young exclaimed that he could only manage two appointments per day as the work is too emotionally draining. "I have to revisit my birth and release my own negative emotions *every* time I treat a patient."

At the fees Mr Young commands he certainly wouldn't need to see many people per week to make his business lucrative. Nor was there any mention that these emotions are usually perfectly normal responses to the very act of living and probably crucial to the balance of personality.

### Motivation by apocrypha

Relentlessly, Mr Young explained that he was going to hypnotise me again and tell me "a few stories". Orthodox techniques used in hypnosis were not even employed this time. I was told to close my eyes, breathe slowly and listen carefully. He proceeded to tell me a few apocryphal, motivational tales supposedly to boost my confidence levels and self-esteem. I was told of the young Indian girl who was given a 'magical' brooch by the village 'cunning man', a talisman that would safeguard her from evil and sickness. In her adulthood she revisited this man, seeking a stronger amulet against her new-found problems in life only to be told that her brooch never had any real powers. It was within herself that she could find the strength to face life and its dilemmas! Mr Young continued with one more story that either a dose of post-



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hypnotic amnesia or a mid-hypnosis nap precludes me from relaying!

At no point did Mr Young query my medical history or whether I was seeking any treatment external to my appointment with him. I was just repeatedly asked to reveal my 'problem' until it became evident that there was no problem. Despite this assertion Mr Young was convinced that I could benefit from his 'treatment'. It is alarming to consider the truly sick and troubled patients in dire need of professional help, who visit Mr Young and pay a considerable amount of money for a fruitless session of ridiculous autosuggestive 'NLP/time-line' therapy. On the basis of my appointment with Mr Young, I can quite confidently dismiss the efficacy of his 'therapy' for treating any condition with any success whatsoever and argue most vehemently that he cannot cure cancer, assist in treating mental health conditions or provide genuine help for any of the illnesses or problems he claims to be able to 'cure'.

Following the session of hypnosis, Mr Young again asked me how I felt. I replied that I was tired and he again assured me that this was the norm. "We've achieved a lot today." He announced that he was very happy with my 'progress' (?) and that he needn't see me again for a follow-up appointment. He was very confident that I wouldn't have any more problems. I should feel "emotionally lighter" now... I certainly felt \$200 lighter!

#### Note:

I sent Mr Young a copy of this article inviting him to defend his company and practices yet have received no response. Subsequent to my post-appointment contact with him, Mr Young has ceased advertising his services in *The Manly Daily*.

# Healing Vibes in the Mountains

## **Karen Stolsnow continues her search for wellbeing and enlightenment on a trip to the Blue Mountains.**

My intention was to escape the New Age purveyors of Sydney for a weekend, so I headed off to the beautiful Blue Mountains. The drive was pleasantly uneventful until I reached the Mountains town of Blaxland where my eagle eyes spotted a small sign on the highway that announced 'Free Healing Day at the Blaxland Community Centre'. I simply couldn't resist this opportunity ... and I did have a nasty dose of Spring sinusitis! Here was a chance to test the 'healers' and witness some Mountains mysticism in action!

I had fortuitously stumbled across the annual free healing day held by the Blaxland Spiritual Centre. A brochure from the group stated:

*Today we are holding our Alternate Healing Awareness Day as a gift to the community in which we live. To raise awareness of the gifts each one has within and the harmony and balance of the mind and soul that can be created in the giving and receiving of healing channelled through Spirit by Spirit for Spirit. There followed a welcoming message from a 'guiding spirit', channelled by the "minister" (the Centre appears to be affiliated with a group called the Australian Spiritualist Association).*

The Blaxland Community Centre was bustling with local New Agers. The hall boasted eight flat beds where people were receiving 'healing' and stalls sold crystals and other mystical wares. Of course, the Blue Mountains area is no stranger to alternative interests. A highway drive will reveal 'magick' shops, alternative medicine stores and even

Catholic idol suppliers. Tourists seem intrigued by these places and leave with stockpiles of candles and incense which is all good and well ... until you visit a 'Free Healing Day' and become witness to sick elderly people, people in wheelchairs and others with less obvious problems in attendance, all with hope in their eyes.

A lady at the entrance greeted me and enquired with which healer I would like to have a session. A whiteboard listed the branches of 'healing' on offer – 'specialists' in Reiki, Kinesiology, Magnetic healing, Qi gong, Reflexology, Crystal Healing, Spiritual Healing and the mysterious Emotional First Aid Healing by a Mr Bob Enright, whose business card describes him as a "Metaphysical teacher, Coach and Mentor" who utilises "Emotional Freedom Techniques" whilst "Marching to the Beat of [his] Own Drum" (!)

### Picking a target

Faced with an agony of choice, I decided to have a cup of tea before I chose my healer. The tea lady initiated a friendly chat, so I asked her who she would recommend, to which she furtively asked me to "step aside" for a private chat. She advised me to see 'Harold the Spiritual Healer', pointing to an elderly man, deep in consultation with a lady clinging to a walking aid. The tea lady swore by Harold. Only this morning her granddaughter was suffering the most debilitating menstrual pains until she had a visit with Harold. Without revealing her problem to him, Harold detected her pains and healed her. Within minutes the tea lady and I had attracted a small group of several local women, all of whom were keen to praise Harold's abilities. This, I decided, I must see!

## Healing

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I didn't spoil the tea lady's faith by pointing out that period pain is cyclical, that is, it comes and goes in bursts. Perhaps Harold's 'healing' had merely coincided with the easing of a bout of these pains. Alternately, any woman who suffers greatly from such problems would always keep some painkillers within easy reach on such a day. Half an hour of lying down and resting as Harold milled about would provide ample time for a few hastily taken pills to do their stuff.

### A session

When my turn came, Harold beckoned me to lie on the table. He then mummified me with a purple blanket, and, no sooner had he done this than he excused himself to go outside to "eliminate the excess energy" from his previous patient! After ten minutes with no sign of Harold's return, I looked around to witness him removing the excess energy via a cigarette! Eventually he returned, mumbling contentedly "that did it!". He then proceeded to explain his absence - "I feel the pain of the patients I treat, so I go outside to remove that energy" (or to remove his nicotine craving?)

Harold now sat on a chair behind my head as I lay there. Telling me he was tuning into my pain vibrations, he placed his hands above my head. Did I have a pain in my left big toe? No. Okay, the pain he was sensing must be from another person in the room. Did I have pains in my lower stomach? No. Did I *ever* suffer from lower stomach pain, say, women's problems? Yes, occasionally... as do most women. Fine, then, he was feeling the times when I have felt such pains (or was he remembering his early morning 'success' with the tea lady's granddaughter? Is this a common and safe guess with most of Harold's female patients?).

Now, he was picking up that I suffered from back pains, was this correct? I replied that this was incorrect and again he attributed the 'pain vibration' to someone else in the room. (It was *my* consultation, why were other people getting the

benefit?) Becoming desperate, Harold asked if I was suffering from a headache and eye pains. Bingo! A huge smile spread across his face when he learned of my current misery! "Now I can help you!" he exclaimed.

Placing his hands above my eyes, he asked me to close my eyes and lie still. Could I feel anything? "Only the heat from your hands", at which Harold chided me for my comment, "It is the heat from my healing", he corrected. After some time he sat at my side and placed his hands above my stomach to heal me of the 'women's pains' I would eventually suffer from. He asked me if I could feel anything. Again I replied that I could feel the heat from the close proximity of his hands. No, I should be feeling 'waves' throughout my body, gentle flutters that signified the pain leaving my body.

Harold now moved on to my left leg where he began to 'heal' my healthy left big toe. He must have forgotten that there was some other poor, unknown soul in the room with a painful, untreated big left toe! He began to pummel my leg. Could I feel anything? Yes, I could feel him manipulating my left leg! "It's not me", he argued "It's the spirits healing you *through* me! You're not very in tune with your feelings, are you?" Nor was Harold very in tune with his 'ability' to feel what I could feel as my left big toe sat comfortably and pain-free in its shoe!

At one point Harold expressed that he had an itchy nose, did I too have an itchy nose? No, I didn't. "That's odd", Harold replied, "I usually feel exactly what you feel". Remarkably, five minutes later, my nose *was* itchy. When I told Harold he commented, "Ah! I thought so. My itchy nose was a premonition that you would soon have an itchy nose!" (I hate to think of Harold suffering from all the menstrual pains of his patients.)

Harold had employed some sort of intuitive method to 'diagnose' my problems and 'spiritual healing' to 'heal' me. Throughout the healing session, which consisted mainly of

Harold's holding his hands above my face, stomach and feet, he informed me that spirits were working on me to heal me of my pains. At one point four spirits were all furiously working at once on me! While all this commotion was going on, Harold told me it was best that he leave me alone with the spirits to allow them to concentrate on healing me (and allow Harold to go outside for another ciggie).

### Holes in the head

At end of the long session (Harold was kind enough to spend an hour with me) he asked me to envision a 'trap door' on the top of my head. I should 'open' this trap door and allow the "sickness loosened up by the spirits to drain away". Now, did I feel any better? No, I didn't. Then I should be patient for 36 hours, as 'absent healing' would take place during this period following the *in situ* variety and the spirits would continue to work on me and heal me of my pains (presumably at time and a half for overtime). I ended up leaving the community hall with the headache and sinusitis that I had arrived with, but a couple of aspirin fixed that - or was it the absent healing?

### Shut your trap

I thanked Harold for his time and got up to leave. I had only taken a step or two when he called me back with great urgency. I walked back to him and he asked me to sit down for a minute. As I did so, he waved his hands over my head, explaining that I had neglected to 'close' the door in my head. How careless of me!

Harold now used an expression that, oddly enough, I have been using a lot of late. He said that "the veil was lifting", meaning, I presume, that the illness was leaving my body, and then he mused, "that's funny. That phrase came to me out of thin air! Were you thinking that?" Strangely enough, I *was* thinking of that very phrase at that moment. Incredible! Actually, this was coincidental thought not amazing. After all, it's not as though Harold said

"You're a skeptic and will be writing an article for *the Skeptic* denouncing my healing abilities",

Harold appeared very genuine and sincere in his belief that he possessed healing abilities. He gave me an hour of his time for free and was earnest in his intention to relieve my aches.

### Community service or community scam?

Well, immediately it's a disservice to the community to purport to be able to heal via any of the above listed alternative methods. In defence of the Blaxland Spiritual Centre, they do hold regular fund-raising activities to raise money for Leukaemia research and treatment – and how marvellously honest that they don't claim to be able to cure that disease! At their fundraising events, the 'Spirit for Charity' appeal, held at the Blacktown RSL, they charge \$10 for readings in iridology, aura photography, 'nature's sunshine' (!), Bach flower remedies and the afore mentioned methods of 'healing'. But this doesn't condone their organisation which holds frequent 'healing' meetings. As these are also free and there appear to be no financial gains for those involved, I've come to the conclusion that the Blaxland Spiritual Centre is somewhat of a cult, where members are recruited through these regular meetings – and every cult holds its dangers.

The following day I was going for a morning walk in Leura when I noticed activity at the 'Country Women's Association Centre'. You guessed it! It was the fortnightly Sunday service of the Leura Spiritual Centre... offering healing, readings and meditation...!



# Lament

Joan Vaughan-Taylor

*I'm in love with the digital girl,  
Her voice gives me a high,  
But when I try to tell her so  
She makes no real reply.*

*She offers services galore  
To deal with my distress,  
Yet buttons on the telephone  
Seem all there is to press.*

*She asks me what I'd like to have  
And I just say "It's you",  
To which comes back the cool advice  
To press the button two*

*She tells me if I want to pay  
To press on button eight  
I think she's got the wrong idea  
When all I want's a date!*

*I'm mad about the Telstra girl  
I'm foolish, fervent, fond -  
A case of unrequited love,  
She never will respond.*

*From faxing and from e-mailing  
I'll make another choice,  
If all I get on phoning is  
A disembodied voice!*

Joan Vaughan-Taylor is a poet who lives in the Blue Mountains, where she bemoans the spiritual desolation of being surrounded by fundamentalists and devotees of the New Age. She wrote this cheerful "lament" for her husband, Ross, after he had experienced a frustration we have all felt with the new digital age of communications.

# Reviews in Brief

## Tricks of the psychic trade

**The Full Facts Book on Cold Reading, Ian Rowland, self-published, available from [www.ian-rowland.com](http://www.ian-rowland.com) for £40**

*When you were younger, I see an accident involving water. Does that make sense to you? I sense it's going back some time, perhaps when you were really very young. You may not remember.*

*There's an indication of a career in progress, or a transition. This could be you, or someone's career that affects you.*

*For some reason I'm seeing a blue car outside your door. Now why would that be?*

*I see the initials J and T. Do these mean something to you? Are you quite sure? Well, will you watch out for them? If they don't mean anything to you now then I'm sure they will very soon, all right?*

I know, I know. It's amazing. How did I know so much about you? Well, let's just call it a psychic gift I have. And although I'd never exploit my gift by predicting the stock market or picking lotto numbers, you can pay me for this reading by cash, cheque or credit card.

*The Full Facts Book of Cold Reading* is brilliant. While it would take me six years to train to be a doctor, I could set myself up as a psychic right now, and charge people \$40 an hour, purely on the basis of what I've read in this book. And I know I'd do better than any of the psychics I've been to.

Author Ian Rowland says all you need to be a good cold reader is the gift of the gab, modest acting ability,

lack of nerves and a touch of stage presence. Basically, these are same qualities you'd need to be a teacher, a telemarketer, an insurance salesperson or any number of less well paid and less glamorous occupations.

Rowland knows what he's talking about. He's not psychic, and claims to lack both charm and charisma, and yet has done tarot readings on TV where he's wowed complete strangers with his accuracy – in one case, knowing the name of a woman's brother. He's also done personal astrological readings that the subjects claim are up to 99.9% accurate, even though he's written exactly the same thing for people of different star signs.

There's no one devious trick. There's a whole range of devious tricks, based on a combination of facts and psychology, which Rowland has dissected and helpfully named.

There's *Fine Flattery*. Most people like to think of themselves as being a little bit more honest than the general population, as well as fair-minded, independent, wise in the ways of the world and a good friend. Tell them that, and butter them up while looking perceptive at the same time.

Then there's the *Fuzzy Fact*. Mention some sort of connection with Europe, "possibly Britain, or it could be the warmer, Mediterranean

part?" and let them go on from there. It would be almost impossible for anyone to deny "some sort of connection" with Europe.

There's genius in the *Vanishing Negative* as a way of extracting information. A question such as, "You don't work with children, do you?" can be met with either a negative answer, to which you respond, "No, I thought not. That's not really your role," or a positive answer, to which you respond, "Yes, I thought so. There's a strong affinity with children indicated." You can't lose, and you've gained some information about them.

And there's brilliant psychology behind the *Push Statement* – coming up with a specific incident (such as something involving a party, a car and a shoe), then modifying it and prodding the client until eventually they connect it with a memory ("How could you know that when I'd forgotten!").

Add a few *Sugar Lumps*, a couple of *Lucky Guesses* (if even one hits, you can guarantee *this* will be remembered and retold) some *Peter Pan Predictions*, then learn all the ways to sound like you're right when you're wrong, and you're set.

The transcript of a tarot reading Rowland did on TV is illuminating. He tells a woman there's someone from her teenage years, Nick or a Mick, perhaps a boyfriend, perhaps a close friend. She says she has a brother called Michael. Bingo! She was quite close to her brother, wasn't she? Later on the TV show this is recalled as Rowland knowing the name of the woman's brother. This is how people remember psychics as having amazing powers.

All this comes under the heading of cold reading. Rowland touches briefly on hot reading (sneaky ways of finding out about the client before



Helen Vnuk

the reading) and magic tricks (which, a little frustratingly, he won't explain). But really, the cold reading techniques are fascinating enough.

I'd like to imagine millions of people buying this book instead of spending their money visiting a spirit medium, ringing a psychic phone line or having their personal astrological chart done. I'd love to think this one book could destroy all those bodgy operators single-handedly. But sadly, I know the people who really should read this book never will. They'd rather pay to have someone tell them they're wise and creative and a good friend, and that someone whose name starts with the letter M is happy in the afterlife.

PS. If you didn't find my reading at the start of this review accurate, that's because your skepticism is preventing the consultation from being effective. It's blocking the channels that are important to my work. I'm afraid I can't help you. The reading is over.

Helen Vnuk

## Two views of evolution

***Dawkins vs. Gould & Survival of the Fittest*, Kim Sterelny. Icon Books. 2001. 156pp. pbk. \$16.95.**

Sterelny, Professor of Philosophy at Victoria University of Wellington, New Zealand, and Australian National University, Canberra, covers the controversy as to which scientist is more correct in their contrasting views on the subject of evolution. Now this subject cannot be put to the determining test of many scientific theories, that of experimentation, because of the many thousands of years involved in major evolutionary changes. Instead one must base one's

conclusions on what is the most reasonable from the evidence, from the observations.

His book explains their differences as being based on the clash of perspectives drawn from their different scientific backgrounds. Dawkins comes from ethology, the science of understanding the adaptive significance of particular behavioural patterns, of how adaptive behaviours evolve in a lineage and develop in an individual. Gould's background is palaeontology, the study of fossils.

For Dawkins the adaptation of organisms with the environment is from natural selection, as propounded by its discoverers, Darwin and Wallace, from their observations. There is a continual war between gene lineages, the winners being the genes that adapt to the environment best and so replicate their successful genes. The adaptations are disrupted from time to time by catastrophes – continents dividing, mountains erupting, meteor impacting – to cause extinction of many species. This theory has been massively reinforced in recent times by the discovery of how the genes of all living organisms are linked by DNA.

Gould is struck by how the fossil record shows so many extinction of species and so little change in species – instead there are abrupt changes in species rather than gradual adaptation. He calls this “punctuated equilibrium”. New species arise by a split in a parental species followed by a rapid speciation of one or both of the fragments.

There are two difficulties with Gould's hypothesis. One is that fossil records are notoriously non-continuous – there are large



James Gerrand

gaps in the fossil records. Such gaps could explain the “punctuation”. The other concern is that there is no evidence of such splits occurring nor any explanation as to why they should.

The differences between Dawkins and Gould also relate to their different attitudes to science. For Dawkins science is the one great vehicle for producing knowledge about the world around us. Gould however believes some important questions are beyond science's scope, particularly science is irrelevant to moral claims – science and religion are concerned with independent domains.

Sterelny illustrates this science versus religion view on moral claims by posing the question: “Is torturing babies bad because God forbids it or does God forbid it because it is bad?” Give the first answer you are committed to the view that it would be right to torture babies should God command it. Give the second and you accept the irrelevance of religion to moral truth. However Sterelny is remiss in not then pointing out that science's conclusion is that morals are not absolute truths but are what are accepted by the community as being for the best in the current state of their society. Morals need to change as society changes.

A major difference between Dawkins and Gould is in their attitude to human sociobiology and its descendant, evolutionary psychology. Dawkins invented the term *meme* for those social items of ideas and skills that are replicated, passed down and evolved from generation to generation. This makes humans have a special status within evolutionary biology.

I found this book helpful in understanding the differing views of Dawkins and Gould on this subject of evolution but also found many passages difficult to comprehend. Now this could be due to the depth and range of this crucial subject but I found Sterelny's philosophic background and language not too helpful at times.

James Gerrand

## Real flood geology

***Before the Flood*, Ian Wilson; Orion, 2001 ISBN 0 75284 6353**

This is not a book for creationists. Wilson is no self-appointed scholar. During his career as an historian at Magdalen College, Oxford, he published highly acclaimed works such as earlier works *The Blood and the Shroud*, *Jesus: the Evidence*, *The Bible is History* and *The Columbus Myth*.

The inspiration for this book came from the 1998 Ryan and Pitman book (*Noah's Flood*) and Ballard's later work on the Black Sea using submersibles. The early flood myths related to post-glacial sea level rise are evaluated. Although some such as the Sumerian, Assyrian and Babylonian resemble the Biblical myth, there are numerous European, African, American and antipodean myths which record sea level rise and climate change.

Wilson shows that the Noah story belongs to a whole group of stories that all emanated from one single, localized but momentous catastrophe. The J and P Biblical versions of Noah's Flood are evaluated, Wilson scathingly dismisses "arkeologists" and moves on to the Ryan and Pitman work on the Black Sea. The marine geologists Ryan and Pitman found a drowned coastline, sand dunes and river systems, extinction of a fresh water mollusc population that died around 5600 BC and a sequence of marine sediments deposited in turbulent conditions on old soils, dunes and terrestrial sediments. Furthermore, this inundation of the Black Sea at 5600 BC was so rapid that the water level rose 15 cm per day resulting in a drop of global sea level of 25 cm. The breaching of the Bosphorus and inundation of the Black Sea Basin by 90 to 120m of saline water was not a global event. However, it led to flood myths such as the Gilgamesh Epic and the biblical Noah myth. There is no doubt

that this was one of the most disrupting events in human history.

Then Bob Ballard enters the picture. Ballard work with submersibles on mid ocean ridge hot spring systems led to his discovery of the wrecks of the *Titanic* and *Bismarck*. Ballard then turned his attention to the Black Sea and found wood, charcoal, obsidian, wall supports comprising hewn wooden beams, wood and stone tools and ceramics. He validated the 5600 BC age of saline water ingress. The standard of craftsmanship was high for a period nearly three millennia before the building of Egypt's Great Pyramid. Wilson asks the question:

*Who were the people who were living around the Black Sea immediately before the great burst-through?*

The reader is then taken on a trip through the ancient settlements of North Africa and Asia Minor. In a fascinating couple of chapters, archaeological evidence from the ancient city of Catal Hüyük in Anatolia is integrated with other findings from the ancient world such as buildings, looms, woodworking, printing devices, burial practices, shrines for bull cults, petroglyphs, paintings, counting tokens, obsidian, bones, grains, woven clothing and statues of fertility goddesses.

Catal Hüyük and many other sites were abandoned about 6000 BC due to the very cold and dry conditions of a mini ice age when post-glacial climates were changing very quickly from one extreme to the other. Urban and agricultural populations perished, became displaced and reverted to hunting and gathering.

Wilson suggests that many of those displaced resettled in the pro-

tected warmer wetter Black Sea Basin, established villages, recommenced agriculture and husbandry and were matriarchal societies only to be wiped out a little later by the Black Sea Flood.

This double catastrophe led to another diaspora. By comparing a great diversity of cultures in the lands around the Black Sea (eg Ubaid in Mesopotamia), Wilson argues that the post-flood cultures around the Black Sea Basin have many similarities with the pre-flood Catal Hüyük culture. He argues from archaeological evidence that some pre-flood populations stayed in Asia Minor and others dispersed widely.

He shows that Catal Hüyük cultural traits existed in what is now Egypt, Iraq, Romania, Chechnia, Georgia, Bulgaria, Greece, Balearic islands, Galicia, Ireland, the Orkneys, Malta and North Africa. The Eteo-Cretan language was probably a direct descendant of the language spoke at Catal Hüyük.

A chapter devoted to the fact or fiction of Atlantis would be a disappointment to those wanting to abandon rationality. Wilson concludes that there are lingering memories preserved as folk tales, myths and archaeological records of catastrophic events and suggests that the most fundamental advances in civilization derive from the Black Sea environs rather than Egypt or Mesopotamia. Agriculture, animal husbandry, weaving of textiles, house-building, town-planning, carpentry, metallurgy, pottery and the decorative arts are given as examples and such examples were developed before the 5600 BC date ascribed to the Black Sea Flood.

Wilson's *Before the Flood* flows well as an easy to read authoritative work supported by notes, a bibliography and various translated documents as an appendix.

**Ian Plimer**



Ian Plimer

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## New look at old legend

***The Keys to Avalon. The True Location of Arthur's Kingdom Revealed.* Steve Blake and Scott Lloyd (2000) Element Books Ltd.**

In this book, one of the most famous legends of all is debunked., King Arthur and the Knights of the round Table; The Once and Future King. Arthur was conceived with the aid of the prophet Merlin in Tintagel castle in Cornwall. He was the son of Uther Pendragon. Arthur was the boy who pulled the sword Excalibur out of the stone to become high king of all Britain. He sleeps, so the legends say in a cave until he is needed by his country again.\*

That's the stuff of legend that so many stories and books have been based on for hundreds of years. Sean Connery has even played King Arthur with a Glaswegian accent. Graham Chapman played the best Arthur of all.

All the stories about Arthur originate from a book called *The History of the Kings of Britain*, written by Geoffrey of Monmouth in about 1136. In fact the book wasn't written, it was translated into Latin (*Historia Regum Britanniae*) from earlier Welsh stories. Arthur had supposedly been the high king of Britain in the 6<sup>th</sup> century, some 600 years before the *Historia* appeared. The authors' examination of the earlier written records indicates that translating wasn't Geoffrey's strongest skill. He got some of the details right, but he got all of the place names wrong. He set the whole story of Arthur in the wrong country.

The Welsh bards, who preserved the oral tradition of Wales through their poetry, enabled Blake and Lloyd to access some of the oldest references to Arthur and his companions. Written down for the first

time in the 12<sup>th</sup> and 13<sup>th</sup> centuries, the poetry and histories of the bards preserve the original names of people and places connected with the historical Arthur. By using these earliest written sources, whose oral origins pre date Geoffrey's *Historia*, they were able to begin to penetrate the actual life and times of Arthur.

The Welsh texts indicate very clearly that the Welsh bards at the time referred to the land they occupied as Britain and the people in the next door country as Saxons. Therefore, the History of the Kings of Britain would more accurately be translated as the History of the Kings of Wales. None of the Arthurian stories take place anywhere in England. Once Blake and Lloyd had established that Britain was actually Wales, they were able to re-translate Tintagel as Dindagol in Wales.

Merlin was supposed to have raised the Giants' Dance. This has always been thought to be a part of Stonehenge in Somerset in England. When the original place name Caer Caradog is translated again, it turns out it is a hill fort in the modern county of Denbighshire in North Wales. The authors looked at modern maps and went driving, presumably with one eye on ancient Welsh manuscripts and the other on the traffic, they found an interesting place now called the Circle of the Saxons where there are mounds of large standing stones dotted around the field. The stones were not geologically indigenous to the site but had been brought in purposefully many hundreds of years before.

Each place associated with the life of Arthur is examined in the original Welsh documents and re-translated in the light of the premise that Britain is actually Wales and each place is identified as a place in North Wales with an impossible Welsh name. Avalon is Ynys Affalach.

So King Arthur wasn't an English ruler who fought the Saxons. He was a Welsh ruler who fought the English. The Saxons didn't land in England at Kent. The English landed in Wales at Keint or Gwent. Quite a difference.

There is a chapter in the book, which discusses the possible reason for Geoffrey's errors in geography. He may not have been just an appalling translator, baffled by unpronounceable Welsh place names. The authors suggest that in the early 12<sup>th</sup> century, the ruling monarchs of England, which was the home of people called Saxons as far as the Welsh were concerned had become kings of that country by conquest. Even though they claimed the leadership by "divine right" they were in an inferior position to their continental rivals, the kings of France. The latter were at the time their feudal overlords and also the newly founded English dynasty, the Plantagenets, lacked a noble and heroic figure such as Charlemagne and the sacred leadership offered by the Merovingian ruler Clovis.

To overcome this, the English monarchy needed a myth of their own and so, at what appears to have been at the instigation of the Henry II's illegitimate relative Robert of Gloucester, Geoffrey's *Historia* was translated and then adopted as the Anglo-Norman political mythology. In a propaganda coup, they made the history of the Welsh kings their own. So effective was this reworking of history that it became the foundation of a great historical myth, which supported racial and dynastic aspirations for over 500 years. Indeed one of the names of Prince Charles is Arthur.

There is no doubt that the royal household of Henry II adopted the Arthurian romances for purely political purposes as they attempted to recreate themselves as the successor to the kings of the Britons and give their fledgling dynasty a history to rival that of the continental Capetians. The rewriting of history is not new and the mistranslation of documents for political purposes clearly goes back a long way in time.

King Arthur wasn't just a legend after all. He was a minor Welsh ruler who was savage and cruel and was greatly disliked by his subjects.

**Liz Armstrong**

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\* Being hundreds of runs behind Australia and having to follow on must qualify as being needed by your country, yet Arthur has never walked onto the field at Lord's carrying a bat.

# It's Not Easy Being Green

A controversial professional looks at a controversial book and finds it good.

***The Skeptical Environmentalist - Measuring the real state of the world.* Bjørn Lomborg, Cambridge University Press, 2001. ISBN 0-521-01068-3**

During a conversation with the earth science editor of Cambridge University Press in London in June, he told me that they were publishing a book challenging many of the concepts held sacred by the environmental movement. He added that there were many conclusions in the book with which he did not agree. When I asked him which conclusions, he could not answer. Instead, he sent me a copy of the book.

This is the problem. Bjørn Lomborg, a statistician from the University of Aarhus, Denmark, has used data to demolish what he calls "the litany". The book has been reviewed by experts in science, but it is not written for statisticians. It is written for the person in the street, although the huge volume of information is almost overwhelming and takes some effort. It is blessed with 173 excellent line diagrams, the data is presented in the final 153 pages as 2930 notes and it has thousands of references in a bibliography. Those of us used to looking at fringe science and fraud always look at the quality of the source information in the bib-

liography. With Lomborg, the data is derived from the international refereed literature, UN and government reports and major books; this data is available for all to check and use and the data is verifiable.

## Creating a storm

Lomborg's book certainly did that, but why should there be such virulent objections to a book underpinned by science and refereed by scientists? Lomborg was once an ecological activist and "member" of Greenpeace. He left in disgust when he realized that the arguments underpinning the political activities of Greenpeace were based on concocted data, preconceptions and poor statistics.

Lomborg uses a mountain of data to show that the world is getting better. It might not be perfect but he is able to show that by evaluating internationally validated available data, then the end is certainly not nigh. This is Lomborg's thesis. His science is statistics and it is their use and unprofessional misuse by scientists and environmental scaremongers that he documents. To those who know the world is doomed, Lomborg's revelations are very uncomfortable. The objections to this book are political (which is hardly surprising), as he argues that envi-



*Ian Plimer is Professor of Geology at the University of Melbourne and a notorious tilter at deserving windmills.*



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ronmentalism is like a religion, but one he hopes will eventually evolve into being just good commonsense.

### Scientific and statistical objections

Very few of these have been presented and even reviews in such respectable journals as *Nature*, *Scientific American* and *New Scientist* concentrated on political, rather than scientific objections to Lomberg's thesis. He has been branded a traitor, governments have unsuccessfully tried to show he is in error, he has received threats from enraged environmentalists and he has had a pie thrown in his face as by a publicity-seeker at Oxford. Some have tried to brand him as a fraud, a fascist, a lone dissenter, or that he does not even have a basic understanding of science. The criticism is largely *ad hominem* and it all sounds disturbingly familiar.

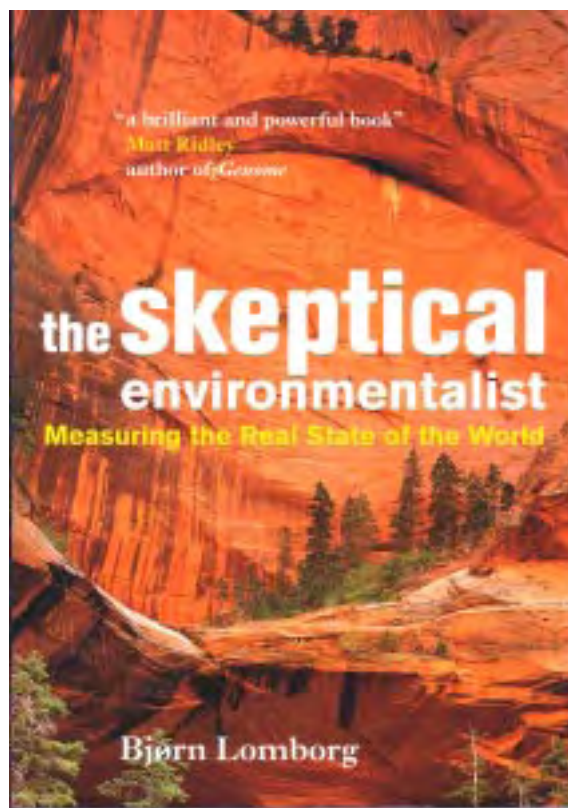
Lomberg tells us what we know (or should know). Great Britain didn't starve (Thomas Malthus 1798), nor did it run out of coal (William Jevons 1865). American oil reserves lasted beyond 1924 (US Bureau of Mines 1914) and we did not run out of oil, gas, silver, tin, uranium, aluminium, copper, lead and zinc by the end of the 20<sup>th</sup> century (Club of Rome 1972). In fact, we are always going to run out of resources. This is the nature of the exploration business and Lomberg argues that just because the fridge is empty, it does not mean that we are going to starve. We just go out and buy more food or, in the case of resources, undertake more exploration and research. History supports this argument.

### Positive trends

In Part I of the book, he looks at global trends and various organisations such as the Worldwatch Institute, World Wide Fund for Nature and Greenpeace. Later in Part I, he looks at the lopsided reality of television and radio and the associated

conflict, guilt and bad news which bombards an uncritical community with information, but not knowledge.

In Part II of the book, population demographics and mortality are analysed. The great decrease in infant mortality has greatly increased the global population. Compared with previous generations, we humans live longer, have more healthy lives and are healthier in our old age. Furthermore, not only do we have more food, our calorie intake is higher, food is cheaper and there is a



decreasing proportion of the global population that is starving. Although there are hundreds of millions starving, the long term statistical trends show that there are very heartening signs.

The analyses of prosperity show that education, leisure time, safety and security are all far better than in former times. There is more money, there is less poverty and we live in a time of unprecedented human prosperity. The data shows that mineral, energy, forest and water resources are not as the scaremongers would have us believe. The area of forests is increasing, the history of

energy use shows that we are not doomed and the use of mineral commodities shows that we do not need to stockpile commodities. Analysis of historical records and modern scientific data shows that air and water pollution levels are far lower than in former times and that we are not running out of space for waste.

A large part of the book is devoted to the chemical fears and, by risk analysis, Lomberg argues that lifetime risks from pesticides and synthetic oestrogens are far smaller than risks which we accept in every day life. He challenges the popular views of the modern rate of species extinction and biodiversity and argues that claims about modern extinctions are a serious overstatement. This chapter could have been strengthened by looking at the palaeontological data. Notwithstanding, the statistical evaluation of modern data shows that claims about the rate of extinction have nothing to do with the existing body of data.

### Global warming

In a chapter devoted to global warming, Lomberg accepts the data touted and then analyses this data. Some of us challenge the data used to argue for a catastrophic greenhouse scenario and this chapter could have done with some geological and climatological input to even further strengthen what are

already powerful arguments. Lomberg evaluates all the global warming scenarios and analyses the effects on agriculture, sea level rise, human health and extreme weather. He concludes that there are scares and there is sound policy and that if we learn to distinguish between them, not only can the environment be improved but the economy can be strengthened at the same time.

The concluding chapter shows that although we have the data to show that the real state of the world is improving, we worry more. We are trapped in the 'litany' that holds that we humans, especially in the West,

are dramatically contributing to our ever deteriorating environment. This view of the environment is shaped by the images and messages that confront us each day on television, in the newspapers, in political statements and in conversations at work and around the kitchen table. This is why *Time* magazine can lead an article with “everyone knows the planet is in bad shape.”

Lomberg is not anti- environment – far from it – by any objective test he would be regarded as a moderate leftist “greenie”, but many of the attacks on him have asserted that he neither a skeptic nor an environmentalist. No one is ever quite so vilified as the apostate. Reading the book shows that he clearly **is** concerned about the environment; he argues that there are real environmental problems and the diversion of scarce resources as a result of unprincipled scaremongering comes at a great cost, because other real issues are deprived of attention. His skepticism is well demonstrated by his exposure of the misuse, by self-interested bodies, of statistics (his own field) in supporting scaremongering and other irrational claims.

Australians might care to contemplate the costs of ratifying the Kyoto Protocol. The choice is simple – either no road transport and electricity for three days a week, every week, or no agriculture whatsoever. A further point he made that has attracted some media attention is that, for the cost of implementing the Kyoto Protocol for one year, everyone on Earth could be provided with clean, safe drinking water. Ultimately, what Lomberg is about is priorities, and he suggests that the world, through bad policies motivated by scare campaigns rather than good science, is focusing on the wrong ones.

*As a footnote to this review, on February 22 Reuters reported that the Danish Government had appointed Bjørn Lomberg as Director of their Institute for the Environment. This news does not appear to have been reported elsewhere in the Australian media.*



# Mysteries investigated

***The Seventy Great Mysteries Of The Ancient World Unlocking The Secrets Of Past Civilisations, Brian M Fagan (ed.), Thames & Hudson, 2001 (pp 302 \$A88)***

This book has been edited by a leading figure in American anthropology/archaeology and includes accounts of 70 of the greatest mysteries of the ancient world by Fagan himself and 27 other authorities (including the well-known skeptical archaeologist Ken Feder).

Naturally, some mysteries are omitted, and others are treated rather briskly or as parts of more general sections; but the book is nevertheless an excellent source for the current mainstream scholarly views on a wide range of topics, including Noah's Flood, the Pyramids and the Sphinx, King Arthur, the Mayan calendar, Easter Island, Gimbutas and the Mother Goddess, Stonehenge and other such monuments, the Nazca Lines, Kennewick Man, Afrocentrism, Atlantis, catastrophism more generally, etc, etc. It is particularly strong in my own field, with sections on the origin of human language and on various mysterious ancient scripts. And although it is not an Australian book there are several sections about or involving Aboriginal Australia. The contributors all provide lists for further reading.

There is a tendency to focus on the less extreme manifestations of fringe thought, with the result that the wilder non-standard ideas are less well covered (eg, Fagan on 'The First Americans' does not refer specifically to Goodman's claims about the

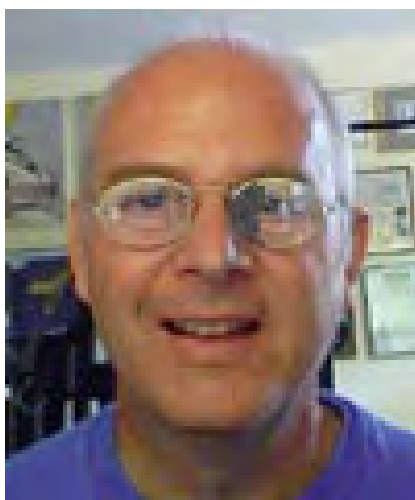
'Calico Site'). But the book can nevertheless be cited against many fringe theories, especially when one is dealing with non-specialists who have been exposed mainly to fringe positions and simply need to know what the genuine experts believe. The discussion regularly draws attention to controversy within the mainstream where this exists. For instance, Charles Stanish openly acknowledges (p 204) the conflicting evidence of archaeology and linguistics in respect of the builders of Tiwanaku (Tiahuanaco). And where innovative thinkers have made out a good case, this is freely admitted. Fagan presents the views of Baillie and Keys on catastrophes arising from comet strikes or huge volcanic eruptions as very much 'in the frame' (pp 289-292).

J.P. Mallory writes very authoritatively and clearly on Indo-European; but the main contributor on the linguistic front is Andrew Robinson. He is very largely accurate, though there are a few cases where a statement is too forthright: for instance, he ignores the substantial opposition to Chomsky's ideas (p 89), and he talks as if all scholars now agree that Pictish was Celtic (p 265). His discussion of the early development of writing on pp 241-244 omits two very major points (the language-specific nature of true scripts, and the key role of syllabaries). But if the rate of error and omission is as low as this throughout the book, it can be regarded as very reliable. For anyone with an interest in this area, it is a sound investment.

Mark Newbrook

# A Curious Friendship

Book catalogues the strange friendship and eventual falling-out of two of history's better known figures.



Rob Hardy is a retired US Air Force psychiatrist. While once based at Wright Paterson AFB, he never saw any alien bodies there. He is a regular reviewer for the Skeptic.

***Final Séance: The Strange Friendship between Houdini and Conan Doyle*, Massimo Polidoro: Prometheus Books**

Two of the most famous personalities of early in the last century shared a strong interest in spiritualism, the belief that souls live on after death and can be contacted by the living. Sir Arthur Conan Doyle, creator of the immortal Sherlock Holmes, was unassailably convinced that spiritualism not only worked, but that it was the religion that all of us soon would practice, once its truth were known. Harry Houdini, the brilliant showman and escapologist, was convinced of no such thing, but he was convinced that he never found a conductor of séances who used supernatural rather than fraudulent or erroneous means of getting results.

These two domineering personalities became unlikely friends, for a five year period, sharing correspondence, dinners, and holidays. It isn't hard to believe that the friendship foundered over their differences on the keen shared interest, but it is surprising that the friendship ever existed.

*Final Séance* is a good supplement to the current crop of biographies of both men. It gives capsule biographies of both, with an extensive and annotated account of the years when

they were an item together, and thus provides an excellent picture of spiritualism, rationality, and the will to believe.

In many of these pages, Doyle emerges as the more interesting figure because he was obviously a thoughtful and sometimes brilliant man, and it is a puzzle that he kept the belief in spirituality, despite what seems to be overwhelming evidence (some presented by Houdini himself). He had abandoned Catholicism and then Christianity itself, becoming a materialist and agnostic.

In this period, he declared, "Never will I accept anything which cannot be proved to me. The evils of religion have all come from accepting things which cannot be proved." What softened this stern skeptical stance was the carnage of World War I; he lost his beloved son in the war, and along with many others got comfort in the idea that departed loved ones could be contacted by special means and could provide a reassuring presence.

He changed entirely from skepticism: "The objective side of it ceased to interest, for having made up one's mind that it was true there was an end of the matter. The religious side of it was clearly of infinitely greater importance." Not only did he abandon objectivity, he seems to have adopted the opinion that if

## A Curious Friendship

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he himself saw the phenomenon, then it was a real manifestation, and could not be caused by the techniques familiar to magicians. He found it difficult to believe that mediums could be fraudulent, and was able to accept only that they sometimes might use trickery if their powers unaccountably lapsed.

Houdini had, by the time of his first contact with Doyle, proved an adept at stage magic, but his career had really taken off when he started well-publicised escapes from handcuffs, local jails, and containers full of water. He was a compulsive collector of memorabilia about magic (most of which is now in the Library of Congress), and also about spiritualism. Escaping from handcuffs and ropes had much to do with spiritualism, because often the mediums were confined some way to “prove” to those sitting in séance that they were not physically causing the effects, so Houdini’s change from stage performer to investigator was a natural one.

### Social climber

Houdini was quite a social climber, eager to be seen with important people in order to be seen as important, too. Doyle was a famous author and lecturer, and it is probable that Houdini initiated their acquaintance in around 1920 by sending Doyle *The Unmasking of Robert-Houdin*, in which Houdini referred to the Davenport brothers, mediums who were securely tied up but who could command the spirits to ring a bell or rap on the table and so on.

Doyle responded in a way that was a sort of prediction of how their friendship would go throughout. He was convinced that the Davenports were genuine and never exposed, and it did not matter that Houdini interviewed one of the then-elderly brothers who had admitted the secret methods by which they had done their tricks. Doyle insisted that they had never been exposed while performing, that they were mere youths at the time and could not have practised an elaborate trick, and that “confessions” by reformed spiritual-

ists were “an old trick of the opposition.” Such a stance must have been exceedingly frustrating to Houdini.

In 1922, Doyle tested a husband and wife team, the Zancigs, who demonstrated telepathic transfer of thoughts between them. Houdini recognised that they were using a clever, silent signalling system, a good trick but a trick nonetheless. He even interviewed Professor Zancig who gave his personal word that it was stage magic, not telepathy, at work, but Doyle was undeterred: “The only thing I can’t understand is why Z should wish to hide it [his telepathic gift] from you, but I suppose people do try to cover the trail of how they do things, and give fake information rather than true.”

Doyle even believed that Houdini was performing his escape stunts by paranormal means despite Houdini’s assertions to the contrary. Sherlock Holmes would not have been fooled for a minute if Houdini could have provided him the repeated evidence that mediums were frauds, but his creator refused to back down. He was an intelligent man who trusted his senses, and he wanted to believe; the wanting to believe in his religious view of the afterlife struck down any evidence that might have called such beliefs into question.

### A personal interest

Houdini had a personal interest in the afterlife. Nothing would have pleased him more than to have contacted his departed mother, for whom he possessed an exaggerated love. However, he possessed the proper attitude of the skeptic: he would have been happy to believe in the phenomena if there were good evidence for them, but he never found any.

It was this lack of evidence at a personal level between Houdini and Doyle that was to sever their friendship. While the Houdinis and the Doyles were vacationing together, Lady Doyle offered to try to get a message from Houdini’s mother by a trance in which she did “automatic writing,” putting down on paper the words which the spirits that pos-

sessed her during a séance wanted the onlookers to see. She drew a cross at the top of the paper (Houdini’s mother was Jewish) and wrote such things as “Thank God, thank God, at last I’m through” and predicted that Houdini would get all the evidence he needed. Houdini thought both the Doyles were completely sincere, but he knew that his mother would not have written in English, a language she did not understand. This did not cause an immediate rift, but when Houdini wrote publicly later that he had never witnessed any sort of psychic phenomena, Doyle took this as a personal insult, and the friendship was over.

Houdini went on to organise against mediums, including lobbying for ill-judged laws to ban spiritualism. He also offered large amounts of money to anyone who could demonstrate “psychic” powers that he could not explain or duplicate. As Polidoro shows in an intelligent critique, this was a flawed argument; Houdini’s ability to duplicate an effect would not prove that the effect was not originally performed in a psychic way. However, the offer led the way for the more comprehensive one by James Randi, who currently offers a million dollars for a demonstration of psychic powers under controlled conditions (and Australian Skeptics which offers \$100,000). No prize awarded yet. Houdini died in 1926, and Doyle resumed a solicitous correspondence with the widow of the man who was “in some ways, the most remarkable man I have ever known.”

Doyle died four years later, believing still. Houdini did us all the service of a final test; he was, if it was at all possible, to return and give his wife a message agreed between them. Mediums did try to summon him, and if anyone could have escaped from the reaches of “the other world” to get her that message, the great escapologist would have managed it. It never happened. John Edward, and you other people who make money off other’s desire to believe, please take note.



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# Forum

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## Ecoterrorism or Egotourism

Any self-respecting Skeptic would be excused from walking away from an article containing two typos in the title. Who knows what slime might ooze out of the rest of the thing. However these are not typos but are intended as an alert to all sceptics of the latest flavour of charlatanism to poison our perspective. Greenwash.

Even if viewed through rose tinted spectacles, green tourism still paints a dark cloud on wilderness areas. Remove the glasses and allow the Skeptic to focus on the issue and the dark cloud precipitates into an icy chill.

Just the other day I saw a large truck with "Global Ethical Hunters Association" written on the side. Ethical hunting? Pfew (I don't know how to spell pfew, but I can make the sound pretty well) How do you kill a wild animal with a gun or arrow, chop it's head off and hang it on your wall in an ethical manner? So I discussed the issue with some of my more ethical friends and found all sorts of ethical activities dedicated to degrading the environment in an ethical sort of way. Then I went to my dictionary (pfew was not in it) to look up the word "ethical". Guess what it did not say? It did not say that ethical meant doing something dodgy in order to make money that can then be "used" (nudge-nudge-wink-wink) to "fix" the very thing you have just destroyed.

So what am I raving on about?

Eco-tourism, adventure tourism. All things tardy and meretricious that have been brightened up with a splash of green paint and are reminiscent of an elderly whore glaring cynically through her layer of makeup.

"Who is this weirdo to compare the very activities that are saving our planet with an elderly sex worker?" you may ask. Well the other day I happened to be pursuing a bit of adventure touring when I came across a bunny. So I sat down



*Rod Lichtman is a doctor working in the fields of critical care and anaesthesiology in Namibia. He has an interest in the conservation of natural environments and is an active outdoor adventurer.*

next to the bunny and asked it a question: "Do you like to be hugged?" The only response was a high-pitched squeak, a very short squirt of panic-stricken urination and it was gone. From this reaction I surmised that hugging was not on the agenda.

So if the bunnies don't want to be hugged and the trees probably do not care, then do the wild places want to be driven over, photographed, signposted and generally exploited in an ethical sort of way? Let me guess. No I believe that Nature actually wants to be left alone as far as possible so that it can get on with the task of creating and destroying in privacy.

But along come the latest smooth-tongued businessmen and find a huge niche not yet exploited by capitalism. There are greenbacks to be made. Just buy a hundred quad bikes, paint them green and start an adventure-eco-environmentally-friendly-dune-driving-seabird's-egg-crushing tour. For every customer you will donate one dollar towards the "Save the Dunes Foundation". Aah, is this not a better, more sensitive world?

While I was wiping up my tears I thought of another ethical way of improving things. Let's start an ethical paedophile society. For every child that gets abused we will donate a dollar to the local orphanage. In this way everyone wins.



# Reds Under the Bed After All

I guess I'm a slow skeptic. Skeptics examine the evidence. Trouble is, the evidence is sometimes misleading.

Nuclear energy is a case in point. It has both peaceful and military applications, with some degree of overlap if demanded. The overlap bedevils the issue and for that reason I have been somewhat slow to harden my stand against anti-nuclear propaganda and its purveyors.

At first, nuclear weapons were welcomed in this part of the world because they ended a horrible war with minimal loss of allied life, but the Cold War soon ended that euphoria. World-wide alarm at the escalation of nuclear bomb tests led to the 1963 Atmospheric Test-ban Treaty. The fact that early nuclear power stations, like Calder Hall in England, helped produce plutonium for bombs meant that sincere anti-bomb sentiments extended to nuclear electricity generation as well.

This created a problem for me because I was never happy about nuclear weapon proliferation but I could see a positive role for nuclear electricity in a world of expanding population and burgeoning energy demand. So what was there to be skeptical about?

In the late 60s and 70s there were two relevant developments. Although there was a declining proportion of nuclear power stations in the West involved in the military nuclear fuel cycle, opposition to nuclear electricity continued to increase. Also, I found myself involved in teaching nuclear and reactor physics at senior university level. This involvement made me highly skeptical of many of the claims being pushed by the anti-nuclear groups.

By 1978 this reached the point

where I felt obliged to go public. Triggered by a long anti-nuclear letter in the *Newcastle Morning Herald* from two members of the local Ecology Action Group of the Communist Party of Australia, I replied, challenging many of their spurious claims. As the exchanges continued I was perplexed by the hostility of the Communists toward nuclear power because I was well aware of the extensive nuclear power station construction program under way in the Soviet Union.

I also had arguments on the same subject with a colleague, a one-time member of the Communist Party. On the scientific side I was able to score well, but the claim that nuclear power was a social problem requiring great care by all involved was a standoff, until the Three Mile Island meltdown in 1979. Then there was much "I told you so" rhetoric.

Seven years later Chernobyl exploded. Score: one all, East vs. West. Except that Chernobyl was a vastly greater human disaster and exposed the hypocrisy of the anti-nuclear activists. On the plus side it helped bring about the collapse of the Soviet empire. However Chernobyl whipped the anti-nukes into an even greater frenzy, with outright lies and gross exaggerations flooding the media. There were so many organisations with anti-nuclear agendas that I almost forgot the Communist connection – until a remarkable book came into my possession.

Published as long ago as 1986 (shortly after Chernobyl), *The Truth Twisters*, by Richard Deacon, surveys the role of cleverly planted disinformation in shaping world views on a variety of subjects from UFOs and Star Wars to genetics and nuclear power.

Richard Deacon is a pseudonym adopted by Donald McCormick, an intelligence operative turned newspaper man and author. He has written half a dozen histories of the Soviet, Israeli, Chinese and other secret services and about ten other books on related themes.

In *The Truth Twisters*, much of the chapter "How Serious is Pollution" is devoted to exposing a Moscow-inspired campaign against nuclear power. The Soviets not only wanted to hamper American and British weapon production as far as possible, but also cripple Western nuclear electricity programs. To quote Deacon: Regarding the hazards created through the development of nuclear energy, there has been disinformation once again on both sides. If the Western world has played down the risks of nuclear waste dumping and accidents in nuclear plants, the Soviets have busily, brilliantly and cunningly infiltrated all manner of innocent environmental protection lobbies in the West and supplied them with false data."

During the late 60s and early 70s practically the entire spectrum of green groups was subverted. The American Sierra Club initially favoured nuclear electricity because of its relatively benign environmental impact, then changed direction on the issue. Greenpeace was founded in Vancouver in 1970 to protest French nuclear weapon tests in the Pacific and soon swung into a campaign against nuclear power stations. According to Deacon the Friends of the Earth drew support from known communist sources. And so the subversion continued, acknowledged by a figure no less than

Andrei Sakharov, who asserted that Russia played a key role in sabotaging nuclear development for industrial purposes in the West.

But the Red Orchestras and their fellow travellers howled down Sakharov's claim. The anti-nuclear chorus grew even more strident, climaxing with the Three Mile Island meltdown. The activist groups were jubilant. So was Moscow. Success was theirs. From that date to the present day no more nuclear power reactors were ordered in the United States.

Even prior to Three Mile Island anti-nuclear activism had succeeded in driving up the cost of nuclear power through countless court battles where they claimed that nuclear reactors were inherently unsafe. According to a respected physicist, Frederick Seitz, demands for extra, usually unnecessary, safety features made new reactors up to ten times more costly than they needed to be.

One of the TMI problems was the presence of too many safety devices and the confusion arising in interpreting their warnings. It is deeply ironic that seven years later the Chernobyl disaster demonstrated that the Soviets themselves should have practised what they preached. Now their substandard reactors are retrofitted with Western safety systems!

For three decades various green groups strenuously denied any influence or aid from Soviet sources. I was silly enough to believe their denials. But now I know that yes, there were reds under the bed after all.

**Colin Keay**



# Rules for Mysterions

I am a member of a discussion group and recently a thread emerged which ended up with me writing down a set of guidelines which I thought your readership might enjoy.

The honours graduate of the "Von Daniken School of Unclear Thinking and Deception" will master the following writing genre:

1. Rattle off real historical facts with real evidence for a while.
2. Intersperse it with faintest hints something big coming up and possibly actual conjecture about [*insert mystery of choice*].
3. Go into great depth on the author's experience and expertise, how much more sensible it is for me, the author, to know about these things and have the 'correct perspective'.
4. Put little pointers (a) to bibliographies (b) that make the target reader (c) think they are participating in a work of science with backup, that they know no-one but skeptics (d) will ever follow up but they don't care. Assume authority in passing reference to others who have been down the same trail of evidence and failed to see truth. It looks good if you allude to an obvious trail of evidence (e) that you didn't have time to follow up – this saves a lot of work. Let the reader follow up if interested via (f).
5. Photos. As many as possible. Hand drawn artwork versions of those key but elusive mysteries, the reader in all likelihood won't read the caption that says 'artwork'.
6. Diagrams. Do a few diagrams with symbols and high school maths that look plausible and mysterious and scientific.
7. Put a little more meat on the conjecture and then back off a bit, adding real events that appear to lend weight to the conjecture. It helps to put in little hints about being ignored in spite of obvious prowess and mastery of the subject... this gets the sympathy element of the hard-done by readership going along with you.
8. Links. It is very helpful to link your mystery to other mysteries. Many readers have been through the other mysteries and this will lend credence to your authority.
9. Intersperse this section with allusions to conspiracies and cover-ups that conveniently put key evidence just that little bit out of reach. Polish it with questions like "Did the [*mysterious thing*] do this/that or the other", "What if the [*mysterious thing*] did...".
10. WHAM. Hit 'em with a conjecture as a matter of fact. Isn't it obvious? Anyone can see it's true!
11. Postulate more future conjectures assuming the WHAMMY is real.
12. Post-Game mop up with philosophical sounding inspirations, rounding off a hard won fight with the forces of ignorance, welcoming you the tribe of true believers, leaving you feel like you've been sated, you were right all along. Not only that, if you don't believe you're in for trouble of some sort, but now that you're 'in the know', preparations can be done and you'll be OK.
13. Long list of bibliographies to nowhere along with an optional index in case you need to look up that key gem to quote at the book launch.

### Post Scripts

- It really helps as an author if you are as deluded as you want your readership to be. It sounds more convincing.
- Lies. Now this is a tricky one. Lies are really useful but have a much shorter shelf life. Only use this if your marketing plan has higher one-off sales, no reprints and precludes sequels. Make sure you use a *nom-de-plume* and publish in another country.
- If you want to do a PhD you can stay on at VDSUTD and do Cult Leadership. This is where you do all the above, but in person. Only the psychologically damaged need apply.
- Timing. Any allegations made about future events must occur within the lifetimes of the readership and suit the author's need for income.
- Sequels. Wherever possible leave enough gaping holes for a second or third follow-up novel.
- Be strong. Your book will, if it ever ends up in a library, be on the fiction shelves.
- Controversy. Ensure that your work or the subject matter ends up being scrutinised by skeptics associations. They are a good source of free promotional work as they have a lot of interface to the public at large and are very dedicated. An especially good site for publicity is [www.skeptdic.com](http://www.skeptdic.com). References in here will be found by search engines and are money in the bank.
- Web Site. Mandatory but make it all links and with automated email or you'll end up working for a living. Better to start of an automated discussion group and let the readership pump each other up. Put a personal/proxy appearance in from time to time to make them feel like they're part of something special.

Colin Hales

# Eureka Prizes Update

The Australian Museum has recently announced the late addition of 2 new prizes in the 2002 Eureka Prizes.

The previous line-up of 16 prizes was itself a new record. The addition of 2 more prizes sees a total of 18 prizes on offer in 2002, worth almost \$180,000!

The first new prize is a wonderful training ground for potential Skeptics converts – a \$10,000 prize in lateral thinking for secondary students. Sponsored by media personality Adam Spencer (himself no slouch in the lateral thinking department) and the University of Sydney through its School of Physics, the prize challenges young minds to think “outside the square” by answering a series of logic/problem solving questions. Entrants will also be asked to outline their imaginative solution to a social/economic problem facing Australia.

The second new prize, sponsored by the Australian Computer Society, is for innovation in the research, design, development or implementation of projects related to the information and communications technology industry.

### Adjustment to Skeptics Prize

While on the subject of the Eureka Prizes, we should report here a small but significant tweaking made recently to the criteria for the 2002 Skeptics Eureka Prize for Critical Thinking. In previous years the prize has been described as “designed to encourage and reward the rigorous investigation of ‘beliefs’ in the community that have no rational basis - in effect, skeptical analysis of pseudo-scientific claims”. There was a sense however that this description was rather too limiting – that it suggested Skeptics were only interested

in the paranormal and other un-worldly beliefs.

As Peter Bowditch explained clearly in our Guest Editorial in the last edition of *the Skeptic*, Skeptics are people who want to be confident that what they believe is the most likely thing that accords with reality – that our facts are correct. To make it clearer that our Eureka Prize is designed to encourage the testing of the full range of ideas and beliefs, we have amended to criteria to read ‘designed to encourage the rigorous and critical investigation of conventional wisdom, and beliefs that have no rational basis – in effect, skeptical analysis of pseudo-scientific claims – to promote rational thinking in the community’. A small but significant change, which we hope will encourage a range of even more interesting entries!

### Program.

The Eureka Prizes are an extraordinary cooperative partnership between the federal government, the NSW state government, educational institutions and a range of private sector organisations and companies. Individuals and organisations play a critical role in maintaining the vitality of the program by identifying suitable candidates for these prestigious awards.

Information on the full range of prizes on offer in 2002 and entry/nomination forms is available from the Australian Museum's web page <http://www.amonline.net.au/eureka>.

Entries in most prizes close on Friday 17 May 2002, with winners to be announced in August 2002 at a gala award ceremony during National Science Week.





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# Letters

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## On theology

Matthew Birmingham  
Nowra NSW

I would like to respond to some of Tony Kelly's theological remarks (*Letters*, 21:4). Firstly, in opposition to Kelly and many others who call themselves philosophers, I do not consider theology to be a branch of philosophy, any more than I consider astrology a branch of astronomy or "flood geology" to be one of the earth sciences.

Just as these subjects are pseudo-science, so theology is pseudo-philosophy, apparently operating under the assumption that, being largely untestable, any belief may be indulged in without the worry of science proving you wrong.

If theology is a valid branch of philosophy, surely equality demands the founding of other branches in which we can endlessly ponder the "nature and operation" of other mythical beings.

I propose "Serpentology" to deal with the Rainbow Serpent of Aboriginal mythology, and "Santaology" to deal with Father Christmas. I might even write a thesis on Santa's omnipresence and become a self-professed expert, some theologians having built careers on as much.

As for the necessity of a deity, and the statement "I think the case is a lot stronger now for a self-existent deity", this belief has been refuted by logic and science many times and appears sillier with each passing day. In typical creationist fashion, theologians basically ignore this evidence, unable to let go of cherished notions.

Science, of which logic and skepticism are integral components,

has revealed to us the development of the Universe from the formation of the first atoms to the emergence of complex minds, and all without the slightest need for a controlling deity. All that is required is a very simple "something" to start with. And where did that something come from? Theologians, ignoring the logic and consistency that poor encumbered philosophers and scientists must bear, seem to think they can explain this simple beginning by introducing a creator of supreme complexity. Just as the astrologer will invent mysterious forces to prop up his beliefs, so the theologian will invent his own breed of logic for the purpose; a logic in which some primeval energy or matter is in dire need of explanation, yet the complex mind of a deity is not.

The nonsensical thinking of this pseudo-philosophy is the result of a misguided endeavour with a long tradition; that of trying to make outmoded ideas fit with modern knowledge, rather than conceding that old ideas and beliefs might simply be wrong.

That is not philosophy. Philosophy is part of the serious search for knowledge and will make full use of science and logic in its methodology. Theology is selective in its use of logic and science and is a hindrance to intellectual progress.

Then there is Kelly's question "Why is there anything at all?" It might be that there is an assumption that influences the way the question is put and thus blinkers thinking on the matter. The assumption is that non-existence is a more 'natural' state than existence and would require no explanation, whereas existence is, in some sense, 'unnatural' and requires an ex-

planation – natural or supernatural – that derives it from a state of non-existence.

This thinking certainly fits well with our 'intuition', but I can think of no logical argument to support it, nor can I conceive of a way in which something could be derived from a state of complete non-existence. Speculation involving 'quantum foam', 'negative vacuum', etc may succeed in deriving our current Universe from a previous state, but not from a state of complete non-existence.

The point is that it appears that existence is simply the natural state of things, and is no more in need of a creator than a state of non-existence would be, if that were the natural state. Of course, this state of affairs offers nothing for those seeking the possibility of magic or an afterlife, and I suspect that is the main reason that these arguments have such little impact on pseudo-philosophers.

## Evolution of religion

Garry P Dalrymple  
Earlwood NSW

I think there is a rather simpler evolutionary explanation for the emergence of belief and religion, which I believe can also be connected with the equally universal (and irrational) urge to gamble and other sorts of potentially dangerous thrill seeking behaviour.

My dog, a not very well socialised Basenji, is naturally cautious and reticent in all new situations. She is very reluctant to chance a new situation

even when the opportunities for reward are clearly visible. In the wild, animals do not take chances, but I believe that pre-humans did, opening paths to new opportunities and new ways of life.

If you accept this, then any factor, such as a belief in good luck or malleable gods/spirits to watch over you may continue to embolden the individual, beyond their understanding of the risks of the situation. In most situations, the result of failure are far less than the worst imaginable consequences, ie the first person brave enough to eat an oyster probably had an advantage over their fellows.

It is commonly said that there are no atheists in fox holes. In any conflict between groups with and without 'belief', a clear rational assessment of the consequences may be a disadvantage at the time of conflict. Aggression with the comfort of 'heaven' in the event of failure may lead to pressing on to 'victory' for the population irrespective of the personal cost.

### On terror

James Gerrard  
Kew VIC

Peter Bowditch's guest editorial, "The Danger of Knowing for Sure", uses an error and an unwarranted assumption in presenting many current dangers. The error is in his statement that "Science ... is testable ...". Whilst much is so there is much that cannot be tested. The greatest example is the scientific theory of evolution by natural selection. The many thousands of years required for any testing precludes this approach. Its scientific truth is based on the many observations and relevant data, including the discovery of common DNA in all living entities, that is persuasive in its acceptance as the most reasonable explanation.

Peter's unwarranted assumption is that the suicide bombers of 11th September were "absolutely certain that they were right". They were certainly prepared to sacrifice their lives for their cause. But this is no more than is asked of members of any military

force, admittedly at the extreme end of their commitment. Many of the Arab world, noting the injustices meted out to the Palestinians and the Iraqi under the USA slogan "might is right", accept that their world is in an extreme situation.

### Or foreign policy

Bob Holderness-Roddam  
Austin's Ferry TAS

As a more or less regular reader of *the Skeptic*, courtesy of my local library, I am taking a skeptical view of your Summer 2001 piece about September 11, 'More Editorialising'.

Frankly, I object to being lumped in with Nostradamus followers and "people driven by a Christian fundamentalist dogma".

I consider that US foreign policy over the last 100 years or so has contributed to the mind-set that lead to September 11. I may be left-wing, but I certainly am not driven by an innate anti-Americanism! Indeed, I have visited the United States of America on several occasions and I have many good friends there. Interestingly, most of these also blame their country's foreign policy for September 11.

Now, before you consign this letter to the round filing cabinet, please consider the following. (You may even decide to publish the letter, though I'm sceptical.)

Here's a direct quote from a man who, at the time, was the most highly decorated soldier in US history:

*I spent 33 years in the Marines. Most of my time being a highclass muscle man for Big Business, for Wall Street and the bankers. In short, I was a racketeer for capitalism. I helped purify Nicaragua for the international banking house of Brown Brothers in 1909-1912. I helped make Mexico and especially Tampico safe for American oil interests in 1914. I brought light to the Dominican Republic for American sugar interests in 1916. I helped make Haiti and Cuba a decent place for the National City Bank boys to col-*

*lect revenue in. I helped in the rape of half a dozen Central American republics for the benefit of Wall Street."*

The speaker was Smedley D Butler, 1881-1940, Major General in the US Marines turned political activist. You can look Butler up in *Encyclopedia Americana* or *Who Was Who in America* vol. 1. There is also a web site which covers him at: <http://members.bellatlantic.net/~brimdaev/>

Since WWII, American foreign policy has been misused in order to ensure that US friendly leaders were installed in a number of countries, largely to further US commercial interests. Let's refresh out memories.

Remember the Shah of Iran? The CIA organised a coup to topple Mohammed Mosadegh, the legally constituted prime minister of Iran, at a meeting held on 22 June 1953. Those present included John Foster Dulles (US Secretary of State) and his brother, Allen Dulles (CIA director). The aim of the coup was to shore up the Shah's power and retain control of the oilfields.

Oh boy, didn't that little exercise come back to bite them on the bum during the Carter Presidency!

Following their success in Iran, the Dulles brothers orchestrated a coup in Guatemala in June 1954. The reason, because the democratically elected government was instituting land reforms which the US deemed to be unfriendly to United Fruit. Oh yes, the Dulles brothers just happened to have substantial financial interests in United Fruit.

Castro came to power in Cuba largely because the US Ambassador to Cuba, Earl T. Smith, refused to sign reports critical of the Batista dictatorship. Yes, United Fruit had interests there, too. Had the US Government withdrawn support for Batista, it's likely a more democratic government could have been established.

These last three items come courtesy of David Halberstam's excellent book, *The Fifties*. It includes an excellent list of further reading on these and other topics.

Then there were Vietnam, Nicaragua and the Gulf War.

Another aspect of US foreign policy

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is the push towards globalisation – on their terms, of course. To see how this would affect the rest of the world, just take a look at the North American Free Trade Agreement (NAFTA). Here are a couple of charming examples of how US companies use NAFTA to bully Canada and Mexico. I quote from *Green Left Weekly*, 5 December 2001, ‘Suing for fun and profit’ by Sean Healy:

1. *Metalclad vs Mexico.*

*The government of Mexico paid US waste company Metalclad US\$16.7 million in compensation for a decision which closed the company’s toxic waste disposal dump in the state of San Luis Potosi. The local authorities believed the dump was causing fatal contamination of the state’s water sources. (October 2001)*

2. *Ethyl vs Canada.*

*Canada was found to have infringed NAFTA stipulations when it banned the import and transport of the gasoline additive MMT, a known human neurotoxin. The panel ruled that the Canadian government had to pay US\$13 million to the US Ethyl Corporation in compensation and pro-claim MMT ‘safe’.*

It seems pretty obvious that the World Trade Centre was selected as a target because it symbolised American capitalist excesses, which are underpinned by the US military and foreign policy.

I suggest that genuine skeptics have a duty to do a little bit of basic research before condemning ideas which are clearly supported by evidence.

### The Editor responds

Nonplused (or even gobsmacked) would be the best way to describe my initial reaction to this letter, which sent me scurrying back to the preceding issue to re-read my ringing endorsement of US foreign policy, something I could not for the life of me remember giving. Much to my relief I discovered that I had made no such endorsement, rather I had suggested that anyone driven by an unquestion-

ing fidelity to *any* dogmatic worldview, be it religious, political or anything else, was sadly prone to knee-jerk pronouncements on issues to which they had not necessarily given the thoughtful consideration that complex issues demand.

I would agree with the correspondent that it is the duty of Skeptics to do research and look at evidence before coming to a conclusion, however, I would suggest to him that simply looking for evidence that confirms one’s own prejudices is hardly the proper way to research anything. He objects to being equated with Nostradamians and fundamentalists, yet he seems to see no irony in his apparent conviction that *Green Left Weekly* is likely to be a more objective chronicler of the affairs of the world than, say, *Creation Ex Nihilo*.

Of course, adherence to any dogma (ideology, holy writ, party line, call it what you will) can be a comfortable position and it certainly alleviates the pressure of having to think for one’s self. Dogma is useful for generating conspiracy theories or various other forms of bigotry, and anyone who thinks that “left” conspiracy theories are any less silly than those from the “right” (or *vice versa*) clearly hasn’t been exposed to enough of them. In our experience they are frequently indistinguishable from each other, differing only in certain key words and rhetorical flourishes.

The world is full of political issues, mostly complex, often seemingly intractable, to which there are any number of ‘easy solutions’ offered by those of a dogmatic persuasion. Like any easy solutions to complex problems, they rarely help and, in any case, *the Skeptic* is hardly the forum in which to canvass them. We have always eschewed the pleasure of throwing our pages open to purely political (or religious) debates, they generally being issues that generate far more heat than light and we see no reason to change this policy.

Ultimately, dogmatism of *any kind* is the antithesis of Skepticism, or, as Peter Bowditch so cogently put it in the Editorial, the greatest danger we

all face is from people who “know something for sure”.

### Medical fundamentalism

Peter Bevan  
Gatton QLD

As a long time Skeptic and humble country doctor allow me to write how much I enjoy your journal. As an example in the last issue, Warwick Finch’s letter on the anti-vaccination sect.

In the course of my work I have some contact with this group of ratbags. Like Warwick Finch, I find them, without exception, to be pathologically immune to facts and evidence and interested only in justifying what seems (at least superficially) to be a blind emotional reaction to the use of needles on children. However, their reaction (in my view) is just an extreme form of a common response to the scientific interference in human health that makes the actual application of Professor Del Mar’s nice ideas earlier in the journal so difficult to apply in practice.

Mathematics is hard science (1+1 always =2, right?). Physics and Chemistry are hard sciences (sort of, until you get to the subatomic level). The main problem with the clinical use of Evidence Based Medicine is that Medicine involves dealing with pesky irrational human beings. Outcomes can only be predicted in terms of statistical likelihoods, not cause and effect certainties. Worse still, such likelihoods can only be based on the most recent (best?) data and the conclusions drawn from that data. This information is also drawn from and interpreted by *Homo sapiens* and has a nasty habit of changing, sometimes in the complete opposite direction.

Sick patients and their families are apt to think irrationally at the best of times, and tend to be even more so if the result of their management falls outside the happy outcome predicted by two or three standard deviations. I wonder what my Medical Defence Organization would say if I failed to investigate a case of microscopic hae-

---

maturia that WAS associated with a urinary tract carcinoma or failed to treat a case of dogbite with antibiotics that DID result in fulminant septicæmia, however unlikely such events might be?

Doctors are forced to play the odds all the time, but being on a hiding to nothing with our legal friends also means we also have to lay off a lot of bets, even in the face of good evidence.

### The Public Lie

Jackie French  
Braidwood NSW

Given the deficiencies in the Trade Practices Act, Therapeutic Goods Administration Act *et al*, I'd like to propose they be bolstered by the prohibition of The Public Lie.

A Public Lie would be any statement made with intent to deceive the public. A politician who makes promises when they have good reason to believe they may not be able to keep them, would be guilty of a public lie. An alternative medical practitioner who claims to cure cancer, AIDS etc, but who has been shown evidence that these claims are ineffective, would be guilty of a public lie.

When I promise my husband that I have no intention of buying another rose bush, I'm just browsing through the catalogue to see what's available, however, that's a private lie – a public lie is an intent to deceive on a wide scale. Nor would the Archbishop be guilty of a public lie when he promises life after death, even if he can't prove it – as long as there is no evidence that he knows he's lying when he makes the promise.

There would be no need to prove that the perpetrator is conducting a business, as with the Trades Practices Act, or is involved in medical practice, as with the Therapeutic Goods Administration Act – just that they're lying to the public ... well, a girl can dream, can't she?

### Naming Names

Graeme McDowell  
Balmain NSW

I have an idea to up the ante of the \$100,000 Australian Skeptics Challenge. As I understand it, Dick Smith is the one who puts the proverbial money where Australian Skeptics Inc mouth is. That's one good-hearted man with a large amount of money but think what could be done by a large number of Skeptics with modest amounts of money. I suggest a system similar to the Lloyds of London system of "names". Any person who would like to participate formally promises to contribute an amount of money by signing up as a Skeptical Name. I'll start: I promise to contribute \$1,000 to the Australian Skeptics Challenge prize money should it be won. So in theory the prize now stands at \$101,000. Now all we need is another 899 skeptics to also promise \$1,000 and we will be sporting a million dollar prize.

No need to supply cash up front, just the promise. I don't have a thousand bucks stashed in my mattress but I could get my hands on it and would gladly give it up for the privilege of knowing I helped unearth a person of genuine paranormal ability and brought their benefit to society. I'd like to think that many skeptics feel similarly philanthropic.

Maybe it's a crazy idea but it may only take 90 names willing spot for \$10k each or perhaps the legalities are too cumbersome. Just thought I'd throw it out there. I don't know the legal ramifications so perhaps the lawyers amongst us could be persuaded to investigate. There'd be documentation necessary to give the system credence. I'm would be willing help where I could.

Keep up the good work. I look forward each quarter to a good dose of Skepticism.

### Reply

Thanks Graham. Just to clarify a point or two, our Patron, Dick Smith, is one of a number of Skeptics who

have guaranteed the money for the \$100,000 Challenge, and he and our other Patron, Phillip Adams, made the initial guarantees when the Challenge stood at \$20,000. Since then others have added their guarantees and the ante has been raised to \$100,000.

The method you suggest was how the James Randi Educational Foundation (JREF) (US)\$1 Million Challenge reached that sum, however it has since been formalised, as we understand it, by an endowment of \$1 Million to the JREF by a supporter. We'd be interested to hear what other subscribers think.

### A lot of bull

Graeme Marshall  
Marsfield NSW

It seems clear that the participants in the Water Divining test at Mitta Mitta, as described by Steve Roberts in "Dowsing for Dowsers" (*the Skeptic* 21:4) were just a bunch of unskilled amateurs. Even animals can do it, and bring great benefits to farmers struggling in apparently dry country. The following extract illustrates:

*In 1901, an unusual incident occurred. A Spring Ridge bull was fitted around the neck with a fork from a green sapling usually called a yoke. It acted as a deterrent from stock breaking into fenced paddocks. It was dry and the stock were mustered each day for watering purposes. The bull was found to be missing and was later found lying down. The fork yoke, being green, had acted as a divining rod and when the bull had walked over a spring of water the rod had been powerful enough to turn the animal's head to the ground and keep it there. A well was sunk on the exact spot and water was found at just four feet.*

Wallis, Roma (1997) *Pubs Past and Present* Sale: Peter L Wallis.

Unfortunately, the extract does not make clear how the bull actually communicated his discovery to his owner!

## Patent remedies

John Smyrk  
Dee Why NSW

I seem to recall that in an earlier edition of *the Skeptic* you asked readers about their recollections of patent remedies.

One that I remember was “Dr. Morse’s Indian Root Pills”. There used

to be a prominent ad for the product on the wall of a building we passed on our way to school when I was a child living in Waratah – a suburb of Newcastle.

This caused great ribald amusement as we tried to figure out what the product was used for. (In retrospect, the consensus view amongst us was that it was a precursor to Viagra!).

The true story – including a debunking of some myths surrounding the product, can be found in an excellent page on the Internet at: [glswrk-auction.com/073.htm](http://glswrk-auction.com/073.htm)

Interestingly, someone has recently decorated a barn near Morpeth (in the Hunter Valley) with a faithful reproduction of the ad we saw as kids. I’ve attached a photo that may of interest to readers.



## Skeptics Merchandise



**T shirts**      **\$15**  
**Polo shirts**   **\$20**



**Skeptics Lapel Badges**  
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# Great Skeptic CD

We talked about it for ages, we worked on it for over a year, and in the past three months we have sold over 400 copies of *The Great Skeptic CD*.

## A world first

No other Skeptics group in the world has ever presented such a comprehensive compilation of all their work.

## Contents

*The Great Skeptic CD* has over 4000 pages which can be read with equal facility on PC and Mac platforms. It contains the full text of *In The Beginning*, the book we produced several years ago as a compilation of all the original articles from *the Skeptic* from 1981-85, and a similar treatment of the issues from 1986-90, which we have made into a virtual book entitled *The Second Coming*.

From 1991 to 2000, the magazines are exactly as they appeared in their original format (with a few of the more egregious typos and other editorial cock-ups removed). Additionally, Richard has included some extra illustrations taken from various sources to brighten up the text and many of the photographs included in the magazines will be seen in glorious colour for the first time.

All the magazine covers have been reproduced, just as they were, and there is a facsimile of the historic First Issue from 1981.

Also included is the full text (slightly updated) of our book *Creationism: An Australian Perspective* (Eds Ken Smith and Martin Bridgstock) and the book, *Skeptical*, (Canberra Skeptics, Ed Don Laycock)

which were published in the mid-1980s.

## Searching

It has a powerful search function. Follow the instructions and you will be able to track down every item or issue that has come under our scrutiny over more than two decades. Each disc contains detailed instruc-

tions, so even those who are comprehensively computer illiterate (including the Editor of *the Skeptic*) can easily learn how to use it. If you can't, call us and we will help.

It will be an invaluable tool for any Skeptic involved in answering questions from the public and media, but more than that, it makes an ideal gift for anyone who is interested in any of the wide range of activities *the Skeptic* covers.

## Endorsement

Don't take our word for how good it is. Recently Richard received this letter from Cosmos Studios, producers of Carl Sagan's remarkable (and now available on DVD) *Cosmos* series. "Annie" refers to Sagan's widow, Anne Druyan.

*Today we just received your wonderful CD, The Great Skeptic CD, and I have been totally distracted from doing any real work ever since. First, I want to commend you for the wonderful layout of*

*this CD. It is absolutely user friendly, and for an essentially non-tech person like myself, I really appreciate it when product is created for ME. Secondly, I promise I will pass it on to my office mates here, and then we'll send it on to Annie in NY. I'm sure she will also enjoy it.*

*It's good to know about you, your work personally on this CD and the Skeptic magazine itself. Congratulations, and thank you very much for sending us this invaluable gift.*

*Very best regards,*

*Lesley Taplin*

*Cosmos Studios*



*RS presents the CD to ABC science journalist Dr Paul Willis, guest speaker at a recent NSW Skeptics Dinner Meeting.*

## The Great Skeptic CD

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(incl P&P and GST)

# The Fourth World Skeptics Conference

## June 20-23, 2002 Burbank, CA

The Fourth World Skeptics Conference, sponsored by the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP), is to be held at the Hilton, Burbank Airport and Convention Center, Burbank, California, June 20-23, 2002.

The first such conference was held in 1996 at the State University of New York at Buffalo; the second conference, sponsored by CSICOP and the German Society for the Scientific Investigation of Para-Science (GWUP), was held in 1998 at the University of Heidelberg, Germany; and the third, co-sponsored with Australian Skeptics, was held at Sydney University in Sydney, Australia, in 2000.

These conferences have proven to be very successful in bringing together the best known and most effective speakers in the promotion of science, critical thinking, and education. Our intent is to bring together the leading lights in the skeptical movement and we are eager to have you be part of this event.

### Theme

The overall theme is *Prospects for Skepticism: The Next Twenty-Five Years*. We not only want to examine issues that are important today, but also try and focus on topics that will influence science and skepticism in the future. Thus, we are planning sessions on alternative medicine, unsubstantiated psychotherapies, confidence and financial scams, intelligent design and attacks on evolution, education and young skeptics, urban legends, a meeting of local skeptical organizations, and other topics.

### Schedule of Events

#### Thursday, June 20

##### Registration 6:00-7:30 pm

Paul Kurtz, Chairman, CSICOP. Welcoming Remarks.

##### Don't Get Taken 7:30-10:00 pm

**Richard Lead**, treasurer, Australian Skeptics Inc.

**Richard Schroeder**, CFP, Executive Vice President, Schroeder, Braxton & Vogt, Inc., Amherst, NY.

**Robert Steiner**, speaker, expert, author in the fields of magic, confidence games, and psychic investigations.

#### Friday, June 21

##### Registration 7:30-9:00 am

##### Evolution and Intelligent Design 9:00 am-12:00 pm

**Massimo Pigliucci** (Moderator) Associate Professor of botany at the University of Tennessee, Knoxville.

**William Dembski**, Associate research professor in the conceptual foundations of science at Baylor University and a senior fellow with Discovery Institute's Center for the Renewal of Science and Culture.

**Wesley Elsberry**, Behavioral research programmer. Software and hardware design, implementation, and operation for audiometric, behavioral, and acoustic studies of cetaceans and pinnipeds, Science Applications International Corporation.

**Kenneth Miller**, Professor of biology at Brown University.

**Paul Nelson**, Editor of the journal *Origins & Design*.

#### Special Address 12:00-2:00 pm

**Harlan Ellison**, World-famous author of 75 books. He is waiting for the *Guinness Book of World Records* to confirm his title as the "Biggest Pain in the Ass in the Western Hemisphere."

#### Concurrent Session

##### Fringe Psychotherapies 2:00-5:00

**Scott Lilienfeld** (Moderator) Emory University, Dept of Psychology.

**Gina Green**, Director of Research, New England Center for Children.

**Steven Jay Lynn**, State University of New York, Binghamton, Psychology Dept.

**Jean Mercer**, PhD, Richard Stockton State College, Dept of Psychology.

**Carol Tavris**, social psychologist and writer.

#### Concurrent Session

##### Look to the Stars; 2:00-5:00 pm

**James McGaha** (Moderator) Major, USAF Ret'd, Director, Grasslands Observatory.

**Alan Harris**, Senior Research Scientist in the Earth and Space Sciences Division, JPL.

**Tod Lauer**, Kitt Peak National Observatory.

**David Morrison**, Senior Scientist at the NASA Astrobiology Institute.

#### Keynote Address 8:00-10:00 pm

**Marvin Minsky**, Toshiba Professor of Media Arts and Sciences, Professor of Electrical Engineering and Computer Science, at MIT.

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Saturday, June 22

**Registration 8:30-9:00 am**

**Urban Legends 9:00 am-12:00 pm**

**Benjamin Radford** (Moderator)  
*Skeptical Inquirer* magazine

**Jan Brunvand**, Professor Emeritus,  
Dept of English, University of  
Utah, author, *Encyclopedia of Urban  
Legends*, *The Vanishing Hitchhiker*,  
etc.

**David Mikkelson**, Creator, director  
snopes.com.

**Barbara Mikkelson**, Creator, direc-  
tor snopes.com.

**Timothy Tangherlini**, folklore in-  
structor at UCLA.

#### Concurrent Session

**Medical Claims 2:00-5:00 pm**

**Wallace Sampson** (Moderator) for-  
merly Associate Chief of Hematology  
and Medical Oncology at the Santa  
Clara Valley Medical Center, and a  
Clinical Professor of Medicine at  
Stanford University School of Medi-  
cine. Editor, *The Scientific Review of  
Alternative Medicine*.

**Stephen Barrett**, Retired psychia-  
trist, author, editor, and consumer ad-  
vocate. Board Chairman, *Quackwatch*.

**Willem Betz**, Professor in General  
Practice Medicine, Chair and Director  
and of the Academic Centre for Train-  
ing of GPs (University of Brussels,  
VUB).

**Steve Novella**, assistant professor of  
neurology at Yale University School  
of Medicine. Co-founder and president  
of the New England Skeptical Society  
(NESS). Editor, *New England Journal  
of Skepticism*.

**Marcia Angell**, Senior Lecturer, Dept  
of Social Medicine, Harvard Medical

School; former Editor-in Chief, *New  
England Journal of Medicine*.

#### Concurrent Session

**The Investigators 2:00-5:00 pm**

**Joe Nickell** (Moderator) Senior Re-  
search Fellow, CSICOP

**Jan Willem Nienhuys**, Dept of Math-  
ematics and Computing Science,  
Eindhoven University of Technology  
(The Netherlands)

**Massimo Polidoro**, Co-founder and  
Executive Director of the Italian Com-  
mittee for the Investigation of Claims  
of the Paranormal.

**Richard Wiseman**, Director, Perrott  
Warrick Research Unit, University of  
Hertfordshire, England

Pre-Banquet social hour; 6:00-7:00  
pm

**Awards Banquet 7:00-10:00 pm**

**Paul Kurtz** (Host) CSICOP Chair-  
man.

**Gabe Kaplan**, Comedian, TV person-  
ality.

**Jim Underdown**, Executive Director,  
CFI West.

Sunday, June 23

#### Concurrent Session

**Educating our Future 9:00 am-  
12:00 pm**

**Amanda Chesworth** (Moderator)  
program director of the Young Skep-  
tics, specializing in educational mate-  
rials and activities for children.

**Don Hockenbury**, Assistant Profes-  
sor of psychology, Tulsa Community  
College.

**Sandra Hockenbury**, science writer  
who specializes in psychology.

**Diane Swanson**, award-winning au-  
thor of over forty books, specializing  
in natural history and science, includ-  
ing *Nibbling on Einstein's Brain*.

**Charles Wynn**, Professor of chemis-  
try, Eastern Connecticut State  
University

#### Concurrent Session

**Paranormal Around the World  
9:00-12:00 pm**

**Shen Zhenyu**, Research Fellow at the  
China Institute for Popularization of  
Science and Technology (China)

**Lin Zixin**, Former Editor, *Science and  
Technology Daily*, (China)

**Sanal Edamaruku**, Chairman of the  
Indian Rationalists Association (India)

**Manuel Abraham Paz y Miquo**, Edi-  
tor, *Neo-Skepsis* (Peru)

**Alejandro J. Borgo**, Founding Mem-  
ber of CAIRP, Argentina Skeptics Or-  
ganization (Argentina)

**Sami Rozenbaum** (Venezuela)

**Mario Mendez-Acosta** (Mexico)

**Amardeo Sarma**, GWUP (Germany)

#### Conference Information

If you have any questions about the  
program or the arrangements call or  
write **Barry Karr** at CSICOP, PO Box  
703, Amherst, NY 14226; (716) 636-  
1425 ext. 2 17, or by e-mail at:  
skeptinq@aol.com.

Media Representatives should contact  
**Kevin Christopher** at CSICOP, PO  
Box 703, Amherst, NY 14226 (716)  
636-1425 ext. 224 or by e-mail at:  
press@csicop.org.

Hosted by: The Center for Inquiry  
West, 4773 Hollywood Blvd, Holly-  
wood, CA, 90027 (323) 666-9797.

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## NSW Dinner Meeting

Following the outstanding success of  
our February Dinner Meeting with  
Paul Willis, who spoke on dinosaurs,  
birds and the relationship between  
them (and who demolished a roast  
chicken in the interests of science),  
we are planning another gala (no,

Richard, not galah) function at the  
Chatswood Club for May 25. As yet  
we have not confirmed who our  
speaker will be, but we can promise  
another instructive and entertaining  
evening.

Subscribers living in the relevant  
areas will be advised of details, by mail  
or email, in plenty of time for the event  
Mark your diaries now and also look  
out for more about the July and Oc-  
tober dinners in our following issues.





# Hold onto your Hats (and Rabbits), The Magicians are Coming to Town.

The 28th Australian Convention of Magicians will be held in Sydney from June 7-10.

In association with the Convention, there will be three shows open to the public on the evenings of June 7, 8, 9.

For full details see <http://come.to/sydneymagic>

Sydney subscribers will also get the chance to see our own tame magicians at the October Dinner meeting at the Chatswood Club. Details in next two issues.

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## THE NAKED SKEPTIC

WHO IS  
THE NAKED  
SKEPTIC?



The Naked Skeptic is coming to *Australasian Science* magazine in 2002. *Australasian Science* is Australia's only monthly science magazine for the general public, featuring world-class science from our most inspiring minds.

*Australasian Science* covers a broad range of disciplines each month, while recent themed issues have examined artificial intelligence, nanotechnology, biotechnology, the brain – and skeptical thinking.

*Australasian Science* is available in newsagents, but remember to put your clothes on before browsing the newsstands. Or if you want to remain naked you can browse the web site at [www.control.com.au/~search](http://www.control.com.au/~search)

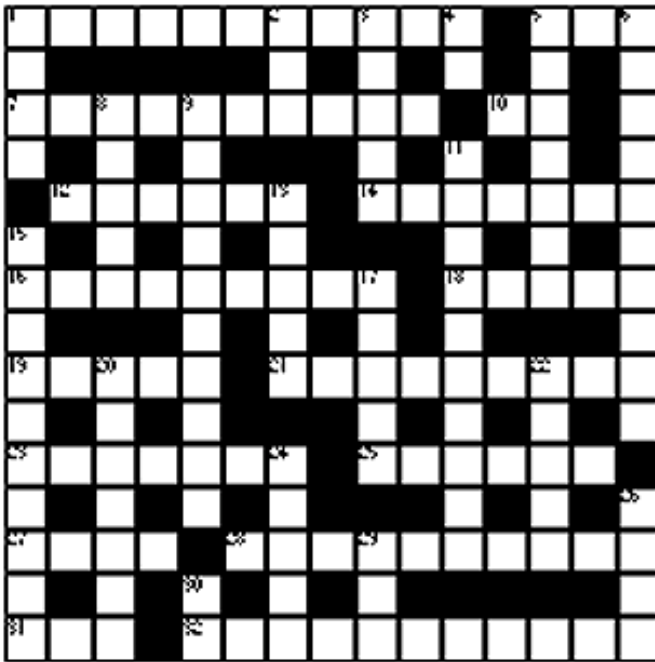
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## Competition

### Skeptic Crossword No 14

(Compiled by Tim Mendham)



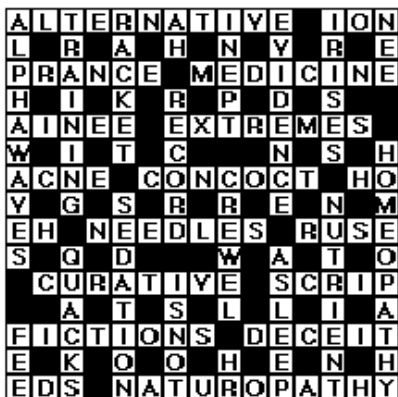
Return to Skeptic Xword  
PO Box 268, Roseville 2069

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Entries will not be opened until Feb 1. The first correct entry opened will receive a book by Richard Dawkins.

### Solution to Crossword No 13



The winner of Skeptic Crossword No 13, and a copy of Richard Dawkins' *Climbing Mount Improbable*, is Stefan Sojka of North Ryde, NSW. We have more than a suspicion that Stefan is the presenter who hosts the weekly Skeptic Tank segment on netFM, in which some of the Star Sydney Skeptics feature prominently. Well done Stefan.

### Across

1. The mythical saviour found with the king. (5,6)
5. Can a policeman take the blame? (3)
7. It's the Chinese lot to be the only racial stereotype. (4,6)
10. Cross dressing medium? (1-1)
12. Frankly my dear, you're dozy. (6)
14. Murky result of a clash between MIM and ASIC. (14)
- 16.& 18. Fantastic peer of Telstra? (4,2,3,5)
19. Beneath what is within fractions. (5)
21. Expedient vet is same but different. (5,4)
23. Hide when heard to trick a sea mammal. (7)
25. Slid around to become detached. (6)
27. Pequod skipper greeting to a crewman? (4)
28. Play acting like a cameo. (10)
31. English conservative has no right to be a plaything. (3)
32. Pop kid lit exhorts us to harass the ceramics manufacturer. (5,6)

### Down

1. Yearn to be his western extremity. (4)
2. Japanese play among the Dayton, Ohio population. (3)
3. Tale telling siblings tell of an edge in genetic modification. (5)
4. Patent protection for a crossword compiler. (1-1)
5. Hip, but childish, warning to the troglodyte. (7)
6. Regal ladies add sincere PSSs. (10)
8. Mixed up ruler will entice you. (5)
9. Alter abode to become embellished. (10)
11. In Syria forty people tell this spritely tale. (5,5)
13. Yes it isn't abominable snowmen. (5)
15. Nullarbor mantra a capella? (10)
17. Little people who could have been king with minor vowel surgery. (5)
20. Any fast arrangement will do for make believe. (7)
22. Simpleton subject of comical king. (5)
24. Solitary figure can't enrol. (5)
26. Remnant of a wound caused by smashing cars. (4)
29. Cheerful in Georgia, yes? (3)
30. Exclamation of a Borderless 27 Across. (2)

**Copy deadline for the next issue  
is May 6**