

the Skeptic

Volume 16, No 1

Autumn, 1996

a journal of fact and opinion



Thinking critically
Seeking the evidence
Challenging the claims

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Queensland Branch Reconstruction

Queensland is a hot-bed of fundamentalism, and its newspapers feature uncritical reporting on paranormal and pseudoscientific events. Where is the voice of reason? Where are the critical thinkers? Who is stemming the tide of irrationality? The answer is not that the thinkers and voices don't exist, they do, but they appear to lack the incentive and coordination to make themselves heard.

Queenslanders form the third highest number of subscribers to the Australian Skeptics' journal, *the Skeptic*, in fact, they constitute the greatest *per capita* subscribership of any state in Australia, yet, for the past few years, they have had no active committee to promote the Australian Skeptics' aims of investigating and reporting on paranormal and pseudoscientific claims and promoting critical thinking.

Fortunately, one Queenslander not only felt very strongly about the lethargic attitude of his fellows towards the promoters of magic, myth and misinformation, he was prepared to financially assist those who would take up the fight. We refer to the late Mr Stanley David Whalley of Nambour,

whose substantial fortune was left to the Australian Skeptics to further their aims.

The time has now come to honour Mr Whalley's wishes by making the Australian Skeptics' presence felt in his home state and to relieve Bob Bruce of the pressures of being the sole official Skeptical voice in the Sunshine State.

To this end, we would like to see the formation of an active committee of people prepared to devote some of their time to countering extraordinary claims, disseminating sceptical and scientific information, lecturing, and holding the occasional public meeting.

While academics, scientists, teachers, rational thinkers and magicians with their expertise would be welcome on any proposed committee, a lack of those qualifications and attributes need be no deterrent. A commonsense and cautious approach to extraordinary claims are the main prerequisites.

To this end, a meeting of all interested people has been called to reform an active Branch structure for Queensland. Details are as follows.

Date: March 12
Time: 7.30
Place: 5 Lamington Crescent
 Dutton Park
Contact: Bob Bruce
Tel: (07) 3844 3601

Editors: Barry Williams
 Harry Edwards

Subscription:
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NOTICE

Richard Dawkins for 1996 Convention

Roland Seidel

If you keep up with the evolution debate, Richard Dawkins will be an instantly recognisable name. Richard Dawkins is a Biologist who is the most articulate and energetic advocate of gradual Darwinism, a strident critic of fundamentalist thought, member of the Great Ape Project and all-round inspirational powerhouse.

He has just been made Professor of Public Understanding of Science at Oxford; an interesting thing in itself because the chair is funded by Charles Simonyi of Microsoft and Richard has such a long association with Apple that he will also be keynote speaker at an Apple conference in Brisbane after ours.

What's more, Richard's wife, Lalla Ward, is coming as well and Dr. Who fans will recognise her as Romana II from the Tom Baker incarnation. Paradox upon paradox.

His books include *River out of Eden* (Allen & Unwin), *God's Utility Function* (Collins), *The Selfish Gene* (Oxford), *The Extended Phenotype* (Oxford), *The Blind Watchmaker* (Penguin) and *Climbing Mt. Improbable* (Viking - Penguin) to be released in May.

Annie Warburton from ABC Tasmania who will speak on scepticism in journalism. Lesley Vick, president of the Rationalist Society of Australia, will look at lessening the public impact of misleading ideas. We have speakers on pharmaceuticals orthodox and 'alternative', cults, false memory, ecclesiastical opinions on evolution, econometrics or astrology? Pyramids and cricket ... can't mention any names yet because some of them might not come off.

When? Where? Sorry, I should have said sooner.

September 21,22 (the weekend before the grand final) at Monash University, Melbourne. We will probably use Monash's fabulous catering as well so that we can be

assured of dinner without disasters. No ticket information yet - watch this space.

Richard Dawkins will probably be doing a tour similar to Susan Blackmore's last year. It is very likely that he will have engagements in some of the other Australian capitals and New Zealand around the time of the convention. Again- watch this space.

Pre-convention Data Gathering

We're looking for a bit of audience involvement in the run up to the convention this year. In 1989 someone asserted that 'most Skeptics would be Geminis in particular and Earth signs in general' (Vol 9 No 4 p 29) so Ron Evans canvassed the membership to check this. There are a couple of other questions that have recently generated interest and we'd like to hear from you. Send your responses to any of these to:

**Skeptics Conference,
PO Box 1555P, Melbourne 3001.**

How did you become a Skeptic?

At the last conference our President, Kathy Butler, opened the conference with some of her reminiscences of the journey. My friend Leigh has always been sceptical. I remember a key moment in second grade during Religious Instruction, but I only really made up my mind after a couple of traumatic losses in my thirties. Martin Gardiner eventually reacted against his fundamentalist beginnings and retains a personal God.

How did you become a Skeptic? We think it would be interesting to hear some of your stories. If you feel so disposed please send us a short account, a paragraph or a page, of how you ended up joining the Skeptics - and has it been worthwhile? Now don't expect this to turn into some prize thing, we just intend presenting some sort of summary at the conference.

The Language of Skepticism

When you give a name to something you define it, it comes into existence and can be thought about. Epigrams and neologisms give form to ideas. Here are a couple of examples. Do you know any others?

Epigrams (they make good bumper stickers)

"New Age. New Wage?"

"Belief: it's what you do when you don't know."

Neologisms (new words or phrases)

The Gypsy Effect: a shift of responsibility. This is where you find meaning in vague narrative or an arbitrary selection of images, and someone else takes the credit. Like seeing pictures in clouds and paying someone for them. Why does divination seem to work? The Gypsy Effect. Why does Nostradamus sound convincing? The Gypsy Effect.

Sleight of Healing: another shift of responsibility. You're sick, you try lots of things, you get better, you associate getting better with the last thing you tried. Magicians are very good at suggesting false impressions by sleight of hand. There's not much you can say to someone who is firmly convinced that meditation, turnip juice, rose quartz or whatever it was, actually cured them other than to say it could be Sleight of Healing.

What's bad about it?

Astrology's just harmless fun, isn't it? Natural medicines can't hurt you, can they? Scientology doesn't sound so bad. You've got to have an open mind, don't you? Why do you Skeptics bother? I don't think there is much formal research on these sorts of questions, but I'm sure there is evidence that it is worth bothering being sceptical. Send in any examples you may find but be certain to provide references that can be checked; we don't want anecdotal evidence, do we?

News and Views

Readers of the *Sydney Morning Herald* on February 8 might have been startled to see a prominently displayed story on the dangers inherent in the currently fashionable practice of inserting various pieces of metal through protruding parts of the human anatomy.

Oddly, the story was not concerned that followers of this rather grotesque form of self mutilation were at risk from infection from unhygienic tools or of having open wounds in sensitive body parts. It was a cri de coeur from the practitioners of acupuncture that insertions be made in spots so as not to interfere with the assorted 'meridian points', thereby causing "permanent damage to their health". Anecdotal evidence was adduced to suggest that piercing the traditional 'eye point' (about where a normal pierced earring hole would go) "caused blurry vision in some people and improved eyesight in others".

Although I am not an expert in such matters, I could easily be convinced that having a needle thrust through a nipple or various prominent parts of the pudenda would be "a real eye waterer" (to quote Major Dennis Bloodnock), but I doubt if that is what the acupuncturist meant.

As is frequently the case for activities of this kind, proponents of both sides of the argument claimed antiquity as a major factor in support of their craft, although why a practice gains credibility simply from being old is something of a mystery. To be fair, I once had a pimple on that part of my ear that is shown to be connected with the uterus, and since then I have completely failed to become pregnant, so perhaps there is some truth in this ancient art after all (though I wouldn't wager the mortgage on it).

As Skeptics, the story put us in the same position we often experience when seeing religious fundamentalists and New Agers battling for the hearts and minds of the gullible. We would love to join in if only we could decide which side was less silly.

* * *

Readers may be familiar with a book, published in the USA, entitled *Mutant Message from Down Under*, in which the author, Marlo Morgan, purports to have visited Western Australia and to have met with an Aboriginal group. The book states that she met with the tribal elders who took her to a secret place where their cultural treasures are kept and to have invested her with the mysteries and wisdom of the people.

Originally self published as a true story, the book sold so well among New Age types that a mainstream publisher, Harper Collins, bought the rights and published a new edition, which they labelled as fiction. The Aboriginal myths and cultural practices portrayed in the book bear no resemblance to any real Aboriginal practices, and are very typical of the patronising attitudes taken by New Age believers to any indigenous culture that happens to take their fatuous fancies.

Not surprisingly, Aboriginal groups in WA are more than a little incensed by the blatant misrepresentations of their culture and have sent a group of elders to the USA to convince the media of that country that the book is bogus. A spokesman for the Dumbartung Aboriginal corporation, Mr Robert Eggington was reported in the *Sydney Morning Herald* (Jan 19) as saying, "It's just a fabricated fantasy of deceit. If stories like that written by Marlo Morgan are picked up around the world as factual, then it's going to be much harder for the next generation of aboriginal people to find their own cultural identity".

More recently, Marlo Morgan has apologised to Aborigines for her portrayal of their culture in a false light, however a film company that has rights to the story is said to be intending to go ahead, though the story is unlikely to be set in Australia. It would appear that the cultural gurus of Hollywood have determined that some sort of 'generic' indigenous 'wisdom' is contained in the story, which they think will sell well. Regrettably, we suspect they are right.

* * *

On a similar topic, we heard recently from the Italian Skeptics, who asked if we had any comment on the book, which has also been published in Italian. He also told us that a student at his university had told him "the Australian Aborigines regularly live to 120-130 because of the 'natural' medicines they use". With some shame, we had to inform him that that was very far from the truth and that Aboriginal Australians had a much lower life expectancy than other Australians, nor was it likely that any Australian had ever lived 120 years.

New Age gurus who use the cultural myths and practices of indigenous people, without even trying to understand them, are guilty of the grossest exploitation and are, in our view, to be deplored.

* * *

"Is there some mysterious force of coincidence operating whereby my new Postcode of 2324 is exactly the same number as the Australian Skeptics PO Box number?" asks subscriber Kevin McDonald of East Seaham 2324 NSW.

We put this question to our senior numerological consultant Madame Harry. Her response: "There is an underlying synchronicity which attunes with the deeply vibrational nature of our spiritual identity, which has a causal influence on the human condition, leading to deeply meaningful holistic coincidences such as this. This manifests in ..."

She is now under heavy sedation and is expected to recover completely in time.

Meanwhile, we urge Kevin to proselytise among the residents of East Seaham and if he succeeds in recruiting a mere 1% of π times the population of that locality, then we calculate that all crime will stop and Australia will be safe from nuclear attack. (We thank the Transcendental Meditation movement and the Natural Law Party for giving us this wonderful idea).

* * *

As could be expected, many of our ever alert readers discovered the typographical infelicitude in our subscription renewal form.

In the space where the heading "Qualifications" normally resides, we inadvertently inserted "Qualifictions". It may or may not be coincidence, but the first two responses we received pointing this out came from members of the legal fraternity.

Others took the trouble to point out that their qualifications were perfectly genuine and some even took us at our word and made claims that looked suspiciously fictitious to our Subscription Czar.

Though it may be possible that some of our most eminent scientists hold their positions solely on the strength of a Doctorate of Divinity, we doubt that it is all that widespread. And do we really have that many taxi drivers with higher degrees in science?

* * *

Who are the Skeptics? This question is often asked by journalists or those who are thinking of subscribing to our magazine. As most people who subscribe fill in the optional questions on our subscription form, this gives us an idea of the occupations and backgrounds of our readers and we discover that Skeptics cover a wide range of professions and interests.

In very broad terms, our numbers fall into the following occupations.

Education	20%
Retired	16%
Health	15%
Science	13%
Public Service	8%
Computers	7%
Engineering	7%
Business	7%
Arts & Media	6%
Trades	6%
Law	3%
Primary production	2%

The list totals more than 100% for the obvious reason that some people fall into more than one category. "Education", for instance, covers teachers, professors, lecturers, librarians, students, university administrators and many others. Many scientists may

also be included under education, health or public service and many engineers or computer people may also be included under education, public service or business.

Among those scientists who have nominated their specialities, physicists, geologists, chemists and biologists are in the greatest numbers, and in that order. "Health" includes psychologists, pharmacists, dentists and veterinary surgeons as well as the more obvious medical practitioners and nurses. The largest single occupational category listed by respondents is "Teacher" which gives us a great deal of satisfaction, while the second largest is "Medical Practitioner". This would indicate that we are having some sort of effect in the areas most likely to come into intimate contact with irrational practices.

Politically, we seem to be admirably non-partisan. Two Members of Parliament subscribe, one a Labor member of the South Australian Parliament and one a Liberal member of the NSW Parliament. Interestingly, both of these MPs are women.

It would seem that men outnumber women subscribers by about four to one, although we have no real way of telling, as lots of people nominate themselves by initials and without titles. We expect that many of our subscribers, of both sexes, share the magazine with their spouses (spice?) but we can't tell what the sex mix is. (We have considered conducting a survey entitled "The subscribers to *the Skeptic*, broken down by sex" but realising that the great temptation would be to answer, "Most of them", we refrained.)

The number of "Retired" people would indicate that our average age is on the high side and that would be borne out by our experience of the Skeptics we meet.

The range of interests is as broad as any among the community at large. As would be expected, science (especially astronomy) rates highly among the background interests of our readers, but music, history, religion and literature are also prominent. Lots of you seem to like bush walking and cricket seems to be the preferred sport of many (a sure sign of intellectual superiority, in the humble Editor's view).

There doesn't seem to be anything paranormal about it, but does anyone know why horticulturalists seem to have succumbed *en masse* to an almost hysterical desire to attach small oval plastic labels to the fruits of their labours? A straw poll reveals a universal distaste for this nefarious practice and it is difficult to imagine what commercial advantage this is perceived to confer on the producers and why it persists in the face of consumer opposition.

* * *

It was with a great deal of trepidation that your Editor-in-Chief accepted an invitation to address the 20th Australian Condensed Matter Physics Conference at Charles Sturt University, Wagga Wagga in late January.

In the event, it was a very pleasant experience, with the scientifically unqualified E-i-C confronted by 200+ physicists from all around Australia, telling them why the Skeptics was such a worthwhile group and many convivial ales were dispatched after the talk.

However, I am now undergoing an intensive course in elocution, as several of the colleagues I rang after the event to boast of my achievement wanted to know just exactly what is meant by "Condensed Metaphysics".

* * *

The NSW Branch had an enjoyable dinner meeting on Feb 16, with Chris Puplick, President of the NSW Anti-discrimination Board as guest speaker.

We were delighted to hear that our activities in encouraging people to be discriminating in selecting beliefs did not conflict with the law.

At the beginning of his talk, Chris canvassed the topic of a collective noun to describe Skeptics, suggesting an 'inquiry' of Skeptics.

This has encouraged subscriber Martin Hadley to give us his suggestions. Rejecting 'query', Martin considered a 'suspicion' (easily contracted to a 'suss', before plumping for a 'Scrutiny' of Skeptics).

We are open to further nominations from our creative readers. ■

Vic News

Kathy Butler

Well, the Vic Skeptics end-of-year trivia night was a smasher of a success! Hosted by Skeptical **Steve Roberts** (who has left Mensa three times because he thought they were a bunch of smartarses-true!), the winners walked away with a huge bundle of chockies, Skeptics' mags, and a rather nasty second-hand treatise on Velikovsky! The losers were also treated to various chockies and rather dubious loopy literature!

Recipients will be pleased to know that they are helping the Salvos, as the Vic Pres (your correspondent) purchased them at a fund-raising 2nd-hand book sale! If you would like a copy of the questions and answers, send a SASE to Skeptical Steve at the Vic branch PO Box.

* * *

The BIG news for 1996 is that **Richard Dawkins** will be guest speaker at the 1996 Australian Skeptics National Public Convention. He and his wife, actress **Lalla Ward**, will be in Melbourne for the convention on September 22 and 23. **So Should You!** Keep these dates free in your calendar.

* * *

Of course Vic subscribers already knew about the convention from reading their local newsletter. If you are not fortunate enough to live in Vic you can still read our newsletter-on the Web! Visit us at:

<http://www.skeptics.com.au>

and get all the gossip fit to print (or otherwise).

We've already had messages from around the world, including South Africa, New Zealand, Italy, and a great congratulatory message from **Jim Lippard** of the Arizona Skeptics.

If you'd like to send us a message after you've looked at the Web page,

email us at:

contact@skeptics.com.au.

The "contact" is in fact our Web master, **Greg Keogh**. Greg says we have had quite a few new subscribers join up after seeing the web-page. We had over 400 visitors to the page in one day!

* * *

Our local commercial talk-radio station recently had an interview with a Queensland naturopath (you banana-benders seem to have more than your fair share of them!). There is apparently an isolated Peruvian village which is suffering dreadfully from the most severe species of malaria.

VP, Dr **Steve Bassar**, tells me that *falciparum* malaria does indeed kill the most people and is very nasty. The Peruvian government, according to the naturopath, is too strapped for cash to help so he is going free-of-charge to ply the native people with homeopathic cures.

There are, as he says, no side-effects (indeed!) as compared with the pharmaceutical cures. He admitted that he himself would be ingesting no nasty antimalarials (such as chloroquine) and the chance of becoming infected was great. He does however have antimalarial drugs with him should the homeopathics fail.

Just for the record, many antimalarial drugs do have quite debilitating side-effects. Better, though, than dying of malaria, one might think. The naturopath claims he has hard evidence that his remedies cure malaria. I have no knowledge of any documented cure by homeopathic means and would be absolutely ecstatic to hear of any. Rather disturbingly, the naturopath advises that homeopathic remedies work best if your body is free of any man-made drugs.

The proper digestion of TV advertising requires a liberal dose of scepticism, as you would surely be aware. I was interested to see a new TV advertisement which is showing down here, for a well-known luxury car. Their boast is that the latest model has on board as much computing power as was used in the first moon launch. I am reliably informed by our committee computer-head (young **Vincent Butler**) that this is about as much computer as the old TRS-80 (remember them?) and considerably less than my cheap electronic diary! Scary!

.....

Net Notes

Skeptics who have the urge to sample the sceptical wares of other lands are advised of two monitored lists originating in the USA that are interesting and informative on matters sceptical.

The first at:

skeptic@listproc.hcf.jhu.edu

is run by Taner Edis, conforms fairly strictly to mainstream sceptical topics and has some quite serious discussions. On this list you will meet many names that may be familiar to readers of *the Skeptical Inquirer*, as well as other prominent US Skeptics.

The second list:

skeptics_talk@vmetze.mrl.uiuc.edu

belongs to Garrison Hilliard, who likes to cross-post contributions from other lists. Some of these are extraordinary, to say the least. This list is a bit more anarchic and can be lots of fun for those who like to hone their debating skills on the True Believers.

These matters should only be taken up by those with time to spare, as they can consume quite a bit of it. ■

Request for Help

We are happy to print this request for assistance from our 1995 Convention special guest, Dr Susan Blackmore.

As some readers of *the Skeptic* will know, earlier this year I was appointed Perrott-Warrick Researcher, and awarded a grant of £20,000 per year for three years (with a possible extension to five years). The grant is for research entitled "Reality and Imagination: Psi at the interface?" The research will begin with surveys of psi in borderline states of consciousness, including hypnagogia, sleep paralysis, lucid dreams and false awakenings. We are interested in the experiences of both adults and children. We will then go on to explore ways of inducing these states in the laboratory and at home, with the intention of conducting psi tests in both naturally occurring and induced altered states. Other experiments will induce confusion between reality and imagination by using a false memory paradigm.

The funds are being used to employ a part-time secretary and a research assistant. Trudi Osgood has been appointed secretary and Nick Rose research assistant. Both began work on October 1, 1995. Nick will also be working towards a PhD while employed on the project. Several volunteers around the country will be helping with collecting data and running training groups in their own areas.

Many sceptical explanations of paranormal experiences involve one or many of these states. However, there is little research being done to understand the nature and cause of such confusions between the real and imaginary. Thus many 'believers' feel that current scientific explanations for their experiences are simply prosaic, somehow dismissive of events in their lives that may have profound meaning for them. We hope this research will provide a better understanding of both the experiences and the way people interpret them.

Notices

We would welcome accounts of any experiences in which you may have felt that reality and imagination were confused. For example in many OBEs correct observations seem to be mixed with obviously imagined ones. Other examples are hypnagogic and hypnopompic imagery, sleep paralysis, alien abduction experiences, lucid dreams, false awakenings and near-death experiences. I am sure there are other states not included here, and experiences which there is no name for but which nevertheless involve a confusion of the real and the imagined. Please write to the address below. If your account is a long one we would welcome it on disk (please state which format you have used or convert to text only) or by e-mail to:

njrose@wpg.uwe.ac.uk

**Dr. Susan Blackmore
Department of Psychology
University of the West of England
St Matthias College
Bristol BS16 2JP United Kingdom**

Regional Groups

There are *Skeptic* subscribers located in all regions of Australia and we can only encourage those who wish to form a local or regional group to do so.

It is not essential to set up a formal branch structure in order to arrange Skeptics get-togethers in your region. If you are an active Skeptic and would like to arrange a meeting with like-minded people in your area, contact your state branch for assistance in getting things going.

A copy of the Aims of Australian Skeptics, which are subscribed to by all state branches, is printed at the end of this issue. ■

Gold Coast Branch Formed

We are delighted to report that a group of Skeptics residing in and around Queensland's Gold Coast has decided to form themselves into an Australian Skeptics Branch.

In a meeting held on Tuesday, February 20, a committee was elected and the Branch is now in the process of setting up certain structures to ensure that there is a co-ordinated voice of scepticism in this important region.

Office bearers for the Gold Coast Skeptics are:

**President: Graeme Laing
Secretary: John Stear
Treasurer: John Pieri**

The interim address of Gold Coast Skeptics is:

PO Box 819

**Burleigh Heads QLD
4220**

Phone: 0418 756 177

Fax: 07 5592 2261

The new branch will hold its first public meeting as follows:

**Venue: Bond University
Date: Tuesday, April 30**

At time of going to press, all further details have yet to be decided. Interested Skeptics who would like to attend should contact Graeme Laing at the above contact points.

Here at *the Skeptic*, we are delighted to extend our congratulations to the active Skeptics at the Gold Coast who have taken steps to formalise their activities and we offer them all the assistance we can render. And of course, we also request that they keep us informed of matters of interest that are going on in their neighbourhood. ■

NEWS

A Messiah in our Midst?

Barry Williams

An article in the *West Australian* of December 15 informed its breathless readers that an image of Jesus has shown up in a slab of granite found in Beverley, WA. A local businessman, Julian Webb, claimed that he had received messages from a voice he took to be God's, stating "Let I the Lord show you the way" and saw a "white light" before finding the slab on which the image "materialised".

We don't like to be overly sceptical (perish the thought) but we would always tend to be wary of messages from deities so lacking in grammatical acuity as to say "Let I show you the way" although we are prepared to make allowances for the fact that English is not God's native tongue.

This is, of course, only one of many recent sightings of images of Jesus' face (more usually in the USA) in such unlikely media as a barn door, the side of an oil tank and a plate of spaghetti, but we believe this to be an Australian first.

Originally, we had access only to a faxed copy of the *West Australian's* story, which was necessarily somewhat imprecise, but as best we could tell, the 'face' looked vaguely like a bearded individual. It seem to be drawing a long bow to claim it looked like Jesus.

In history, the numbers of bearded individuals are legion, and include *inter alia* Charles Darwin, Karl Marx, King Edward VII, Henry Parkes, Che Guevara, Gareth Evans, Phillip Adams, Abraham Lincoln and the editor-in-chief of this journal.

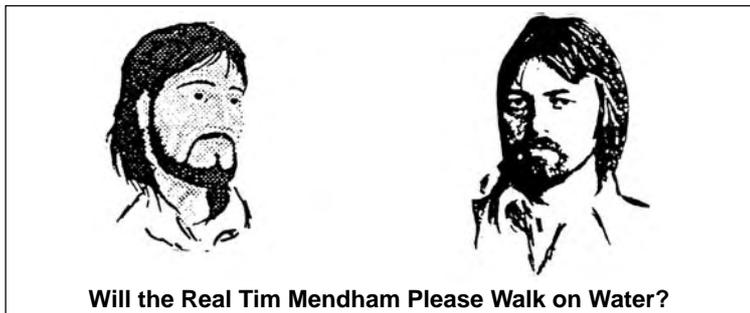
However, thanks to WA subscriber John Johansen, we have been kept current on the story as it unfolds. It seems the 'face on the rock' is remarkably similar to a generic Jesus' face found in a piece of clip art computer software from Corel Corp of Canada. When taxed with this amazing coincidence, the discoverer said that although he had had Corel software at some time, he had "dumped it". According to a subsequent *West Australian* story, he went on to claim, "To believers it proves that the image on the rock is an accurate depiction of Christ or that the guy who drew this [the clip art figure] was having some sort of religious experience when he drew it". Well that is alright then, though it suggests to us, and we would be supported by lots of evidence, that to a "true believer" anything at all can be taken as evidence for anything they believe.

Mr Webb also asked, quite disingenuously, "I don't know what printer we were supposed to put it through to

get the image off the computer on to the rock". Again, we rely on John Johansen to supply a plausible answer. "13 years ago I worked for a company called Rank Xerox and they had a colour copier that could print transfers for ironing onto T-shirts. The same transfer could be made in black and white and transferred onto a rock using a heat gun. The image is carbonated plastic and extremely durable, does not need varnish and would last for years if not in direct sunlight." Thus far, Mr Webb has resisted any offers by specialist chemists or geologists to test the rock for any traces of how the image appeared.

Our real concern, however, is how does anyone know what Jesus looked like (we accept for the sake of argument he was a real historical figure)? No contemporary portraits exist and the oldest pictorial representations still in existence date from several centuries after his death. Although many Byzantine and medieval European

depictions exist, they all differ in many respects and the similarities are better explained by convention, rather than knowledge. We are sure that readers will correct us if we err, but we are not aware of any Biblical descriptions of Jesus' appearance sufficiently detailed to allow us to even guess at



his appearance.

The story did say "From a distance and in shade, it looks like a face in the *most commonly accepted likeness* of Jesus" (our emphasis). Commonly accepted by whom is not stated. Hollywood, and the illustrators of many a glossy religious tract, show a Jesus with blonde hair and blue eyes, which, if accurate, would surely have attracted the serious attention of the Gospel writers, if only for the novelty of such an appearance in a citizen of Roman occupied Palestine.

We have now obtained an original of the Corel graphic and, to our astonishment, we find that the face bears an uncanny resemblance to a younger Tim Mendham and, while Tim is undoubtedly a sterling chap, he has never, to our knowledge, shown any Messianic qualities. Readers are invited to judge the similarities between the 'miraculous' face and that of Tim, taken when he was much younger and much more ethereal. In hindsight, we can only be grateful that a subscriber to *the Skeptic* didn't find the rock first or a Tim Mendham cult might, even now, be flourishing in rural Western Australia, a concept that doesn't bear thinking about. ■

REVIEW

Are Skeptics Really Impressed by Nostradamus?

Allan Lang

Can it be just a coincidence? Years go by without a TV program about Nostradamus, then two come along at the same time.

One was in the generally acceptable *Divine Magic* series (SBS), which at least presents its material as “This is what some people believe to be true”, rather than, “This is true because some people believe it”.

The other was *Mysteries of the Ancient World/Ancient Mysteries of the World* (the program titles and presenter Darren McGavin disagreed about what it was called). As this was on Channel 7, it was another load of drek from these folks who gave you *Ancient Secrets of the Bible* and *The Incredible Discovery of Noah’s Ark*. Their concession to fair debate is to have a sceptic make a one sentence statement “The only mystery about the pyramids is why people think there is any mystery”, and counter this with a slew of the credulous giving their speculations in amazing detail. Combined with the most unauthentic historical reconstructions since the Bately Townswomen’s Guild re-enacted the Battle of Pearl Harbour.

And of course, wild claims without the slightest evidence.

AMOTW: ‘Even the most stubborn of sceptics are impressed by Nostradamus’s ability to give personal names’. **[I am not!!]**

This was in reference to the assumption that when Nostradamus used the name Castel Franco, he was referring to the Spanish Civil War and “the Castilian, Franco”. If Nostradamus had ever written “*maison blanche*”, this logic would allow the interpreters to create, according to preference, a prediction about UK censorship advocate Mary Whitehouse, the US Presidency, or perhaps the movie Casablanca. In the case given, during the Middle Ages, it was the custom of the Normans and other French warriors with nothing better to do, to engage in campaigning in Italy. This resulted in many Italian locations becoming known as “the Castle of the Franks”, in Italian, CastelFranco.

Returning to the wonders of coincidence, both programs offered the same three incidents as their chief proof. In reverse historical order, they were:

1. The capture of Louis XVI in 1791.

What was expounded was that Nostradamus stated ‘the Monk-king would be captured when he made a detour through the forest of Reines’. The only problem is Nostradamus said nothing of the kind.

The following translation is that given in Roberts, which

owes rather a lot to the 1672 edition of Theophilus de Garencieres, which, although it is not particularly good, has the merit of being done before 1791, and thus has none of the later “modifications” to make it fit the Louis incident. (Roberts makes it fit the incident anyway, probably by sheer faith).

Quatrain 9:20

*By night shall come through the forest of Reines
Two parts Voltorte Herne, the white stone,
The black monk in grey within Varennes,
Elected captain, causes tempest fire, blood running.*

The only real connection this quatrain can have to Louis XVI is the mention of Varennes, a French town where, apart from the capture of Louis, nothing of historical importance happened. However the significance is somewhat diminished by the fact that there are twenty-five other Varennes, where nothing of historical importance has ever happened, and on the interpretation of M V Jones, this quatrain is about a Brittany Varennes.

It should also be noted that Nostradamus did not use the French word for “detour” - which is “detour” (détour if you want to be pedantic), but what was possibly his own creation, the word *Voltorte* (or *Vaultorte* - early editions of Nostradamus differ). This allows the various commentators to use Old French, Latin, or whatever language takes their fancy, to produce the translation “detour/roundabout route/wrong way”.

But what did Nostradamus really mean?

It is usually claimed that Nostradamus used cryptic allusions (some of his own creation) so that the meaning of the quatrains would only become apparent after the event. This explanation doesn’t seem applicable here, use of the common word “detour” seems unlikely to limit the applicability of the prophecy.

An often overlooked explanation for Nostradamus’s curious diction is that it was done to adjust each line to the ten syllable length required by the quatrain form. Again this is not applicable here, as both the original and assumed “translation” are of the same length.

So it may be that Jones is correct in assuming that Nostradamus wrote exactly what he meant, *Vaultorte* being a normal 16th Century spelling of the Brittany town Vautort.

Other modifications sometimes made to fit the quatrain to the incident are: *moine noir* becomes “monk king”, and to overcome the slight problem that there is no such place

as the Forest of Reines, this becomes “door of the Queen” to signify the party escaped through a secret door in the apartments of the Queen (actually they didn’t).

2. The death of Henri II in a tournament in 1589.

In this segment *AMOTW* was the most inaccurate, with not the slightest effort to get the re-enactment right.

Henri was portrayed as a sixtyish Kojak, who arrogantly rejected the warning of the suave young prophet. But, when they met, Henri had hair, was bearded, and in his late thirties. Nostradamus was some fifteen years older than Henri. [It may be ungentlemanly, but for completeness it should be noted that Catherine de Medici, portrayed as Henri’s beautiful younger wife, was the same age as him, and - as a contemporary put it - “was beautiful when veiled”.]

Century 1:35

*The young Lion shall overcome the old one
In martial field by a single duel.
In a golden cage he shall put out his eye.
Two wounds from one, then he shall die a cruel death.*

Amazing! Nostradamus predicted two contestants, each bearing a lion symbol, and that the old (Henri) would be wounded in two places when the lance penetrated the visor of his gold helmet. The Divine Magic version assured us: “Even sceptics find it difficult to attribute everything in this quatrain to coincidence”. However, as Buget pointed out more than a century ago, it’s not even coincidence.

What has happened is that the boosters of Nostradamus have simply changed the historical facts to fit them to the quatrain. Henri and his opponent were of similar age, neither used the lion as a symbol, Henri’s helmet was not made of gold (or even gilded), there was only one wound, and his eyes were not affected (in any case the original *deux classes* means two fleets/armies, not two wounds).

What this sceptic finds difficult in believing is the claim that, in 1557, Nostradamus was questioned by the King and Queen about this quatrain as predicting the death of the King. Like all the rest of his work, there seems nothing in this quatrain that would specify any particular incident before it actually happened.

3. Nostradamus picks a young monk, an ex-swineherd, as a future Pope (c.1538-44).

AMOTW declared, without the slightest historical evidence, that Nostradamus used to embarrass his family by making predictions in the street. The example shown was when he addressed a young monk, Felice Paretti as “Your Holiness”, to the great embarrassment of his son César, a gangling youth in his late teens.

The trouble with this depiction is that Nostradamus died when César was only eleven. Most accounts of this incident place it during Nostradamus’s Italian wanderings, some years before he married, and so unlikely to embarrass his (then hypothetical) family.

The portrayal in Divine Magic was more accurate in placing it in the correct period, but introduced its own inaccuracy by saying that Felice was elected as Pope Sixtus

V, nineteen years later. This would have been within Nostradamus’s lifetime, and have been convincing proof of Nostradamus’ prophetic ability.

However it was actually nineteen years after Nostradamus’s death, and when Nostradamus died Felice was still a relatively modest-ranking churchman. (He was born in 1521, became monk in 1533, and was ordained in 1547. He would not become a bishop until 1566, or a cardinal until 1570.) His main claim to fame during Nostradamus’ life was a stint as Inquisitor-General of Venice in the late 1550s. He was recalled from this post on the grounds of excessive zeal, which, in its own way, was something of a distinction for a 16th century Inquisitor.

The real problem is how the story is supposed to have been transmitted. Anecdotes are stories told about the famous, and when Nostradamus died he was more famous than Felice, so is unlikely to be telling anybody how he once predicted a still-insignificant Italian cleric would become Pope.

The only alternative we can imagine is Felice chatting to some other priests over the odd vino or three; “You know, when I was a young man, and had just joined the Church, I was walking with some other monks, when this wild-eyed chap in a four-cornered hat jumped out of the crowd, grovelled at my feet, and shouted ‘I must kneel before Your Holiness’. Well you can imagine what happened after that. All the other monks gave me a lot of chaff over the years. However, that lunatic is now known as the great Nostradamus. I don’t really expect I will become Pope, but it makes you think.”

Now, I suppose it could have happened that way, but it’s unlikely.

However, as all of the early commentaries on Nostradamus were highly critical of the “useless astrological predictions” (Fulke, 1560) of this “lunatic, brainless fool” (Videl, 1558), it is unlikely this anecdote existed in any form before 1590. As I see it, there are two possibilities.

One, the incident happened as related.

Two, it was fabricated by Chaviny (Nostradamus’ first hagiographer) in 1590, as a Nostradamus tale about the reigning Pope, and placed during the only time when a meeting between young principals would have been possible.

Which version I favour is left as an exercise for the reader.

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TECHNOLOGY

Dodgy Devices

Colin Keay

Everyone is done on a grander scale in the United States. Here in Oz I have yet to discover a gadget quite as fraudulent as one which has recently been exposed in the US. In these pages a couple of years ago we exposed a so-called electronic antenna, marketed by Sterling Mail Order of Sydney, which is neither electronic nor works any better than a plain length of wire a metre or so long. Since our exposé another of these modern marvels has been offered to the unsuspecting public by Magnamail Pty Ltd, also of Sydney. Their antenna has even fewer internal parts than the Sterling model, which allows them to sell it for less, but offers similar performance: in brief, that of about a metre length of wire.

As devices for parting the punters from twenty dollars or so, they pale into insignificance alongside a device marketed until recently by the Quadro Corporation in the US at \$955 (Aust. \$1290) a time. At least the local devices offer the equivalent performance of a short length of wire. The American devices offer nothing at all, except promises.

Those who have been following Internet messages from the American magician/sceptic James Randi will know all about this latest scam. On January 13, Randi revealed details of his investigations into the Quadro Tracker, a device claimed to locate guns, drugs, explosives, missing persons, treasure, stolen cars, US currency and golf balls, and do it from 2000 miles away.

At the same time Randi sent letters to nineteen endorsers of the device, ranging from school principals to police and customs officials, asking them to confirm their testimonials if they would. Randi informed them, they could win a prize of half a million dollars (offered by the 2000 Club) if they could support their endorsement and prove that the Tracker worked as claimed. Despite the lucrative offer, Randi was very soon deluged by responses denying previous endorsements.

It seems that the Quadro Tracker had quite a lengthy history. Four or five years ago Mr Wade Quattlebaum, inventor of the tracker, showed up at the prestigious Sandia Laboratories (a major US government contractor) to have it tested. They took it apart and found it was nothing but a chunk of black plastic with a telescoping radio antenna sticking out and would cost a couple of dollars to manufacture. For revealing the inside secrets of the Tracker, Quadro threatened Sandia with legal action. Sandia's lawyers went to water, blocking release of the official written report and gagging Sandia's scientists.

However the City of Albuquerque, who had intended spending \$200,000 on the Trackers, got wind of Sandia's findings before the shutters came down. They backed right off, no doubt sorely upsetting Mr Quattlebaum. However another reputable organisation, the Interquest Group of

Texas and California who train dogs for contraband detection, fell for the Quadro sales pitch and spent \$10,000 on the trackers. They became suspicious and had the devices tested by the Southwest Research Institute of San Antonio, Texas, who reported that the Tracker was a fake device with nothing inside it but "epoxied scrambled dead ants." Interquest remain ten thousand dollars out of pocket. Ironically, they were one of the original endorsers of the Tracker.

To cut a long story short, the FBI Economic Crimes Unit moved in on January 19. From the Quadro Corporation in Harleyville, South Carolina, they seized records and merchandise. They arrested the officers of the Corporation and charged them with fraud. The next day the FBI sent out a bulletin warning all of their branches to cease the use of the Quadro Tracker!

The next episode in the Quadro drama is so bizarre that I won't even attempt to relate it in my own words. Here is the most amazing revelation about the Quadro Tracker exactly as told by Randi himself:

"The FBI, during their raid on the Quadro Corporation headquarters in Harleyville, SC, entered the 'secret research facility', as Quadro president/founder Wade Quattlebaum called it. There they were shown how the 'signature cards' — which are said to be tuned to the 'molecular frequency' of the substance being sought — were prepared. I hope you're seated as I describe this.

"To prepare a 'carbocrystalized signature card' tuned to cocaine, the white-gloved Quattlebaum took a Polaroid photo of the substance. That photo was then taken to what appeared, to the uninitiated person, to be a Canon copier. In actuality, explained Quattlebaum, this was an 'electromagnetic frequency transfer unit'. Science marches on. An enlarged photocopy of the Polaroid photo was made, which 'extracted the molecular structure and its subsequent frequency emission from the photo'. That piece of paper was then cut into tiny squares, one of which was inserted into the plastic 'signature card' chip. *Et le voila!*

"But there's more! Aware that some competitor might cut open the plastic chip and discover this high-tech secret, and sure that foreign governments would want to steal this technological leap, Quattlebaum cunningly changed over to making the photocopies on black construction paper [!] so that the image could not be seen.

"To turn to a cheerier development in human progress, I [Randi] must tell you of an article in the November,

1993, issue of *Coonhound Bloodlines*, a journal with which not many of us will be familiar. Under the *Product Review* section, an author named Steve Fielder wrote a 5-page analysis of the Quadro QRS 550 DL Tracker, a variation on the regular model, designed by the geniuses at Harleyville to locate lost coon dogs. Mr. Fielder, after three months of trying to use the toy, did a most perceptive, penetrating and sensible investigation, and concluded, in part:

'It is my opinion that as long as the user knows where the [target] is, he will be totally convinced that the unit works. I believe that the user can unconsciously influence the movement of the antenna. The unit is intricately balanced and can be moved from right to left with the slightest tilt of the hand.'

"And there, from a non-scientist who has the good sense to examine the device carefully and without bias, is the 'secret' behind the success of the Quadro Corporation in selling their products.

"Mr. Fielder, my compliments. You have done what numerous highly-educated academics, chiefs of police, school principals and journalists have found to be beyond their abilities. It's called 'common sense', and it is not taught at schools."

As a wry comment within Randi's informative news bulletins, which I hereby acknowledge with much gratitude, he quotes a postscript from the last letter which Mr Quattlebaum wrote to him before his arrest. Quattlebaum informed Randi "We may be calling upon your magical powers to get us out of prison if the Tracker does not work as advertised."

Randi has advised that he is not presently available for that sort of work, but is sure, using the Tracker, Mr Quattlebaum and his friends will be able to find a way out all by themselves.

Now we ask, can the same sort of thing happen here? The answer is yes. I don't know of a rip-off quite as audacious as the Quadro Tracker, but there are very dubious devices on the market which are somewhat more sophisticated than the electronic antennas I mentioned earlier and cost more. But, excepting under cover of a thoroughly rainproof legal umbrella, I am not prepared to reveal all I know, except to observe that if the devices in question worked as advertised, the huge multinational players in the game would long ago have bought out, for a seven or eight figure sum, the rights to manufacture and market them. As a result, the current vendor would now be living in the lap of luxury.

The Australian devices, claimed to be marketed overseas as well, are certainly selling and will continue to do so until word gets around from disgruntled buyers reporting that they do not work. There is only a 30-day money-back guarantee (which is not advertised) so there are many Australians, like the Interquest people in the USA, who have lost their money. Until the name and nature of the Australian device can be revealed the message is simply "be very cautious about gadgets for which astonishing claims are made". ■

Eureka!

We are delighted to announce that the Australian Skeptics Science and Education Foundation, in keeping with its charter to support the use of critical thought and sceptical analysis in science and education, has agreed to sponsor an additional Eureka Prize.

Initiated by Radio National's Science Show supremo, Robyn Williams, the Eureka Prizes are administered by the Australian Museum and seek to reward outstanding endeavours by scientists and science communicators. Each Prize is sponsored by a different organisation.

At present there are five Eureka's covering:

Promotion of Science (won in 1995 by Prof Ian Plimer)

Environmental Research

Science Book Prize

Environmental Journalism

Prize for Industry.

As we go to press, the full details of the Australian Skeptics Eureka Prize are still being negotiated with the Museum management, but it will be a commitment for three years and will reflect our concerns with critical thinking.

In keeping with the other Eureka's, the Prize will be \$10,000 plus a trophy.

Further details will be included in the next issue. ■

A Grovelling Apology

We would like, and we mean this most sincerely, to apologise to those NSW and ACT subscribers who recently received a Dinner Meeting Notice on the back of which was a Renewal Reminder Notice. Although the Dinner notice did say that the form on the reverse was for those who had *not* renewed, several subscribers thought that we were dunning them and either paid again, or were forced to advise us that they were still current.

Our intention was to send the Dinner Notice to current subscribers, and to include both notices to presently unfinancial subscribers. However, in an attempt to save themselves some extra labour, two members of our overworked subscription staff (Messrs Barry Harrison and Harry Barrymore) made an egregious error of judgement and included both notices in every letter.

Some of our more generous readers might consider this to be an understandable mistake, however, we at Skeptics Central are uncompromising in the standards we expect of our minions. We are therefore pleased to report that the two offending members, having been appraised of their unforgivable misconduct, retired to the Library with a loaded revolver and took the only honourable course. ■

Confessions of an X-ophile

Mark Lawson

This is a self-serving and no-doubt gratuitously offensive article on why I am a member of both the X-Files Fan Club of Australia and the Australian Skeptics.

In my university days, when I told people I was a member of a science fiction fan club and even used to attend science fiction conventions, they would occasionally look at me strangely.

"I don't believe any of that stuff," they would say.

"What stuff?"

"You know, flying saucers and alien visits 'n' stuff."

If I could be bothered and there was time, I would then point out the vast gulf between enjoying science fiction as fiction and believing in alien encounters as fact. However, the would-be sceptics were far easier to deal with than the semi-serious believers in UFOs, who would also confuse the two areas and badger me with tales of lights in the sky that travel at incredible speeds, until they realised I was unsympathetic.

Now, although it has been several years since I went near a convention (and then only for one day) and I cannot claim to be an authority on science fiction fandom, even fans themselves will agree that their behaviour seems a little odd to outsiders. They might, say, wear costumes to conventions that can only be described as unfortunate - a skintight, leather space pirates costume, for example, on an outrageously fat fan. Younger fans have been known to wear cloaks and jump off couches in the foyer, while hotel staff are elsewhere (conventions are often in hotels), and crack *Star Trek* in-jokes only barely comprehensible to ardent Trekkies.

I recall a former colleague coming back from an appointment that had taken him through the Southern Cross in Melbourne, just when a major convention was in progress.

"Your people, Lawson," he said, as if I was responsible for all of SF fandom, "are making a spectacle of themselves in that hotel".

But despite the occasional eccentricity in behaviour, I don't recall any fans seriously claiming to be abductees or to have seen UFOs. As a group, fans are highly intelligent, well educated, or at least well read, and much more likely to be sceptics than new age believers. Come to think of it, fans are never really sceptics either, in that they rarely trouble to debunk outrageous claims. If they happen to meet someone claiming to be an abductee, say, their attitude is similar to that of a botanist encountering a new form of plant - a self-confessed abductee is a phenomenon to be studied and observed, rather than debunked. In any case, although I cannot claim to be an expert, I believe there is very little cross over between New Agers and SF fandom.

Despite all that, I still get the occasional strange look,

even from fans and ex-fans, when I admit to being both a member of the X-Files Fan Club of Australia, as well as the Australian Skeptics. In certain circles, being a member of both groups is thought to be going that touch too far. The general feeling is that perhaps I should seek professional help.

Well, I don't think so - but first some background.

The *X-Files* is a series about a two member FBI team that specialises in investigating incidents involving the paranormal or the merely very strange, including UFO abductions, poltergeist murders, strange cults whose members have the power to change gender, Bigfoot-like creatures in the forest, computers that kill because they are self-aware, satanic killings, vampires and almost any and everything else strange that you've ever heard of and some things you haven't.

However, unlike the real X-Files (FBI agents used to look at UFO sightings when the craze first hit, but the bureau eventually decided it was a waste of time), agents Fox Mulder and Dana Scully always seem to be investigating something more than the ravings of lunatics and poor, ill-educated fringe dwellers who contradict themselves and do not have any physical evidence to back up their stories.

Nor is it a matter of discovering the truth through careful interrogation - UFOs in the X-Files are very real, and frequently sighted. Scully and Mulder also often have physical evidence of alien contact and/or paranormal occurrences in their hands, but somehow the evidence always slips through their fingers.

X-Files plots can be difficult to follow but are well thought out and occasionally strike out into innovative SF themes. The episodes concerning the ship on which everyone aged quickly, the scientist whose shadow killed people after he was caught in one of his own experiments, and the episode concerning a squad of ex-soldiers who had been redesigned to kill, all point to a big budget for the scripts - as well as lots of money available for special effects and actors.

One special twist, and one that truly sets the series apart from the other attempts at television SF, is that the pair often unearth evidence that points to their own government. They find alien craft being test flown from a US Air Force base, a plague that seems to have been started among prisoners by someone deep within the US government, and Defence Department files stating that the government has been covering up its knowledge of UFO contact and its experiments with alien technology for decades.

There are other plot strands connecting episodes - Mulder's father was deeply involved in the early part of the conspiracy, and his sister was abducted by aliens

because of the father's involvement; an unidentified, chain-smoking man high up in the government repeatedly tries to stop their investigations; and highly placed deep throats keep throwing out enigmatic clues.

There is also a romantic sub-sub-plot with hints that Scully, the sceptic of the pair, is romantically interested in Mulder, but realises he is too bound up in his work, being driven by the disappearance of his sister, for anything much to happen. There is the occasional spark between the two to keep viewers wondering, but then they are kept wondering.

Will they eventually blow the lid off the government's cover up? Will Mulder find his sister? Will Scully (who can investigate me any time she likes) and Mulder eventually get together? All those ifs make the *X-Files* more than the sum of its many episodes.

Apart from its value as fiction, the series has a certain value to sceptics.

After all, the *X-Files* emphasises the often difficult issue of how to convincingly reconcile all the new-age and alien-presence theories that eventually find their way into the series plot line and has two long-standing mottos - 'Trust No One' and 'The Truth Is Out There' - which any sceptic can adopt without blushing.

Of course true sceptics might have a little trouble with the fact that Scully and Mulder are always turning up hard evidence about, and are occasionally seriously attacked by, aliens and paranormal phenomena.

This surprising ability of the paranormal to reach out and touch investigators extends even to concepts about which even Mulder (played by David Duchovny) is himself sceptical - notably satanic cults. In one episode, despite his well judged scepticism, they uncover a dangerous cult dominating a small town.

However, to belabour the obvious, the show is fiction and as fiction it works quite well. I don't really believe that the US government is really involved in a gigantic conspiracy involving alien contact, but it's fun to enter the *X-Files* universe for an hour a week, and in that universe any and every conspiracy theory is true.

Sometimes the show's writers (who include Duchovny) also have to tweak known facts a little (or a lot) to get to where they want to go. In the episode 'The Blessing Way', for example, Mulder is handed Defence Department computer files that prove the UFO cover-up, only to find that they are written in Navaho.

Now it's quite true, as the show asserts, that the Navaho language was used as a code during World War II, but it was mainly used as a convenient code below army command level. Navaho is a difficult language which is only known to a limited number of people outside the Indian nation and, at the time of World War II, none of those outsiders were German or Japanese. But the Navaho tribe was still sufficiently large to furnish enough radio operators for the army's needs.

The advantages of Navaho as a code are obviously lost for domestic files - but from the view of the series the use

of the language proved an almost plausible way to drag a few native Americans, and their wise sayings, into the plot.

As I'm sure all Skeptics will agree, however, a few tweaked facts are neither here nor there in a piece of fiction which is, of course, well known to be fiction. Contrast it also with the rubbish about UFOs, angels and the Turin Shroud peddled as fact on television specials.

So for the third series, and in the interests of enjoying fiction, as harmless, escapist fiction, I shall be watching for further "proof" of the

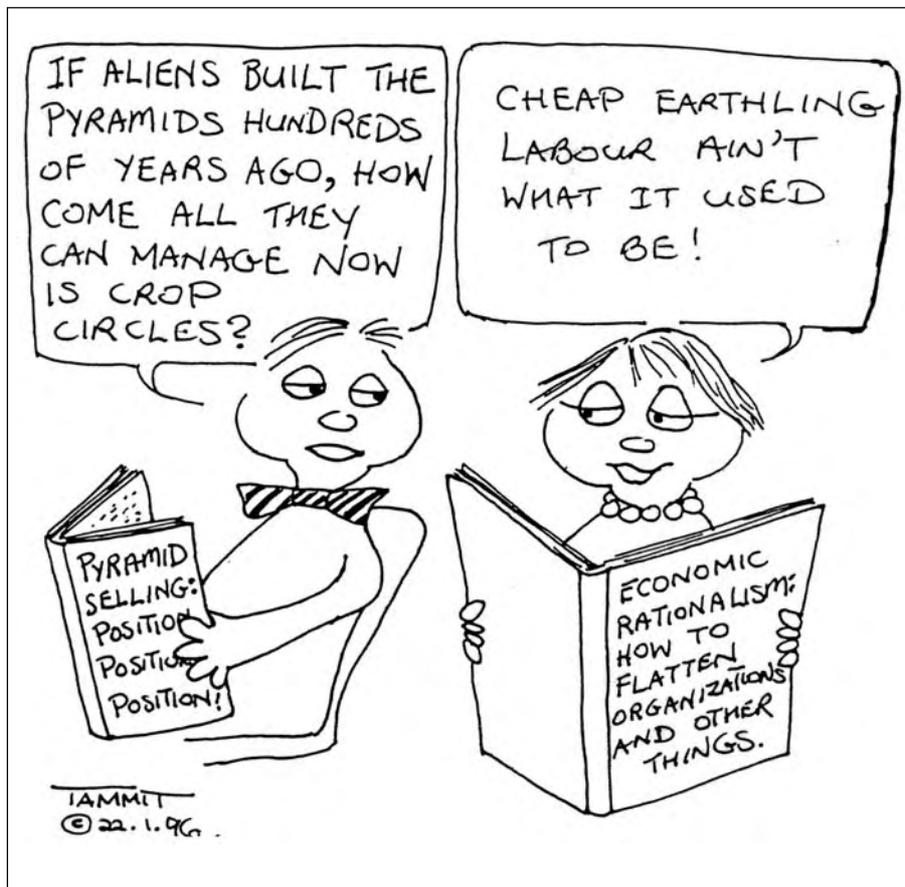
gigantic government conspiracy which Scully and Mulder are gradually unravelling. Where do the aliens come from? Do they control the US government? Does the US government control them? Will FBI assistant director Skinner, the immediate boss of our dynamic duo, meet with an unfortunate accident?

As an *X-Files* sceptic I will follow two rules.

*I will demand positive proof of new episodes - an episode does not exist until I have watched it.

*I will not believe in any strange explanation of phenomena encountered on any episode until Mulder states it and, crucially, Scully pours scorn on the idea.

Remember: Trust No-one. ■



FORUM

Religious Freedom

David Maddison

The freedom of the mind is the most important of all liberties. An essential element of that freedom is the freedom to practise or not practise religion and this is manifest in the doctrine of separation of religion and State. People who advocate freedom of religion are not necessarily atheists, humanists, anti-Christian, or anti-religionists as may be claimed but may also be religious and/or Libertarian. People in minority religions or who have unconventional views of any kind know that the principle of religious freedom is necessary for their survival since there are people in our society, including those who govern it, who would have no qualms about establishing an official religion if they were given a chance. Some may interpret this article to be an “attack” on Christianity, the dominant religion in Australia. This is not the intention. Rather, this article espouses the general principle of freedom of religion for all religions. This principle is also espoused in the Australian Constitution. The Australian Constitution specifically guarantees free exercise of religion and prohibits enforced religious observance. It says, in part, “The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion ...” (Section 116).

In the United States, issues of separation of religion and state are taken very seriously, but they rarely are in Australia even though Australia is, like the United States, a secular State. There are numerous instances in Australia of religious imposts of an “official” nature upon secular affairs: compulsory religious public holidays such as Christmas, Boxing Day, Good Friday, Easter Monday and Sundays (the US also has official holidays on some of these days); an unknown soldier who was presumed to be a Christian although he may have been of many possible faiths or none; Australia Post providing discounts for Christmas cards but not greeting cards of other faiths; Australia Post printing stamps celebrating Christmas; a head of state who is also “Defender of the Faith”; a frequent use of the term “Christian name” on government forms (although, fortunately, the option of “given name” is also usually given); local governments spending thousands of tax dollars on Christmas decorations and other religious icons on public property; the embracing of Aboriginal religious beliefs in the Hindmarsh Island affair without evidence that the alleged beliefs were genuine and there are many other examples.

Skeptics should be concerned that undesired observance of a particular religion is unavoidable under these circumstances and that religious practice does not remain the private activity it should. It is also discriminatory against those who are not of the religion being promoted, or who have no religion.

Of course, no one has any problem if religious expression is within private organisations - but governments should be completely neutral and non-participatory with regard to all aspects of religion (except ensuring its freedom) since, unlike private organisations or individuals, they are meant to represent all people.

There are other examples of enforced religious observance at a Government level. Of concern to some are examples of religious activity within the work place. Should Government organisations be permitted to allow the placement of religious decorations or other representations in public areas of the work place, to send official Christmas cards on behalf of a government organisation or to hold Christmas parties when public servants are official representatives of the secular State? Private organisations are not so problematic because they only need represent their own interests, not those of the secular State and freedom of association and thought is their right. (Although, obviously, if they want the best people to work for them, they should try and accommodate all religious and non-religious viewpoints.)

Regarding the topic of Christmas parties which are of recent relevance, in order to reflect the diversity of beliefs in Australia, work place Christmas parties might be more appropriately named “End-of-Year” parties (although private organisations should not be compelled to, of course). Unfortunately, most people don’t care what these parties are called as long as they have a good time. Many think that the naming issue is trivial but it is appropriate in our society where staff members are likely to be from many different backgrounds to have a secular celebration to mark the end of the now ostensibly secular Gregorian calendar. Clearly, a Christmas party is for the benefit of one particular faith only. A staff Christmas party tends to exclude non-Christian staff members who may feel uncomfortable being involved in the semi-compulsory attendance of a Christian celebration.

Having religious events, religious decorations or other icons within government organisations or on public property is problematic because public resources will be used for the promotion of just one particular religion. The government and its employees should represent all citizens (or “subjects” as politicians think of them). It is thus improper for taxpayer resources to be directly or indirectly used in the promotion of any one religious viewpoint. If public servants want to engage in religious expression it should be on their own time and conducted using their own resources. Celebrating religious festivals using government resources may lead to the unconscious acceptance of an “official theology”, which in turn may bias the decision making of public officials. It is not a trivial issue as some

may think. The fundamental attitude being tested is: Do we live in a secular State or not?

In a United States Supreme Court decision ¹, which is discussed because of the general doctrinal principle it espouses, Justice Sandra Day O'Connor has proposed a test that focuses on whether a particular governmental action amounts to an endorsement of religion. According to Justice O'Connor, a government action is invalid if it creates a perception in the mind of a reasonable observer that the government is either endorsing or disapproving of religion. In short, she believes one's standing in civil society should be separate from one's standing in a church. Her fundamental concern is whether the particular government action conveys "a message to non-adherents that they are outsiders, not full members of the political community, and an accompanying message to adherents that they are insiders, favoured members of the political community". This doctrine emphasises that not only must governments be impartial with respect to religion, they must be seen to be so.

None of this is to say that religious activity should be discouraged - Australia theoretically guarantees all forms of religious expression that do not impinge on the rights of others. Used properly, and within a self-consistent belief system, religion can be beneficial. But such religious activity should be private in nature and the State should have no role in it by either encouraging or discouraging it. Of course, the basic codes of morality espoused in some religious systems would not be invalidated by such a separation, and just moral codes remain knowable by all those who seek them. But the associated religious expression within an official capacity is what should be prohibited.

In support of recognising religious events such as Christmas within government agencies and on public property it has been argued that Christmas is not really religious after all, that it is merely a commercial or secular event. Certainly, there is a strong commercial component, but undeniably it is based on a particular religious event. Others argue that it is really a pagan festival and thus does not bear the problem of religious expression. It is true that December 25th was originally associated with the pagan rite of *Natalis Sol Invictus*, the rebirth of the invincible sun occurring on or near the Winter Solstice, but sun worship was also a religion. (The December 25th date for Christmas is commonly thought to have been instituted by Constantine some time after his conversion to Christianity in 312CE. He moved it from January 6th because he wanted to establish Christianity as the State religion over the existent pagan practices, but the details of this are not clear. He also moved the Sabbath day from Saturday to Sunday (*Dies Solis*, "Sun's Day") for the same reasons and decreed Sunday to be a public holiday in 321CE.)

In the US various regulations and laws prohibit religious expression under state auspices. This includes banning religious decorations on government property. It also, incidentally, relates to a prohibition of naming official places after certain classes of living persons or placing their images on coins and other places, lest the living person comes to be worshipped as an idol or a god, as was Caesar, Hitler or "Uncle Joe" Stalin, for example. Compare this philosophy with the existence of places like "Whitlam

Square" in Sydney.

So far in Australia, there have been few, if any, court cases concerning the constitutional validity of religious expression or representations within government agencies or on public property. It would be interesting if the Human Rights and Equal Opportunity Commission would rule on these matters as it would help test the doctrine of separation of religion and state. This is unlikely to happen however, since it has no interest in this type of thing ².

There are several outcomes of this relevant to improved observance of the separation of religion and state. Firstly, it would be prudent for religious activity and display to be prohibited from government agencies and on public property. Secondly, religious public holidays should be replaced with the same number of general purpose vacation days to be used however one wants, including their use on the traditional days for those who desire this. It is unfair that those of the minority faiths have to take vacation leave for their special days whilst those of the dominant faith have their days of religious observance provided *gratis*. Anything else is incompatible with the doctrine of religion and State separation under which Australia is supposedly governed.

Those who aren't happy with the doctrine of religion and state separation might like to consider the Spanish Inquisition or numerous other crimes against humanity committed in the name of religion over the past 2000 years or the anti-religious activities and associated crimes such as pogroms in Eastern Europe where religious freedom was not (and is largely still not) protected.

It is the unfortunate experience of the author that despite the mythical view Australians have of themselves of being tolerant, a recent experience indicates this is far from the truth. When it was proposed within a certain highly scholastic public sector organisation that the "Christmas Party" should properly be named the "End-of-Year Party" the proposer of this idea (not the author) was subject to a tirade of abuse. Apparently doing so was offensive to certain Christians and this wasn't OK, despite the fact that its original naming was offensive to non-Christians, but this was OK. As they say, go figure! One can't help thinking that these are the same sort of allegedly civilised people who were putting their fellow citizens into gas chambers a little over 50 years ago or who 500 years ago were Spanish Inquisitors.

Incidentally, at the risk of sounding too politically correct, it would be compatible with the aforementioned views to wish people "Happy Holidays" as is done in the USA rather than "Happy Christmas" as is common practice here.

It is clear from examples such as Nazi Germany and the countries of the former Yugoslavia as well as numerous examples from Europe of the tragic effects of religious intolerance. It is quite disturbing the degree to which certain people, even highly educated ones, will attempt to impose their religious views upon others when these are private issues. It is downright dangerous when governments get involved in the business of religion, or are seen to be involved either directly or indirectly. Australians are not immune to religious intolerance and bigotry and despite a self-delusion to the contrary, experience demonstrates that

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Spread The Word

Mark Dawson

Working in a public library, I see hundreds of new books each week. It is unfortunate however, that the number of books we receive on the pseudosciences, alternative medicine and paranormal seem to far outweigh books of a sceptical nature about these same subjects.

As a member of the Canberra Skeptics and a concerned citizen (we have at least 3 schools that teach creation 'science' in Canberra), I saw it as part of my responsibilities to rectify this imbalance by requesting sceptical books.

I selected most of these books from reviews in newspapers, *Scientific America*, *New Scientist* and of course, *the Skeptic*. Another good source is the books themselves as most contain comprehensive bibliographies as well as details of other titles by the same publisher.

Requesting new books for purchase at most public libraries can usually be done by any member of the public. Of course in this time of government funding cuts not all libraries will do this but it is worth asking, so please go to your local public library and request sceptical books and *the Skeptic* if they don't already subscribe.

If you are unsure of what to request, here are a few recent titles that I have found to be very good:

Telling Lies For God : Reason Vs Creationism.

Ian Plimer Random House Australia, 1994.
ISBN:009182852X

Note: First of course, I know for a fact that Carl Wieland has taken personal offence to this book.

How To Think About Weird Things : Critical Thinking For A New Age.

Theodore Schick and Lewis Vaughn; Mayfield, 1994.
ISBN:1559342544

Note: Brilliant book.

Science Versus Pseudoscience.

Nathan Aaseng; Franklin Watts, 1994.
ISBN:0531111822

Note: A children's book to help them think critically

The Making Of The Messiah : Christianity And Resentment

Robert Sheaffer Prometheus Books, 1991.
ISBN:0879756918

Note: Caution, this book will probably offend most Christians.

The Mythmaker's Magic : Behind The Illusion Of "Creation Science"

Delos B. McKeown Prometheus Books, 1993.
ISBN:0879757701

Dictionary Of Science & Creationism

Ronald L. Ecker Prometheus Books, 1990.
ISBN:0879755490

Note: Actually any book published by Prometheus Books is good to get.

What Johnny Shouldn't Read : Textbook Censorship In America

Joan Delfattore Yale University Press, 1992.
ISBN:0300057091

Note: Shows us what could happen if Fred Nile had his way.

Looking For The Aliens : A Psychological, Imaginative And Scientific Investigation

Peter Hough & Jenny Randles Blandford, 1991.
ISBN:0713722142

Note: Perhaps not sceptical enough but infinitely more sensible than most others on this topic.

So once again, please go to your local public library, join if you haven't already, and get busy spreading common sense. ■

...Religious Freedom from p 18

religious tolerance in this country goes only so far.

It is up to sceptics to promote the doctrine of separation of religion and state and to ensure governments keep well out of the business of religion. History teaches that governmental religious impositions and doctrines can have devastating effects.

References:

(1) Justice O'Connor's concurring opinion in *Lynch v. Donnelly*, 1984, United States Supreme Court.

(2) Telephone conversation, 17-1-96.

Internet Resources

Suggested sites on the separation of church and state to visit on the Internet (these are mainly US based as there are no sites in Australia on this topic, but some material is of relevance for Australia). Note that not all of the content on all of these sites is endorsed by the author.

<http://apocalypse.berkshire.net/~ifas/index.html>

Institute for First Amendment Studies

<http://www.fac.org/default.htm>

First Amendment Center

<http://www.netplexgroup.com/americansunited/>

Americans United for Separation of Church and State

<http://www.kosone.com/people/oct/>

Ontario Centre For Religious Tolerance

<http://northshore.shore.net/rf/>

Religious Freedom Home Page

<http://www.power.net/users/aia/str/america.htm>

America's Unchristian Beginnings?

<http://www.louisville.edu/~tnpete01/church/index.htm>

Separation Of Church And State Home Page

<http://www.intr.net/tialliance/index.html>

Interfaith Alliance

<http://www.mindspring.com/~edge/separate.html>

The Edge of the World web site ■

UPDATE

If at First You Don't Succeed ...

Harry Edwards

Readers may recall some time ago, Australian Skeptics was approached by a Dr Jamal N. Hussein PhD., Director of the Paramann Programme Laboratories, located at Amman, Jordan, to enlist our co-operation in the testing of an alleged phenomenon called "The Deliberately Caused Bodily Damage", wherein volunteers would insert sharp instruments, such as knives, spikes and daggers into various parts of their bodies, without apparent pain, harm or infection. Furthermore, it was alleged that this ability could be controlled (i.e., switched on and off, and also transferable to others). [Refer "Volunteers Wanted", Vol 14. No 2] In the absence of a promised video tape of the experiments and any evidence of standard abdominal surgical procedures which one would assume to be the logical extension of such experiments, and which may have been conducted by Paramann Laboratories, I terminated the correspondence by concluding that the paranormal abilities claimed were merely examples of those acts performed in circuses and carnivals.

On March 18, 1995, the Canberra Skeptics received a letter from Dr Hussein outlining the programme and enquiring whether they (Canberra Skeptics) would like to conduct joint research. The letter was identical in every respect to that received by me (and other like-minded groups around the world) over two years ago, including the sentence "this project was started ten years ago by...". Whether or not Dr Hussein had forgotten our previous correspondence or perhaps believes in the old adage "if at first you don't succeed, try, try, try again", I can only speculate. However, in September 1995, another letter was received from him, reiterating many of his original claims.

He also asked if the Australian Skeptics would like to be listed in the first Arabic directory of societies, research centres and institutes around the world, interested in studying anomalies, paranormal and parapsychological phenomena, subtle energies, bioelectromagnetics, exceptional medical phenomena, complementary and alternative therapies, energy medicine, unconventional healing, holistic medicine, info-medicine and relevant subjects. As we are of course, although I doubt from the same side of the fence, I replied "yes"; and cognizant of possible beneficial results of advertising our existence in the Arab domain, supplied some relevant information regarding the establishment and activities of the Australian Skeptics Inc. I'm keeping my fingers crossed hoping there will be no request forthcoming for the back issue containing my article "Volunteers Wanted".

According to *Skeptical Briefs*, (5[2]:1) a newsletter published by CSICOP, Dr. Hussein has also been in touch with the Tampa Bay Skeptics as well as with other US Skeptics groups. In April the TBS informed Dr Hussein

that if he could demonstrate to them that the claims in his letter were true then he would qualify for their \$1,000 challenge award. Gary Posner (chairman TBS) added that if Dr Hussein would visit Florida they would increase their award to \$10,000 "if he were to exhibit no signs of pain or injury as we pass a knife through your body." Gary Posner (a doctor) also added "...that the police would be present to verify that we were doing this at your request, and despite your claimed 100% success rate, as a physician I would be able to properly dress your wounds."

A letter from Louay J Fatoohi of the physics department at Durham University, Durham, England, on behalf of his colleague Dr Hussein, informed TBS on May 10, that Dr Hussein was prepared to take up the challenge and asked how to arrange the meeting. Nothing more was heard until July 25, when TBS received a mailing from Paramann containing seven snapshots of skewered bodies and the same three part article as had been received by the Australian Skeptics. Dr Hussein evidently doesn't have the courage of his convictions. A recent update from the TBS advises that the PPL is now interested in taking up James Randi's 2000 Club Challenge for \$US 550,000. Gary Posner suggested a test along the following lines:

"A PPL swami/guru will pass a skewer entirely through the abdomen of another person, entering and exiting within one inch of midline. Alternatively, daggers would be hammered into the skull of another person such that the daggers stay in place without being held. In either case, the subject will exhibit nearly no pain or bleeding and the external wounds will heal within ten minutes."

Paramann has now been in business for at least thirteen years, and since I last corresponded with them early in 1993, no progress seems to have been made, with one exception - the alleged piercing the vital organs is now included among the claims. Given the dramatic increase in the number of knife associated crimes in this country over the past couple of years, I felt any information on this one aspect was at least worth the price of a postage stamp, and reopened the correspondence file with Dr Hussein. I also asked for further details of Paramann's experiments and whether a video tape of them was available.

While there is no progress to report as far as Paramann's experiments were concerned, there was an improvement in the public relations department. Formerly typewritten, the latest correspondence was composed in better English on a computer and laser printer, and in addition to the original PO Box address, Paramann now has a fax number and an e-mail address!

Perhaps Dr Hussein has checked his correspondence file - there has been no further communication. ■

POLITICS

C for Conspiracy

Sir Jim R Wallaby

As an hereditary aristocrat, I am not one to get exercised about the democratic process. Indeed, I am frequently seized with the urge to bemoan the demise of the feudal system, which seems to me to be a far more appropriate method of maintaining a stable polity. Be that as it may, recent political events have forced me to cast my thoughts (albeit unwillingly) towards this unedifying spectacle.

Much to my surprise, this close scrutiny has revealed to me one of the most insidious and vicious conspiracies ever to be perpetrated against the unsuspecting public of Australia. A conspiracy, moreover, which has permanently discriminated against at least half of this good, solid, yeoman population. *Noblesse oblige* requires that I bring the ramifications of this dastardly plot to your attention and to this end, the Editor-in-Chief, in his typically cringing, forelock-tugging manner, has acceded to my forthright request for space in his tear-sheet.

Let me begin at the beginning. Browsing through an almanac, I came across a list of all Australian Prime Ministers and something struck me as being a little peculiar about the list. I wasn't certain what it was until I jotted them down in alphabetical order.

Barton	Bruce	Chifley	Cook
Curtin	Deakin	Fadden	Fisher
Forde	Fraser	Gorton	Hawke
Holt	Hughes	Keating	Lyons
McEwen	McMahon	Menzies	
Page	Reid	Scullin	Watson
Whitlam			

Now there are some obvious anomalies in that list - they are all men for a start - but it is not a conspiracy against women that I am addressing here. It is a far more insidious form of discrimination that is revealed.

As any over-educated mathematician or linguist will acknowledge, the English alphabet can be evenly split into two halves: A-M and N-Z. Thirteen letters fall into each half in an admirably democratic dispersal and one which should appeal to all democrats.

Now consider the list of worthies enumerated above and what becomes glaringly apparent? A gross discrimination in favour of those whose names commence with letters from the first half of the alphabet. Indeed, 19 of them (80%) fall within the first half and only 5 (20%) fall into the second, a blatantly biased distribution.

When we investigate further, we find that the case is even more seriously skewed in favour of the alphabetarian primes. The five sub-median PMs, while comprising 20% of the total, were all relatively short term holders of the high office and have governed for a combined total of a

little over six years since Federation, marginally over 7%, while their alphabetical predecessors have held the reins of power for fully 92% of the time. Further research reveals that Messrs Menzies, Hawke, Fraser, Lyons, Hughes and Bruce each governed for longer than the combined terms of all five in the disadvantaged group.

Nor do the current political shenanigans (which may have been resolved by the time you read this) offer any relief from this distorted form of governance. All of the parties seeking your support are led by people firmly anchored in the ranks of the alphabetically superior. Keating, Howard, Fischer, Kernot, Brown, Beasley, Costello - not a Zeugma or a Xylophone among them.

Worse is to come, as this is not confined to the national political scene. A look at the situation that pertains in the states gives an even more depressing view of the distribution of high office. This list, which contains both Premiers and Opposition Leaders exposes a situation that cries out for rectification:

Qld	Borbidge; Beattie
NSW	Carr; Collins
Vic	Kennett; Brumby
Tas	Groom; Field: (subject to review)
WA	Court; McGinty
SA	Brown; Rann

If I were in the prediction game, I would advise Mr Rann, the South Australian Opposition Leader (and the *only* representative here of the repressed minority) to watch his back. There is very likely a member of his shadow cabinet from the upper echelons of the alphabetical stream plotting his downfall as I write.

And the blight is not only an Australian one. Overseas, for every Yeltsin, there is a host of Clintons, Majors, Chiracs, Kohls; each Soeharto is overwhelmed by Bolgers, Mahatirs, Hashimotos, Dengs; and so it goes on.

Among your own ranks, this maldistribution of power gives hopes of preferment to the Edwards, Butlers, Mendhams, Evans', Bruces, Happs, Champions, should they give up honest Skeptical pursuits and seek to chance their arms in the murky realms of politics. But your editor would be well advised to stick to his blue pencil, for a Williams is unlikely ever to reside in the Lodge (for which small mercy, we should all give thanks).

Although I have no personal interest in this curious democratic (or more properly undemocratic, in light of what has been revealed herein) process, I can't but hark back to the glorious days of yore, when the Thutmoses, the Rameses, the Xerxes and the Sennacheribs bestrode the world like colossi. ■

SCIENCE

Chaos Theory - Should I be worried?

Justin Lipton

Chaos has become a trendy subject for both lay scientists and researchers over the past two decades. Movies such as Jurassic Park have led to many misconceptions regarding chaos theory and what it is all about.

What is chaos theory and what can it do?

Many of us simply accept events with probabilistic outcomes as a way of life. The simplest example is the tossing of a coin. Only a masochistic physicist would sit down and plough through the hundreds of equations related to the angle at which the coin was flicked, the height reached by the coin, angular velocities numerous forces etc. in order to determine whether the coin will come up heads or tails (in fact even if the masochistic physicist did this s/he is likely to only get the correct answer 50% of the time) - but it is theoretically possible to do¹. There may be many completely deterministic systems that are blindly described using statistics that, if analysed carefully, may be able to be modelled analytically.

Chaotic systems are systems which produce aperiodic (non-periodic), random looking outputs but are in fact completely deterministic (completely describable by a set of equations). If one knows what the equations are and what the exact starting point is (initial conditions) the output for any future state is completely defined.

A simple example is an iterative equation such as:

$$x_{new} = 1 - 2x_{old}^2$$

This equation generates chaos when one chooses a value for x_{old} between 0 and 1 (not 0.5). Substitute the value of x_{old} into the equation to find x_{new} . Continue the process by substituting each value into the equation eg. Choose 0.2, using the equation get $1 - 2 \times 0.2^2 = 0.92$; using the equation get $1 - 2 \times 0.92^2 = 0.6928$ and so on.

This sequence is chaotic and will never repeat.

The Butterfly Effect

This is the oft quoted "... a butterfly flapping its wings in China that could result in a hurricane in Florida". This is clearly not true - chaotic systems are systems which are very sensitive to initial conditions (the weather is generally believed to be such a system). However events must be causally connected if they are to have any effect on each other. Unless there is some direct link between minute changes in air pressure in China and the formation of hurricanes in Florida a scenario such as this is highly improbable (just the same as losing a lottery ticket is unlikely to cause you to be mugged by a donkey).

For the more mathematically minded this translates as

- events must lay on the same orbit of the same attractor. Whoever first wrote about the Butterfly effect (this is attributed to Ed Lorenz² - one of the founders of chaos theory, who I am sure would never say anything so imprecise) was trying to demonstrate an important quality of chaotic systems. Chaotic systems are so sensitive to initial conditions that even the tiniest difference in starting points will *exponentially increase* with time. In the example equation above, try choosing two very similar values for x_{old} eg $x_{old} = 0.6$ and $x_{old} = 0.600001$ and watch how the two sequences diverge after only a few iterations.

Now consider the weather - this time properly, leaving out butterflies, moths, hurricanes and the like. Assume one has records of Melbourne's weather from the last 100 years and wants to forecast the weather tomorrow. A typical procedure might be to search through the last hundred years for a day most similar to today with respect to temperature, air pressure, time of the year, wind speed and direction etc. Obviously a close match may be found but one will never find a day which is identical in every respect to today (one is always limited at least by measurement accuracy). From this historical data, the weather for the next hour, 6 hours, 12 hours, day etc can be predicted by assuming that, if the weather behaved in a certain way previously (assuming the weather is a deterministic system) it should behave in a similar manner again.

This method may work quite well for predicting the weather in an hour, 2 hours, maybe even 6 hours. But because of the sensitivity to initial conditions (i.e. the exact temperature, pressure, etc), if one predicts that the weather tomorrow will be fine and still, it is just as likely to be snowing (Melbourne is a particularly difficult case) as a result of the exponential increase in errors (i.e. difference in starting points). In fact even if we had a massive array of extremely precise measurement instruments placed all over the Earth, we would still only be able to predict the weather accurately for a finite time into the future (the predictions becoming less accurate with increasing forecasting time). This is a result of sensitivity to initial conditions and is a characteristic of chaotic systems.

How can chaos be used and manipulated?

The sensitivity to initial conditions can be exploited to implement coding (i.e. computer encryption keys), secure communication systems, random number generators and a host of other applications. The human heart and brain during their normal operation are believed to display

continued p 27 ...

RELIGION

Enlightenment and the Attaining of Ultimate Reality: Is it Worth the Candle?

Lawrence Pope

Introduction:

The Existentialist Society's credo begins: 'for those who question whether life has a meaning and a purpose; for those who despairingly ponder whether one can live without self-deception or hedonistic escapism...'

These same questions were asked by the authors of the Upanishads over 2000 years ago and, as ideas, they seem relatively un-fatigued from their long exposure to scrutiny. They remain fresh for each generation to ponder anew. We might think of these sorts of questions as a kind of existential epiphenomena, the by-product of a creature, a slice of nature, that protrudes so far from the rest of itself *qua* nature that it can witness itself in the act of looking and say - with a certain degree of apprehension - 'hello'. It is the dualistically contingent nature of that 'hello', its dependency upon subject/object relationality, that is seen in the Upanishads as the primary cause of all suffering, the eradication of which is held to be the zenith of human aspiration and is, ultimately, the only worthwhile goal of human life. This end or goal is called Liberation or Self Realisation, Immortality or Union with the Absolute/Brahman. The attainment of Liberation delivers one forever from the trials and travails of mortal existence, and in fact from any kind of existence whatsoever in the sense of standing-out in any kind of self-aware fashion.

The main focus of my paper will be on the nature of Liberation itself and I will be questioning if this conception of the Ultimate Good is indeed as attractive or non-problematic as it at first sounds, especially in terms of the metamorphosis or rather meta-ontosis it effects on the person so Liberated. I will also briefly explore ways in which our very mode of existence as human beings can act as a source of profundity in our lives. The kind of profundity I have in mind may lack the narcissistic appeal of a 'You are the Universe' type pronouncement, but may, perhaps, compensate for this in its subtlety and in the sense of its being accessible to us all as a concomitant of our existence as human beings.

The Upanishads: An Overview

For those who may not have a knowledge of Hinduism I will begin by making some general remarks on the origin and content of the Upanishads. But first let me say that one of the reasons I've chosen to write on the Upanishads is because they are the scriptures, that lie behind a myriad of Eastern religious movements. Most of us here

would have heard of a few of them at least - Siddha Yoga, The Divine Life Society, The Divine Light Society, Arsha Vidya, The Chinmaya Mission and to a lesser extent TM, Sai Baba and so on.

Their impact on the complexion of Indian religious life cannot be overestimated and yet it is one of the great mysteries that very few students of Indian religion or devotees of this, or that, guru ever read them. The Upanishads (the word Upanishad means to 'sit closely' and implies secret teachings passed on verbally from teacher to pupil) are a body of ancient Indian texts written between 600BCE and 200CE. They are the sacred and secret utterances of sages, ascetics, and saints of ancient India and have arguably had the most profound influence on later Hindu traditions such as Advaita Vedanta who draw on the Upanishads almost exclusively for their philosophical content. ¹

The Upanishads consist of the ecstatic outpourings of ascetics on the nature of the world and the cosmos in total and, in part, of prescriptions for behaviour arising from these veridical insights into the fundamental fabric, of the human condition in toto. ² In short, they are comprised of material that can be classified as cosmogonical, cosmological, soteriological and ontological. (That is, of the creation, its current status, what we should do about finding ourselves in it, and what we are at our most fundamental, in essence.) I want to emphasise the exhortational content of the Upanishads. They exhort the person to flee the round of birth and death as one would escape from a burning building. The seer apprehends the endless round of birth and death and is overcome by a great weariness and desire for cessation.

What Does the Path to Enlightenment Look Like?

There are two paths of spirituality to follow in the Upanishads: the first is the path of *nivritti* or (Cessation) and the second is the path of *pravritti* (Activity). ³ These two paths, the path of 'cessation', - also known as the 'path of the gods' and the path of 'activity' - sometimes referred to as the 'path of the fathers' - differ fundamentally in their psychosocial and philosophical dimensions.

The *pravrttic* path is primarily concerned with matters of a secular and temporal nature - avoiding sickness, having sons, finding the money for dowries if you had daughters, ensuring good crops and so on. It may conduce to spiritual growth but not enlightenment: 'They who make the

sacrificial offering pass into the moon. They become food for the gods, then pass forth into space and are born again in the fire of woman'.⁴

In contrast, the adherent of the path of *nivrtti* at death is conducted to the Brahma-worlds and Liberation, 'Of these it is said there is no return' i.e. no rebirth.⁵ Socially the two paths manifest in lifestyles that are essentially polarised. *Pravrtti*'s sphere of importance is exterior to the individual whereas the *nivrttic* path involves a mendicant lifestyle where the fires of the sacrifice are interiorised as it were. The person, the ascetic, themselves becomes the sacrifice and is consumed by the fires of their asceticism attaining Moksa or Liberation as a result.⁶ In the Upanishads this path is held to be the linear way to Immortality. I might add that contrary to the pop-media image and some Western 'ashrams', India is not a land full of people trying to escape rebirth, engaging in austerities and such like. Most religious practice is decidedly down-to-earth - offerings for children, health, marriage, success and the like. The same could be reasonably said of Christianity or Islam with prayers being said for the wellbeing of others or asking for the intercession of a saint or such like.

Having set the stage let me turn to the subject proper of this paper, the goal of the religious aspirant, viz: Liberation, Immortality, Self-Realisation, Nirvana, Moksa, The Real, etc.

Much has been written on the logical problems and paradoxes associated with the alleged experience of non-duality - the sine qua non of the above - as an experience without an experiencer the content of which is both indubitable and non-cognisable and yet veridical. I do not intend to pursue this line of inquiry here. Rather, I will examine the nature of Liberation as it is given in the Upanishads, on their own terms, as it were. I might also add that my critique of the Upanishadic conception of the Ultimate Good would also apply in large part to the Nirvana of Buddhism or the Tao of Taoism.

Now, along with the notion of indescribability - emphasized (disproportionately in my view) by various gurus - are terms, phrases, exclusions, analogies, allegories, homilies and epigrams, and other means where an effort is made to communicate some of the content or nature of the experience of the Absolute. It varies, some is didactic and baldly states: The Absolute is this or that, eg Truth or The One.⁷ Other efforts utilise negation, eg Only Brahman Exists, the objective manifold is illusion. But there is almost a complete accord throughout the Upanishads that the realisation of one's **self** as consubstantial with the Absolute or Ultimate Reality is the realisation of a condition of unsurpassable spiritual happiness that is infinite, unconscious or non-conscious, and blissful.⁸ What could be more straightforward? A lifetime or perhaps a succession of lifetimes of renunciation, self abnegation and effort followed by an eternity of bliss as everything and no-thing; a fitting reward for the *jivanmukti*'s herculean exertions on the razor's edge path.⁹

A Common View of the Effect of Enlightenment

The effects of this kind of experience on the person, their attitudes and overall wellbeing have generally been

described in very positive terms. Often it is said that identifying oneself with the entire world or universe results in a concomitant and proportionate sense of compassion for the ills of the world. However, it must be said while the Liberated may indeed dwell in a state of non-duality, his concern for the world, its sufferings and affairs, is experientially zero according to the Upanishads themselves.

Chandogya 7.26.2:

*The seer sees not distress
or sickness
only the All*

Feelings are contingent on a sense of self and other, they have no place in the logic of Liberation - with the exception of spiritual bliss. All suffering, from the standpoint of the Liberated, has the experiential and epistemic status of a fiction albeit a convincing one to those still enmeshed in ignorance. Paul Deussen (a translator of the Upanishads) writes, 'When the knowledge of the Atman/Self has been gained, every action, and therefore every moral action also has been deprived of meaning'¹¹. This analysis seems to have the weight of logic and scripture behind it given the absolute dissolution of any other as a discrete entity in all but the most provisional of senses. Indeed what other' would there be to feel compassion for. We might go on to ask given the all-inclusive nature of the experience would not a single instance of Liberation be sufficient to liberate all or, conversely, might not a remaining iota of *avidya*/ignorance be sufficient to preclude the liberation of any given the requirements of an infinite non-duality, and would not this then amount to a necessarily coterminous all or nothing requirement for Liberation. The paradoxes multiply and I will not follow them any further here.

First Attribute of Enlightenment: Infinitude And its Relation to Meaning

The condition of the Liberated is one of infinitude, completely unbounded and endless in every respect. But infinite what?

The Liberated/Immortal is a Universe in which only **He** exists as a state of blissful - solipsistic - nothingness.¹⁰ (This Universe is also a universe in which literally nothing matters. The absolute is an absolute necessarily bereft of meaning and the possibility of meaning. Well may the Svetasvatara Upanishad 4:18 say that Liberation consists of neither being nor non-being. It would appear to qualify for neither death proper, nor life in any existential sense.¹² We might even say that whatever else the Immortal is liberated from, philosophical nihilism may not be included. A blissful nihilism perhaps, a nihilism in which it does not matter that 'nothing matters' but a condition of absolute insignificance nonetheless.

We find traces of resistance to this conceptualisation of Immortality/Liberation in the Upanishads themselves. Robert Hume in the introduction to his translation of the Upanishads writes "...and therein even the possible distinction that this is I (loss of which represented a condition which seemed so abhorrent to [the god] Indra

and which Prajapati did not succeed in justifying) is impossible ... in that plenary unity".¹³

So, while Hume affirms the conceptualisation of absolute non-dualism as the fountainhead of Upanishadic thought he also acknowledges that even the great sage Prajapati found it difficult to sell and that a major god of the Hindu pantheon, Indra, arched an eyebrow - a supernatural one presumably - at the notion. We might argue that one of the objections levelled at a life lived superficially is that it simply lacks meaning, this may also be a valid objection to an infinite factive-less existence.

John Macquarrie in his book titled Existentialism argues that finitude is a concomitant of facticity (meaning: brute facts, non-manipulable limitations e.g. death, race), and it is fair to say that facticity has received its share of bad press in existentialism and elsewhere. Facticity is seen to be one of the structural ubiquitousities of existence that stands over and against our freedom. It blindly limits us, and frustrates our will and power. Camus, thought that we should rail against the inimical factive dimensions of our lives¹⁴, while Sartre's arch factive enemy was duality itself encountered monstrously as a sickening 'otherness'.¹⁵

We may ask however if the absence of finitude and necessary facticity could not produce a situation of even greater existential inimicality. While it is true that we find ourselves bounded by facticity it is also true that our boundaries supply us with a rich source of meaning. We have an ambivalent relationship with the unchosen facts of our existence - we find ourselves with a body that has gender, height, colour, race, species and so on, all of which circumscribe the parameters of possibility that our individual existence allows and with which we engage in a constant and often troubled dialectic. (I can try to the limit of my ability and ingenuity to be the next Chairman of China but will fail because of the unchosen facts of my existence; or a person may struggle to become an Olympic athlete and succeed, thereby overcoming the limitations they imagined themselves bounded by). So, perhaps contra to the ebullient you-can-do-anything-if-you-really-want-to optimism of the New Age set, I would hold with most existentialists that we encounter our admixture of facticity and possibility at every turn and that this is not all bad news.

Following this line of reasoning we may ask; might not the exclusion of the possibility of facticity in an infinite existence be a limiting kind of facticity in itself? In becoming everything it may be that the Liberated has been existentially devalued as it were. If facticity has limitation and concreteness as its defining characteristic then infinitude may have vacuity as its.

Bliss and Immortality

The quality of Bliss is ubiquitous in the Upanishad's conception of Liberation. It is Bliss without equal or the possibility of cessation. The Upanishadic claim in regard to Bliss appears something like this: Life is inherently painful and problematic. To escape from this and to dwell in a condition of the greatest pleasure for the longest period is the highest good. It seems reasonable to question the value of such a 'state' and life spent trying to attain it,

even if such a condition were somehow 'Blissful in the absence of personhood'. It could be argued that it may be no less ignoble because of that fact. It might even strike him/her as a repellent form of escapism purchased at too high a price. Over pleasure or even happiness many people value autonomy and satisfaction through self-direction and challenge and may question the appeal of a life spent trying to ensure the absolute (experiential) negation of all 'otherness'.

The Upanishadic seer might grant these factive concerns but assert that even so we have to face one of two possible eternities: the first being the unending round of birth, death and rebirth with all its incumbent ills and the second being that of Liberation and Bliss. Even if persuaded of the likelihood of this 'fate' we might still opt for the former (seemingly less attractive) alternative on the grounds that at least in it one retains a sense of personhood and with it the chance to exist in a manner of their choosing, to live consciously and perhaps attempt to reduce the amount of unhappiness in the world where possible. In other words to exist as a moral being rather than in a condition of suspended ethical animation.

For many the question of a desirable form of existence is not one that can be satisfied solely by references to pleasant enduring experiences but would require an examination of the total field of their existence in relation to ideals, values, projects, and relations that make it worthwhile being at all.

Which brings us to the third aspect of Liberation given in the Upanishads viz: Unconsciousness and pure Awareness.

Unconsciousness and 'Pure' Awareness.

The absence of consciousness entailed by non dualist metaphysics finds its most explicit acknowledgement in the earliest Upanishads. At verse 4.5.15 of the Brhadaranyaka we find the philosopher/mystic Yajnavalkya explaining to his wife why there can be no consciousness in liberation.

'When there is duality there one sees another there one speaks to another but where everything has become just one's own self then whereby and whom would one see? Then whereby would one speak? Then whereby would one think? Knowledge is only of a second.'¹⁶ In the Chandogya Upanishad Verse 8.11.1, we find the following conflation of the condition of deep sleep with that of the atman/ brahman or Self;

'Now when one is sound asleep, composed, serene and knows no dream - that is the Self, ... the Immortal, the fearless. That is Brahma.'¹⁷

The Prasna Upanishad 4.5-6 refers to the brilliant happiness of dreamless sleep and the mind's non action¹⁸ and goes on to equate this with Moksa, the state of Liberation. Even in those Upanishads where Liberation appears to have consciousness as one of its attributes it has the character of an allpervasive bare awareness or presence unto itself. It is the awareness of 'otherness' that is absent in the Upanishadic ideal as is apperception itself - the Mind's reflexive self perception. This kind of unconsciousness is most familiar to us in deep sleep, the

nature of which is Liberation according to many Upanishadic texts. (On a permanent basis this kind of Being strikes me as being equivalent to a materialist conception of death as nothingness.)

The Existentially Deceased ?

Now, this vision of somnolent or semi-somnolent salvation would no doubt appeal to some, and while we may agree that the condition of deep sleep is indeed a condition free from the cares and anxieties that accompany normal waking consciousness, relatively few, I feel, would opt for it as an interminable condition. In as much as it is posited as the overcoming of the sorrow of cyclic existence, it resembles a kind of 'comatose undeadness' and that rebirth with all its attendant difficulties may seem the preferable of the two.

Furthermore, I would argue that an eternity of non-consciousness would be monumentally unappealing even to thinkers like Camus who often regarded life as absurd and death as the final insult to be railed against. But perhaps this not so much a railing at death in itself as an opposition to its particular manifestation in human life - it comes after only a few decades and almost always without our permission. If Camus were offered a sempiternal immortality, that is, an immortality existing in time with the option of a self-selected cessation at a time of his choosing, I believe that he would not have found this unacceptable. He would not, in my view, find acceptable the overcoming of death at the price of a fully self-conscious personhood. With Kierkegaard we might agree; 'When death is the greatest danger one hopes for life; but when one becomes acquainted with an even more dreadful danger, one hopes for death'.¹⁹

In 'Dread' (our confrontation with our mortality and death) our attention is turned toward the profound nature of our existence; for Kierkegaard and Heidegger our meditations on death, on the impossibility of possibility (in death) which is at the same time the possibility of impossibility (our non-being) serve to deepen us ontologically. In other words, the conscious possibility, or the realisation of our impending personal extinction can produce a value, a revelation, if you will, in which we encounter the profound nature of our existence, that we are at all and that it can be possible that we can not be entirely.

The Role of Doubt

Unlike the Seer, Swami, or mystic we will retain an awareness of our fallibility and acknowledge that we may be mistaken. With William James we will ask; 'Why should we believe that normal waking consciousness is always the most revelatory?' Occasionally, it may not be.

Nevertheless, to be significantly influenced by another's paranormal experience seems somewhat reckless given the numerous and phantastic ways in which the mind may behave under abnormal conditions and pressures. Perhaps the most sublime and illuminating of the mystic's experiences are the experiences of a positive sort of psychosis, a last ditch effort of the mind to save itself from destruction; perhaps the severe practices and psychic

exertions required to attain the experience of Ultimate Reality trigger a kind of biochemical survival mechanism that floods the mind with peace and certainty.²¹

One of the hallmarks of genuine mystical/religious experience is indubitability that is, the experience is such that its truth cannot be doubted by the experiencer. This kind of criteria however in no way renders the mystical experience invulnerable to the kinds of considerations given above. Quite simply because although we may be absolutely certain of something, more certain of it than of anything we've been before, we may also be wrong. We were convinced for a long time that the sun moved across the sky. It was self-evidently true, and incorrect. Post-hypnotically we may hold a suggested event to be true with a more intense sense of certainty than would be the case for the same memory not induced by hypnosis. Again, we may be convinced and we may be wrong.

Cosmic Purpose? No Thanks.

Another concern - if slightly tangential - is that even if we discovered a kind of 'Cosmic Purpose' to human life it need not tally with our own; the cosmic purpose may not be my purpose. We might resist it on the grounds of it being imposed upon us, without our consent as it were. We do not choose to be part of the '**Cosmic Purpose**' we are thrown into existence and may, upon reflection, resent any kind of Big Plan of which we are as individuals witting or unwitting participants.

There is a scene in Lawrence of Arabia where General Allenby is trying to persuade Lawrence to return to the desert. He says something like, 'look here Lawrence, you're a vital part of my Big Push to Damascus. I need you out there', Lawrence becomes irate and says, 'I don't want to be any part of your **Big Push!**'. We might respond to the realisation of a Big Plan in a similar kind of way - and presumably risk being struck by lightning.

The point is that the existence, or not, of an Ultimate Reality is one issue but by no means the only one; there may exist an ultimate and attainable Enlightenment or Reality but this is no guarantee of it being personally acceptable as a goal. Indeed many people may reject such a goal simply on ethical, value based or existential grounds.

A Profound Everydayness

Our doubts about the value of mystical experience and 'Metaphysical Ultimates' need not denude our lives of profundity. We are a part of the natural world that existentialises the existence of the world in our capacity to know that **it is** rather than **is not**. This ontological reification of Nature, is unique to us as beings who have a conscious relationship to Being.

The awareness of ourselves as 'existents' can be seen as a form of transcendentalism in itself, as it were. Moreover with Peter Berger we may argue that any act of courage, any recognition of beauty or even of humour can be seen as sources of an intentionality in human beings that appears to "undermine meaninglessness, cruelty and death thus rendering our existence, inductively, as beings against meaninglessness just as legitimately as we may be seen as beings-towards-death".²²

To sum up, I've said that the Upanishads level a critique at human life and conclude that life is a painful unending disappointment. They follow this evaluation by proposing a way out, an answer. The answer is a Liberation that is said to have certain attributes including Bliss, Infinitude, Non-Duality, NonUnconsciousness etc. I've argued that even if we accept the logically unacceptable and talk of an infinite existence, eternal and blissful, we may nonetheless have concerns over the value of such a 'state' and I've ended by outlining a couple of ways in which our mode of existence itself can be a source of profundity in our lives.

We may choose to guard our unbelief while remaining open to possibilities that affirm our integrity in its broadest sense. If need be, with Camus, we may choose to live and create even if it be in the very midst of a desert. 23

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Planning a Move?

Please let us know so we can change your address in our records.

...Chaos from p 22

chaotic dynamics³. This makes intuitive sense as we would want both our hearts and our brains to be able to adapt quickly to changes in conditions - a lack of chaos is a sign of ill health - a lack of being able to change output for a slight change of input. We want our brains and our hearts to be sensitive to both internal and external stimuli and to respond accordingly. During an epileptic fit or a coronary seizure (ventricular fibrillation or tachycardia) these chaotic dynamics are lost. There have already been research investigations into controlling the state of the heart or the brain using chaos theory⁴.

How can I make lots of money or control the world using chaos theory?

If one were able to determine the system of equations with associated parameters describing the weather - given the appropriate starting points (initial conditions) one could predict the weather very accurately in the short term and reasonably accurately into the medium term. Alternatively, if some indexes on the stock exchange turn out to display chaotic dynamics (as some analysts believe⁵) short to medium term predictions could result in an exponentially increasing bank balance.

Another interesting property of systems that exhibit chaotic dynamics is that their extreme sensitivity to initial conditions allows them to be controlled.⁶ By applying tiny perturbations, a chaotic system can effectively be manoeuvred into various well defined, controlled states. This has tremendous implications with respect to the weather and perhaps in the future we may be able to control, rather than predict complex systems such as the weather. Experimental control of chaos has already been achieved with vibrating magnetic ribbons and various electrical circuits that exhibit chaotic behaviour.

I hope this clears up the chaos for you.

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J. Gleick, *Chaos - Making a new science*, New York: Viking, 1987.

World Round-up

Harry Edwards

Spells in Soccer?

South African soccer may suffer from supernatural interference. The Moroca Swallows accused an official of the QwaQwa Stars of splashing them with "magic water" and threatening them with a traditional African fighting stick. The protest delayed the game by 10 minutes. Where will this lead? Will we have charges of bewitchment in baseball, fascination in football and hoodoo in hockey? Probably not unless it works to make winning teams. The article didn't say which team won the game, so we have no idea whether the spell worked.

San Francisco Chronicle. June 2, 1995.

* * * *

"Dirty" Disney

It appears that America's Christian right has taken offence at several of Disney's recent animated film releases.

Careful examination by diligent Christian movie-goers has revealed the following outrages:

The Lion King - After Simba, the lion hero, falls to the ground, a cloud of dust rises beside his head forming successively the letters S...E...X!

The Little Mermaid - During the wedding scene at the end of the movie, a side-profile clearly shows that the minister conducting the service has become sexually aroused. You can't miss it they say.

Aladdin - When the prince calls out to the princess from the balcony, a voice can be heard whispering "good teenagers take off your clothes."

The *Americam Life League*, the group making the ruckus, are unable to say why Disney is doing this. Disney does Dallas? ...Who said that!?

Sunday Age. September 3, 1995.

* * * *

Spontaneous Coffin Combustion?

On June 1, 1994 undertakers at Mount Gillian Baptist Church in Baton Rouge, Louisiana found smoke pouring from the closed coffin of Wycliff Robertson, a 25 year old victim of a shooting.

Morticians were called in to the church earlier in the evening to work on the dead man following complaints of an odour coming from the casket.

"We believe that whatever chemical was added that second time caused the reaction that started the fire beside

the body," said arson investigator Haley Carter. The body was not badly burned and Robertson was buried in a new coffin two days later. Thousands of bodies are embalmed worldwide, so we must ask why this phenomenon is not more frequent.

Fortean Times. April-May 1995.

* * * *

Tricky Dicky Rides Again

Ever since President Richard Nixon was entombed at the Richard Nixon Library and Birthplace in California on 26 April 1994, odd nocturnal manifestations have been reported.

A night watchman has claimed to have seen a luminous green mist over the president's grave. Once he saw a man enter the Nixon Birthplace house, but when he went to arrest the culprit no one was found there and the door was locked. He has also heard tapping sounds emanating from the Watergate display room. On several occasions, the audio-tape machines that play the Watergate tapes have malfunctioned.

Is the restless spirit of the old crook trapped on the earthly plane? Listen closely at the fence in the dead of night. The address is 18001 Yorba Linda Blvd., Yorba Linda, California; telephone: (714) 993 3393.

LA Weekly, 30 Sept-6 Oct 1994

* * * *

Orange Squash

Reports from California catalogue the extraordinary case of Orange County, formerly one of the wealthiest local government entities in the US, which was forced to declare bankruptcy after losing more than \$US1.5 billion in high-risk investments.

The former Treasurer, one Robert Citron, was found by grand jury investigators to have consulted an astrologer and a psychic on matters regarding future interest rates and to have suffered accordingly. Citron pleaded guilty to six counts of fraud and misappropriation of funds. The maximum sentence he faces is 14 years in prison.

While Skeptics, from the safety of Australia, may be tempted to say "Only in California", we suggest that it really was tempting fate for Orange County politicians to appoint a mandarin by the name of Citron and not expect to wind up with a lemon.

From Various US newspapers

FEATURE - ALTERNATIVE THERAPY

Natural Therapies? The Pharmacy in the Forest.

Kathy Butler

Do you have a medicine cabinet full of herbal treatments and natural medicines? Does your doctor happily prescribe them, and your pharmacist willingly fill their prescription? All true, most likely, even if you answered "no". The majority of modern pharmaceuticals have their roots in nature (no pun intended), and some are still purified from their natural source. Nystatin, an antifungal, was isolated from bacteria in the leaf-mould of a New York state forest.

Streptomycin, produced by the *streptomyces* fungus, was originally isolated from the sewage outfall of Naples!

The new anti-cancer drug, which shows excellent promise for soft-tissue cancers, is Taxol. It was discovered as part of a 1950s National Cancer Institute search for treatments from botanical sources. It was found that an extract of the bark of the Pacific Yew tree (*Taxus brevifolia*) was efficient in halting cell division (by the accumulation of cellular spindles, if you are of a technical bent and need all the details). This makes it an excellent candidate

for the treatment of cancers. Taxol has recently been able to be manufactured semi-synthetically. The "nucleus" of the molecule must still be extracted from the yew tree, however. The yew has long been known by its poison. In Hamlet, our hero's father is killed by his brother with the sap of the yew (known then as hebenon):

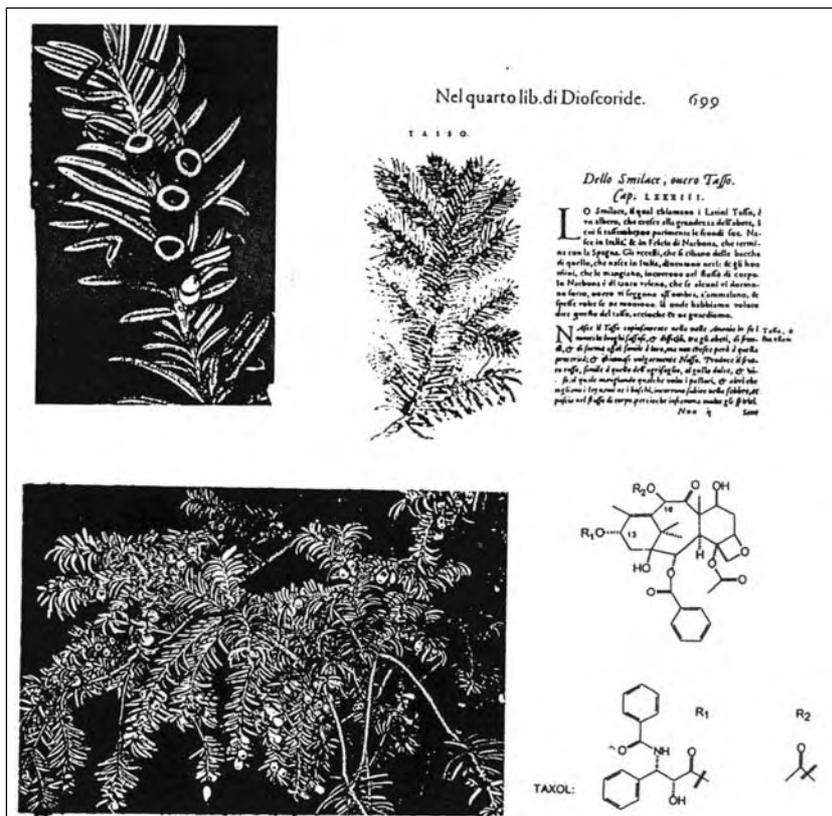
"... Upon my secure hour thy uncle stole, with juice of cursed hebenon in a vial, and in the porches of my ears did pour the leprous distillment whose effect holds such enmity an with the blood of man ..."

The tree was also thought to grow abundantly in the underworld! The Pacific Yew tree is now difficult to find in its native habitat. It has traditionally been heavily culled because it is poisonous to livestock. The Taxol product, a pseudoalkaloid, is in very low concentration in the bark. A century-old specimen of this slow-growing tree yields about 300mg of Taxol - one course of treatment requires about 2 grams of product. Since stripping the bark will kill the tree,

it is clear that the Pacific Yew would soon be driven to extinction if we only used the 'natural', 'non-synthetic' product. The drug is currently produced by Bristol-Myers Squibb Pharmaceuticals. Research has enabled them to produce Taxol semi-synthetically, using the 'nucleus' of the molecule, which can be extracted from bark, leaves and twigs of the tree. Five million Yews have been planted specifically for this purpose.

Dr Mike Ablett, Director of Research for Bristol-Myers Squibb in Melbourne, says that natural sources are extremely important to the pharmaceutical industry. Every drug company undertakes investigation of jungles and forests for possible new drugs, and the competition for these resources is enormous. One multinational drug company has apparently secured the rights to investigate a huge tract of South American rainforest for potential pharmaceutical products, ironically saving it from destruction as grazing and farming land.

Drugs are also designed "from the ground up", says Dr Ablett. "At our research institute at Princeton, two Cray



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computers are dedicated to the task of finding molecules to treat specific conditions." Capoten, a drug for the treatment of hypertension, was sought in a similar fashion. It was known that an inhibitor of the renin-angiotensin system in man would reduce blood pressure. A molecule which would bind the zinc moiety of the kininase II enzyme, which converts angiotensin I to II, would perform the task. A molecule from the venom of the South American pit-viper was found to be the correct shape, leading the researchers to design a similar molecule which could be taken as an oral drug - Capoten. This drug is now completely synthesised.

The story of the discovery of digitalis, a heart drug, is a fascinating tale of how a herbal product became a pharmaceutical drug. It is now used almost exclusively for congestive heart failure and atrial fibrillation. Historically, various cardiac glycosides, such as digitalis, had been used as poisons. The Romans killed rats with it. The Chinese used dried toad skin as a drug for centuries, the cardiac glycoside being its active ingredient. The *strophanthus* plant gained medical popularity via Dr Thomas Fraser. He discovered its digitalis-like action whilst studying African arrow poisons!

Digitalis, from the foxglove plant, became widely used medically after Dr William Withering published his book in 1785: *An Account of the Foxglove and Some of its Medical Uses: With Practical Remarks on Dropsy and Other Diseases*. Withering had allegedly been given some foxglove by a local herbalist, to use as a treatment for dropsy (fluid accumulation caused by heart failure). This "wonder drug" fell into disrepute, however, when it was noted that many patients were killed by its administration. As with any botanically-derived substance, the amount of digitalis in the foxglove varied from plant to plant and season to season. It was administered as an infusion with no knowledge of its active ingredient: a therapeutic dose in one batch may be toxic in another. Also, contrary to Withering's advice, it was used indiscriminately for many disorders. It is now completely synthesised and used only for specific conditions.

Another famous story describes the early use of quinine, the original effective malaria treatment. Extracted from the bark of the *cinchona* tree, it was known as Jesuit's or Cardinal's bark. The Jesuits allegedly knew of its use from Peruvian natives, and were its chief importers in Europe. This gave them great influence in their missionary work, and in local matters. In Rome, *cinchona* was sponsored by Cardinal de Lugo, giving it the name Cardinal's bark.

Another version of this story involves the malaria treatment in 1639 of the Spanish Countess Anna del Chinchon, wife of the Viceroy to Peru. There is no evidence that she actually took the bark, but the name *cinchona* persists. In fact in Spain it was known as '*los Polvos de la Contessa*'. The Viceroy did, however, bring a large shipment of the bark to Spain from its native Peru. By 1640 it was in wide use in Europe for the treatment of fevers. It was treated with suspicion by many, however, partly because it did not conform with Galen's teachings, and partly because of its association with the Jesuit brothers. "Better dead than Jesuit" is attributed to William the Third

(he died). It was also widely pedalled by charlatans in the form of 'secret remedies'.

For 200 years it was used in the form of powder, extract or infusion. In 1820, Pelletier and Cavento isolated quinine from the *cinchona* bark and its use gained favour rapidly. Quinine must be administered with great care, however, as its therapeutic dose is close to the toxic dose. The use of other, safer forms such as chloroquine have taken over in modern times. Multi-drug resistance of the malarial parasites has become an increasing problem in malarial areas of late, and quinine has again found its use in malarial treatment. Quinine can be completely synthesised but the process is long and complex, and quinine and its relatives are today obtained entirely from natural sources.

Are there disadvantages to taking medicines in refined, synthetic forms, though? Mike Ablett says there are enormous advantages in refining a drug product. "The advantages of knowing the exact dose and purity of a pharmaceutical are overwhelming. Would you prefer to take digitalis as William Withering's infusion or the exact dose which can be prescribed today? Plants produce many complex and unidentified compounds, many of which can have undesirable effects on certain people.

When I was a medical student in Jamaica it was popular to drink various herbal teas. At the time it was known of people dying after drinking teas containing *carotalaria* and *senecia*. For most people there were no ill effects. For one person in a hundred, say, it would be lethal. If you can precisely purify or synthesise the substance, it becomes easier to characterise its effects and risks, becoming much safer as a drug."

So take your aspirin and antibiotics happily. If you are berated by your naturopathic friends for using "drugs" instead of "natural medicines", placate them by re-labelling the bottles "extract of willow bark" and "fungus-broth product"!

REFERENCES:

These stories are quite well documented and you can get the primary references from any pharmacopoeia. Try Martindales Pharmacopoeia, or "The basis of Pharmacological Therapeutics" by A Goodman Gilman *et al*.

Extensive historical information on Taxol and the Yew tree can be found in Appendino, G: "Taxol (paclitaxel): historical and ecological aspects" *Fitoterapia*, Vol LXIV, suppl. al N. 1-19 "(Sorry. It's a bit obscure! but good reading.)

For technical information on Taxol, contact Bristol-Myers Squibb, Melbourne.

I am indebted to Dr Mike Ablett for his assistance in preparing this article. Dr Ablett will be speaking at the 1996 Australian Skeptics National Convention.

**Plan now for the
1996 Convention.
September 21 - 22
In Melbourne.**

FEATURE -ALTERNATIVE THERAPY

How Did They Begin?

Steve Basser

The *Letters to the Editor* and *I Want to Know* sections of the last issue (Vol 15, No 4) contained so many 'invitations' for me to write; how could I possibly refuse?

In response to Steven D'Aprano's query about **osteopathy**, I hope the following proves useful.

Osteopathy was 'discovered' by Andrew Taylor Still, an American, in 1876. He conceived osteopathy's concept as a divine revelation and came to believe that all diseases are caused by pressure on arteries, particularly those in the spine. This pressure, Still believed, was usually caused by faults in the vertebral joints and, of course, these faults could only be identified and corrected by an osteopath.

Osteopathy, like chiropractic, was, in its earliest days, intended to be a complete practice of medicine competing directly with 'orthodox' medicine.

In the mid 1930s in the UK an attempt was made by the British Osteopathic Association to obtain formal recognition of osteopathy. A Select Committee was appointed to advise the parliament. This Committee concluded that osteopathy could not support the claim that it was able to treat all diseases, and advised that it would be neither safe nor proper for osteopathy to be regarded as an alternative to medicine.

Times have changed somewhat since then and, like chiropractic, modern day osteopathy is a mix of those who still (no pun intended) cling rigidly to a pseudoscientific theory and practice, and those who have chosen to pursue a more scientific path. In Victoria osteopaths are now registered, sharing legislation with chiropractors.

As for scientific validity, there appear to have been relatively few formal studies of osteopathy. In 1977 the Commonwealth 'Report of the Committee of Inquiry into Chiropractic, Osteopathy, Homeopathy and Naturopathy' supported the contention that '...osteopathy offers no proof of its philosophy, demands unquestioning adherence to unscientific tenets, and lacks scientific experiment and proof.' (p29)

A study published in the *Lancet* in 1985 (Vol 1, p1258-61) failed to demonstrate a specific benefit of osteopathy in low back pain, and I am not aware of any studies that support the use of osteopathy in systemic diseases.

I have not conducted an exhaustive search of the literature and therefore I am unable (and unwilling) to defend the above as being anything more than an overview. I would be more than happy to hear from any osteopaths who feel I have been unfairly critical.

Without having been there I am unable to definitively answer Steven's query about the thermodynamics of **laying on of hands**. One technique that could be used, though, is to rub the hands vigorously prior to laying them on. This causes heat to be generated through friction, and also through dilation of superficial blood vessels. If the rubbing

is done after the massage has commenced the person being massaged (who will almost certainly be relaxed and not specifically looking for 'tricks') may believe that the heat has a mystical origin.

The **muscle strength test** is a simple way to convince people that they really do have a problem, and is a favourite of many naturopaths and kinesiologists. The test relies on, amongst other things, muscle fatigue, and upsetting the balance between 'competing' muscle groups.

There is an old party trick everyone can try at home to demonstrate part of what I mean. Stand in a doorway with your arms by your side, palms facing your body. Now move your arms outwards from the side of your body and when you meet the resistance of the door frame press firmly for 1-2 minutes, or until your arms begin to feel uncomfortable. At this point stop pressing against the door frame and take one or two steps forward. You should find that your arms 'automatically' move outwards.

The trick also relies on the fact that we use different muscles to perform different shoulder and arm movements, but I'm not sure I can explain this succinctly, so I won't try. Rest assured, though, that it is a trick, and is not due to an allergic response.

The pseudoscientific basis of this test is confirmed by the fact that when practitioners who perform it are asked to assess muscle strength without knowing whether the patient is in contact with the supposed causative substance (a black curtain can be put up which has a hole for the patient's arm but shields the rest of them) the diagnosis rate suddenly becomes the same as tossing a coin. What a surprise!

In answer to Harry Edwards' inquiry re the **origin of chiropractic**, the evidence for the restoration of Harvey Lillard's hearing by David Palmer the 'inventor' of chiropractic is entirely anecdotal. Lillard's hearing was not formally assessed either before or after the manipulations from Palmer, and there are conflicting reports in the literature as to how deaf Lillard actually was. Some versions have Lillard as being almost totally deaf prior to manipulation, whilst others, including Lillard's own daughter, report that Lillard was able to hear well enough to carry out conversation, and that after the manipulation he could hear 'a bit better'.

Without access to time travel I am unable to 'prove' one way or another what really happened, but logic and a knowledge of neuroanatomy lead me to the most likely explanation - a subjective sense of improved hearing. This view is, I think, supported by the fact that in the one hundred years since Harvey Lillard's manipulation there have been no reported cases (supported by objective before and after evidence) of hearing loss restored by vertebral manipulation or adjustment. ■

FEATURE - ALTERNATIVE THERAPY

Vinegar Can be Used for What?

Glenn Cardwell

Want to get rich quick? Join the nutrition quackery promoters of fat mobilisers, amino acid tablets, cellulite treatments, food combining, digestive enzyme tablets, fantasy books (eg Fit for Life), weight loss fraud, protein powders, fake vitamins, magic nutrients, finding nonexistent allergies, vitamin B12 injections, cancer curing diets.... and the list goes on. Better still, create some new quackery. Success is measured by financial income, not health outcome.

A personal favourite is the recent advertising campaign for a book on the new 'superfood', vinegar. The advertisement makes the following statements:

"... scientific studies praise the curative and preventative powers of vinegar ..."

"Scientific tests show it's a natural storehouse of vitamins and minerals - over 93 different components - to fight what ails you and help extend life."

"You'll learn how to melt away pounds with a meal-time vinegar cocktail."

"Just one spoonful of apple cider vinegar is endowed with vitamins, minerals, enzymes, amino acids, nutrients and important pectin and beta carotene."

Whoops! That last one's a howler! Vinegar is a lousy source of essential nutrients. In fact, the Nutritional Value of Australian Foods, the US Department of Agriculture and the British food tables, McCance & Widdowson, all list vinegar as having no fibre (therefore no pectin), no vitamins (therefore no beta carotene), only a mere trace of calcium or iron, and the same amount of protein and amino acids as you will find in one teaspoon of bread crumbs or less (USDA claims nil protein - the number may have been rounded down).

The advertisement then lists 20 medicinal properties of vinegar, including:

- help lower cholesterol;
- forestall osteoporosis;
- help coughs and colds;
- lower high blood pressure;
- relieve night time leg cramps.

These are significant claims, all of which had evaded me in the last twenty years. I had to chuckle when it also listed the old quackery pearls "aids digestion", "improves metabolism" and "aids to maintain health". Nothing like some meaningless feel-good statements to pad out your list.

My first complaint went to the magazine that published the advertisement stating that it included lies, deception and quackery. The potentially most damaging problem was that the advert was illegal, due to the statement "You'll learn how to melt away pounds...". In the Slimming

Advertising Code (Media Council of Australia) it points out that "All advertising which includes a weight loss claim shall conform to the requirements of this Code". This advertisement doesn't.

Furthermore, the Code states: "All advertisements shall be subject to prior clearance by the relevant clearance office. With print media the clearance number allocated shall be displayed within the dimensions of the advertisement. Any advertisement which does not meet these criteria shall be deemed to be in breach of the Code". No relevant Australian Publishing Bureau clearance number was included with the advert.

The magazine replied quickly and reassured me that the advert would no longer be included. And guess who was peeved? The book's Australian distributor (Willow Tree Press) telephoned from Sydney, on 3 November and advised me against 'taking on Tresco Publishers (US)'. I thanked him for the warning.

On his second call he had calmed down somewhat (The greatest remedy for anger is delay - Seneca). I explained my great interest in the therapeutic powers of vinegar and could he please forward any scientific details, as these had never previously entered any public health discussion among health professionals. He offered to send me a copy of the Vinegar Book, guaranteed to answer my questions as there was a list of references at the back of the book.

And the answers were easy to find. They were on the inside front cover and on page 2. Allow me to quote:

"This book is intended as a record of folklore and historical solutions ..."

"No claims are intended as to the safety, or endorsing the effectiveness, of any of the remedies ..."

"... remember, these are only folk remedies, not scientifically proven cures! "

I repeat: "Not scientifically proven cures! " Now, that would have been a useful and honest statement to include in the advert.

Indeed, the author has our welfare at heart. We are told that "The Select Committee on Aging's Subcommittee on Health and Long Term Care (House of Representatives, 98th Congress) calls the marketing of supposed arthritis cures a \$10 billion a year scandal". It is much cheaper to use her arthritis remedy of " 1 teaspoon of honey and 1 teaspoon apple cider vinegar, mixed into a glass of water and taken morning and evening".

I looked at 14 of the references listed in the back of the book. Of these, 11 made no mention of vinegar; rather they referred to nutrients not found in vinegar. Two others referred to vinegar reducing the severity of jellyfish stings. This is well established and the Australian Red Cross First

Aid textbook (Times Mirror International publishers 1995 p170) recommends to "pour vinegar over the stung area to inactivate the stinging capsules".

The final reference discussed the calcium content of soup stock with added vinegar (Hadfield *et al*, *J American Dietetic Assoc* 1989; 89: 1810-1811) where the author comments:

"The decrease in pH due to the addition of 60mL vinegar was insufficient to extract a significant amount of calcium from the bones."

This is not the impression you get from reading page 18 of the book which implies vinegar added to soup "can make a difference in the calcium which is pulled from boiled soup bones". It is certainly bold of the author of the Vinegar Book to include a reference that refutes the very assertions she makes. Misrepresenting research findings is common in nutrition quackery (amino acids and body building is a wonderful example).

The very next sentence from this reference is "Nutrition misinformation can lead consumers into making choices that may result in serious consequences, as would be the case if an individual relied primarily on a vinegar-based soup stock as a source of dietary calcium. This study demonstrates the responsibility of the nutrition or health professional to evaluate nutrition information critically through direct research or thorough review of reputable literature in order to provide the public with the most accurate information available." Precisely.

Footnote:

A complaint was also forwarded to the Advertising Standards Council, the advertising watchdog. Consequently the advertisement cannot be run in its current form. In a phone conversation with the Australian distributor, on 8.12.95 he said to me: "What you've done is a crying shame. You've done a lot of harm to people who could have been cured of ailments."

The Vinegar book has sold 140,000 copies in Australia and, supposedly, 2.5 million worldwide. Oh, why was I born with scruples?

The Vinegar book. Emily Thacker. Tresco Publishers 1994

Questioning Orthodoxy I

Re Harry Edwards' article "Prostate Cancer and Chinese Medicine" (*the Skeptic*, Vol 15, No 4).

As a victim of BPH, or Benign Prostatic Hyperplasia, I have come to the conclusion that there are medications that will offer great relief to most men suffering from mild or moderate BPH without the need for risky surgery.

Unfortunately, some of the medications, mostly standardised extracts from plants or herbs, freely available and popular in Europe, are not approved by Australian authorities and therefore not available locally.

I have been experimenting with Uritiron and Prostatonin Pharmaton. Manufactured by Pharmaton SA, Lugano-Bioggio, the former are obtainable in the Czech Republic, and which contains 25mg extract from African Prunes (*Pygeum Africanum*), 300mg extract from the Stinging Nettle (*Urtica Dioica*), and 10 mg. of Beta Sitosterol.

I have also experimented with Epilobium herbs (extract of *Epilobium parviflorum* - a small willow flower, a popular medication used for prostate/urinary problems in Europe and elsewhere but not recognised in Australia.

I also take vitamin tablets containing Pygeum (extract of African Prunes). However, this has not been found to have a beneficial effect on BPH.

One extract clinically proven to bring about a significant improvement in flow rate, residual urine and nocturia in patients with BPH is Serenoa, better known as Saw Palmetto. (Champault, G., Patel, J.C. and Bonnard, A.M. 1984. *Br. J. Clin. Pharmacol.*, 18, 461-462).

The most effective clinically proven of the phyto-pharmaceuticals would appear to be a product called Cernilton - a pollen extract. (Buck A.C., Cox R., Rees R.W.M., Ebeling L., John A. *Br. J. Urol.*, 1990. 66, 398-404). It is also known to be effective in the treatment of chronic abacterial prostatitis and prostatodynia. (Ohkoshi *et al.*, 1967 and Ebeling, 1986; Buck *et al.*, 1989), and symptomatic relief in patients with BPH (Takeuchi *et al.*, 1981. Becker and Ebeling, 1989).

Cernilton is free of allergens and its two principal active constituents are a water soluble fraction, T-60, and an acetone soluble fraction, GBX. The acetone-soluble fraction was found to consist of 3 Betasterols with a similarity on UV absorption spectra to oestrone and Stigmasterol (Kvanta, 1968).

During clinical tests Cernilton produced a significant decrease in the size of the ventral and dorsal lobes of the prostate gland accompanied by histological evidence of epithelial cell atrophy, a significant fall in total and prostatic acid phosphatase, with a significant increase in the zinc concentration in the dorsal lobe of the prostate and in the blood in mature Wistar rats compared with the control animals. (Ito *et al.*, 1986). A further test confirmed the beneficial effect of Cernilton on BPH. (Buck A.C., Cox R., Rees R.W.M., Ebeling L., John A. Treatment of Outflow Tract Obstruction due to Benign Prostatic Hyperplasia with Pollen Extract, Cernilton. *Br. J. Urol.* 1990, 66, 398-404). See also, Treatment Options For BPH, 1994. National Health and Medical Research Council, Australia.

I have also been trying a recently approved drug called Proscar. Although it effectively reduced the size of my prostate by 25% after 12 weeks, the cost and side effects on my libido forced me to abandon it.

Since confining myself to extracts of Stinging Nettle, saw palmetto, beta sitosterol and occasional cups of tea brewed from epilobium herbs, my prostate feels as good or behaves as well as when taking Proscar and without the side effects.

**Josef Holman
Maroubra NSW**

Questioning Orthodoxy II

Before reading Albert Gallo's reply to Richard Gordon (Vol 15, No 2) I had written but not sent the following reply.

Has it never occurred to 'orthodox' Medicare-funded medicine to enquire of the many people who turn to often expensive alternative medicine, why they do so? Time devoted to listening to the patient may sometimes be a reason but not, I suggest, the only one.

One clue may lie in the low level of reporting by doctors of adverse drug reactions (ca 5000 per year, - I am very sceptical about that!). If patients were asked, as they should be, to make independent input the figure would be much higher. What is dismissed as 'insignificant' by the medical profession can be a major indisposition to the patient. Anyway, the doctor frequently says it can be fixed by an additional drug, which accounts for those considerable numbers of patients ending up in hospital for iatrogenic drug-induced conditions. There is also a tendency for the medical profession to dismiss patient concerns about changes they perceive in their bodies or minds when taking prescribed medicines.

I am in the position of having had major adverse effects to the three main anti-hypertensive drugs, as well as to many other drugs. These effects were medically verified and the drugs were withdrawn on medical advice. None reduced my hypertension. I have now been told to choose the one that adversely affects me the least! This for medication I am assured I shall need for the rest of my life. These drugs were so disastrous that expensive alternative medicine is worth a try. It would be cheaper and more helpful if I could find a doctor who is prepared to give alternative treatments a go - especially those not requiring drugs. Such a doctor would also have access to sophisticated diagnostic tools that are denied to the non-medical practitioner.

The reality is that orthodox drug-orientated medicine has failed many people. Not surprisingly they feel rather desperate about it. What else can they do but try alternative, non-drug, therapies?

As for making claims that are not always fulfilled, try reading the ads in the medical journals. I am particularly sceptical about the anti-hypertensive ones! If some of the conditions they have produced in me had been the result of 'alternative' therapies, the AMA and the NHMRC would have been screaming to have them banned or, as is their other ploy, to have them brought under the control of the medical profession - as was suggested for the vitamins - where, presumably, they will no longer harm people.

**Denise White
Dianella WA**

FEATURE

Medical Response I

Stephen Basser

According to Denise White the rate of reporting of adverse drug reactions by 'orthodox' medical practitioners is disappointingly low. She also states that these same doctors may not readily consider an adverse drug reaction as the cause of perceived changes in the bodies or minds of patients taking prescribed drugs. Even if they do, she says, the answer will often be to prescribe another drug.

As broad generalisations I see no reason to disagree with Denise's views. Adverse drug reaction (ADR) reporting in Australia is far from perfect even though we have an 'in principle' excellent ADR reporting scheme. Not all doctors will consider non-pharmaceutical solutions to their patients' problems and many patients, particularly the elderly, are victims of 'poly-pharmacy'.

The problem I have with Denise's letter is she fails to apply the same criticisms to the 'alternative' practitioners, thereby suggesting that she has already made up her mind about the therapies they use.

How many ADRs are reported by 'alternative' practitioners each year? According to Denise when 'orthodox' practitioners fail to report ADRs they are under-reporting the true number, but the impression is given that if alternative practitioners (who don't use 'drugs' remember) are not reporting them it's because they aren't occurring.

Denise has relied upon the artificial and scientifically invalid distinction between 'drugs' (nasty, and used by 'orthodox' practitioners) and 'non-drugs' (natural, and used by alternative practitioners) to support an ideological position.

If a patient experiences changes in their body or mind whilst on 'drugs' then according to Denise an ADR must be considered. Why doesn't the same logic apply to patients taking 'non-drugs'? The only reason I can come up with is if you have decided in advance that the latter will always be safe and non-toxic. Why consider an ADR when you believe they don't occur?

Now I suspect that if an 'orthodox' practitioner explained to Denise that the substances he/she was using were always safe and non-toxic she would be demonstrably sceptical, yet her scepticism appears to be put on hold when the name of the practitioner is changed to 'alternative'. Is Denise claiming that significant adverse reactions have not

been caused by substances such as herbs or vitamins?

As I have noted elsewhere in this article, a therapeutic agent that has been shown to have a positive risk/benefit ratio in trials involving large numbers of patients may not prove to be helpful in a given individual. The fact that Denise has not derived any benefit from particular medications does not invalidate their use in others. Many patients are prescribed the medications Denise was unable to tolerate and derive considerable benefit with few if any side effects.

Many of Denise's criticisms are valid, it's just that she is overly selective about whom she directs them at. Though it is difficult, particularly when one's own experience seems so 'certain', we must never allow dogma or ideology to obscure our objectivity.

Josef Holman has also fallen into the trap of extrapolating from personal experience. He experienced adverse reactions when taking an approved pharmaceutical agent (Proscar) and as a result recommends patients with benign prostatic enlargement take the 'natural' therapies Cernilton and/or Serenoa.

The assumptions made by Josef are that virtually all patients on Proscar will have adverse effects and that virtually all patients who take Cernilton/Serenoa will neither have adverse effects nor require Proscar (because they are so effective).

These assumptions are invalid. Proscar is taken by many patients who experience only minor side effects, and neither Cernilton nor Serenoa have been shown in clinical trials to be as effective as Proscar in the management of benign prostatic enlargement. In addition, whilst generally well tolerated, some patients taking Cernilton and/or Serenoa do suffer adverse effects.

If the point of Josef's letter had been to investigate scientifically valid alternative means of managing prostatic enlargement for patients who are unable to tolerate Proscar then he would have been partly successful. Though I disagree with the strength of the conclusion Josef reaches regarding Cernilton's usefulness, I would agree that the evidence supports at least considering its use in patients who have not benefitted from other treatments, or who do not wish to undergo surgery.

This does not appear to be the point of his letter, though, and, like Denise White, Josef reveals himself by demonstrating that he too believes there really is a distinction between nasty 'drugs' and nice natural 'non-drugs'. His faith is further revealed towards the end of his letter when he expresses the view that 'herbal medicine or non-drug curative medications' will soon be made available for a range of conditions including 'incurable health problems'.

Josef rejects Proscar not because a review of the scientific literature led him to the conclusion that it is ineffective or too dangerous, but rather because it's a drug. If he had been scientifically 'honest' he would have concluded that whilst not useful for him Proscar is an extremely effective drug for many patients, though side effects mean it is not suitable for everyone.

Finally, all patients with symptoms of prostatic enlargement, regardless of what treatment they may end

up choosing, must see a doctor so that testing for prostatic cancer can be performed. Self treatment with the herbal remedies mentioned in Josef's letter without such testing could lead to a disastrous outcome.

Alberto Gallo quite rightly responded sceptically to an individual practitioner who, it seems, failed to understand the significant quality of life improvement patients with arthritis can achieve through lifestyle changes (particularly losing weight and engaging in some regular non-strenuous exercise). He also chose wisely in relying on modern surgical techniques to reattach a body bit that had wrestled with a power tool and lost.

The error he has made is to rely on his own personal experience to try and support a general proposition. This is the old "my grandparent is 95 and smoked all their life" fallacy. As any scientist knows, the individual anecdote proves nothing. If I can show Mr Gallo (as I easily can) someone who died in a car accident even though they wore a seat-belt, will he argue that seat-belts should not be worn? I would certainly hope not.

We know that patients with injuries such as the one sustained by Mr Gallo are at risk of developing an infection. We also know that the use of antibiotics reduces this risk. In a study of two populations, one treated with antibiotics and the other not, we would expect (and we observe) the total number of infections to be higher in the untreated group.

Of course there will be individuals in the untreated group who do not get an infection, and individuals in the treated group who do, but these cases taken out of context do not enable us to decide whether, on balance, patients are better off from using or avoiding antibiotics.

It is clearly absurd to follow the advice of Oliver Wendell Holmes, and cast out 'all the drugs'. There are many individuals with diabetes, for example, who are alive and well living full and active lives because of insulin therapy. Is this the type of drug Alberto Gallo wishes to 'cast out'?

I am not asserting here that all existing and new drugs should be embraced unquestioningly. As I have stated on more than one occasion (no rude comments from the Victorian committee please!) what I believe is needed is agreement that there must be a process for deciding which ones to cast out and which ones to keep. That is, all drugs and devices should be tested for safety and efficacy, and there should be no exceptions based upon the use of spurious labels such as 'alternative', 'complementary', 'natural', or 'orthodox'.

This process, though, no matter how 'strict', will still not provide a guarantee that an individual patient will respond to an individual drug. As in most areas in which science plays a role, it all comes down to probability.

The principal scientifically valid conclusion from Alberto Gallo's experience is that he was lucky. It is incorrect to use his experience to say that for future similar injuries in other people antibiotics will not be required. Whilst I defend Mr Gallo's right to choose not to follow the advice given by any health practitioner, I suggest he be a little more careful about relying on his own experience as a guide for others. ■

FEATURE - ALTERNATIVE THERAPIES

Medical Response II

Richard Gordon

I wish to comment on Denise White's letter and also to reply to Alberto Gallo (*Letters* Vol 15, No 4) who criticised my article "Alternative Medicine" (Vol 15, No 2 p43).

Firstly, Mr Gallo, describes himself as a skeptic! He criticises me for mentioning astrology and dowsing as methods used by alternative practitioners. He seems unaware that these practitioners use astrological readings and dowsing to diagnose disease. Dowsing, in this case, is used to 'divine' disease by holding a pendulum or divining rod over the patient or a sample such as hair (for diagnosis by mail!) and interpreting the swing of the rod or pendulum to make the diagnosis.

Mr Gallo complains that I confused the terms Complementary and Alternative. I suggest Mr Gallo and any others who don't know the difference should consult their dictionaries. There are many complementary therapies currently in use. Some have been shown scientifically to improve health or allay disease and others at least have a rational basis. It is non-rational alternatives such as psychic healing and aura readjustment etc which, by calling themselves complementary, hope to obtain legitimacy.

He then goes on to describe how he refused treatment to prevent Tetanus and possible wound infection because of his admiration for the craft of surgery. I wonder if needle-phobia may have played a part? Mr Gallo's final jab at orthodox medicine is a quote from a speech given by the great physician (and sceptic) Oliver Wendell Holmes. This seems appropriate to Mr Gallo as Holmes' speech was made in the middle of the 19th century when there was little to distinguish between orthodox and alternative medicine except for the former's development of the scientific approach.

Mr Gallo's approach to scepticism is shown by his letter to be somewhat selective in that, on the one hand he scoffs at treatments which are scientifically based, while on the other he professes to follow (and I quote from his letter) "'alternative medicine' a concept which is gaining followers in this part of the world".

Denise White, in her letter points out some obvious weaknesses in the current practice of medicine, adverse drug reactions, failure to empathise with patients' concerns, and extravagant claims made in pharmaceutical ads. She has suffered because of the first two and quite rightly concludes that non-drug therapies should be given a try.

With respect to hypertension (Ms White's problem) a number of non-drug therapies are used. These are salt restriction, weight control, exercise, relaxation/meditation, and biofeedback. Unfortunately these manoeuvres generally fail because of the difficulty in maintaining the regimen (just ask Barry Williams) and even when strictly

adhered to will not reduce blood pressure in a majority of patients. In her final sentence Ms White says that the AMA and the NH&MRC would treat adverse reactions to alternative treatments differently to those of orthodox treatments. This is not only insulting to the men and women in those organisations who are devoted to caring for people and to consumer protection but is also untrue.

On Josef Holman's contribution concerning the treatment of BPH (benign prostatic hyperplasia). He raises several issues in regard to plant derived medications, herbal remedies, 'natural' products and the cost of orthodox treatment. He complains that there are products which may be used for the treatment of BPH which are cheap and are available in Europe (specifically the Czech Republic where the requirements for registration of a therapy are not known to me) but not approved in this country.

Before dealing with approval of medications, it should be noted that most, if not all, of the products he names are plant derived oestrogens and thus have their effect by mimicking the action of oestrogen on the prostate. There are already a number of oestrogenic and anti-androgen products available in this country which are approved for the treatment of BPH, Proscar being just one. However it is their very effectiveness that causes their main side effect ie demasculinisation, as the hyperplasia of the prostate is directly related to the effect of testosterone. Proscar and other similar drugs currently under development are supposed to act specifically on the prostate in their anti androgenic effect. Unfortunately this has not been fully realised. The reason that the products Mr Holman describes are not available is either that the producers cannot afford to prove the efficacy of their medications or that the medications are not effective enough to pass the test.

The cost of gaining approval for a new drug to be ethically marketed in this country is a two-edged sword. The down side is that small manufacturers and drugs which are likely to have a small market are discouraged and the community may be denied a useful medication. Currently being examined are ways of granting international approval rather than approval being gained one country at a time. The upside is that the community is protected from an avalanche of unproven and possibly dangerous drugs (who would want to go back to the days of Thalidomide?).

In summary, while I sympathise with Mr Holman in his attempts to find a solution to his piddling problems, I still think that his best chance of a solution is in science, a science which I am sure is closely studying all possible treatments including those derived from plants.

It is disappointing to see members of our own organisation repeating irrational beliefs of a medical conspiracy. ■

INVESTIGATION

Is this a Case of Artful Pretence?

Harry Edwards

Necromancy: *The art or practice of pretended communication with the dead. Sorcery. Witchcraft. Black magic.*

Any objective assessment of one claiming to communicate with the spirits of the dead will be profoundly deficient in supporting evidence. Famous mediums such as Henry Slade, Nina Crandon, Helena Blavatsky, Leonore Piper, Helen Duncan¹, and Doris Stokes to mention a few, have all been exposed as frauds. Examination of the historical evidence, therefore, raises doubt that any credence can be accorded any present day medium making a similar claim.

It seems to me these days, that the mere thought of a sceptic hovering in the background, is anathema enough to make some psychics choke on their chakras. Following the publication of "Necromancing in the Dark" (Vol 15, No 2 p53), in which I looked at the antics of one Bridget Pluis, the star of 2UE's *Cosmic Connections* and a clairvoyant columnist for the *Women's Weekly*, I was contacted by the producer of *Today Tonight*, (Channel 7) and asked if I would like to attend and comment on one of Bridget's performances at an RSL club. I agreed, but cautioned that proponents of the paranormal were somewhat averse to those who may be inclined to ask awkward questions about their claimed psychic abilities, and expressed the doubt that Australia's answer to the late Doris Stokes would agree.

About two weeks later I was contacted again and had my assumption confirmed - Bridget flatly refused to have me in the vicinity while she performed. Why not? I asked myself, perhaps it's because a sceptic's negative vibrations cause static on the frequency she uses to contact the spirits of those passed on. Or maybe the auras of those she was reading would become distorted in my presence and give faulty impressions. Or was it simply that it would be bad for business to have someone publicly question her alleged mediumistic ability? I suggested that if one of Bridget's performances could be video taped, I could view it and comment, thus achieving the same result. On September 25, I passed judgement on such a tape during an interview at the Channel 7 studios.

Divine intervention?

The performance was held at an unnamed RSL Club, before an audience of over 400, predominantly middle aged and elderly women, many of whom had come expecting to receive messages from their departed. At \$10 per head, this represents an hourly rate enough to make the average QC look like a charity worker.

Introduced as Australia's highest-profile psychic, the 54 year old grandmother from Yass waltzed down the well trodden road of other mediums who have claimed to

communicate with those allegedly dwelling in the hereafter, and she was totally in command. The smiles and nods of affirmation far outnumbered the occasional apologetic shaking head. The latter were simply ignored, passed over or utilised to the medium's advantage. My general reaction was a mixture of amazement that people could be taken in so easily and, when seeing an elderly and recently bereaved lady brought to tears by a reference to her late husband, sympathy and disgust.

Bridget claims that her role is as an interpreter between this world and the next and that she is an instrument of a higher power - someone who takes over her spirit and soul to enable her to deliver messages from beyond the grave to her fans. She claims to hear a voice in her head which, if true, may well be a mental condition for which psychiatric treatment should be sought.

This of course is the manner in which all so-called channellers abrogate any responsibility for what they say - the "wisdom" dispensed allegedly comes from an omniscient source. If any credence could be had in the claim of a divine hot-line, such a facility would be of enormous value in solving murders - simply contact the deceased victim and ask for information. As Bridget appears to have no trouble in instantly contacting the spirits of anyone and everyone without any information other than a Christian name, why is she not putting her talents to better use than music hall entertainment?

Unfortunately, in some instances "hearing voices" has a down side - those heard by Joan of Arc, for example, were responsible for her eventually being burned at the stake, and many are the victims of psychotic murderers who killed at the behest of their "voices." On the other hand, as in the case of Oral Roberts, they can be money spinners, Roberts' collecting \$8,000,000 after God told him to ask his flock to cough up!

Modus Operandi

Bridget's *modus operandi* was nothing new and as transparent as the Emperor's new clothes. She would pluck a name out of the air and then look around to find someone who possibly had some affinity with that name. Thereafter, it was a game of question and answer with Bridget asking the questions and the nominee supplying the answers. Exactly the reverse of "psychic" ability.

Most individuals would have living or dead parents, uncles, aunts, brothers, sisters, cousins, nieces, nephews and countless friends and acquaintances. Therefore, a gathering of 400+ people would provide a data bank in excess of ten thousand names with some form of association on which to build. On many occasions Bridget will say that the name she has come up with could be the first or

second name, so doubling her data bank. Thus if she tried to associate a name with a particular person and it proved to be wrong, she could rest assured that someone else in the room would acknowledge the name giving her the opportunity to change tack and continue her line of patter. At the RSL meeting she came up with the name "Harry" (maybe Harry the sceptic was on her mind!) and approached a very elderly woman saying, "Harry's hubby? (pause) He's passed over? (pause - the woman nodded and tears appear in her eyes) How long ago darling?" "Seven months" (woman bursts into tears). "Seven months, well he's done a very good job to get back so quickly."

Achieving this type of reaction is acclaimed by Bridget as "consoling the bereaved." "If you bring them to tears it helps relieve all that pent up hurt", she says.

But is this evidence of communication with the departed? I think not. The lady was unaccompanied by a male, wore a wedding ring, and would have been in her late seventies. Although one could safely assume that she was a widow, Bridget "the clairvoyant" not only had to ask whether Harry was her hubby, but also whether he had passed on! And then, "how long ago?" She told the woman nothing new, gave her no consoling message, and merely upset the lady by rekindling fond memories of a recently lost loved one.

Inanities were commonplace. One lady in the audience was told that she was a "fellow" in a previous life! Just that, no more, no less. The reaction? Not how do you know or what evidence can you give me - just a silly grin and a nod!

It is very evident throughout Bridget's club appearances and listening to her on 2UE's *Cosmic Connections*, that no information is ever forthcoming to confirm her claim to be able to communicate with the dead. The "messages" are confined to banalities such as "Hubby is well (up there?) and sends his love." "Mother is with friends (on the other side?) and is happy", or "Grandma is looking after you." At best, the only clue she has is a Christian name or a relationship to work with, and in some cases, only a star sign with which to identify those in the nether world. Even when given more than enough detail, as reported in "Necromancing in the Dark" the "high profile psychic" didn't have a clue. Furthermore, I have yet to hear an enquirer on her radio programme or to read of one in Bridget's *Women's Weekly* column, give sufficient detail to identify the departed or to ask any questions that would authenticate the alleged respondent. Yet none of this appears to phase her fans. Members of the audience interviewed after the show all believed her to be genuine.

Moral, ethical and legal ramifications

The TV segment was of six minutes duration out of which I was allotted fifteen seconds to comment. Despite my being limited to a token appearance, and assuming the chronological sequence of events on the tape to be correct, Bridget was given a second bite at the apple when interviewed on her property at Yass. Asked to comment on the sceptical attitude, Bridget had this to say: "If it makes them (the Sceptics) feel good, it's not their time yet to be enlightened ... I don't have to defend myself, it's my job. If they don't like it, then they have a problem." Well

Bridget, I believe I'm enlightened enough to question one who makes an extraordinary claim such as yours, and am of the opinion that anyone who appears to practise the art of deception should be obliged to defend what they do in order to satisfy the moral, ethical and legal expectations of our society. Failure to honour that obligation serves only to suggest that the claims made are indistinguishable from those of a charlatan.

Regarding the latter expectation, that of the legal requirements under the Trade Practices and Fair Trading Legislation, it would seem to me that anyone advertising their ability to receive messages from the dead, and charging a fee to pass on those messages, is sailing very close to the wind. Under Section 178BB of the Crimes Act, "obtaining money by false or misleading statements which are known to be false or misleading" could render that person liable to imprisonment for five years. In the absence of evidence to support Bridget's claim that she can receive messages from other than the live and conscious, she can only be perceived as advertising a non-existent service.

Past failure

As an aside, Bridget Pluis' past record as a psychic is unimpressive to say the least. While living in Canberra and practising as a psychic in 1986, 16 of her predictions for that year were published in the January 1986 issue of the *Canberra Times*. After excluding two of the predictions that were either too vague or too predictable, she got one hit out of the 14, and of that two part prediction one part was obvious and the other part wrong! Bridget's psychic choice to win the 1995 Melbourne cup (broadcast on radio station 2UE the Sunday evening prior to the race) never ran a place. I wonder how many of her claimed 200,000 radio fans did their dough?

What harm does it do?

One question frequently asked of Sceptics, not only in respect of necromancing but of other branches of the paranormal, is "what harm does it do?"

Confining the answer to the subject under discussion, apart from deceiving people and taking their money under false pretences, psychics engender a false trust in themselves. In the first instance, that of my enquiry to locate my long lost cousin (Necromancing in the Dark,.) had I been a believer, I could have spent an enormous amount of time and money in North Queensland in a futile search for someone permanently resident in Zimbabwe.

Typical of the questions asked of our clairvoyant on *Cosmic Connections* are, "My house has been up for sale for three months but there have been no enquiries, when will I sell it?" "My husband is unemployed, when will he find work?" "Do you see a relationship for me in the future?" "Will I travel?" "Will I pass my HSC exam?" Bridget obviously cannot answer these questions with any authority, she has to respond with guesswork, or a common sense analysis of the problem or situation and embellish it with words of encouragement. While this may have the effect of ameliorating the enquirer's anxiety, it does nothing to encourage reliance on their own decision making and problem solving abilities. It is also a sad indictment of the

level of her audience's intelligence. Thus, people come to rely on psychics and clairvoyants for advice, and in some cases, become dependent on them. Therein lies the danger. Advice is being sought from those with no professional training or qualifications, and such advice is no better or worse than that given by your friendly bartender or next door neighbour. Should that advice not turn out to be beneficial, few people seek recourse at law due largely to embarrassment.

Some questions our "clairvoyant" sagaciously avoids answering or committing herself to indicate that she is aware that she can be caught out, as in the case of a person seeking information on a lost object or medical advice. Sometimes Bridget will hazard a vague guess, on others, a straight-out "No." I note that there is never any adverse feedback on subsequent radio programmes which would suggest that Bridget is not psychically endowed.

One is left to speculate on the motives of the print and electronic media in promoting people claiming extraordinary powers, and I wonder whether they realise that they are encouraging their audiences to believe in the untenable and to rely on dubious information.

It could be argued that those with a proclivity to believe that communication with the spirits of the dead is possible would not take much persuading to believe in the existence of angels, demons, gods, the devil and other metaphysical improbabilities, assuming they don't already. A situation common in the Middle Ages, when thousands of innocents were condemned to painful deaths by those believing in the superstitious nonsense called witchcraft.

Encouraging irrationality has nothing to commend it, and is certainly prejudicial to the efforts of those striving to make Australia the "clever country."

\$US550,000 up for grabs

Recent pledges made by sceptical groups around the world have made available a sum in excess of \$US550,000 to be awarded to any person who, under mutually agreed controlled test conditions, can prove the truth of any paranormal claim. As this includes the alleged ability to communicate with the spirits of the dead, requiring only a ten second question and answer test, any reticence to accept such a magnanimous offer by one who claims "it's her job", can only be viewed with extreme suspicion. (see following story)

The bottom line

In my opinion, a refusal to be a competitor in a test in which the potential exists to earn US\$50,000 per second would be a tacit admission by one seemingly performing an artful pretence, that they are unable to substantiate their claim to communicate with the spirits of the dead.

¹Helen Duncan was the last person to be prosecuted (in 1956) under the Witchcraft Act of 1735, subsequently replaced by the Fraudulent Mediums Act of 1951. She was sentenced to nine months in Holloway prison.

Prior to publication, a copy of this article was sent to, and comments invited from Bridget Pluis; the Editor-in-Chief *Women's Weekly*; *Today Tonight*; and the producer of 2UE's *Cosmic Connections*. To date there has been no response. ■

The 2000 Club

The Amazing Randi's Amazing Offer

Barry Williams

Readers will be aware that for several years Australian Skeptics have had a standing challenge to all claimants of psychic or paranormal powers that if they can perform as they claim they can, under mutually agreed controlled tests, we will give them \$30,000. The idea originated with our good friend, the amazing James Randi, who has been offering \$10,000 on similar terms for many years.

Now James has upped the stakes for the challenge. He has instigated the **2000 Club** and has obtained signed pledges from over 200 people around the world (including Australian Skeptics and some of our individual committee members) and is now offering (at time of writing) over US\$550,000 to a successful claimant.

Astonishingly, both James Randi and our committee have found that the bulk of the people who believe (or at least claim to believe) that they are the possessors of psychic powers are more than a little reluctant to have their claims evaluated under controlled test conditions. In our experience, the small minority of believers who do seek our money seem to expect that we will pay up, based on their own unsubstantiated word. The remainder, when taxed with the fact of our offer, usually reply that they are not in it for the money, claiming their abilities are used "for the good of humanity" (although most charge for their services) or justify their refusal to be tested by inventing elaborate schemes as to why we would not pay, even when they have proved their case. This is untrue.

Some ask us what the test will be, without divulging what it is they claim they can do. As should be obvious, we require a specific claim of ability before we can devise a test of that claim. Someone claiming the ability to levitate would undergo quite different tests from someone claiming to accurately predict the winners of horse races.

When asked to be specific, most casual inquirers fail even to get back to us with any claim at all. They seem to be entirely unfamiliar with the concept of 'mutually satisfactory tests', claiming, without evidence, that it is a get-out clause for us. All we usually ask is that we agree on a procedure that the claimant agrees is a fair test of his/her abilities and that we agree is free from the possibility of fraud, misinterpretation or manipulation.

We reiterate our offer to anyone who has, or believes s/he has, a psychic ability. Contact Australian Skeptics with written details of your claim and let us see if we can agree on a fair and mutually acceptable test. You could win \$30,000 right away and, if you really are psychic, we will put you in touch with James Randi's 2000 Club so you can try for the big reward. Just think how much good you could do for humanity with \$A750,000. ■

COMPETITION

Obliquity Prized

Barry Williams

In Vol 11, No 1, back in 1991, we invited our readers to submit their own explanations for some of the “proverbs, cliches, axioms, truisms or givens that we encounter in everyday life” and offered a prize for the answers that best conformed to “originality, humour and obliqueness of thought”.

As our numbers have doubled since 1991, we think it is time to run another competition along similar lines. This time, the prize we offer will be a copy of our compilation of the first five years of *the Skeptic*, In the Beginning, or Harry Edwards’ latest *opus (magnum or minum* we leave to the reader) A Skeptics Guide to the New Age.

As many of our readers may not have seen the examples of the way their fellow Skeptics think, we will list a few of the items we published in 1991. Surprisingly, these ideas are still as fresh (or rancid) as they were five years ago.

First prize was shared between two subscribers. One of them was Dr Phil Millard, a retired medical practitioner, who really should have known better. This is an example of Phil’s logic:

Parkinson’s Law states “Any job, project or undertaking will expand in complexity and duration to fill the time available for it”. Why?

The prospect of having time and space to carry out a job carefully and without haste engenders a fever of delight and enthusiasm, and it is that heat which, in accordance with the laws of thermodynamics, will naturally expand the job to fill the available time.

The other winner was Simon Saubern, then a science student. He must have been a real trial to his lecturers. Simon enlightened us as to some of the more obscure effects of quantum physics:

Why do socks disappear in the washing machine?

During the spin dry cycle of the washing machine, the clothes tumble around quite violently. Occasionally an item of clothing is compressed by the tumbling and the weight of the other clothes below a certain minimum size known as the event horizon. Once this occurs, the item of clothing collapses into a microscopic black hole.

Smaller objects such as socks and hankies turn into black holes more readily because they are already close to the event horizon radius. Once a single sock has collapsed into a black hole, it will remain in your washing machine, sucking in the odd handkerchief, and slowly grow. When it gets big enough to start swallowing tablecloths and sheets, it is time to sell your house and move overseas.

What is antimatter?

The concept of ‘antimatter’ is one which has puzzled philosophers and scientists for centuries. Even today

antimatter is not fully understood. However, the best way to explain what is known of antimatter is by example. If you dig a hole in the ground, removing the dirt (matter), the absence of dirt in the hole is in fact antimatter. This explains why the hole disappears when you put the dirt back in (mutual annihilation). The hole in the middle of a donut or a Lifesaver is another example of antimatter. The small round blobs of donut batter that are sold as ‘donut holes’ are in fact the anti-hole in the centre of an anti-donut.

Why do the tough get going when the going gets tough? When the going gets tough, Newton’s Law of the Conservation of Opposites states that the conversion of going into tough must be balanced by an equal but opposite conversion of tough into going. Therefore, at the same instant as the going gets tough, the tough must get going.

Then we had these contributions from Doris Leadbetter which arrived late because she claimed that our closing date of April 31 was invalid. We published them regardless of her denial of the Doctrine of Editorial Infallibility.

Why does water go down the plughole in a clockwise direction?

Or anticlockwise, if one lives where it does? It is all to do with the rifling in the pipes. Pipes are made using plumblines, which are dropped into the protopipe to ascertain in which direction the natural magnetic force is, as it were, precessing. Rifling is done in accordance with the direction indicated by the plumb line. Otherwise the bath would refill, you see? Incidentally, we also get the word ‘plumbing’ from the use of this device, which can also be used to ascertain whether an unborn child will be female or not, by dangling the line over the mother’s frontage. It works less well when dangled over the father’s frontage. See Sexual Preferences.

Why does every cloud have a silver lining?

The price of gold is artificially inflated, so as to maximise several things which we won’t go into here. As gold costs more than silver it is clearly out of contention in the lining business. Silver is cheaper and it matches better with the moonlight.

Why do dogs howl in moonlight?

They also howl in sunlight but cause less nuisance then. It is merely a matter of observer-error that suggests otherwise.

This was followed by a contribution from a correspondent signing himself "I'm Mandy the Moth", whom we strongly suspected of being a pseudonyminous entity:

He who laughs last, laughs best

This is a reference to the daisy-chaining of energy. Energy can be added to, in a series, leading to the greatest

accumulation of energy being in the last link on the chain. This is called the "Quilt Effect", similar to communal peasant quilt-making activities. It is similar to, but not the same as, Rupert Sheldrake's morphogenetic theory of causative formation (or formative causation, or formative formation), which is that "Anyone who laughs after the first laughs, laughs at exactly the same thing and in exactly the same way" which is evidenced by everyone having the same sense of humour. There is a further version of the same basic epigram, to wit, "He who laughs last, laughs last", which is indicative of the profundity, but not the accuracy, of creation scientists.

You never miss the water 'til the well runs dry

This is patently obvious to anyone who has fallen down a well. A well is so narrow, and the water so conveniently malleable as to perfectly fit the well contours, that unless there is no water in the well there is no way you can miss it.

Ezekiel Scorpio, Science Advisor to The Creationist Astrology Foundation, whose *bona fides* we had no reason to doubt, sent in these profundities:

The sun never sets on the British Empire

The sun is a globular collection of gas which radiates energy as a result of thermonuclear reactions. Its temperature ($15 \times 10^6 \text{K}$ at the core, $5,800 \text{K}$ at the surface) precludes the formation of complex molecules such as gelatin or pectin, thereby making it highly improbable that the sun will set under any circumstances.

The grass is always greener on the other side of the fence

This is one of the successful predictions made by the quantum theory of the wave nature of light. All paling, wire and other open structure fences are, by international convention, constructed with the gaps conforming to an exact multiple of the wavelength of green light. With light shining through the fence, the green frequencies form an interference pattern and enhance each other, while all other frequencies will tend to cancel out. Thus grass on the other side of the fence will always appear to be greener.

Note: This statement is *not* true for brick or other solidly constructed fences.

Further examples of this sort of Skeptical logic appear in Vol 11, Nos 2 and 3 - masochists can purchase copies from Australian Skeptics. Strangely, all of these contributors remain as subscribers and have not been murdered by those near and/or dear to them.

Now is your chance to enhance your reputation (for good or ill) and have your innermost thoughts about the nature of Nature indelibly preserved for posterity in Vol 16, No 2. Send us your contributions to arrive no later than May 7.

The best examples of original thought will be determined by the Editors and such other committee members as they can dragoon onto the judging panel. As always, the judges decision will be final and any correspondence entered into in regard to such decisions will be met with an abusive (if not violent) response. ■

Get into the Green and Gold

No, this is not an invitation to play at second slip with the Australian World Cup XI, nor to front up for training with the Wallabies. You don't have to be tested for anabolic steroids or performance boosters to get into the Green and Gold. You don't even have to be fit.

Ever alert to the needs of our loyal readers, who have for years been stacking up their back issues of *the Skeptic* next to Grand Dad's ashes on the mantelpiece, your humble servants at Skeptics Central have scoured the length, breadth (and even depth) of the land for the very best method of keeping safe your invaluable records of a decade and a half of Skeptical endeavour.

Now we can report that our efforts on your behalf have not been in vain.

From a secret laboratory in a suburb of Sydney has come an environmentally friendly plastic (no animals were injured in its production) in an environmentally affable colour that can only be described as Green, which has been carefully moulded around environmentally amiable cardboard stiffeners, to form what are known to the *cognoscenti* as 'binders'.

Skilled artisans from the Black Forest have exercised all of their inherited expertise to emboss the legend *the Skeptic* (not once, but twice) on each hand-crafted work of art. Only the finest and environmentally passionate gold leaf, from the lost mines of Solomon, has been used in this labour of love.

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These binders will adorn your library shelves, nestling between your original Shakespeare Folios and your rare first editions of *Chariots of the Gods?* and will yield nothing to these volumes in taste or beauty.

And what will this exemplar of late 20th Century culture set you back? No, not \$2,000 - not even \$29.95.

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REVIEW

Totalitarianism and Truth

James Gerrand

Albert Speer - His Battle with Truth

Gitta Sereny; Macmillan. 1995. 757pp. hbk \$39.95

When receiving this Christmas gift I wondered how I was going to find the time to get through its 750 pages; anyway I probably knew it all from reading Albert Speer's own "Inside the Third Reich".

Well, I can tell you it is a must for all Skeptics to read so as to understand how a generation of Germans could be led astray to bear responsibility for the dreadful crimes that Hitler's Nazism perpetrated.

The book is also a refutation of the post-modernism credo that there is no truth, only a subjective view based on a person's social and cultural values. There are certainly no absolute truths, even in that most truthful of disciplines, science, but there are degrees of probability. Here we have a distinguished journalist spending 18 years researching the evidence for her opus, including eight years delving into the available archives and interviewing all available people who had any important role in the Speer saga. The result is the most likely account of the rise and fall and rise of Albert Speer and of major aspects of Nazism.

As the title suggests a major theme of the book is how a key supporter of Hitler and his Nazism could claim not to know of the genocide practised against all enemies of the master race - Jews, communists, gypsies, non-aryans.

Sereny traces the rise of the young architect Speer who happened to be in the right place and the right time to carry out work for the Nazi Party when it was beginning its rise to political power. Hitler recognised Speer's capability and in 1934 appointed him as his chief architect responsible for the many grandiose structures Hitler had in mind for his 1,000 year Reich. Speer also formed a close relationship with Hitler because of their shared interest in architecture.

It was largely because of this tremendous career opportunity that Speer closed his mind to any questioning of the darker side of Nazism. There was also the euphoria from the political success achieved by Hitler in the early days of National Socialism - unemployment solved through public works and rearmament, inflation beaten through all-pervading financial controls. As well, Hitler, through his brilliant Propaganda Minister Goebbels, very skilfully kept the population in ignorance of any criminal actions of the Party. A factor not mentioned by the author for this selective blindness is the capacity for many people to compartmentalise their minds. Thus some scientists can believe in religion; they do not use the scientific part of their brain to seek the evidence for their religious beliefs stored in another section.

The author's major conclusion for Speer's not knowing the truth about the genocides and other atrocities is that

"Pity, compassion, sympathy and empathy were not part of his emotional vocabulary". In brief, he lacked concern for the human race. This lack led him to concentrate his efforts on achieving success, first through his architectural achievements and later his brilliant organisational performance as Minister for Armaments. He did oppose Hitler's policy of a "scorched earth" for Germany when Hitler realised the war was lost but this was on the rational grounds that such a policy was not in the interests of a post-war Germany.

The principal lesson to be learnt from Speer's career is that no matter how rational, scientific and overtly successful a person may be, if he or she lacks concern for others then such activities may well lead to bad ends.

This detailed book has much of interest. Here are the major items that were revealing to me.

Hitler had charisma enough to put a spell on his associates so that they placed their trust in him. He was good at selecting leaders to carry out his mission such as Goebbels as Propaganda Minister and Speer as Armaments Minister. His principle deficiency was not understanding foreign affairs. He had great hopes that the conservative forces in the UK and later USA would side with him against communism and against the USSR. Perhaps his greatest mistake was declaring war on the USA when Japan attacked the USA at Pearl Harbour. President Roosevelt, not wishing to see a Nazi Europe, had been supporting the UK against conservative opposition. Such opposition now vanished.

The greatest revelation was the evidence for Hitler's genocidal program. It began with the conquest of 'their' half of Poland in 1939. Himmler created special forces (Action Groups) under Heydrich who were trained for murder rather than war. The former Polish state and its varying races - Poles, Ukrainians, White Russians, Jews - were to be broken up into the largest possible number of parts and fragments. The racially valuable elements were to be extracted and the rest left to die.

But the first order for genocide murders was by Hitler in March 1941 to his army generals. As part of his goals from the forthcoming assault on the USSR, "The Jewish-Bolshevist intelligentsia must ... be eradicated". Himmler and his SS were given the powers to do this in Commissar Order 13/3/41.

Such a genocide campaign against the USSR commissars, Jews and intelligentsia served as the pattern for the later genocide of the European Jews. As set out in *Mein Kampf*, Hitler's first approach to the Final Solution was to be rid of the Jews in Germany and Austria by emigration. But other nations, including the UK and USA

continued p 46 ...

REVIEW

That Shroud Resurrected?

Alan Towsey

The Jesus Conspiracy: The Turin Shroud and the Truth about the Resurrection.

Holger Kersten & Elmar R. Gruber; Element Books, Dorset, 1994 \$34.95, 373 pp.

The Turin Shroud Is Genuine. The Irrefutable Evidence.

Rodney Hoare: Souvenir Press, London, 1994 \$29.95, 188 pp.

Just when you think the 1988 Carbon 14 tests on the Turin Shroud proved it once and for all a fake, along come these two books to stir the pot again!

Both books claim the Shroud is genuine, dates back to the first century CE and almost certainly was wrapped around the body of Jesus. Both support this claim first by an analysis of its probable history, going back to the 1st Century, before its appearance in France in the 14th Century, and by the nature of the textile and the stains on it, and an explanation why the Carbon 14 tests are not to be trusted - though each gives a different reason.

Kersten and Gruber place much more emphasis on the history than Hoare, who relies more on the nature of the stains, their correspondence with the Biblical accounts, and how they may have been produced.

With regard to the history, both tend to agree largely with Ian Wilson's theories [in his *The Turin Shroud* (Gollancz, 1978)], linking the Shroud with the Knights Templar in the Middle Ages. The Templars were reported to venerate a mysterious, bearded male head, which has been associated with the image on the Shroud. Hoare does not accept that this was the actual image on the folded Shroud, as it would most likely have faded after frequent exposure to light, but rather believes it was a painted copy.

Neither book seems to be aware of the theory put forward by the noted Jewish historian and Hebrew scholar Hugh Schonfield, in his book *The Essene Odyssey* (Element Books, 1985). Schonfield (p.7) mentions that the Essenes and some of the writers in the Old Testament occasionally used ciphers for secrecy or didactic purposes; one is prominent in the Book of Jeremiah. I quote:

"It was a very simple cipher. There are twenty-two letters in the Hebrew alphabet. The cipher exchanged the first eleven letters for the last eleven in reverse order. With the English alphabet this would mean that Z was substituted for A, Y for B, X for C, and so on. In Hebrew this would be Aleph = Tau, Bet = Shin. The cipher was therefore known as Atbash."

In his Appendix A, Schonfield mentions the account of the Templars in Baigent, Leigh & Lincoln's *The Holy Blood*

and the Holy Grail¹ and their reference to the Templars' worship of a "devil called Baphomet". Schonfield "decided to treat the obviously artificial name Baphomet as another case of the use of the Hebrew Atbash cipher for purposes of concealment", with the following result:

B	-	S
[a]		
PH	-	O
O	-	PH
M	-	I
[e]		
T	-	A

[The vowels are not normally written in Hebrew, though I O & U can be represented by the consonants Y and W.]

'Sophia' is Greek for 'Wisdom'. As for the bearded male head, "In the cosmic figure of Adam Kadmon (Sky Man) the bearded male head is denominated in Hebrew as Chokmah, ie Wisdom. The Greek Sophia represents a female rather than a male, and we are not surprised to find in Templar hands, according to Inquisition records, a casket surmounted by 'a great head of gilded silver, most beautiful, and constituting the image of a woman'." (p. 164)

If Schonfield is right, the likelihood that the head venerated by the Templars had any connection with the Shroud is greatly reduced, and the case for its previous history is much weakened.

Both books stress that the stains on the Shroud could not have been produced by painting, since (a) only the top two or three fibres of each thread are stained, and paint would permeate right through, and (b) medieval artists were unlikely to be able to produce a negative image. Both give a somewhat similar explanation of how the stains might have been produced: by physical and chemical factors involving the effect of sweat and warmth on cloth heavily impregnated with aloes and myrrh (see *John* 19:38-40). Both base their explanations on experiments conducted by them.

While Hoare lays more stress on the image itself and the fact that a fairly long period of warmth would have been required to produce it - thus proving that the body around which it was wrapped was still alive (corpses are cold!) - Kersten and Gruber concentrate on the blood stains, whose direction, position and quantity prove that the body was not dead when laid on the Shroud (dead bodies do not bleed!),

To explain the pattern of some of the blood marks, on the other hand, Hoare has Jesus nailed facing the cross - a

theory I regard as unnecessary and improbable. It does not seem to accord with the Biblical account, and I know of no recorded instances of any of the Romans' crucified victims being so nailed to a cross. In any case, why?

And what of the Carbon 14 tests? Both books point out that they were not "blind" - the age of some of the pieces of cloth was already known to the scientists involved, and the laboratories were in contact with each other, instead of working independently. Kersten and Gruber claim that the Shroud material was switched during the half-hour the pieces were being placed in the metal containers in secret in another room, and that this was a deliberate ploy on the part of the Church officials, who, aware that, if the blood stains proved Jesus was still alive when placed on the Shroud, the Church and its teachings would be in serious trouble, actually wanted the Shroud to be declared a medieval fake.

As a Skeptic, I am somewhat sceptical of conspiracy theories, however well documented - and both books are extremely well documented - and much prefer the explanation offered by Hoare, who points out, with several examples, that Carbon 14 tests on cloth often go astray 2 - a case in point being the 'Iceman' found in the Alps in 1991: carbon-dating by laboratories in Oxford and Switzerland placed him about 3300 BCE; grasses associated with him were dated by an Innsbruck laboratory to considerably younger than 3000 BCE.; the archaeologists confidently dated him to the beginning of the Bronze Age, about 2000 BCE, from the accompanying artifacts.

But if Jesus was alive when placed in the tomb, what happened afterwards? Both books claim Joseph of Arimathea and Nicodemus came by night on the Saturday, carried him out and nursed him back to health³. The times of his post-crucifixion appearances in the Bible are obviously unreliable - not only do the gospels disagree with each other, but Luke has Jesus ascending into Heaven on Easter Day, while Acts 1:3 (supposedly by the same author) has him appearing to his disciples over a period of 40 days. So it may have been quite a while before Jesus actually got about again.

Hoare points out the difference of opinion between the Jerusalem Church and Paul on the matter of preaching to the Gentiles, and voices the view (now adopted by very many modern scholars) that Paul was the real founder of Christianity (see eg Galatians 1-2), and that Jesus was really preaching only to the Jews (see eg Mat. 10:5,6; 15:24). Paul's view prevailed, because the Jerusalem Church was destroyed when Jerusalem fell during the revolt against the Romans in 70 CE.

What happened to Jesus afterwards, then? Well, as Hoare points out, he would not have dared to appear again in public - the Romans would make sure he never got a second chance! Indeed, the French writer Gerald Massadie, in his fictionalised life of Jesus *L'homme qui devint Dieu* (The Man who Became God) (Robert Laffont, Paris, 1988) has him living out the rest of his life in obscurity, under the name of Emmanuel, in Tiberias (with some stiffness in his wrists).

Books of this kind tend to take their sources for granted.

I suppose that is fair enough - one cannot check everything - and most of those I personally checked (eg, meanings of Greek words, references to the Mishnah and Apocryphal New Testament books) were correct, except for a very small number, for example:

(a) The etymologies given by Kersten and Gruber for "Veronica" (p. 116) and "grail" (p. 273) are what is known as "popular etymologies", and are not accepted by the experts.

(b) I could find no mention of Jesus being wrapped in a shroud (*sindon*), as affirmed by Kersten and Gruber on p. 349, in the versions I have of The Acts of Philip.

(c) On p. 138 Hoare states: "Joseph of Arimathea was accused of (stealing the body) before the Sanhedrin, according to the apocryphal Acts of Pilate, or Gospel of Nicodemus." I have two translations of this book, but no such episode appears in either of them. It says that Joseph was in fact arrested by the Sanhedrin for taking down the body of Jesus and putting it in his own tomb, and was locked up in a windowless room, the door sealed and the key given to the High Priest Caiaphas, pending trial after the Sabbath. When the door was unlocked, however, the room was empty - Joseph had been miraculously whisked away by the Lord.

However, the fact that almost all other references in both books checked out OK is reassuring.

But when all is said and done, does all this really matter?

Well, if the Shroud really is a fake, no - nothing has changed.

But if further tests - conducted "blind", under much stricter controls, with control samples of cloth whose exact age is already known (but not to the laboratories) by at least seven laboratories (as was originally proposed) - show that the cloth is indeed 2000 years old, and is almost certainly the shroud in which Jesus was wrapped, and indicate that the body it enclosed was in fact alive, the effect would be devastating.

The very foundation of the Christian faith - resurrection from the dead of a God man who died for our sins - would be destroyed, the ridiculous doctrine of the Trinity would have to be discarded (it is not accepted anyway even now by some Christian sects, notably the Christadelphians and the Jehovah's Witnesses), and Christianity would become little more than a revised form of Judaism.

But I have a feeling that, in view of the conclusions reached in these two books, the Roman Catholic Church is very unlikely to let the scientists ever have another go at the Shroud - just in case.

Notes

1. This book, first published (by Jonathan Cape) in 1982, attempts to explain why the new parish priest, Beranger Sauniere, of the tiny French village of Rennes-le Chateau, towards the end of last century, suddenly became very rich and was able to restore the local church out of his own resources. Briefly, they claim that, while renovating the altar, he discovered documents proving that Jesus did not die on the cross, but subsequently married Mary

FORUM

Some Thoughts On Thoughts

Clive Robbins

Magdalene, moved with his family to France, and there founded the line of Capetian kings. Saunier's wealth was the result of a bribe from the Church to keep his mouth shut.

A more plausible explanation is given by the French writer Jean Markale in his *Rennes-le-Chateau et l'nigme de l'or maudit* (Rennes-le-Chateau and the mystery of the cursed gold) (Pygmalion, Paris, 1989), who claims Saunier simply discovered a cache of jewels under the altar, where it had been hidden by a former parish priest on behalf of a local aristocratic family for safe keeping during the French Revolution.

2. Much the same arguments as appear in these two books for the genuineness of the Shroud and for doubting the Carbon 14 test results are also put forward in a recently published little book by a French scholar, Andre Cherpillod: *Le Suaire de Turin - l'impossible objet* (The Shroud of Turin - the impossible thing) (published by the author, Courgenard, 1995). An agnostic, who takes a pretty detached and scientific approach, he largely agrees with Hoare, but draws no inferences from his conclusions.

3. There is a recorded precedent for a man being taken down from a cross and recovering: Josephus, *Life: 75* (421).

Afterword

After this review was drafted (and while it lay on my desk waiting to be typed!), an item appeared in *The Sydney Morning Herald* of 12 September 1995 headed:

Turin Shroud maybe the World's Oldest Photographic Negative

The report alleged that the head of fine arts at the University of Port Elizabeth, South Africa, one Dr Nick Allen, had established, after a series of experiments using materials available in the 13th century, that the Shroud is a 13th century photographic image.

Using a large camera obscura with a quartz lens 15 cm in diameter and 7mm thick, he focused an image of a statue onto a sheet of linen made light-sensitive by soaking it in silver sulphate. He needed four days' exposure time to create a giant photographic negative, which he fixed with ammonia - he believes urine may have been used in the 13th century. The model was, according to him, most likely a corpse.

He has two theories as to why it was made: as a rallying point for the Templars, who were in deep trouble in the 13th century, or for a ruler in Constantinople called Baldwin, who pawned it to raise a loan from the Venetians. It may have been subsequently stolen by the Templars during its journey to the King of France, St Louis, to whom the Venetians had sold it.

Still the theories come!



Human beings are capable of determining their actions by the process of logical thought, but does this really happen? What would be your reaction if it was claimed that your mother had been a street walker? Would you calmly evaluate the possibility or would you interpret the statement as a personal insult and react violently?

How reasonable is a person in love? Countless murders and suicides have been perpetrated in this highly charged emotional state. Frequently, our responses are purely emotional taking little heed of the facts involved. Reason and rationality seem to desert us when we are in a bad temper, when we fear for our lives or when we suffer bereavement. Our response to a chance remark is more likely to be coloured by a bad day at work than by the actual remark. Sigmund Freud said that "willpower is a cork, floating on a sea of emotion." Whether this is true or not, it would seem that reason occasionally floats on an emotional sea, and does not always inform our decisions.

I was prompted to reflect on the phenomenon of thinking and the beliefs and assumptions which affect our thoughts and reactions, when recently I saw a documentary which examined the various religions of the world.

The documentary showed some of the more extreme rituals connected with religion, such as scenes of dancing, flagellation, various forms of masochism, rolling, moaning, chanting, all of which were meant to please or appease various gods. The Tibetans were shown writing prayers on paper which were then placed on a wheel and spun, sending the prayer towards heaven. A dancing dervish, a tall thin man dressed in a knee-length shirt and carrying a black umbrella, was also featured. With each forward step he leapt high enough to do a 360 degree spin. These scenes were greeted by laughter from the mainly Anglo-Saxon audience in the theatre.

The final scene showed a Christian ritual. There was a bishop dressed in a long gown, preceded by two boys also in long gowns swinging censers, and a priest who dispensed water from a bowl with an inadequate drumstick-like appliance.

From an objective point of view, this procedure, though perhaps more dignified than other rituals shown in the documentary, in many ways appeared just as ridiculous. However, because this was a familiar scene to the majority of the audience, having as its basis a long tradition of western style culture, there was no laughter.

It is obvious that our early programming is responsible for our different reactions to these events. Religions mostly run in families, so whether you are Christian, Mohammedan, atheist or Callithumpian is purely an accident of birth and environment. The religion we are born into is the only true and reasonable one and we can clearly see that all others are either foolish, fallacious or even downright evil. It would be fair to surmise that reason and logical thought has little to do with determining a person's beliefs and actions in the case of religion.

However, even logic can let us down. The ancient Greeks invented the laws of logic, the first of which states that two premises will lead to a conclusion. An example might be as follows.

Major premise: All dogs have four legs
 Minor premise: This has four legs
 Conclusion: This is a dog

With a simple example such as this it is easy to spot the flaw in the logical progression and to deduce that a logical conclusion is only as good as the original premises on which it is based. A paranoid lunatic, who kills because he believes he is about to be killed, is actually thinking logically. It is not the logic that is wrong but the premise that everyone wants to kill him.

In order to more fully illustrate the way embedded beliefs, underlying assumptions and incorrect premises can influence and determine our behaviour, an analogy can be made with the computer and, the bane of all computer users, the computer virus. A computer virus acts in such a way that it is only evident at a crucial stage in the running of the program. All will be processed properly except that which the virus is designed to disrupt.

The computer virus can be likened to the beliefs or ideologies which inform our decisions and actions, and are formed largely by those we come in contact with at an early age, such as parents and teachers. Any subject can be dealt with calmly and logically until it conflicts with the 'virus' or 'truths' embedded in our subconscious. Anything contrary to these truths cannot be processed further.

The sure sign that a new idea has run into a virus is the sudden surge of anger that is felt. It is no coincidence that so-called controversial subjects, such as religion and politics, are discouraged at social functions. Why are they so controversial? Why can't they be discussed in the same dispassionate tone with which we might discuss the weather?

The problem is that although the logic of any argument may be relatively easy to prove, premises are another matter. They are propositions which are believed or not. There is no real proof, we can only judge them on their probability or on our individual experience.

One thing seems certain however. If a statement that is not necessarily offensive upsets you it is probably because it conflicts with your preconceptions. Many people never recognise that personal beliefs, although often profound, are not always correct.

To varying degrees we are all brainwashed. We are affected by media advertising, social contacts and even by

the cliches in constant use by everybody. For example, the saying that "you have to speculate to accumulate" was probably coined by someone who wanted to accumulate what you speculated. The 'friendly' firms that want to help you make your money grow can be compared to someone who wants to lend you an umbrella and take it back when it starts raining. However, most people still believe, or want to believe, in get-rich-quick schemes.

"It's too cold to rain" is another cliché often heard in Australia, half of which is in the torrid zone and half in the temperate zone. The saying probably came to Australia with the first settlers from England where it is often too cold to rain; it snows instead. Despite evidence to the contrary and over two hundred years of observation the saying (virus?) still persists.

Socrates discovered the inherent danger of 'viruses'. He reasoned that if he could destroy falsehood through a process of elimination, truth would remain. He then proceeded to argue with all the so-called experts on justice and religion with the result that he proved that the judges knew little about justice and the theologians knew nothing about the gods.

Questioning the beliefs of people and the underlying assumptions which influence all their behaviour and actions rarely evokes a thoughtful response. It is more likely to provoke, offence or cause anger. Unfortunately for Socrates, it cost him his life.

Hopefully, no *Skeptic* reader will suffer a similar fate. ■

...Totalitarianism from p 42

refused to accept other than minimal numbers. Then the next idea, one huge Jewish resettlement such as on Madagascar was not feasible because of the size of the Polish Jewish population. The third plan, the eradication of the Jews under the cover of the murder of the Commissars began when Hitler's armies moved into the Baltic States and the Ukraine.

At the Nuremberg trials, Speer was sentenced to 20 years prison. He was the only one of the 18 defendants to accept responsibility for the acts for which they could and should be called to account. Six others were given prison sentences, eleven were sentenced to death. He spent these 20 years sorting out his guilt through sessions with three successive clergyman, a Protestant, a Catholic and a Jew, as well as writing his memoirs, communicating with his children and wife, and with a life-long architect friend who arranged a financial trust through soliciting donations so that his family could be cared for. On his release he produced a best-seller from his memoirs "Inside the Third Reich".

A brilliant if flawed man and a great survivor. ■



Little Miss Psychic

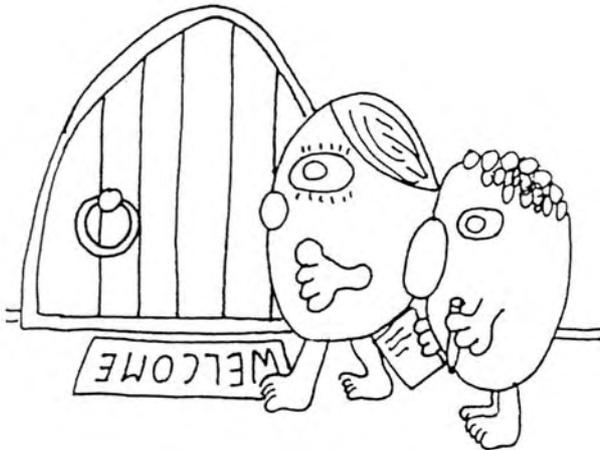
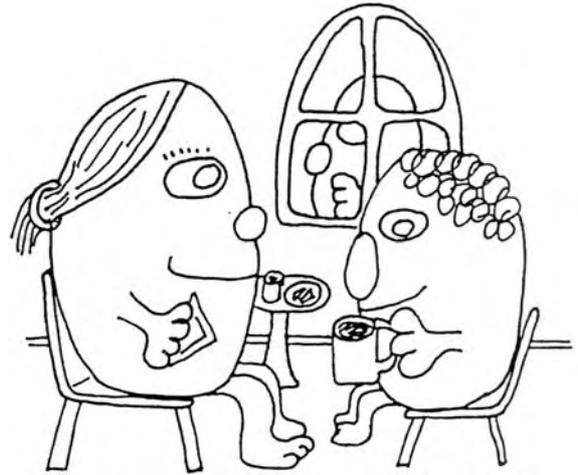
A story for grown-ups

Anthony G. Wheeler

“Oooh dear” swooned Little Miss Psychic as she finished her last slice of breakfast toast. “I feel a premonition coming on - we’re going to have a visitor.”

“Oh you are clever” said Little Miss Gullible. “I’m sure I don’t know how you do it.”

And Little Miss Gullible started clearing the table.



Knock! Knock!

“I do believe someone’s at the door” said Little Miss Psychic.

“Oh a visitor! You were right, you were right!” laughed Little Miss Gullible. “That’s your first prediction of the day, and proved right, all before we’d hardly finished breakfast. I must write this down.”

“Hello Little Miss Psychic” said Mr. Happy. “I’m Mr. Happy and I’ve come to ask for some help.”

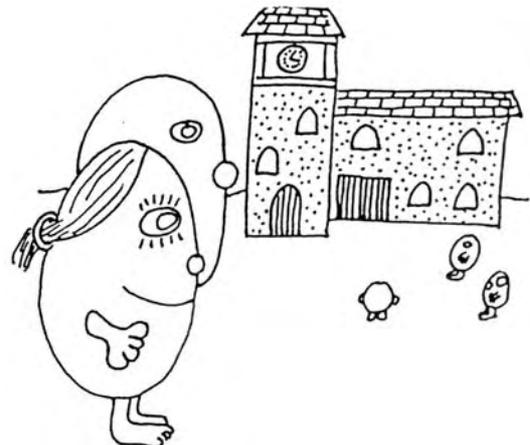
“Helping is what I’m good at” said Little Miss Psychic. “What’s the problem?”

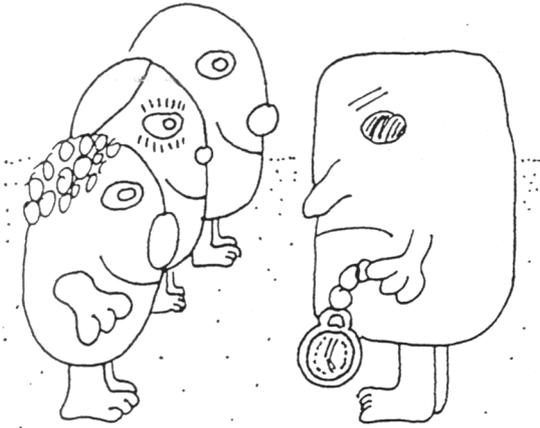
“It’s the Town Clock” said Mr. Happy. “It’s stopped, and no one knows how to fix it.”

“That sounds tricky” said Little Miss Psychic. “We’ll come and have a look at it, and see what we can do.”

And Little Miss Psychic fetched her broom, just in case it rained.

“Don’t you worry” said Little Miss Gullible to Mr. Happy. “I’m sure Little Miss Psychic will be able to fix it - she’s ever so clever.”





“Hello Mr. Snotty” said Mr. Happy. “This is Little Miss Psychic. We’re on our way to fix the Town Clock.”

“Humph” said Mr. Snotty. “I don’t believe in psychic powers myself. No sense to it. Confirmed sceptic, and all that. My pocket watch stopped a year ago and no matter how much I’ve thought at it the watch has never started again.”

“Maybe you’re thinking on the wrong wavelength” said Little Miss Psychic. “Do you mind if I have a go?”

“Humph” said Mr. Snotty; but he handed the watch over, just in case the psychic nonsense did work.

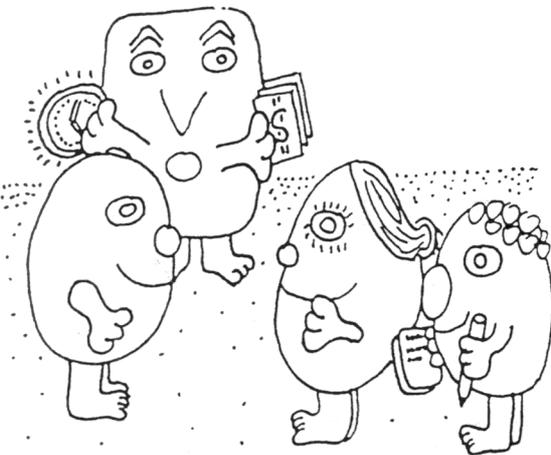
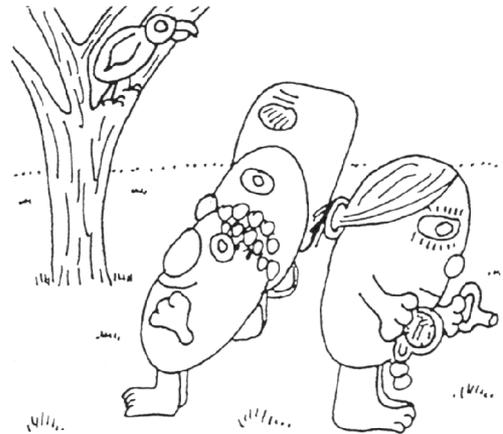
“It’s an awfully old watch” said Little Miss Psychic studying the timepiece. “Very nice to look at, but I’m not sure that it will ever work again.”

“Don’t frown so” said Little Miss Gullible to Mr. Snotty.

“Distrustful vibes de-harmonise the psychic energy flow.”

“Look at that pretty seagull, up in that tree” said Little Miss Psychic.

“Little Miss Psychic’s ever so observant, isn’t she?” asked Little Miss Gullible as she and Mr. Snotty and Mr. Happy watched the pretty seagull watching them.



“I do believe it’s fixed” said Little Miss Psychic triumphantly.

“I say it’s ticking!” said Mr. Happy.

“Goodness gracious me” said Mr. Snotty, “My lovely old broken watch is working as good as ever again.”

“Another triumph!” exclaimed Little Miss Gullible. “I must write this down.”

“I’m ever so grateful” said Mr. Snotty. “I don’t know why I ever doubted you. I’m a believer now. Here, have \$50.”

“Thank you so much, for my charity of course” said Little Miss Psychic.

“Hello” said Mr. Curious.

“Hello said Mr. Happy. “Little Miss Psychic is going to use her para-normal powers to fix the Town Clock for us.”

“Oh really?” said Mr. Curious. “That will be a most interesting and useful demonstration of the validity of alternative science.”

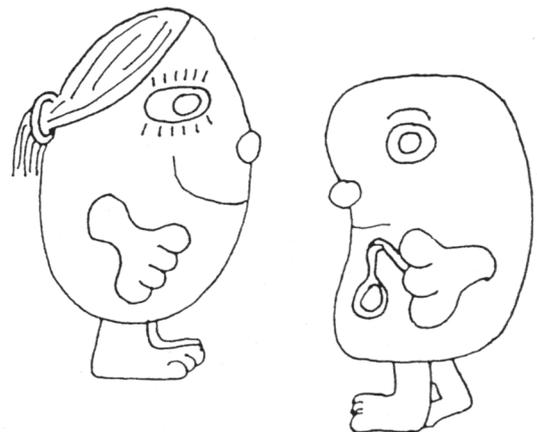
“It’s all a matter of cosmic harmony” said Little Miss Psychic.

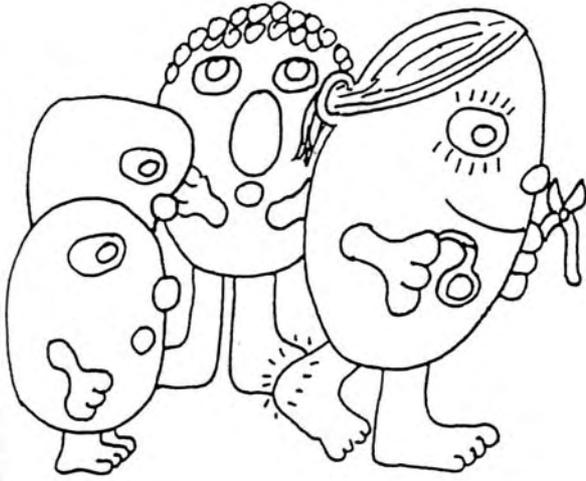
“She’s ever so good at it” said Little Miss Gullible.

“Can you mend my spoon?” asked Mr. Curious.

“It’s all bent!” exclaimed Mr. Happy.

“My cat sat on it” explained Mr. Curious.





"I'll have a go" said Little Miss Psychic. "Concentrate with me on the essential fluidity of refined metal as I gently stroke this poor, deformed kink."

Little Miss Psychic trod on Little Miss Gullible's toe. Little Miss Gullible shrieked in surprise. Mr. Curious and Mr. Happy looked at Little Miss Gullible.

"It's straightening!" said Little Miss Psychic. "The psychic energy is re-forming the essential uniformity of the metal." "Fancy that, and before our very eyes too," said Mr. Curious. "Who would ever have believed it?" said Mr. Happy. "You can't fake powers like that."

"Another dramatic and relevant validation of your great Gift" said Little Miss Gullible, reaching for her notebook. ("Is \$2 enough?" whispered Mr. Curious.)

"Hello chaps" said Mr. Sick.

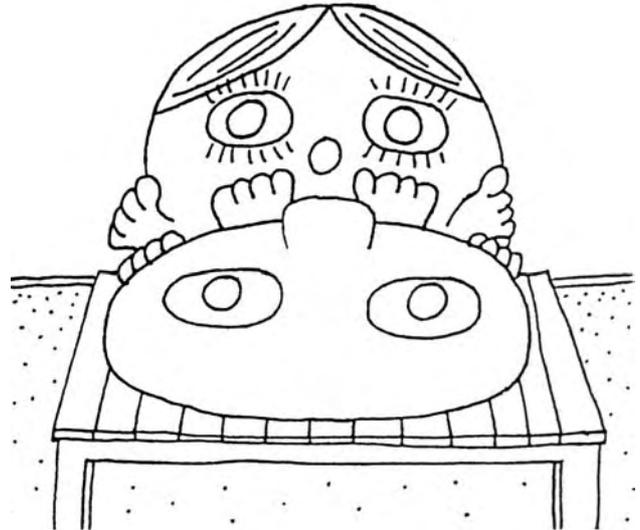
"Hello" said Mr. Happy. "We're on our way with Little Miss Psychic to mend the Town Clock."

"Oh good" moaned Mr. Sick. "I wish someone would mend me. Every time I poke my fingers down my throat I throw up."

"Let me take a look at you" offered Little Miss Psychic. "Lay down here on this bench and look into my eyes. Give me \$5."

"Ooooo yes, take \$10" said Mr. Sick. "Probe my inner organs, seek my dastardly disease; my health is in your hands."

"The money just represents a commitment to Mr. Sick's own cure; his own motivation is an essential part of the healing process" Little Miss Gullible explained to Mr. Happy.



"I'm probing now, deeper and deeper" said Little Miss Psychic, swaying gently as she pummeled Mr. Sick's tummy.

"Ooooo" said Mr. Sick.

"She's ever so good" said Little Miss Gullible, watching intently.

Under the bench Little Miss Psychic found the packet of fresh liver bought from the butcher two days ago in her handbag.

"I've reached the foul growth, the urky bit. I'm pulling the nasty stuff out from inside now" said Little Miss Psychic.

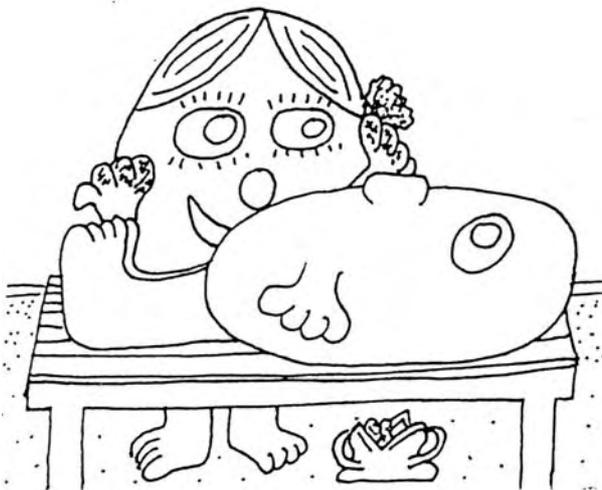
"Ooooo" said Mr. Sick. "I can feel it leaving."

"Look at the blood" said Mr. Happy. "Yuk!"

"It's all over" said Little Miss Psychic kindly. "You can get up now."

"Gosh - I feel so much better" said Mr. Sick. "And there's no hole left in my tummy either."

"Another unsolicited testimonial" said Little Miss Gullible, reaching for her notebook.

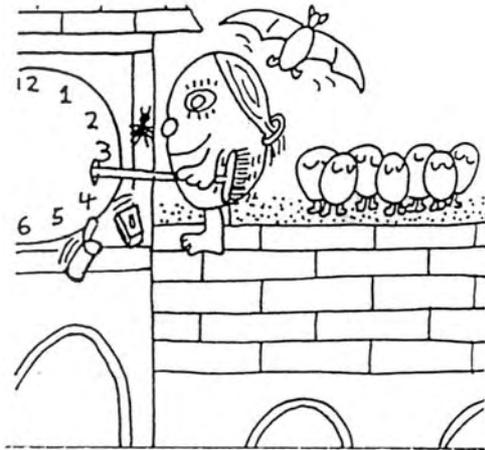


“Here’s the Town Clock” said Mr. Happy. “Quite stopped, as you can see.”

“I see, I see” said Little Miss Psychic. “I shall need everyone’s help on this job because the clock is so large. So everyone come and hold hands and concentrate on the clock with me.”

The little crowd of Mister Men that had gathered was eager to help.

“Chanting is a good idea” said Little Miss Psychic. “Everyone chant with me: Start Clock Tick Tock; Start Clock Tick Tock; Start Clock Tick Tock...”



“Nearly there” encouraged Little Miss Psychic. “Keep concentrating your mental energies, your psychic forces, keep your eyes shut, keep the chanting going - we’re nearly there.”

The crowd chanted: “Start Clock Tick Tock; Start Clock Tick Tock...”

“Here it comes, yes, here it is, yes, I can feel the forces flowing, the vibrations. I do believe we have it. Oooooh...” swooned the excited Little Miss Psychic.

“Oh my dear - are you alright?” asked Little Miss Gullible. “It was a big effort, I feel quite drained” explained Little Miss Psychic.

“Oooh” gasped the crowd. “look at the clock, it’s working again!”

Later that day.

“As a token of our sincere appreciation” said Mr. Mayor. “Please accept this commemorative plaque.”

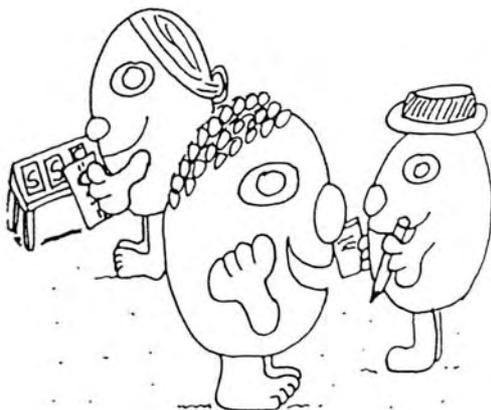
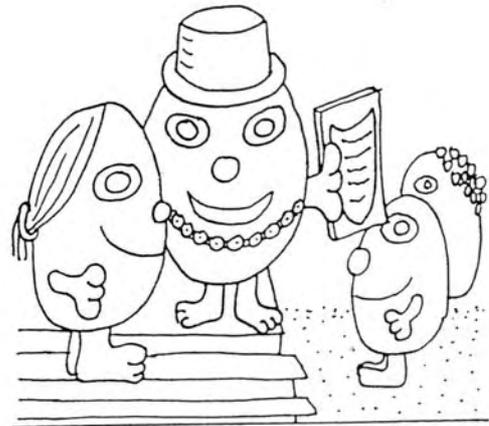
The crowd cheered enthusiastically.

“I’d rather have the money” said Little Miss Psychic, but no one heard.

“Let me photograph this for the scrapbook” said Little Miss Gullible.

“You do my simple powers a great honour” said Little Miss Psychic modestly.

The crowd cheered.



Little Miss Gullible told everyone about the paranormal super-science psychic forces of her good friend, and how the certified destroyed dismantled Town Clock had been inexplicably repaired and re-started in front of thousands of qualified watchmakers, and how money, reward or acclaim played no part at all in The Gift.

Mr. Reporter wrote it all down for a syndicated newspaper feature, with TV rights.

Little Miss Psychic rested her aura.

Mr. Sceptic demonstrated 23 ways to start a stopped watch or clock; but everyone was too busy watching Usi Guller on their TVs.

COSMOLOGY FORUM

Big Bang (second round)

Colin Keay

In my article “Big Bang Cosmology - Fact or Fiction?” (Vol15 No 1), I thought I had done a reasonable job of being sceptical about the entrenched orthodoxy surrounding the big bang cosmology, until a Forum note by Charles Nagy in the last issue of the Skeptic took me to task for my “blatant misrepresentation of Big Bang Cosmology”. Mr Nagy quoted five points which he asserts are predictions of the big bang theory. I contend that some of these preceded the big bang concept and others do not necessarily require an *ex nihilo* big bang. I respect Mr Nagy’s sources for the points, but since their authors strongly support orthodox cosmology, seeking guidance from them about alternatives to the sacred big bang is almost like expecting the Pope to have kind words for Protestantism.

What’s more, I make no apology for the religious analogies in this and my previous article, because it is the parallels I wish to highlight. I might also mention that before I submitted it, I ran the article Mr Nagy complains about past the eyes of a professional cosmologist, who found nothing to take exception to.

Those few texts on cosmology which attempt a reasonably balanced view of the subject have for years discussed the pros and cons of Lemaitre’s *ex nihilo* big bang hypothesis. This is frequently referred to as ‘standard’ cosmology (which rather makes my point about holy writ! - see below). One such textbook is Jayant Narlikar’s very lucid “Introduction to Cosmology”¹, which lists six arguments “ardent supporters of standard cosmology will mention” and another six which an “agnostic in the cosmological debate may use”. Since Narlikar wrote his text, many more items of evidence have emerged to reinforce the arguments for the anti-bang case.

Three of Narlikar’s first six arguments embrace the five points made by Mr Nagy. The one about the origin of the elements (nucleosynthesis) was shaky from the very beginning. George Gamow² took the Hubble expansion of the universe as his starting point and used it to show that going back in time the universe must have been hot enough to ‘cook’ all the known elements from primordial hydrogen. Any consequence of this scenario, such as the hydrogen/helium ratio, can hardly be regarded as a big bang prediction. In fact, as far as the hydrogen/helium ratio is concerned, R C Tolman arrived at it on thermodynamic grounds in 1922³, five years before Lemaitre’s model of the universe⁴.

It was Gamow’s colleagues, Alpher and Herman, in a paper amplifying Gamow’s model and extending it to a full-blown cosmology, who predicted that radiation from the hot phase of the universe would by now have cooled to 5 degrees Kelvin⁵, but nobody took particular notice of this estimate until Penzias and Wilson discovered the isotropic microwave background radiation seventeen years later. It must have been tempting for Gamow, Alpher and

Herman to assume the expansion of the universe could be extrapolated backwards from the 300 million degrees “hot phase” of the universe, when helium was cooked from hydrogen via deuterium, to an epoch 35 minutes earlier (on the Lemaitre model) when the density of the universe would have approached infinity. So it is not very surprising that Gamow and his co-workers became strong proponents of big bang cosmology.

A year later, Alpher and Herman developed their ideas in a major paper⁶, by which time they had begun to realise that the heavier elements had to be formed in stars rather than in a hot phase of the universe. It became apparent that the origin of carbon was a critical stumbling block in the Gamow model. This was overcome by a brilliant piece of work by Fred Hoyle when he predicted the existence of an undiscovered energy level in carbon which allowed it to form - but not under primordial big bang conditions. It then remained for the justly famous B2FH paper⁷ to show how the heavier elements were formed in supernovae explosions, not in any big bang or hot phase of the universe.

There are now many further pieces of evidence casting grave doubt on the big bang ‘standard’ model in addition to the ones listed by Narlikar. No answer has yet been found for the ‘missing-matter’ problem. The Hubble space telescope has found strong evidence for stars older than the Hubble Age of the universe. High beryllium abundances occur in stars where there should be very little⁸. And there are many more discrepancies and anomalies in ‘standard’ cosmology.

One anomaly which I find very persuasive if I understand it correctly, and very topical right now because of the incredible navigational accuracy of the Galileo spacecraft and the feats of interplanetary radar, is the fact that radar ranging within the solar system shows that our solar system is not expanding at the Hubble rate! Enough precision is there to detect it.

So what’s going on? We can measure the expansion of the universe from the rate at which distances to distant galaxies are expanding. But for some reason our solar system does not appear to be sharing in the expansion. Why is the space-time continuum of the universe as a whole expanding while our local system does not alter? The red-shift of Galileo and Jupiter should be measurable, but it is not being detected⁹.

Returning to Mr Nagy’s five points. They are not predictions of the big bang hypothesis because they may be deduced quite independently. George Gamow derived his model for the origin of the elements from a backward extrapolation of the Hubble expansion of the universe, as the title of his paper makes clear. The same goes for the other points. They can all be cited in favour of a putative big bang, but many other scenarios explain them equally well, if not better. So they are hardly predictions from big

bang theory, as Mr Nagy insists.

Alas, I cannot claim originality for my statement that "Like holy writ, the big bang has made no successful predictions of hitherto unknown phenomena". Mr Nagy's reaction of surprise sent me scurrying to my bookshelf for vindication. Here are a couple of quotes, given time I could find more: "Big-bang cosmology refers to an epoch that cannot be reached by any form of astronomy, and, in more than two decades, it has not produced a single successful prediction"¹⁰.

Here is another quote, this time from Tom Van Flandern, a professional astronomer as unyielding to orthodoxy as Fred Hoyle: "Despite widespread acceptance of the big bang theory as a working model for interpreting new findings, not a single important prediction of the theory has yet been confirmed, and substantial evidence has accumulated against it"¹¹.

Van Flandern goes on to say "The big bang made no quantitative prediction that the 'background' radiation would have a temperature of three degrees Kelvin (in fact its initial prediction was 30 degrees K); whereas Eddington in 1926 had already calculated that the 'temperature of space' produced by the radiation of starlight would be found to be 3 degrees K. And no element abundance prediction of the big bang was successful without some ad hoc parameterization to 'adjust' predictions that otherwise would have been judged as failures"⁹.

Discussing the data from the COBE satellite, a recent text on cosmology states:

"These results showed that the cosmic background is a very good approximation of a black body at $T = 2.735$ K. This measurement, made 25 years after the discovery of the cosmic background radiation, is a brilliant confirmation of the 'big bang' cosmological model (the processes capable of thermalising the cosmic background radiation could have taken place only in the first year of the universe)"¹².

Note the bit in parentheses. It is the authors' escape clause. They are quietly acknowledging that the microwave background radiation does not imply the necessity of an *ex nihilo* big bang, only the existence of a very hot epoch in the distant past. But their caveat may be inadequate even so.

What is more, big bang proponents hail the COBE discovery of minute fluctuations (less than one part in 100,000) in the isotropy of the microwave background as evidence for the inhomogeneities that a billion years later gave birth to galaxies. The discovery of a bubble-like structure in the distribution of galaxies, with huge 'walls' of galaxies (as many as thirteen in a regular coplanar pattern have been hinted at) seems to imply anything but a single big bang as their origin.

There is also the curiously perfect match between the radiation spectrum of the cosmic background and that of a black body. There are absolutely no hints of absorption, particularly on the long wavelength side, which one would expect imprinted on radiation which has traversed the material of the universe from nearly the beginning of time. The very perfection of its spectral curve suggests that it is of more local origin, as Hoyle has always maintained¹⁰.

What I personally find most difficult to accept in the so-called 'standard' cosmology is its explicit requirement that the *ex nihilo* big bang represents a singularity in space-time. The physics we know and love simply cannot apply

at that epoch. This causes major problems with quantised theories of gravity. However, if the initial/final singularities in cosmological spacetime are replaced by bounces, where collapsing matter rebounds and expands again, many problems are avoided. Such a "Phoenix Universe" is an old idea, discussed, for example by the eminent American cosmologist John A. Wheeler¹³.

Now for the interesting bit: the basic parameters of the universe may differ slightly after such a collapse from what they were beforehand due to small random fluctuations in the structure of space-time! This too is an old idea. Wheeler calls it "the reprocessing of the universe". However recent advances in understanding self-organising systems, a comparatively new idea, suggest this as the mechanism whereby the astonishing fine-tuning of the physical constants in the universe came about.

Yes, there is a ferment in cosmology¹⁴, and books popularising unorthodox cosmological ideas are now rolling off the presses in increasing numbers. And a good thing too. One such is by Lee Smolin¹⁵, which I have ordered. I can hardly wait to get my hands on it. That doesn't mean I'll stop reading books by Charles Nagy's mentors. They all have their places on my bookshelf.

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COSMOLOGY FORUM

Relativity and Related Matters

Alan Towsey

I am delighted that John Winkle's letter (Vol 15, No 3) has received such a positive response, in spite of Barry Williams' initial misgivings. I have long held similar views myself.

While most of our modern science rests on a pretty firm foundation, and we can usually be reasonably sure of our facts, there is no doubt that some of it, notably some aspects of modern cosmology, is largely philosophical speculation, based on tentative observations which may well soon be refuted by further work using more sophisticated instruments.

The existence of "strings" and "superstrings" in space has not yet been firmly demonstrated. "Black holes" and "wormholes in space" have been around somewhat longer but no-one has so far discovered one beyond all doubt. "Dark matter" is another assumption - indeed, Eric Lerner in his *The Big Bang Never Happened* (Simon and Schuster, 1992) denies its existence ("What you see is what there is"), and implies that some astronomers have to assume it to reconcile their calculations with what they see, simply because they've got their sums wrong. One good example is the upset to their ideas caused by the information sent back by the recent Jupiter probe - and Jupiter is relatively close.

The Big Bang theory of the origin of the universe begs the question: Did the universe ever have a beginning? Since something must have already existed to set it off in the first place (if it ever happened at all), following the principle of Occam's Razor, wouldn't it be simpler to suppose that the universe has always existed, throughout infinite space, and that the expanding bit we think we see is just a bubble blowing out from part of an already existing universe? (The theory is not mine - it has already been suggested by others.)

Indeed, some astronomers argue that the time taken for supercluster complexes to form would be at least five times the presently accepted age of the universe, ie, about 100 billion years.

The Nobel Prize winning Swedish physicist Hannes Alfvén and his former teacher Oskar Klein have suggested that the local expansion began many billions of years ago, in the little bit of the infinite and eternal universe that we can see, as a result of a previous contraction of matter under its own gravity, which resulted in a massive interaction of matter and antimatter driving plasma apart over millions of years in a series of smaller explosions, ie, an expansion in just one part of the universe, and not a Big Bang creating matter, space and time.

Other explanations have also been suggested. As Alfvén has put it, "there are alternatives to the Big Bang."

So Professor Colin Keay is by no means alone in querying the Big Bang theory. An increasing number of other scientists are doing so, if I understand aright various articles that have appeared in recent years in *Scientific American*. I confidently predict that within a few years the theory will be considerably modified, if not abandoned altogether, and that some of Einstein's theories too will be greatly modified, as new discoveries are made.

The idea that space is "curved" is, with all due respect to Einstein, another absurdity. Space is the complete absence of matter, a void, or, as the *Shorter Oxford English Dictionary* puts it: "Continuous, unbounded, or unlimited extension in every direction, regarded as void of, or without reference to, matter." And a void can have no other characteristics than that; it can be neither curved, straight, square or anything else. It would make more sense to suggest that a body travelling through space moves in a curved line, an effect that could reasonably be accounted for by the gravitational attraction of the vast masses of matter by which it passes.

Steve D'Aprano's hypothetical astronaut (*the Skeptic*, Vol 15, No 4) is not travelling in a straight line. The fact that he eventually returns to his starting point indicates he is moving in a curved line. (If he could move in a really straight line, ie, straight when seen from all angles, hence 'the shortest distance between two points', he might well be able to reach a point 180° from his starting point in less than two thirds of the time normally required to reach it by going the long way round. (Could this be the inspiration for the "space warps" which enable the star ship Enterprise to move so rapidly from point to point in Star Trek?))

Steve's analogy of the surface of a sphere being finite but unbounded, when trying to explain the currently accepted structure of the universe, is inappropriate on two counts. In the first place, we are dealing with the contents of the sphere, not the surface, and in the second place, the surface of a sphere is a boundary in itself.

If Steve's astronaut were to move in a truly straight line (as above), in a finite universe he must, logically, eventually come out of it - into what?

I believe some of the daft ideas that are put forward nowadays are due, in part at least, to the strange reasoning of some theoretical mathematicians. Now, don't get me wrong; I am not decrying mathematics as such - obviously almost all maths is sound, otherwise we wouldn't have Glebe Island Bridges, aircraft or computers - I am merely commenting on a couple of its oddities.

Mathematics is based on symbols, some of which stand for real things, and some of which stand for mental concepts which have not, and cannot, have any existence in reality. Some mathematicians, knowing that some symbols

represent real things, occasionally come to believe that all their symbols stand for real things, mistaking the symbols for reality.

In this connection Ogden and Richards, in their classic work *The Meaning of Meaning*, argue that much of philosophy and religion is meaningless, because many of the words and expressions used (ie, symbols) have no demonstrable referents in the real world, and refer to “the success of analytic thinkers in fields bordering on mathematics, where the divorce between symbol and reality is most pronounced and the tendency to hypostatization most alluring.” (p. 29) (hypostatize = to regard or treat as real)

Let me give you a couple of examples.

In his ground-breaking book *Chaos*, James Gleick describes a “Koch curve” (p. 99), which is formed by first taking an equilateral triangle, then dividing each side into three equal parts, on the centre one of each side then drawing another equilateral triangle, and repeating the process ad infinitum, so that eventually you have, according to Gleick, “an infinitely long line [surrounding] a finite area,” thus: (Figure 1)

Now this, of course, is nonsense, again on two counts. First, logically, a finite

area must be bounded by a finite line, and secondly, in the real world you must eventually reach a point where all the sides of the last set of triangles are so short - equivalent, say, to the dimensions of the smallest possible sub-atomic particle (no particle can be infinitely small - it just wouldn't exist!) - that they cannot be further divided. The line, therefore, is actually not infinite.

Towards the end of the last century Georg Cantor (1845-1918) proved mathematically that one infinity could be greater than another. At first this was received with some scepticism by the mathematical community, but eventually, by the same process as exemplified in Hans Christian Andersen's tale about the Emperor's New Clothes, and because his maths seemed irrefutable, it became generally accepted.

Now, the definition of infinity given in the Oxford English Dictionary is: “The quality or attribute of being infinite or having no limit; boundlessness”, and “infinite” is defined as: “1. Having no limit or end; boundless, endless; immeasurably great in extent, duration, degree, etc. ... 5. Math. Having no limit; greater than any assignable number or magnitude; having an uncountable number of elements, digits, terms, etc.” And by that definition anything that is

infinite has no ends, boundaries or limits, and anything that has no ends, boundaries or limits simply cannot be measured; it is “immeasurably great”, as the OED puts it. And if something cannot be measured, it cannot be compared for size with something else that cannot be measured. They are both simply infinite.

The fact that Cantor could prove otherwise mathematically (no wonder he died in an asylum!) shows how far some aspects of theoretical maths are removed from reality and logic. Indeed, this has been admitted by at least one mathematician, Leopold Kronecker (1823-91), one of whose precepts was that “Logic differs from mathematics. A logical argument may use the *reductio ad absurdum* and be in accord with a set of rules of reasoning laid down, yet

not count as a piece of valid mathematics.” (Quoted from *Pi in the Sky* (p. 201), by John Barrow. Clarendon Press, 1992. This book is a study of the history of mathematics, enquiring on the way whether maths was discovered or invented - I got the impression that it is a bit of both.) It is not surprising that he did not always see eye to eye with Cantor!

Interestingly, there seems to be some support for Kronecker's view in a

recent book by Raymond Smullyan, *Satan, Cantor, and Infinity* (OUP 1993), as illustrated by a passage on page 249:

“ ‘I didn't realize,’ said Annabelle, ‘that there was that amount of controversy in a field like mathematics! I thought that field was cut and dried and there was no room for differences of opinion.’

‘The differences of opinion are not so much in mathematics as in the foundations of mathematics. And the subject of mathematical foundations comes close to philosophy, in which, of course, there is great difference of opinion,’ replied the Sorcerer.”

And finally, don't give me that stuff about our minds not being able to grasp completely the new ‘insights’ into the nature of the universe that we are discovering, or that our system of logic is just something based on the structure of European languages, especially Greek. All real scientific and technological research and progress depends absolutely on that logical system of reasoning (why otherwise do you think the West has outstripped the rest of the world in those fields?), and any attempt to deny it would bring our level of thinking down to that of the New Agers.

It is when we fail to use it properly that we end up in trouble. ■

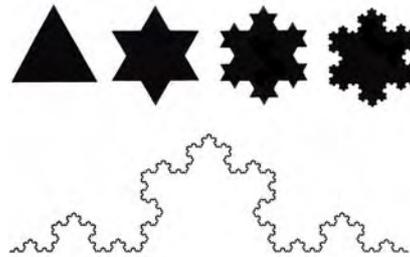


Figure 1

COSMOLOGY FORUM

Questions and Challenges

The preceding article and the two contributions that follow ask questions that call for answers from those of our subscribers with expertise in areas of fundamental physics, astronomy and cosmology.

It seems that some of the most profound discoveries about nature of this century have not been convincingly explained, even to people who have an interest in science. What hope is there, then, for the bulk of people whose lack of knowledge, or interest, in the topic leaves them open to the siren songs of pseudo-science or easy-option religious fundamentalism.

We look forward to having these questions answered in future issues. **BW**

It has recently occurred to me that your *I Want to Know* column is probably the ideal place for me to ask a number of questions which have bothered me for some time. They all concern the physical world:

1. We know that the Universe is expanding because we observe a “red shift”, i.e. the light which reaches us from distant galaxies is “shifted towards the red end of the visible spectrum”.

I understand that this is because of the Doppler effect: as is the case with sound, the frequency of the light rays we observe is lower than it would be if their source was not receding from us. But how is it that we are able to make this comparison? That is, how do we know what the light from distant galaxies would look like if the galaxies were not receding from us? How do we know that distant galaxies are not simply composed of material which emits reddish light?

Is it in fact the case that the light we observe from distant galaxies looks reddish? I know that stars (and therefore galaxies) emit ultra violet radiation. Some of this would get red-shifted into the visible range, just as some red light would get red-shifted out of the visible range. The result would be that a full complement of visible frequencies might still be represented in the light we actually observed.

2. Astronomers tell us that when we look at a distant star or galaxy or other object, we are looking back in time because of the time it has taken the light from the object to reach our eyes.

Almost in the same breath, these astronomers tell us (for example) that Sirius *is* eight light-years away, or that the Nebula in Andromeda *is* two million light-years away. Why do they say such things? It seems to me that we cannot know what *is* the case, only what *was* the case at a certain time in the past?

I realise that on a cosmic timescale even two million years is a very short time, and it is *unlikely* that big changes

would occur during such an interval. Nevertheless, if Sirius had gone nova (exploded) in 1990, we would still not know about it. Something **could** have happened to Andromeda before our race came into being, and we would not even know about that.

The explosion of the Crab Nebula occurred in about 3000 BCE not in 1057 as is often claimed.

3) Regarding “leap seconds”: My Methuen Concise Encyclopedia of Science and Technology (Methuen, 1979) states that the earth’s period of rotation “is increasing by roughly 0.00001 seconds annually due to tidal effects”; in other words, about a second in a hundred thousand years. I understand that “leap seconds” are added to (or subtracted from) our timescale to keep it consistent with the earth’s rotation. It would follow that there should only be one of these leap seconds, on average, every hundred thousand years. However, an article in *The Sunday Age* for December 31 1995, says that there have been no fewer than *twenty* leap seconds added since 1972.

What is the explanation for this? Are human activities, perhaps, causing the earth’s rotation to slow down faster than would have been predicted? I do note that the above mentioned rate of slowdown is only an average. Also, I have studied some physics, and I know that tidal effects can occur in a very irregular fashion but twenty leap seconds in about twenty years is about one a year, on average or about a *hundred thousand times* the rate at which they “should” be occurring. I would not have thought tidal effects would be that irregular. I have also studied some statistics, and I can tell you that (in statistical jargon) the likelihood of twenty successes in twenty trials in which the likelihood of success is one in a hundred thousand, is so small that you could safely say that the event will not occur. Clearly, something unexpected is happening, but what is it?

**Chris Manning
Pahran VIC**

Relativity Questioned

The insect travelling on the surface of the ball is not travelling in a straight line. It might look like it from above or in micro, but there are no straight lines on a three dimensional curved surface. Straight as in ‘the shortest distance between two points’ or what a piece of string looks like if you pull the ends really hard. No, the bug on the ball is walking in a circle.

FORUM

Rights (and Wrongs)

Now imagine if you will the bug inside the ball, looking down a piece of straight string, and walking to the end of it by the shortest path, she continues in exactly this line and a long time later is back where she started. Nor does she reach the edge of the ball because there isn't one. Now let me tell you, that there are no balls nor anything else like it, on Earth or anywhere else that can help us visualise this, because it is nonsense. I challenge you to make sense of it.

The warped space that is supposed to do this, grows out of deductions from the acceptance of the speed of light being constant. The mistake is to think the deductions relate to the real world. The mistake is natural because so often the deductions do reveal new insights on the Universe. When they reveal nonsense, you are supposed to let go of your original premises.

This is refutation by reduction to absurdity. We have to be pretty tough-minded here because there are many ideas which defy common sense and experience, but are not really absurd.

The other way to refute a hypothesis is if it contradicts itself. We start with the notion that nothing can exceed the speed of light and end up with cosmic rays which do and a whole emerging universe which did. The original hypothesis is clearly wrong and should be abandoned.

Does this weird universe exist anywhere outside the mathematics of the cosmologists? Another difficulty with the Theory of Relativity is that it creates more problems than it solves. True, this is often the way forward for science, but this one is in a class of its own. We started with an irregularity in the orbit of Mars that could not be explained. In explaining this away we make the whole universe impossible to explain. Like cutting off your head to get rid of a zit.

The pre-Wright scientists had a parallel to today's cosmologists. Namely their problem was one of logic. The theories of the time proved that heavier than air flight was impossible. Heavier than air things flew, theory was wrong. This is logic, it requires no examination of bee wing areas, body weight, flap rate, air density or anything else. By logic we can see the theory of relativity is wrong independent of any search for space strings or gravity waves.

**John Winckle
Currumbin QLD**

Deadline for Vol 16, No 2

May 1

(But please don't leave it until the last minute)

I was pleased that *the Skeptic* thought the question of political conspiracy I raised in my letter (Vol 15, No 3) was interesting enough to publish the letter uncut, and to publish a response by Peter Henderson (Vol 15, No 4 p62). My response to the response follows.

It is impossible for me to cover, in any reasonable amount of space, all I would like to say on a range of relevant subjects, including: (a) the history of Douglas Credit, a.k.a. Social Credit; (b) my personal knowledge of and family history in this bush school of economics; (c) the nature and structure of the League of Rights, and my contact with it; (d) the character of Mr Eric Butler, widely denounced as a major villain; (e) the three major, interrelated versions of conspiracy theory that I am familiar with (which, to my mind, are on a range from reasonable at one end - which I might call the "John Ruskin" end - to insane at the other end - which I might call the "Solomon's Temple" end); (f) the evidence I think I can see for the management and orchestration of public opinion, which to my mind amounts to conspiracy and ought to be exposed.

I shall therefore confine myself to making scattered remarks on various of the above, in the hope that you can publish some or all of them.

Firstly, I would like to put forward the environmentalist movement as an apparent example of the creation of a public body of opinion by someone above. My recollection is that three to five years before environmentalism burst into public view, there was an introduction into high school science texts of a lot of bad science, under the name of "ecology" and as a subdivision of biology, which set the script for the movement that eventuated. I know it was taught, because I was doing junior high school science at the time (by correspondence), and I knew it was bad science because I was a biology nut who had been reading old science textbooks and other books on science, sent to me through the mail by the Brisbane Library under a scheme for isolated children, for years. Some of the stuff they tried to make me believe in high school really was awful rubbish, but most of the kids my age could not have known that.

I am not sure if the teachers knew it (I am inclined to lump them under H L Mencken's view of "the common man" - see p16, *the Skeptic*, Vol 15, No 4), but I was certainly slapped down hard when I wrote to the Correspondence School and pointed out some of the obvious nonsense. Who decided that this stuff should be taught? How did it come about that it was apparently introduced into a number of independent school systems in Australia and the USA (at least) practically simultaneously? If it is granted that environmentalism as it came out politically a few years later was largely nonsense and that this orchestration of bad teaching really occurred and laid the basis for the later movement among young people, whose interest did this manufacture of a political

movement serve? This to me looks like conspiracy, and I have selected this particular example because *Skeptical* readers are, I gather, relatively knowledgeable about science and concerned about misuse of science in public propaganda campaigns (as evidenced by past *Skeptical* articles on smoking and on the greenhouse effect).

Whether you see something as a conspiracy or as a group of wise men acting together for the public benefit depends on whether you happen to approve of the cause concerned. Even so, I would like to know how any group gets to be so influential as to decide on a politically-motivated change in the science taught in high schools, apparently throughout the English-speaking world.

Taking another kind of example, we sometimes see a concerted effort by the media to rubbish and destroy a particular political figure (Billy McMahon, Enoch Powell, George Brown, Richard Nixon), although admittedly this doesn't always work (Ronald Reagan), or sometimes works only temporarily, with the politician coming back later (Winston Churchill, Bob Menzies, John Howard). In 1976, I thought I saw the deliberate creation by *Time* magazine to which I was then a subscriber, of a particularly pathetic and absurd figure, Jimmy Carter, as a major politician. I can see that the rubbing of an individual politician may be the result of the mob instinct of mostly young, power-drunk and vicious journalists, but how is one to account for the creation of a figure like Jimmy Carter? Even allowing for public gullibility, religion, disillusion with politicians following the Watergate anti-Nixon propaganda campaign, it seems to me that some intelligent mind or minds, somewhere, must have made a choice, must have said something like, "We'll take this particular pathetic hick and build him up, use him to put through what we plan for the next four years." I hardly think it possible that Jimmy, or his wife and Hamilton Jordan (who were sometimes named as the owners of the minds that actually moved Jimmy's visible and audible features) could have done it themselves.

In any case, I was reading *Time* and its constant promotion of Jimmy Carter looked to me like a purposeful, planned campaign. There was a *Time* advertisement for itself that featured the head of Jimmy, and there was a cover shot of Jimmy that looked, at first glance, like a photograph of John Kennedy, the deified martyr of twenty years before. It might be a little hard to explain the effect on someone of my age of opening the magazine from its postal wrapper and seeing the head of John Kennedy (apparently) looking at you with all his appealing strength and sincerity. Then you look again and see it's not Jack, it's this candidate for the Presidency. The John Birch Society said that the photograph was retouched; I don't know whether it was or not, but it certainly had the effect of burning an awareness of Jimmy into one's consciousness.

It seems to me that, just as associations of sceptics have in the past identified and separated out from the welter of mystical ideas a fairly coherent claim, and subjected it to examination and to practical tests, it should be possible to separate out from the admitted welter of conspiracy theories some coherent line of argument - I have given you two above - and subject it to rational criticism (as distinct from

the superior put-down) and perhaps to a bit of historical research. Conspiracy theories are very widespread in the community, every bit as widespread, in my experience, as belief in Jesus or astrology. Mr Eric Butler vider has no control over them, as Phillip Adams sometimes seems to imply: every believing individual is his own expert; and quite a lot of them seem to believe their knowledge is dangerous, apt to get them arrested and tortured if they talk about it.

Commenting briefly on Peter Henderson's response to my letter, my impression is that C H Douglas was not particularly anti-semitic, but that suspicions about banks had long gone hand-in-hand with suspicions about Jews, so anti-semitism, if you want to call it that, just naturally attached itself to his movement.

Mr Eric Butler always gets demonised, and admittedly I have not read everything he has ever written, but I have never heard him say anything that I would characterise as unfair to the Jews, or indeed to anyone else. Some of his followers undoubtedly are rather thick in the head, and may say regrettable things at times, but that applies to all political gatherings that I have had any experience of. I think it would be fair to say that he has a politician's knack of speaking in such a way that everyone present thinks he agrees with their own pet theory. If that is dishonest, well, Ronald Reagan did it, I think Gough Whitlam did it, and I am pretty sure that one of our present political leaders who does not specialise in personal abuse, does it when he can get away with it. My close contact with League bookshops is nearly twenty years out of date, but at that time the bookshop I used to serve in (Brisbane) was marketing books promoting mutually incompatible conspiracy theories. Nobody seemed to mind this, and I assume that most people concentrated on their favourite theories and books. I have made the comment in the past that the League seemed to make a home for lost causes.

Part of what I call my research into conspiracy theories consisted of checking the references to Tragedy and Hope by Carroll Quigley (which is a huge tome) in Cleon Skousen's *The Naked Capitalist*. Quigley's book, which I gather was originally published by Macmillan, but then suppressed, and later issued in a pirate edition, covers a vast range, and I have not read it all, but he does matter-of-factly state that there was a conspiracy and that he was in fact part of it for a while. I found it hard to disbelieve Quigley, who sounded to me like an unworldly, conscientious academic who ventured into the real world and made a hash of it, something like Henry Eissinger. I don't remember seeing anything about the Illuminati in it: my impression is that the story of the Bavarian Illuminati belongs to Nesta Webster and others before her, and in fact predates the League of Rights. I would call this Nesta Webster line the middle version of the three major versions of the conspiracy theory: not insane like the "Solomon's Temple" version, but not probable like the "John Ruskin" version.

I would have to agree that Antony Sutton eventually fell out of his tree, but I think he did not let go of the branch until after he had written *National Suicide*. It does not seem to me at all ridiculous, in the context of the times, to

point out that the Sputnik went aloft on American ball bearings, or to list Russian ships supplying North Viet Nam during the Viet Nam War and to say where they and their engines were built. After all, Reagan and Casper Weinberger have tested and proved the proposition since: faced with a straight challenge to outbuild the Americans with high technology in the "Star Wars" project, the Russians made a feeble attempt to use their old propaganda networks in the West to have the project cancelled, then collapsed. If that doesn't prove Sutton's point, I don't know what does.

He didn't, by the way, say (at least in National Suicide) that the Americans secretly gave technology to the Russians. He said the Russians simply bought it on the open market: they didn't, and couldn't manufacture it or invent it themselves, being a primary-producing country like Australia with an uncompetitive industrial establishment.

I found, in the period 1976-78, that material I attributed to the League of Rights and John Birch Society was getting into fundamentalist religious bookshops and that they were putting their own spin on it. One young gentleman who told me he was a former drug addict, now 'saved', gave me a lecture about how we (League of Rights supporters) were hindering God's purpose by spreading this knowledge, because God was apparently using these evil conspiracies to bring on the end of the world, and all we were doing was setting God's timetable back. I don't know what readers of *the Skeptic* will make of this: to me, it was as reasonable a proposition as anything else in religion, and rather flattering, besides. At that time (perhaps like David Greason, the author of *I Was a Teenage Fascist*, which contains amusing pen-portraits of rather a lot of people I have met at one time or another), I was getting a bit lost, and not sure that I wanted to take on God and the Devil at once.

Paul Rackeman
Rockhampton QLD

A Response

Mr Rackeman's response to my letter raises a number of issues which he apparently feels points towards a global conspiracy or guiding hand. I believe that before he can point to such a conspiracy there are more mundane, if not plausible, explanations for some of the issues he raises.

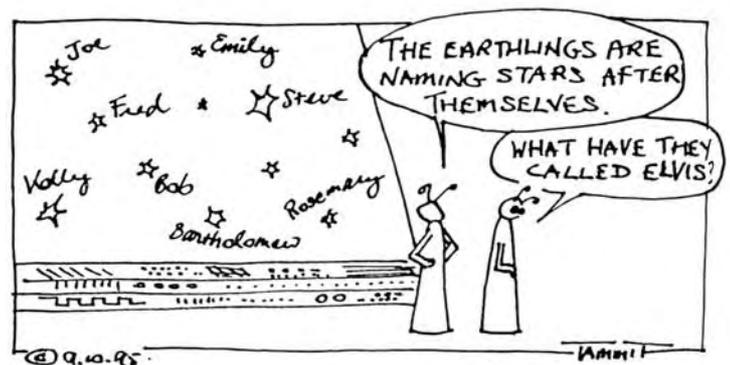
He disapproves of science textbooks which include ecology, which he believes is bad science. I am not qualified to respond to that issue but would point out that the environmental movement was a genuine mass movement that included people from all walks of life. It is not necessarily surprising that it should appear in textbooks, which, like any other books, reflect the values of the times in which they were written. That it appeared around the English speaking world (and probably the non-English) is hardly surprising in an age of instant communication and the Internet.

Mr Rackemann's second example on Jimmy Carter has some truth to it. Carter was supported by some sections of

the American media, as was his opponent Gerald Ford. But to label him a 'pathetic hick' is greatly misleading. Carter was a successful state governor, was trained in nuclear engineering and was probably one of the most intellectually able presidents of this century - not a hayseed from the South. As Mr Rackeman concedes, the national trauma of Watergate was also a factor. Add to this his status as a Washington outsider, free from the stains of corruption, and you have two quite plausible factors for his election.

Two final points. If Mr Rackeman wishes to read an overtly anti-Semitic book by Eric Butler, he should consult *The International Jew*. Second, I only know W Cleon Skousen's book *The Naked Communist*. He was a 'red-baiter' in the tradition of Senator Joe McCarthy and I have found little in his writing that I think could be used to support anything other than a morbid fear of left wing politics.

Peter Henderson
Burradoo NSW



REVIEW

Harry Strikes Again

Barry Williams

A Skeptic's Guide to the New Age,
Harry Edwards; Australian Skeptics Inc; 440 pp; \$20.00

When he is not chairing the Australian Skeptics Science and Education Trust, sending out back issues, writing letters and articles, giving talks and interviews, investigating paranormal claims, visiting improbable parts of the globe and generally keeping Australian Skeptics on track, Harry Edwards writes books. Frankly, I don't know how he manages though I suspect he keeps a stable of elves or gnomes toiling away at a bank of smoking keyboards, just to keep up his amazing output.

Whatever his methods, Harry has just produced his *magnum opus*, a volume entitled *A Skeptic's Guide to the New Age*, which has been published by Australian Skeptics Inc. In this volume he has gathered together the results of his many years of reading and researching the almost limitless number of ways in which people have sought to impose meaning or purpose onto their environment and their lives. Not to mention the very strange interpretations they have placed upon them.

Harry, in looking at this vast range of beliefs, is somewhat more even-handed than readers of his often cutting articles in *the Skeptic* might expect. He begins each section by giving a brief history of the subject, then sketches in the nature of the claims made by those who adhere to these beliefs. He goes on to describe the objections to these beliefs and points out more plausible explanations for many of the alleged effects. Of great value are the Bibliographies at the end of each chapter, which list many publications, both pro and con, on the issues raised.

In one way the title of the book may be a little misleading, as Harry has included sections on Creationism, Extraterrestrial Intelligence and Spontaneous Human Combustion (among others) which are not strictly New Age phenomena as generally recognised. I suspect he may have liked to have called the book a *Guide to Silly Beliefs*, but that would hardly be the way to appeal to a vast audience that may subscribe to any one of the beliefs addressed. And if he can encourage any True Believers into taking an

open-minded look at the evidence for and against their particular belief, then he has provided an invaluable service for the cause of reason and rationality.

All the usual suspects, such as astrology, clairvoyance and numerology, share his pages with such esoteric practices as *critomancy*, omens drawn from barley cakes (barley cakes? Wow!) and *austromancy*, not, as one would suppose, a study of Australians, but divination by a study of winds. Although I have never met one, I would dearly like to make the acquaintance of a practitioner of *phyllorodomancy*, who can tell about the world by "slapping rose petals against the palm of the hand and judging the loudness of the sound made". Talk about specialisation!

What would happen, one wonders, if daisy petals were substituted?

The amount of reading and research that has gone into this book is astonishing and probably explains why a call to Harry's number almost always results in a message on an answering machine. As one who has a limited tolerance for the sort of nonsense espoused by believers in their publications, I can only express profound admiration for Harry's perseverance in getting through so many of them. It's the sort of thing that won medals in the heyday of Empire.

As a Guide, the book does not purport to be the definitive answer to any of the topics raised, but it serves very well in alerting Skeptics (and believers) to the many strange claims being made about the natural world, puts the claims into perspective and suggests further reading that will give more in-depth analyses of each of them. It is written in Harry Edwards' inimitable style, familiar to any reader of the *Skeptic* and I feel sure that readers will not only learn something, but will also be entertained while doing so.

I must declare an interest here, the book has been published by Australian Skeptics and you would expect me to say nice things about it. Well, that is true, but then would we have published it if we didn't think it was worthwhile?

We do think it is a very valuable addition to any Skeptics' library and I have no hesitation in recommending it. ■

ANCIENT HISTORY

Egyptian Matters

Barry Williams

It will probably come as no surprise to our readers that one of my obsessions is the civilization of ancient Egypt and I am not the only one. But where I see Egypt as an important part of the history of the development and civilization of the human race, others refuse to see the accomplishments of the Egyptians as being of human origin at all.

They prefer to regard the catalogue of monumental construction along the Nile, particularly that of the pyramids, as evidence of some sort of outside influence in the affairs of *homo sapiens*. Opinions vary among those who believe such things as to just who these 'outsiders' were, however, my reading of the esoteric literature suggests that at present the "Pre-existing civilization (Atlantis, Mu *et al*)" faction is leading the "Extraterrestrial visitors (Pleiades, Orion etc)" wing, by a significant margin.

An article of faith among these True Believers is that the commonly accepted date of construction of the Pyramids, between 2600 and 2100 BCE is out by many thousands of years. The most popular dates for these 'historical revisionists' seem to be around 11 000 BCE, based on some ephemeral astronomical clues together with a robust application of false reasoning. The all-pervading issue that seems to bolster all the arguments, whether for an extraterrestrial or a lost civilization cause, is that they cannot comprehend how human beings with simple technology could have constructed such large buildings within the times involved. They reject the reasoned consensus among archaeologists as to the probable (and plausible) methods used in construction (see "Building Pharaoh's Mountains" Vol 15, No 1). The underlying thought seems to be "I can't understand how the Egyptians built the pyramids, so they didn't". In this, they conform to yet another article of faith among True Believers of all stripes, and that is that "Of all the people who have an opinion on a subject, those who study it in the most depth are the ones most likely to be wrong". I spend many happy hours on the internet pointing out the inconsistencies in these fantasies and such is the power of my persuasive skill that I cannot point to a single convert to the cause of reasoned discourse. Still, one needs a hobby.

Even more bizarre claims are being made by True Believers about the genesis of the Great Sphinx, which has generally been attributed by archaeologists to Khafre. Recently, I came across a remarkable magazine, *Exposure*, published, like the equally conspiratorial *Nexus*, in Queensland. An article "The Face of the Sphinx Revealed. The Great Sphinx not built by Humans" by one David S Percy. His claim seems to be that the Sphinx represents an amalgum of Neanderthal and Cro-Magnon human types, which he seeks to demonstrate by attaching a Neanderthal jaw to a Cro-Magnon skull and superimposing a caricature

"Jewish" nose. (As the Sphinx lost its nose at some time in the mists of antiquity, this addition seems to be a gratuitously anti-Semitic touch.) In any event, it seems highly unlikely that the cross breeding of two closely related species would produce offspring with such clearly defined features inherited from each parent.

Readers may have seen a recent TV re-run of a program on the Sphinx in which a reputable geologist seemed to give credibility to the idea that at least part of the Sphinx had been carved some thousands of years earlier than the generally accepted date, based on water erosion of the structure. What they may not know is that other geologists and archaeologists have challenged the methodology he used in reaching his disputed dates. Although I am not skilled in either discipline, I must say that the arguments from those challenging the 'revised' dating seem to be much more coherent.

However, even if that part of the Sphinx that is part of the natural rock strata of the Giza plateau had been carved out before dynastic times, then that would only create a small mystery, and one that could easily become part of orthodox thought. It is possible, though not probable, that earlier Egyptians could have dug around the plateau and left a crude structure, which later builders improved upon, but even so, it adds no support to the case for Atlantean or Pleiadean builders.

A report in the January 20 issue of *New Scientist* gives more ammunition to those who see Egyptian history as being purely human. Recent excavations have uncovered the cemetery in which workers on the Great Pyramid are buried. An Egyptian archaeologist discovered that most of the skeletons had "abnormal bony outgrowths known as osteophytes, which are caused by chronic heavy labour." As well, many of the joints showed abnormal wear, spines were damaged and there was evidence of broken bones and severed limbs. The average age of the dead workers was in the early 30s, 20 or more years younger than the average age of those upper echelon Egyptians whose tombs have been found.

This burial ground was found in the precincts of the pyramids, close to the ruins of the workers' living quarters. If, as the proponents of the mystical 'outsiders' claim, the pyramids were built by these 'others' with mysterious technologies, one has to wonder what other great works contributed to the disablement and death of the workers found in the vicinity of the pyramids at the right time to conform with the orthodox view. But don't expect a reasoned response from the True Believers.

It seems that there are many people who, whatever the evidence, just cannot accept that our Egyptian forebears were intelligent human beings. Why? Who knows? ■

Prophetic Dreams?

Too often I have heard it suggested that dreams may be prophetic, and I've had enough. I've heard of people dreaming the name of a race horse, which of course wins the following day. I've heard of people dreaming of the death of a relative, and waking to find their relative has indeed died during the night. I've heard of people cancelling flights and voyages after dreams of impending disasters, to find that it was a good move to do so. Skeptic members have no doubt heard of similar stories.

Well, in the last five years, twice I have dreamt of a mysterious stranger giving me a telephone number, and telling me it was imperative to remember that number so that I could ring it later when I awoke. I duly followed his instructions in the dream, and upon waking rang the telephone number (would you have rung?) to hear a voice telling me the number had been disconnected. And three times I have dreamt of a football team winning by a specific margin, to find the following day no correlation. Three times in the last five years I have woken suddenly, having dreamt that my aging hermit uncle had died. Thankfully he managed to survive my dreams. And three times I have dreamt of a jet aeroplane crashing to find in the following days no such disaster occurring. No doubt these dreams say a lot about me, but they say nothing for prophecies. But the point of this letter?

When I dreamt of the winning margins of a football match there was a low chance in each case that my dream would be correct. And there was a low chance in each case that an aeroplane crash could have followed my dream of an air disaster. And, well, sorry Uncle, but it was possible that you could have carked it when I dreamt of your departure - you had three chances even. (But you didn't, and thank you.) As for the dreams about the telephone numbers, they baffle me, but being told by a recorded voice that a number has been

LETTERS

**Letters about topics of
interest to other Skeptics
are welcome.**

**We reserve the right to edit
letters for reasons of space
or clarity.**

disconnected is not a paranormal experience. However, had someone else had the same dream, and actually rung someone, it would be easy for a new-ager to impute a mysterious psychic connection with a bewildered recipient.

Thus in five years I have had eleven potentially prophetic dreams.

So let us consider probabilities. Even if only one person in a thousand dreamt only one similar dream, in that five year period, then that still means roughly 4000 potentially 'psychic' dreams were dreamt in a city the size of Sydney. Given such a number, the chance of one of those dreams actually being accurate, and thus being deemed prophetic, is high. And that is just for Sydney; there are a lot of cities about!

Furthermore, a correlation between the dream and the subsequent fulfilment of that dream is increased because of association. People booked to embark on a flight the following day are probably more likely to dream about planes crashing than those commuting to work the next day, so the chance of hearing "I cancelled my booking because I had a dream, and look what happened!" is increased. And a mug punter is more likely to dream of a winning race horse than Sister Mary at the local nunnery.

And of course, we have the selective presentation of data to contend with. We are certainly less likely to hear of people cancelling bookings due to a bad dream, only to find their flight or ship had arrived safely, on schedule. Who would own up to that? And we aren't going to hear from the punter who dreams of a winning horse called Vandecor, and who backs it only to find the horse so slow it delays the next race.

So, given our propensity to dream, and given the selective presentation of data, I suppose I will have to accept the fact that I will continue to hear about people dreaming 'prophetic' dreams. According to the normal laws of probability, it's going to keep happening. I'd better get used to it.

**Mark Avery
Forest Lodge NSW**

Bent Spoon

My nomination for the 1996 Bent Spoon Award is the educational authority which condones and promotes irrational thinking by approving Austudy for courses in homeopathy, kinesiology, and other snake-oil therapies. We even have a reputable university offering a bachelor degree in Chinese medicine.

The community and regulatory authorities still demand that the rigours of western scientific epistemology apply to much of orthodox medicine (and elsewhere to engineering disciplines such as aviation and civil engineering). However it seems that alternative medicine modalities are now considered "more-equal", to the extent that their training can attract taxpayer resourcing despite no equivalent rigour of controlled testing.

Could there be a link between the rise of irrationalism in university humanities departments described within post-modernist theory, and this acquiescence to humbug? This rise in irrationalism has been described for the American academic scene by Paul Gross and Norman Levitt in their book *Higher Superstition - The Academic Left and its Quarrels with Science*. This was reviewed in *the Skeptic* (Vol 15 No 3) by James Gerrand and Martin Bridgstock and recently discussed by Roger Sandall in *The Australian*. January, 6-7.

It is tempting to imagine that the theorising described by Gross and Levitt which attempts to undermine the authority of science is contained within the ivory tower of the academy without influencing the real world.

Nothing could be further from the truth. The review in *the Skeptic* ended with the comment "This book is recommended as a most informative and important warning to what lies ahead for Australia unless we also place top priority on achieving a scientifically literate community". I think we can announce that it no longer lies ahead, it has arrived.

**Evan Gellert
Essendon VIC**

Fallacies

In the Summer issue Dale Chant treated us to quick sketch of the evils of fallacies and sophistry, and blamed it all on the ancient Greeks. I gather that before entering the combined field of history and fallacy he did not arm himself with Fischer's classic *Historians' Fallacies*, a gem of wit and erudition. Fischer shrewdly observes that fallacists are themselves prone to misconceptions about fallacies. As his book is hard to come by I will give his list of falsehoods typical of fallacists:

1. "An argument which is structurally fallacious in some respect is therefore structurally false in all respects."
2. "An argument which is structurally false in some respect or even in every respect, is therefore substantively false in its conclusion."
3. "The appearance of a fallacy in an argument is an external sign of its author's depravity."
4. "Sound and creative thinking is merely thinking which is not fallacious."
5. "Fallacies exist independent of particular purposes and assumptions."

No responsible logician would assert any of these, but the third, once cultivated by Jeremy Bentham, is common and mischievous and it appears to have roosted in Dale's very title "You can Tell by the Smell". Arguments do not smell. People do. Dale is saying that if your reasoning is fallacious or sophistical then there could be something *wrong* about you. Heavens you could even be a demagogue! Look at his examples:

power-hungry Greeks slaving fallacies all over Attica; kulakin Joe Stalin and his neighbours the Nazis not thinking straight. And with this lot wouldn't it be more *ad baculum* than *ad hominem*?

Do demagogues use fallacies and sophistry more than anyone else? Are there biases generating Dale's emotional picture of fallacy-ridden elites?

Did a leader's sophistry kill the dupes of Jonestown or was it the collective zombiism of nine hundred closed-minded, authoritarian personality types?

Errors in human thinking are usually inductive: they involve problems in correlation, extrapolation, bias and attribution of causality. It is just error. Forget the evil Athenians bit. Crooked thinking has nothing to do with crooked people. Dale's proposition three should not be added to the Skeptics' preferred list of bugaboos: pandering psychics, alienated abductees and credulous creationists.

Dale asserts that the *ad hominem* argument is essentially a ruse to distract people from one's shoddy logic. That implies a correlation between the incidence of shoddy logic and the incidence of *ad hominem* arguments. Indeed it sometimes has a red-herring purpose. For example gays routinely deploy the charge of homophobia against critics no matter how true the criticism.

But there are intelligent well educated people who are fully capable of deploying cogent arguments to-the-point yet they still resort to the *ad hominem*. An example is Michael Ruse, the philosopher involved in a court case against creationists (see *Zygon: Journal of Religion and Science*, December 1990). Robert Solomon in his *Entertaining Ideas* (Prometheus Books, 1992) argues that the *ad hominem* can be sound. Well, I did call Rafe Champion's friend a turkey, and I did call Peter Singer "baby-faced" when reading him on infanticide, but I would rather argue the issue. Considering the ego some people invest in their beliefs, that can be where the throat is anyway.

The study of fallacies has traditionally belonged to philosophers

and logicians. In their unempirical hands it seems to have reached a dead end. The journal *Informal Logic* seems to strain for something new to say beyond pedagogical nit picking about critical thinking. Hamblin's book *Fallacies* is much raking of old tea leaves. My own non-expert view is that we should get into cognitive psychology and study reason in action and try to understand why the brain churns out the same old errors, even after passing its logic exams. A useful book is *Human Inference: Strategies and Shortcomings of Social Judgment* by Nisbett and Ross.

**John Snowden
Tarragindi QLD**

Mail on Email

It is with some reluctance that I enclose my subscription renewal, as I am greatly distressed by your blatant endorsement of a major whitegoods manufacturer (*the Skeptic* Vol 15, No 4 p 34, first sentence).

Obviously anybody who can gain "many pleasures" from such household appliances is either:

- a. In serious need of psychiatric assistance,
- b. Knows something the rest of us don't, or
- c. Is an artificial female construct from the diseased mind of an advertising executive.

(Or possibly all three).

There is a well-established urban myth that Email's fridges, washing machines etc are just a front for something far more sinister. The expression "lovely titbits" simply confirms this. I was going to point out the disturbing significance of a washing machine called "Gentle Annie", but I suddenly realized that that model is made by Fisher and Paykel in New Zealand, which only goes to prove my point.

And why are so many Personal Computer accessories made by a firm called "Rubbermaid"? Personal? I'll bet!

And, yes I know the Pleiades are not really a group of stars, that they just happen to all lie in the same direction.

But somebody must have arranged them so that they match the badge on Subaru cars.

The word "Subaru" is Japanese for "Pleiades" for Christ's sake! What more proof do you want? (It also sounds like the words for "neat, nifty" and "gliding, flying" but we won't fall for that. Did they think we came down in the last shower?).

Incidentally did you know that the expression "for Christ's sake" stems from a mistranslation of an early Greek text? In the original account Jesus turned water into rice wine (sake) to impress some early Japanese financiers. Their amazed reaction was "Hoh! Chlist's sake!"

You don't believe me. Typical.

Keith Walters.
Lane Cove

Thai Clip

Let me describe an event that occurred recently when I was in Thailand.

The place:

Khao San Rd is a short street in the Banglamphu district of Bangkok where tourists (predominately backpackers) outnumber Thai natives by a margin of about five to one. The upper stories of the buildings that run along the street mostly comprise hostels, while the ground levels are devoted to cafes and souvenir shops.

The incident:

On the day of my return to Australia from Thailand, I was wandering along Khao San Rd in search of last-minute gifts for friends and family when I was approached by a well dressed middle-aged Indian gentleman. "I know your father's first name", he whispered to me, conspiratorially. I was intrigued. It transpired that he was a fortune teller.

Being able to name my father was a sign of the veracity of his powers. On my father's name also hinged his payment, a correct pronouncement at the end of a reading meant that I was obliged to pay him 400 baht (about 22 Australian dollars), otherwise I didn't have to pay anything. Desirous to test

his abilities, I agreed to his terms.

Following my agreement, he said that he would begin by asking the Buddha for good luck for me. From a shirt pocket he took some slips of paper and a pen. He scrawled "GOD GOD" upon one of the slips, scrunched it up, placed it in the palm of my hand and asked me to blow upon it three times. Bemusedly, I did as I was asked. He then unzipped a vinyl bible case he had been carrying. Inside was a book of Buddhist scriptures. He opened it to some propitious verse and asked me to deposit the GOD slip, as well as some money between the open pages. I made some comment to the effect that I thought I was only to pay him later. He replied that I needed to deposit some money for the prayer to be effective. I pulled out 1 baht (about 5.5 Australian cents) and placed it in the book. He gave me a plaintive look, expecting more. However, upon realising that that was all I was going to give, he closed the book and began to pray.

After the prayer, he put the book back in its case and zipped it up. He then took another piece of paper and, away from my view, wrote upon it something that was allegedly my father's name. He scrunched this piece of paper up and told me to hold it in my left hand. I was to unfurl this piece of paper at the end of the reading. "Don't be angry with me if the name is wrong" he said. He then told me to hold out my right hand. Mustering up all the mystique he was able to he then preceded to read my palm - I was going to live to 82, I should watch out for back problems between the age of 52 and 54, etc.

He then took a large piece of paper from a pocket and wrote "father name" "What is your father's name?" he asked. My reply was that he was supposed to tell me that. He responded that this was to stop me from lying about my father's name in order to avoid paying him at the end of the reading. Fair enough I thought. I gave him my father's name. He wanted me to spell it out to him. He then asked me for my mother's first name, my date of birth my two most favourite colours, my nationality, whether I was single or married and what I wanted most in life. He wrote all this down

assiduously. Then, using the numbers of my date of birth and the first letters of my two favourite colours, proceeded to do some form of intricate calculation. From the result he was able to tell me that sometime in January I would fall in love with a non Australian girl, that I would marry in five years, etc.

Taking another small slip of paper, he then proceeded to write out what he told me was another GOD slip - holding the paper, I realized upon analyzing the situation later, at an angle such that I was unable to see what he was writing. He then scrunched it up, asked me to open my left hand and dropped it on my palm next to the piece of paper allegedly inscribed with my father's name. I was then instructed to blow upon both pieces of paper three times. With each blow, he chanted a name in Hindi (?). I was a bit suspicious at the most recent turn of events and was careful not to blow upon the pieces of paper so hard as to disturb their relative positions on my palm - i.e. to ensure I knew which piece of paper was which.

Thereafter came the instruction to transfer the pieces of paper to my right hand, to enable him to read my left palm. I was then told to place both paper balls on the ground while he attempted a simultaneous reading of both palms.

After I had listened for a couple of minutes to another batch of vague generalities about the future came the moment of truth. He told me to unfurl the pieces of paper on the ground. Opening the piece of paper that I knew should have had my father's name scrawled upon it were the words "GOD GOD". On the other piece was written not only my father's first name but my mother's first name and my two favourite colours. He claimed success and demanded that I should hand over 400 baht as we had agreed. I said that I thought it was a fairly poor trick and started to walk away. He followed me, loudly accusing me of stealing from a holy man (himself, I assume). I told him to go away (not exactly the words I used). He ranted, "If you do not honour your debt I will put a curse upon your mother." I kept walking, he started to chant in Hindi

I am probably naive. I must admit

that when we first came to agreement regarding payment, I never suspected that he was going to attempt to play a confidence trick. I simply thought it was going to be a straightforward test of his abilities as a psychic. Where's James Randi when you need him?

It's a decent scam I think. The psychological element was there. "Don't be angry with me if the name is wrong" - a statement that puts you off your guard. In fact, he made this comment a number of times. Some money was extracted prior to the scam, so that there was some reward even if the scam didn't pan out as hoped. Further, if you weren't concentrating, or the pieces of paper were to get mixed up - say, the wind got to them on the ground - then there would be no way that you could rightfully assert that he was a charlatan.

I'd be interested to hear if anyone else has had any similar experiences in Asia

**Shane Delphine
Keysborough VIC**

Fundamentals

The only point on which I could disagree with Dr Ken Smith (Vol 1 No 3) and Neil Weedon (No 4) was on the name of the Seventh-day Adventist church.

The official form of the name is Seventh-day Adventist and even the tragically reduced offshoot is similarly Branch Davidian Seventh-day Adventist written with the small 'd' and the hyphen.

The word 'Adventist' means second advent, the return of Christ to end the world and distribute eternal rewards when paradise is restored. If asked for a pivotal date in modern creationism, both the above organisations would list 1844, the date set for the end of the world by the American preacher William Miller expounding bible prophecy.

Another aggressively creationist organisation, one of itinerant book sellers, the Jehovah's Witness might reluctantly acknowledge their roots in 1844. And their reluctance to

acknowledge roots in the "Great Disappointment" may be one reason they focus on one of their recalculated end dates, 1914 (ie 1844 + 70).

Another creationist organisation, the Christadelphians started around 1844 as did the Baha'is. The Mormons started a little earlier.

The Seventh-day Adventist, and probably the Jehovah's Witness organisations might list bible prophecy as their *raison d'être*. Both organisations have spread world wide and both have acquired substantial buildings, real estate and printing houses. Seventh-day Adventist in addition, have schools, colleges, hospitals and health food factories and the tax concessions of religious organisations. Along with the church employment, the prestige and career paths, it all adds up to a lot of resistance to change.

If evolution is valid and the bible fallible and its creation account a myth, then the fundamentalist churches lose their unique focus on the biblical end of the world. Humankind together might then focus on life as a journey and not as a destination.

The Seventh-day Adventist creationist writer, H W Clark sees the stark choice between Darwin and the bible package when he says:

"When Charles Darwin graduated from Christ's College, Cambridge, in 1831 a few men such as Buffon and Lamarck, had published theories of evolution. None of these theories had fastened themselves in the public mind, and literal creation was still in vogue in Darwin's day. (1831 was the same year that William Miller in America, began preaching that Christ was about to return)".

Clark then links Darwin to his pivotal date:

"After he returned to his native England, ..in 1844 - the very same year when millions around the world were expecting Christ to arrive - he came to the conclusion that species had not been created *in loco* but had developed through long slow years of evolution. The beginnings of modern evolution coincide so closely with the beginnings of the Advent movement."

**B W Doak
Thornleigh NSW**

Burns Burnt

I was reminded by the short piece on firewalking (*News and Views*, Vol 15, No. 4) of an experience at Forrest on the Nullarbor. A friend and I were cycling beside the line from Kalgoorlie to Tarcoola. We'd been two weeks camping out, cooking on fires the size of a dinner plate (wood is a bit scarce). When we arrived at Forrest and were welcomed by two rabbiters. Their fire, fuelled by several old railway sleepers was the size of a small room.

While gazing into the coals, one of the rabbiters mused on his incredulity about firewalking. I knew a little about the physics, so I explained as best I could. He seemed sceptical. (A future Nullarbor Skeptic perhaps?)

Sometime later, and separate from the firewalking conversation, he says to us "Do you cityslickers reckon I could light my smoke with a hot coal?" Not thinking I replied along the lines of "I'd like to see you try". Upon which he reached into the edge of the fire, picked up a glowing coal and lit his smoke. Then, as if to underline his point, he picked up another coal, throwing it to me saying "catch this". Fire walking and low heat content didn't count for much as reflexes took over and I scrambled away. A display of "fire volleyball" with a large glowing coal further humbled the know-all Skeptic from the city.

**Guy Burns
Leith TAS**

Superstition

The Minister for Aboriginal Affairs, Mr Tickner was reported (*The Australian*, 22 December) as describing the South Australian Royal Commission related to the Hindmarsh Island bridge affair as "the Australian equivalent of the Salem witchcraft trials". I understand the sentiment but of course the pertinent distinction is that at Salem the superstitious world view was advanced by the inquisitors,

whereas in South Australia it has been advanced by the Ngarrindjeri “secrets” women.

That the right to personal spiritual belief be upheld is not in question. However, where Government embraces the cross-over of superstitious views into its processes then I foresee many conflicts arising, as much for the Health and Attorney General’s portfolios from “white European” humbug as for Aboriginal Affairs.

**Evan Gellert
Essendon VIC**

A reason

Finally I get around to subscribing to your esteemed publication. Many times I’ve thought to myself I should do this.

Usually after seeing yet another eyewitness drawing of an alien abductor that was, against all odds, bipedal with binocular vision and having travelled possibly millions of light years stop only briefly on earth to dissect a cow, do some gardening and abduct an innocent south US citizen whose mortgage balance coincidentally matched the payment they received from the tabloid publishing their encounter. I love the X-files and have a friend that has mistaken it for a documentary. I think I should do something about presenting him with some hard data on conspiracy theories, the supernatural and alien encounters. Often these events would pass and I would think about you folks. However the clincher was my recent purchase of Ian Plimer’s book “Reason v’s Creationism: Telling Lies For God”. What a great expose, showing that conspiracy theorists, quacks, religious zealots and tabloid media, despite often being great entertainment, do more harm than good and should be exposed wherever possible or at least have their short comings aired.

I would also like to volunteer my services, as an avid Internet Surfer, keeping your readers up to date on the more unusual sights on the World

Wide Web and Newsgroups, and/or to establish a “Home Page” for the Australian Skeptics similar to the one that the UK Skeptics have.

**Matthew Costello
Annandale NSW**

PS The following is a short dialogue I penned late one night after reading the first few chapters of Ian Plimer’s book.

Fundamental Laws and Solid Brick Walls: A Dialogue

-Sir, this truly is an intricate and wondrous glass house which you have erected.

-I am sorry sir, this is no glass house. This is a castle of great stone and timber, of such solidity no person has ever seen.

-Alas, the evidence of my own eyes tells me you live in a magnificent house of glass.

-Then sir your eyes deceive you, I built this castle with my own hands.

-I shall prove to you the contrary sir, and cast a stone at your house and it will shatter as glass does.

-Not a 1000 of your kind and a storm of stones will break the walls of my castle.

-Then I cast the stone and surely now you see the sky above and the shards of glass cut into your feet.

-All I see sir is the great timber roof above my head, no cloudless blue sky and through the thick stone wall I see you not standing there in your fine white coat.

-I am dumbfounded, what seemingly immutable evidence suggests that you are right.

-Sir, the evidence of my faith is all I need for proof of my position.

An excuse

Yes, well, how on earth - or even astrally - could I resist the blandishments of your reminder notice, replete with the sighs and heavy breathing of Samantha and Rodger?

Actually, I should not have needed to resist it, as the original subscription renewal notice was standing

shamelessly erect on my desk, panting for my attention. How could I have ignored it for so long? Alas, the Father of Psychoanalysis was gathered to the Great Consulting Couch in the Sky in 1939, so I may never know for certain.

A prosaic explanation for my tardiness might suggest that the recent school holidays resulted in increased familial interruptions and demands, thus addling my attention span and giving me the mistaken impression that the renewal notice had been propped up on my desk for but a week or two.

But this is not all. There are some electrical power lines running past my study window. Who knows what insidious effects their electromagnetic field may be having on my delicately nurtured neurons.

And there are a pair of masked lapwings (spurred plovers) that have been haunting my garden for some time. I have suspected for a while that they are controlled by, and relay the thought waves of the alien life-forms that have been leaving crop circles on my lawns and emitting unearthly noises behind the dustbins.

I apologise for any inconvenience my tardiness may have caused. Renewal herewith.

**Nigel Sinnott
Alexandra VIC**

Mencken

I write in response to the article by Colin Keay “H L Mencken: A Phenomenal Skeptic (Vol 15, No 4).

As a newcomer to the world of Skepticism, I had never heard of Mencken and enjoyed Dr Keay’s light-hearted introduction to the great man. Having said this, I would like to point out a few areas where I feel Mencken may have (in his exuberance) allowed a few unfair generalisations to creep into his writings.

Mencken asserts that, because science and Christianity are incompatible, it is impossible for a Christian to be a true scientist (he is at best able to aspire to be a “competent technician”). But is this a fair statement? I feel that it is not.

My reason for saying this stems from another comment of Mencken's reported in the same article: "A man is inseparable from his congenial vanities and stupidities, as a dog is inseparable from its fleas". If we were to remove the title 'scientist' from every man and woman who held a contradictory or unsubstantiated belief, then I feel that the ranks of the 'white-coated ones' would be sorely depleted. If the highly educated readership of the Skeptic put their collective mind to it, they could doubtless compose an enormous list of brilliant scientists who were also Christian: Louis Pasteur (a devout Catholic, never without his rosary) springs to mind. To redefine 'scientist' to exclude men like this seems patently unfair.

Please note, this is not an attempt to justify Christian dogma. It is not even an attempt to deny any inherent hypocrisy in espousing both science and Christ (although for an excellent attempt at this I would recommend Russell Standard's *Science and the Renewal of Belief*). It is merely an attempt to show that one can, indeed, serve two masters (at least in this case). Mencken seems keen to assert that no man can be ignorant enough to be a Christian and enlightened enough to be a scientist at the same time. With this I humbly disagree (anyone for a glass of pasteurised milk?)

My second objection lies with Mencken's comments on secondary schooling. While there is much uncomfortable truth in the passage quoted, I feel that something of a contradiction may also be evident.

On one hand he asserts that only "a small percentage of the pupils ... Are really educable ... Beyond the fifth grade level" and on the other he goes on to bemoan the fact that the modern school is "hardly more than a banal aggregation of social clubs". My point is, if most children are "not educable", then what better to do with their formative years than teach them the social skills (so they can at least lead happy lives), and encourage physical fitness (so they can lead long lives)? If Mencken is right about mankind's intellectual limitations, our present system of education would seem to be ideal! The difficulty lies, of course,

in identifying the gifted elite and making separate arrangements for them (an area where I grudgingly agree with Mencken that we need improvement).

Oh, and what the heck is wrong with senior high school girls showing a bit of leg? Short skirts are among one of my fondest memories of High School (right up there with the joys of calculus).

It is not the intention of this letter to suggest that Mencken was anything other than a great sceptic and writer (indeed, now that I know of his existence I intend to search out his work). I also understand that his use of hyperbole and generalisations is suited to the medium. I just feel that the educated Skeptic needs to be all the more careful to avoid the sophistries so beloved of the Enemy.

Daniel Harrison
North Lambton NSW

Daniel, in case it was not clear from Colin Keay's article, Mencken did most of his writing between 1900 and 1940. If you succeed in getting examples of his other work, this becomes more apparent and his style does tend to be a bit over-blown when seen from our perspective. Although I wonder if the modern version of the 'gadfly' columnist is not seen in the many strident 'talk-back' hosts on radio (without necessarily displaying Mencken's wit or flair). It is interesting, however, that you saw his views on education reflected in current concerns about the same issues. Do such things ever change? **Ed**

Ark

I made an interesting discovery during a recent holiday. The argument between David Fasold and Ian Plimer about the Ark remains/mud formation near Mt Ararat can end with a win for both.

Professor Plimer is quite correct when he says: "It's just mud." Meanwhile, Mr Fasold can start looking for the Ark in the right place which is the northwest coast of Spain.

He can obtain details from any resident of Noia, named after the big man himself.

Compared to Turkey, it's a comfortable place to search. The food and wines are better and the locals are less prone to kidnapping.

He could also research how the remains of St James were transported to the same area by boat from Palestine. The journey took a mere seven days which shows that a miracle must have been involved, especially since the boat was made of stone. But that is another story.

Martin Hadley
Windeyer Chambers, Sydney

Politics

I am the Geoffrey Sherrington for whom you kindly clarified the political charter of the Skeptics and the nature of the issues we tackle, be they tiddler or real fish.

The basis of your comments was my review of a book by the US Vice-President, Al Gore and his misuse of science. I did not object to Al Gore because of his politics, but because of his misuse of science, which is every bit as bad as (say) Uri Geller's and other targets of the Skeptics. While a person like Al Gore should not be ridiculed by us because of his politics, nor should he be protected because he is a politician.

Because of his position of political power, he has the capacity to do great harm. That is why I suggested less emphasis on tiddlers. However, your comments raise another quite important point, namely, why do people want to be part of the Skeptics? I feel that the answer is that they like to be entertained. It is easier to be entertained by a debunking of Uri Geller done by a colourful character, than it is to be entertained by a systematic, technical rubbishing of Al Gore. When the going gets tough, the tough will get going - off to join the Rose Society or some less intellectually-demanding location.

On this basis I have to agree with you that a certain degree of judicious

lightness is desirable for the Skeptics' activities. I run the risk of offending A P Herbert who wrote "People do not do things for fun. We are not here for fun. There is no reference to fun in any Act of Parliament."

I will therefore seek another forum to criticise the workings of superannuation legislation and the oft-heard promise that it will make us all better off in our retirement. What a cynical statement ! What a shame it is political!

**Geoffrey Sherrington
Balwyn North VIC**

While the pages of *the Skeptic* are available for airing the opinions of our readers on many topics, we do like to concentrate our main efforts on those areas described in our Aims, which are reprinted in this issue.

We were happy to publish your review of Al Gore's book in a previous issue, because you addressed what you saw as his misuse of science in his tract. Had other readers chosen to dispute your view, we would also have published their responses. However, if you had written a political review about the purely political aspects of Gore's thesis, we would have been much less likely to publish the article.

We are not a magazine of political commentary, nor one of economic discourse and we judge that if we gave our pages over to economic or political discussions our readers would be much less likely to continue their support. We do get contributions from time to time that seek to promote one view or another on matters economic, but, in the absence of any suggestion that any part of the topic is either paranormal or pseudoscientific, (as opposed to just plain silly) we have declined to publish them.

Sometimes we have to make an editorial judgement on what will be of interest to our readers and, given that our renewal rate so far this year is the by far highest we have ever achieved, we can be mildly confident that we are doing something right. For the same reasons we tend to eschew articles that are nothing but polemics against one or other organised religious belief. We respond to market forces (Oh dear, an economic statement), just as any successful enterprise must.

We make no apology for trying to make our magazine entertaining. Going by the mail we receive, our readers seem to prefer a mixture of serious comment and a light-hearted approach. The world is full of deadly serious publications for deadly serious people, on all sorts of deadly serious (and, dare I say it, deadly dull) topics and we are not keen to compete with them.

We even had an outside commentator take us to task for the reason that our cover now asserts that *the Skeptic* is a "Journal of Fact and Opinion". He seemed to regard this as in some way sinister, in that readers would no longer know what to believe. Of course, every magazine (with the possible exception of publications of the Bureau of Statistics) consists of facts and opinions and we would be very disturbed indeed if anyone thought that *the Skeptic* should be a magazine for zealots who see it as their duty to tell people what to think.

We regard a well developed sense of humour and, better still, a finely honed sense of the ridiculous, to be vital tools in the Skeptic's armoury. Some of the areas we deal with seem to admit of no other approach.

But please feel free to disagree and we will publish your comments. **Eds**

I Want to Know

Quite a few of the members of my form think that the Pyramids and the Sphinx were made by aliens from Mars. I don't know how Sixth Form students could still believe that there are aliens living anywhere in the Solar System. Even the teacher said that humans didn't have the technology to build the pyramids.

All this talk started when a video was shown with a distant view of Mars. The person speaking said that there are replicas of the Sphinx and the Pyramids on Mars, all in the same proportion to those on Earth. This is not true because they were only large lumps on the surface of Mars, roughly in the same place as the Pyramids and

Sphinx. We are supposed to believe that there were aliens at work because there was an **exact** replica of the Sphinx. A few members of the form are saying that the Pharaohs were gods with magical powers and not just ordinary people born into the royal family.

I understand that you are an expert on the pyramids. Can you tell me if there is any proof that aliens were involved, and if there is not, can you explain how people did manage to build such huge things without modern technology? This will save my friends from being fooled by talk about aliens and gods

**Patrick Champion (11)
Cremorne NSW**

I am hardly an expert on pyramids, but the subject does interest me.

It is a persistent myth that the Egyptians had neither the skills nor the technology to build the Pyramids, but it is a myth. There is nothing about the Pyramids that would require any technology in advance of what the ancient Egyptians were known to have. In fact, building the Pyramids would have posed no more serious technical problems for the Egyptians of 4,500 years ago, than building the Opera House did for us in the 20th Century. It wouldn't have been easy, but nor would it have been impossible.

It is disturbing that your teacher should subscribe to this idea and s/he should read *The Pyramids of Egypt*, by I E S Edwards, which is the best book I have read on the subject. I also suggest you read "Building Pharaoh's Mountains (Vol 15, No 1) in which I seek to expose many of the myths that have grown up about pyramid construction.

As for civilizations on Mars, the claims made about them owe a lot more to the human need to indulge in fantasy than to any evidence that supports them. There *may* be purpose-built structures on Mars, but at this stage we have no reason to suppose there *are*. It doesn't take much to make a video, and there is no law that states that all videos have to be true. As in many other things, these claims should be viewed with a great deal of scepticism.

Barry Williams

STOP PRESS

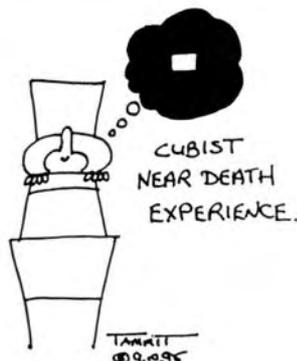
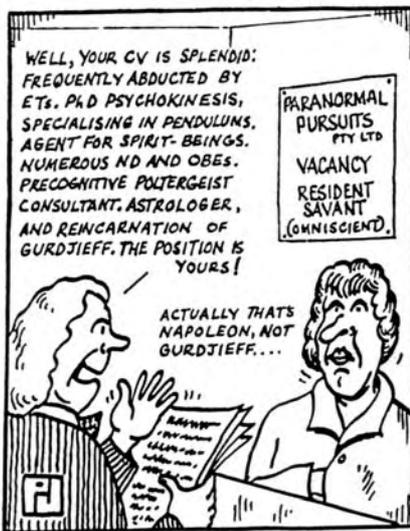
New Address Hunter Skeptics

The Hunter Region Skeptics have a new address and phone number.

The address is: PO Box 166, Waratah NSW 2298 and the Phone No is: (049) 689 666

Kate Burrows, in her column in the *Newcastle Herald* on Feb 16, drew attention to the fact that these numbers may cause *frissons* of fear for the superstitious, given that the three digits of the PO Box total 13 and that the phone no ends in '666'.

The Creation Science Foundation is expected to call for a Royal Commission forthwith.



Concerning our Contributors

Dr Steve Basser, VP of Vic Skeptics and a medical practitioner, will represent Australian Skeptics at the 20th CSICOP Anniversary Convention in June. He is working on his G'day so that Americans will understand him.

Kathy Butler, President of Victorian Skeptics and medical scientist is keen to find an alternative therapy that actually does something.

Glenn Cardwell is a dietician working for the Heart Foundation in WA. His salad dressing recipes are out of this world (and much prized in the Pleiades).

Mark Dawson is an ACT Library Officer, who, when he lets his hair down and removes his glasses, is beautiful.

Henry Cecil Edwards, author, investigator, secretary and undefeated over 70s saxophone champion of Tierra del Fuego, is Editor-in-Ordinary of *the Skeptic*

James Gerrand, a Life Member of Australian Skeptics is a retired aviation consultant. He rarely flies off the handle.

Dr Richard Gordon, medico, is tasked with keeping the Editor-in-Chief alive. He equates this with one of the Labours of Hercules, but will not specify which one.

Peter Johnson, South Australia's leading sceptical cartoonist, hopes that the initials PJ will become as instantly recognisable as OJ (but not for the same reasons).

Dr Colin Key is the supremo of the Hunter Region Skeptics, whose knowledge of astronomy is astronomical.

Mark Lawson is a journalist on the *Australian Financial Review*, is Australian stringer for the science journal *Nature* and is deeply saddened by the fact that no-one has ever asked him to be a member of a conspiracy.

Alan Lang South Australian Skeptic, has a Nostradamus obsession. Old Nostra foresaw this and wrote about it in one of his quatrains. Unfortunately this has been lost.

Justin Lipton is a chaotician completing a PhD at Monash. His work describes his life as it is often hard to tell if he is deterministic or random.

Dr David Maddison is a physicist and a reluctant Sydney *emigre* living in Melbourne (if you can call that living).

Lawrence Pope has qualifications in Religious Studies, Philosophy and Social Work. He considers himself to be a rationalist who is occasionally unreasonable. As far as we can ascertain, he is *a* Pope, not *the* Pope.

Roland Seidel, mathematician, is organiser of the 1996 National Convention. He may, once again, sing unless drastic measures are taken.

Tammi T, mysterious cartoonist from another planet, has a secret identity so secret that even she doesn't know what it is.

Alan Towsey, retired headmaster and linguist, lives in the Southern Highlands of NSW. His ambition to make Esperanto the official regional language is going nowhere.

Sir Jim R Wallaby's political ambitions died with the revocation of the Divine Right of Kings. He lives in hope of their return.

Dr Anthony Wheeler teaches science in a Mackay high school and is becoming an expert in the chemistry of sugar. In that region he dare do nothing else.

Barry Williams, warm and wonderful human being and friend of the working girl, is Editor-in-Chief of *the Skeptic* and holds firmly to the philosophy that, if you can't say something nice about somebody, you shouldn't say anything (especially when it's about yourself). Others think he is a galah.