

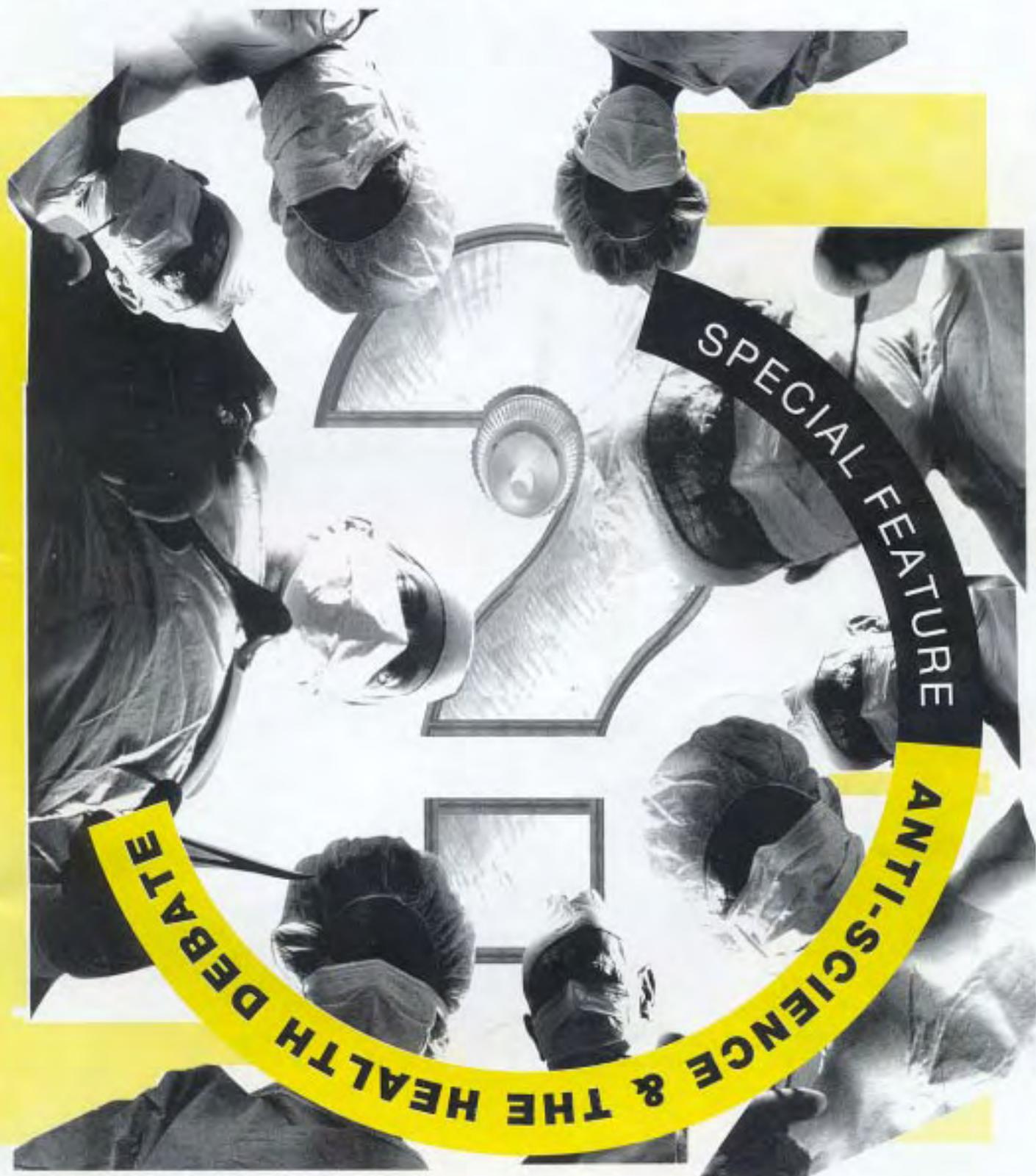
the skeptic



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the Skeptic

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Editor: Barry Williams

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Editorial

The task before us

This year we intend to apply some evolutionary changes to *the Skeptic*, to make it both more readable and more aesthetically attractive. At the same time we hope to maintain, and to even improve, the content of the magazine to cover an even wider range of issues that concern Skeptics everywhere.

To do that, we rely on our readers to keep up the flow of communication and to make us aware of topics that concern them.

We are also putting together a team of branch correspondents from each of the branches, to ensure that readers are kept in touch with local events. We also intend to set up a panel of editorial consultants, with a wide range of skills and backgrounds, to advise on particular issues.

Because this issue contains a large feature section dealing with "Anti-science in the Health Debate", some of our correspondents will find their contributions did not make it this time. We apologise if your deathless prose missed out, but we will certainly consider it for the next issue (unless the new editorial beagle pup has eaten it in the meantime).

On that topic (contributions, not pups) may we make a plea that comes from the depths of the editorial heart. Please send in your contributions as soon as you can. The deadline for the next issue is

May 16, but, if every contribution comes in on that day, there will be a very frantic period around the plush editorial offices indeed.

Items for inclusion can be sent in any format, however, our distinct preference is for items to be e-mailed or contained on a 3 1/2" disc. These should be in plain ASCII text and should not be formatted or laid out (that is what our highly skilled editorial staff is paid to do).

If you send printed or typewritten items, they can usually be scanned, with our scanner showing a distinct preference for laser printers. Faxed items cause serious psychological dysfunction in the scanner (not to mention the editor), but they are useful as a guide if you have any layout preferences.

Of course, not every reader has access to the technology to comply with editorial desires and we are always glad to receive your handwritten contributions, but we would prefer them to be kept short. Items chiselled in stone may well be ignored.

We hope you, our readers, will find the changes in our format and layout to be interesting and an improvement on our previous efforts. We are always keen to get your feedback so we can keep on improving, so keep those letters and cards rolling in. 

Your very good health

Richard Gordon & Barry Williams

We begin the new year of *the Skeptic* with a number of Feature Articles addressing a wide range of health-related topics, under the theme "Anti-science in the Health Debate". Because the topic of health concerns everyone, we regard the proliferation of untested "alternative" therapies and the promulgation of anti-scientific ideas about health as being one of the most important issues we can address.

The *Sydney Morning Herald* recently carried an article in which it was stated that 20 percent of Australians regularly used one or another form of alternative therapy, and, more worrying still, that a similar percentage of registered medical practitioners offered one or more alternative therapies in addition to their regular medical services. Most health funds now offer cover for a wide range of alternative practices and the concept of "alternative" methods of treating illness is now widely accepted.

Some of therapies on offer may contain useful remedies, while others are illogical and patently ridiculous. Those that claim that all illness can be attributed to a single cause, or can be treated by a single therapy, are, by any rational analysis, foolish (and potentially fatal) oversimplifications of complex problems. A dangerous thread that runs through the majority of such therapies is the lack of any diagnostic skill, or training, among their practitioners. The symptoms of many mild and many serious conditions may well be similar and it takes skill and training to distinguish between them. Even trained and experienced medical practitioners can misdiagnose serious conditions and there have been enough high-profile legal cases to show that they can sometimes be grievously in error. What chance is there, then, of having a serious illness diagnosed by someone whose training (if any) is based on a false understanding of the causes and nature of disease?

Our concern is not that all alternative therapies are inherently unsound - it may even be true that some of them contain useful facets and that they may truly be what their proponents claim for them, "complementary" therapies. What does concern us, and what should concern everyone involved, is that we just *don't know*.

If these therapies are ever to be considered as legitimate, then they must be tested, using the tools and techniques of science. The oft repeated claim by practitioners, that these treatments are "not testable by Western scientific methods" is arrant nonsense, and does nothing to instill confidence in either the practitioner or the practice. There is no such thing

as "Western scientific methods" there are only scientific methods, which are not at all dependent on the location or antecedents of those that practice them.

It is not often that we proffer compliments to politicians, but we are heartened by recent statements by the federal Health Minister, Dr Michael Wooldridge, that he will make resources available to test the efficacy of various alternative therapies, and those that are found to be efficacious will be regulated in much the same manner as orthodox medicine. Those are precisely the actions that Skeptics would recommend. Let the alternative therapies be tested, and be shown to be effective, then there should be no apprehension about their use as part of our health care system. Regulation should ensure that only properly trained practitioners are entitled to offer these therapies, not the *carte blanche* system that currently applies.

Dr Wooldridge is further to be commended for his actions in seeking to overcome the disgracefully low level of immunisation among our children. As two articles in this issue demonstrate, the misuse of statistics and the level of misquotation from the opponents of immunisation is such as would not disgrace the creation 'science' movement. The financial incentives offered by the Health Department should have the immediate effect of increasing the child immunisation rate among those whose parents who are merely tardy. It remains to be seen if the anti-science advocates of the anti-immunisation scare can maintain their momentum when they are forced to justify their actions in discussions with health professionals and not merely in "sound-bites" on the electronic media.

As the effects of these government initiatives begin to be felt, it behoves all medical practitioners to make themselves familiar with some of the genuine research findings in this field, and Dr Stephen Basser's article on page 18 would be an excellent place to start.

In the future we hope to offer further special features on various other topics of concern to Skeptics, mixed with informative items and commentary on our wide range of interests. In the next issue, we will have a lead article by Dr Andrew Gibbs, a neuropsychiatrist on the controversial question of "repressed" and "recovered" memories in the context of sexual abuse and the legal responses thereto. Anyone with an interest in the matter is invited to contribute.



Around the traps

Bunyip

January 23 dawned bright and clear and around the world New Age denizens trooped to mountain tops to welcome the light that heralded the "Dawning of the Age of Aquarius". (At this cue, readers of a certain age will dig out their tie-dyed T-shirts, flares and platform soles, turn on, tune in and drop out. Their children will phone for the men in the white coats.)

The reason for this latest foray into unreason by the intellectually vapid was an 'unique' correspondence of planets, in which Jupiter, Saturn and Uranus were in alignment (though round the other side of the Sun from us, we understand). According to media reports, this formed a rare "six-pointed star formation". Presumably you need to be a New Ager to form a six pointed star out of three planets, but then, to a New Ager nothing is impossible (except making sense, we suggest).

Skeptics with an urge to become immoderately rich might like to consider that at any given moment the nine planets of the Solar System form some sort of spatial relationship with each other. It shouldn't take much imagination to draw an analogy between any arrangement of planets and something the New Age movement considers as profound (which includes everything) and make a small fortune out of running bus tours to the top of a local prominence. Just a thought.

* * *

A curious discussion cropped up on the net recently. Some US subscribers were discussing a superstition in which people, who were trying to sell their houses, buried a statue of St Joseph upside down

A collation of news items and oddities from the fringes

in the back yard. This, it was alleged, assisted with a successful sale of the property.

We have never heard of any such superstition pertaining in Australia (although our familiarity with hagiography is not as complete as it might be), but, as we are convinced that our readers know everything, we therefore appeal to you for any sightings of this odd belief.

* * *

A big thank you to our friends at the Creation Science Foundation for sending us their subscription renewal in an unstamped envelope. (Oh, yes, they do subscribe.)

Fortunately Australia Post didn't charge us for this oversight, doubtless proving that they too are part of the world-wide-atheistic/humanistic/communistic-conspiracy-to-destroy-Western-civilisation-as-we-know-it.

Oddly though, the good folk at the CSF also neglected to fill in their renewal form, which made it a little difficult to record their subscription. Needless to say, because we use such scientific skills as rational deduction, critical thinking and nous, we managed. Had we had to rely on Biblical inerrancy we would have undoubtedly failed, as *Genesis* is singularly silent on such matters.

* * *

We are grateful to subscriber **Philippe Tabuteau** of the Gosford History Group, for the clippings he sends us from his local newspaper, the *Sun-Weekly*, about UFO

sightings on the NSW Central Coast. While we can understand local pride in a local paper, we were startled to read, from the December 19 edition, this amazing claim: "Long regarded as the 'UFO capital of the world' by UFO researchers, the Central Coast became the focus of 'ufologists' worldwide ..."

We don't like to be picky, but from our observations the most common places for UFOs to be sighted in Australia seem to be in the suburbs of Melbourne and the outback of the Northern Territory (see following story). And we are sure that the citizens of Roswell, New Mexico or Gulf Breeze, Florida (to name just two US localities) might also care to dispute Gosford's claim to fame. But then we are probably being kept in the dark by the vast worldwide conspiracy.

* * *

On a similar note, we are forever indebted to **George Snowden** of Maribyrnong who sent us a clipping from an unnamed journal (we are fairly sure it wasn't *Nature*) that reprints a story from the US tabloid *Weekly World News*.

This item claims that "angry citizens" have kidnapped a "3-foot-tall" alien in retaliation against the aliens perpetrating a "whopping 49 UFO abductions over the past two years" from "Tanami, a town of 5,000 people in the desolate Australian outback". The nefarious scheme was foiled when "a sheriff and two deputies stumbled across an abduction in progress".

As we said above, we hate to be picky (Evolution forbid!) but, Sheriff? Deputies? What were these officers of the court doing in Tanami? And where exactly is this

“town of 5,000”? We checked our Road Directory of Australia without result, nor does it have a Post Code, however, it does have a telephone Area Code which indicates it is somewhere near Alice Springs and there is a Tanami Desert in that area. Come to think of it, 5000 is a pretty substantial town for the “desolate outback”.

If any of our Territorian readers knows exactly where Tanami is, could they please let us know so we can dispatch our ace super-sleuth, Harry Edwards, to investigate these gross invasions of the privacy of Australian citizens.

It couldn't just be that the story is a complete fabrication, could it? Impossible - it appeared in print!

* * *

And now some cautionary tales from the psychic hinterland.

First, we hear from the United States that prominent American astrologer, Jeane Dixon, died of cardiopulmonary failure in late January, at the age of 78.

Dixon was one of the best known astrologers in the USA and maintained a celebrity status despite the fact that Skeptics groups kept records of her predictions showing her to be particularly inaccurate, even in a group not noted for the accuracy of its predictions.

Her fame was based on her claims that she had predicted that both President John Kennedy and his brother, Robert, would be assassinated. There is little or no corroboration for these claims and some of her other claims, for example that the Russians would be first to walk on the moon, were very wide of the mark. As is usual with such celebrity psychics, she remembered (and publicised) her ‘hits’, vague as they may have been, while totally ignoring her ‘misses’.

As for predicting her own demise, she did in fact do that. Trouble was, she predicted it for “the 80s”. It is not recorded if any member of the Kennedy family predicted her passing. *

In yet another triumph for the predictive arts, we were surprised to learn that a former wife of the heir to the Italian Gucci empire has, along with some others, been charged with his murder. Among the others charged was her ‘psychic adviser’.

This caused us to muse publicly that psychics were notoriously inept at predicting their own futures, so why should anyone else trust their insights?

A worker in the parapsychology field has told us that ‘emotional involvement’ precluded ‘psychics’ from investigating their own futures and drew an analogy with the fact that medical practitioners do not professionally treat themselves, nor members of their immediate families. We think this is an entirely different set of circumstances, because just as a doctor might reasonably believe that he might not behave dispassionately in such cases, it does not mean that his knowledge of medicine suddenly dries up.

In any case, one hardly needs to be psychic to realise that getting involved in a murder, and a domestic murder in particular, is not one of the smartest ways to spend one's time.

* * *

Not that that seemed to deter Francisca Zetina Chavez, a Mexican mystic, also known as “La Paca”.

Very prominent in her community, she claimed that her spirit guide was John Kennedy and also claimed to have many (living) political contacts.

She, too, is languishing in duration vile, after a bizarre series of events in which she and her followers claimed to have found the body of a missing political figure on the ranch of another prominent Mexican politician. Seems they actually planted the remains of a deceased member of their own group in an attempt to frame the politician on whose ranch the body was found.

* * *

John Foley, our indefatigable Adelaide correspondent sent us the following amazing story:

In February, Adelaide's daily newspaper, *The Advertiser* got the astrological chart accurate, but failed to publish why it happened. Now, the fearless reporters of *the Skeptic* bring you the full story.

In the later days of January, 1997, Venus moved in its orbit a little closer each day until it was almost aligned through Earth with Pluto and Neptune.

Saturn, with its mystical rings made up of billions of crystals, fell back towards the straight line.

By early February, tiny Mercury whizzed around and around the Sun in a rapid orbit while Mars was slowly moving into place. By the end of the first week, Uranus was a little behind but the line was forming up nicely. We were waiting for mighty Jupiter to fall into place and as it moved closer, dogs cringed uncannily, domestic cattle were restless and no birds flew by day or night.

On the night of February 4, all the planets were in near perfect alignment. The weather changed dramatically. Temperatures rose, humidity levels went through the roof, and unprecedented rains flooded the Outback, stranding tourists, pastoralists and even the Indian-Pacific train.

The next night when the moon was full and the planetary alignment complete, it finally happened. *All twelve signs of the Zodiac came up with exactly the same reading!* On Thursday, February 6, *The Advertiser* published the star chart accurately but missed the bigger story. Now you have it, courtesy of *the Skeptic*.

* * *

Those, who are as obsessed with the game of the “flannelled fools” as the Editor-in-Chief, will have noted that yet another milestone in the great game was passed on Saturday, February 1 in the test match against the West Indies at the WACA ground, Perth.

In “Superstition Hit for Six” by Barry Williams (Vol 13, No 2) he

exposed the notorious superstition, that 87 was an unlucky score for Australian batsmen, to some critical analysis and found it to be without foundation. Given that only ten players have been dismissed for that score in all of the 500+ test matches in which Australia has been involved and that at least three more wickets have fallen on 88, it is irrational to regard 87 as anything other than 87.

In that article he mentioned that former captain (and semi-hysterical commentator) Bill Lawry was the only player to remain on 87 not out in a test. Now that record has fallen. Michael Bevan was 87 not out at the end of the first innings of the fifth test. Could it be considered unlucky for the young all rounder? Hardly, as it is his highest test score thus far, eclipsing his 85 not out in the fourth test.

* * *

While we are pursuing that topic, we were intrigued to see a headline in the foreign news pages of a *Great Metropolitan Daily* that read "Bhutto Poll Boycott Threat".

Images danced through our minds of the former Pakistani PM seeking to counter the threat to her re-election posed by former Pakistani captain Imran Khan by importing the former Yorkshire and England opening bat to bore the electorate into catatonia.

Alas, the story did not bear out our fantasy - she was merely urging her followers to refrain from voting

* * *

Regular correspondent, **William Grey**, of Qld University sent us this interesting intelligence he

gathered from the net. It seems appropriate, given our focus on strange health practices in this issue.

A new fad, Ear Candling, has broken out among the True Believers in "holistic" medicine. A wax coated tube is inserted in the ear, then set alight. They say it removes unwanted ear wax, improves hearing and clears up ear infections, sinus problems and even chronic headaches. Each 'treatment' costs around \$40, which seems a lot for a candle.



Thanks indeed to Canberra subscriber, **Warwick Finch**, who sent us the following snippet from his desk calendar.

According to his Politically Correct Calendar, February 12 was Charles Darwin's birthday. The calendar noted:

"Charles Darwin's birthday (1809). Find some charity in your heart for Creationists today. After all, many times the validity of a theory is obvious only to those persons who have actually benefited from it."

* * *

As Skeptics are probably aware, the Transcendental Meditation movement has made claims that a sufficient number of adherents to its peculiar doctrines in any area will result in a reduction in the crime rate.

There is little evidence to support this, but a recent survey in the US did produce one startling fig-

ure. The town with the lowest crime rate in the US was Amherst, NY, which just happens to be the location of the headquarters of CSICOP, the original official Skeptics organisation. Hmm, perhaps this shows that scepticism is a more socially responsible practice than meditation.

* * *

Recently someone on the net noted that research into psychic phenomena and electricity began at roughly the same time, 150 years ago.

Another contributor noted that if electricity research had progressed as quickly as psi research, we would still be debating the existence (or non-) of static electricity from carpets.

* * *

We so liked the cartoon (left) that first appeared in a January edition of the (Sydney) *Sun Herald*, that we asked cartoonist **Jenni Coopes** for permission to reproduce it here. She graciously gave her permission and we are very grateful to her.

In a pedantic mood, we pointed out to Ms Coopes that she had incorrectly spelt Skeptics with a 'c', however, she advised us that she had originally used the correct spelling and an ovezealous sub-editor had altered it. The copy she sent us had her original spelling restored.

We also quibbled that the cartoon had a further inaccuracy, in that none of the Skeptics was shown wearing a beard, pointing out that Skeptics' gatherings typically exhibited more beards than anyone had seen anywhere since the 1970s. She promised to take this intelligence aboard for the future.

Victorian attitudes

Roland Seidel & Kathy Butler

It's been a big time for fire in Victoria. I live in the Dandenongs and was close enough to the January 21 fires to be panicking; the expression "scared the pants off" fits well enough.

* * *

Andrew Rawlings had to call off the 4th annual Giordo Bruno firewalk recently (397th anniversary) due to threatening gestures from the weather and it will now be held on Easter Friday.

We're planning a couple of big firewalks at the Bendigo Easter Fair; one on Saturday by the lake and the other on Sunday in the middle of the street, accompanied by a Chilean orchestra. We are also fielding interest from the Tallygaropna Girl Guides for a firewalk in November. It looks like this is year of the match, not the year of the ox after all.

* * *

Have you visited the web site recently? It's amazing, it's fantastic, it's extraordinary, it's brilliant. There are good solid articles, pictures and weird things, Dr Bob's Quiz, links, bios, the challenge.

We tips our collective lid to Greg Keogh for an astounding effort. Look, folks, do yourself a favour and get into it!

* * *

We of the Victorian committee believe it's best to get 'em while they're young. We also believe it's never too late to cultivate some thinking skills. To both these ends we are running a small symposium on encouraging scientific and critical thinking.

So far it's called "Popular Sci-

ence! Make thinking fashionable from preschool to adulthood". A glittering array of scienteratti (?) will gather at Scienceworks on the May 28 to entertain 100 lucky ticket holders.

Speakers will include our own Ian Plimer, Bendigo Discovery's Catie Morrison (who will do some demos, including some small explosions!), Graeme O'Neill - the well-known Melbourne science writer, Ian Anderson, Australian Editor of *New Scientist*, and Harry Gardiner who, since retiring from CSIRO, demonstrates science to four-year-olds!

Keep your eye on our website for further updates, or if you are bursting to be a ticket holder, ring (03) 9841-0581 to make an advance booking. Tickets about \$25.00.

* * *

We are looking forward to Ian Plimer's court case beginning in early April and are delighted to hear of Eugenie Scott's timely visit. We have pencilled in a dinner/talk event at University House, Melbourne University, on April 22 and there may be other events. Victorians - watch out for the local newsletter.

* * *

"Feminism and Scepticism", Dr Claire Colebrook. This was fantastic! Claire is a great thinker, a great communicator and also Steve Colebrook's sister. (Steve is our new secretary and old musician).

One of the clear insights I came away with is that the paranormal is the sanctuary of the disenfranchised - if you can't get security from trusting the real power bases in your culture you are left with make believe power. It is then no

wonder that the New Age is consumed more by women and by the young. A fuller report will be forthcoming.

* * *

Welcome back to Shane Delphine and Tony Prout, long missed committee members, who have been on their respective world trips to places mystical and marvellous.

We got a brief run down on whacko things in India, South America, the Middle East and other spots, but Tony said he had to wait until USA for the real whackos - apparently they leave the rest of the world for dead.

* * *

We have an astrology project on the go, with some rather grand goals - among them one of understanding the theory and calculations from an astrologer's perspective. It's not that easy and we're looking for help. Are there any astrologers or ex-astrologers out there who can help explain things?



Kurtz recovering

The founder of the modern Skeptical movement, Prof Paul Kurtz, chairman of CSICOP, recently underwent a heart bypass operation in the USA.

Paul is recovering well, although his doctors have advised him to try to take life a little easier. He has sent a thank you note to Australian Skeptics for the best wishes we sent him during his illness.

Southerly aspect

Allan Lang

In South Australia we have gotten used to being ignored by the rest of the world: omitted from tours by celebrities; dismissed by the Australian Tourist Commission; left off logos by the Australian Skeptics.

We could accept that, because it seems the only time we make the world stage is when something bad happens; the Beaumont children, Hindmarsh Island, and the appearance of the BVM.

* * *

The Yankalilla image of the BVM just won't go away. And everybody seems to want to put their own spin on it.

It's really got very little to do with Mary at all, according to Pasquo Cassetta, writing in the November 1996 issue of *Share International Magazine* (I'm not sure what field they cover, but I'm betting it's not the stock market.)

The situation is that:

- the Yankalilla phenomenon was another sign pointing to the coming of a Christ-like teacher to unite all religions;
- the new teacher would be a teacher for all humanity and will teach there is one God;
- the Yankalilla image was part of a jigsaw of phenomena heralding a new era of universal spiritual wisdom.

At least that's the claim of Adelaide Transmission Meditation group member Lisa Foley, who was sought out by the Adelaide *Advertiser* newspaper for an "interview at the church linking this event to the series of apparitions and miracles taking place around the world".

As I recall it, Ms Foley was just one of the many grabbed off the street to make a vox pop comment.

Other people might have a different take on the event. (Did I mention that Pasquo Cassetta is also a member of the Australian Transmission Meditation Network?)

Mr Cassetta then faxed one Benjamin Creme in London for verification of the origin of the apparition and the stream of water.

In case you are wondering what he would know about it, apparently the whole shebang is really the work of the "Master Who was the Madonna". This information was conveyed by Cassetta to the Reverend Nutter, who, having already read *Maitreya's Mission Volume Two* by Benjamin Creme, said he really appreciated this information as it confirmed his own intuition regarding the whole phenomenon.

A decision was made to drill for the water. But the question remained: where to drill? [I would have thought the dowser would have told them that.] Anyway Pasquo faxes off again to London to ask Benjamin Creme's Master for the location of the bore. Creme's Master responded with the location for drilling. In late September a bore was drilled at precisely the recommended spot two metres from the wall in line with the image. Water was found! When interviewed by a *Current Affair*, diviner Russell Pope didn't mention the Master Who. Pope seemed to claim that he located the well.

The interesting thing about the article is the fact that it places Reverend Nutter, who has come across as a typical Anglican vicar, with a bit of Marian complex, as really a believer in NewAge Theosophy. Of course, this was from an article by a Maitreyan, and it came off the Internet anyway, so

I'm not sure it can really be relied upon.

* * *

Just an observation of the New Age of Miracles: The *Advertiser*, in its *Weekend* magazine feature on Yankalilla (14/12/96), noted, "Aaron cast his rod before Pharaoh and it became a snake, according to Old Testament Book of *Genesis*". Is this yet another example of the media's failure to check sources for claimed miraculous events? In case anyone is wondering, the incident is from *Exodus*.

* * *

In the Summer 1996 *Skeptic*, I reported on the *Today-Tonight* clash between Skeptic John Foley and a quartet of psychics. During this interview, one of the psychics, Raelene Leach, was highly critical of facts and the logical process. But it seems she was not always so - she used to be sceptical.

I am surprised at the subject of her declaration of scepticism.

In a column in the January-February *New Age Guardian*, Raelene stated:

Like most people, I was sceptical about there being such a thing as extra terrestrials living in the universe.

If there was just one unproven fact that I would feel that it was reasonable to accept, it would be that there were extra-terrestrials living somewhere in the universe.

Grammatical correction: I have just realized I was wrong. Extra-terrestrials are beings not from the Earth. Extra terrestrials (the form Raelene used) are just more of us. Raelene is not confessing to former scepticism about aliens,

she is saying that she used to be a solipsist, and disbelieved in the existence of *everybody*.

* * *

On the first Wednesday of even numbered months we hold a Super Special Skeptical Saracen Soiree at the Saracen's Head, 82 Carrington St.

On February 5 the guest speaker was Professor Alistair McLennan, of the Women's and Children's Hospital, whose talk was on "The causes of cerebral palsy". When the subject was first announced, some of us (including I) couldn't see the immediate connection to scepticism.

But the talk was a fascinating account of the influence of "junk science" and the litigation quagmire that has arisen from the attribution (without evidence) of cerebral palsy to birth trauma - including the judgement of one of our high court justices that legal proof and scientific proof are different.

Incidental data: the number of obstetricians now practising in the US state of Florida - zero.

* * *

The next dinner will be at 7:30pm, on April 2. The speaker will be Andrew Rooney from the Department of Transport on "The Future of Roads and Transport".

* * *

Do ring me (we're in the book - and, by now, *the Skeptic*) and tell me you'll be there. If you haven't been because you think you won't know anyone, don't worry. Neither do the rest of us. We all wear name tags and there is lively conversation and debate on many, many subjects.

* * *

Remember: "Skeptics Corner", on *Breakfast with Julia*, 5AN-891, on the 13th of each month. It goes to air between 5:35 and 7:30am. ☞

Darwin doings

Linden Salter-Duke

There's a lot to be sceptical about in the Northern Territory, which has more than its fair share of dingbats.

It was reported this week that the ghosts of Elvis and Marilyn Monroe had been spotted at a Mobil Service Station some 500 kilometres down the track (that's the Stuart Highway) from Darwin. Mataranka is a pleasant enough place, with some delightful warm springs) but probably not the sort of place that either Elvis or Marilyn would be seen dead at.

Mind you, round June and July, there's a lot to be said for heading north to Darwin, so if there are any Skeptics who can take on a job of public speaking and happen to be thinking of getting away from the cold weather, drop us line.

Were looking at putting on a stall at the Darwin Show. Any ideas? What's worked for you? We want to appear professional, or it's not worth doing.

How do other people sort out the tension between getting things done and getting to know each other at Meetings? Do you take a leisurely stroll around aministrivia, pausing for interesting digressions on the Power of Prayer, or do you race through a tightly controlled agenda?

We're aiming to have the best of both worlds by lumbering the admin side onto an Executive, who will arrive half an hour early to sort things out.

We're also planning to upgrade our own public speaking skills by taking it in turns to put on a presentation.

Next month: Noah! (It's been a very wet Wet season.)

Contact details are shown on page 3. ☞

Canberra comment

Julie McCarron-Benson

Canberra Skeptics have another active year planned, with the following range of exciting events.

We will have a stall at the annual *Information Expo* on the lawns of Old Parliament House, on Monday, March 16, 1997, during Canberra Week. We enjoy this stall and usually manage to collect a few new members and locate a few new areas to target.

We will have an information booth at the *Amazing World of Science Festival* in April. Some members of Canberra Skeptics will be guest speakers at the festival. Anyone wishing to help by working the booth for us over the four days will be most welcome.

Last year we initiated a regular round of events to take place, maybe four times a year, as a way of keeping in touch with our members and giving an opportunity to the wider community to attend something they may be interested in.

The first event for this year will be a dinner with Dr Eugenie Scott, Executive Director of the National Center for Science Education, Inc, (see story p 13) who will speak on the topic, "Science, Creationism and Scepticism". The dinner will be held at the Brassy Hotel, Barton, Friday, April 18, 1997. Cost of the dinner will be \$35.

About the middle of July, we are intending to host a forum on the bothersome topic of Immunisation.

We have held an annual dinner in late October for many years and this year we have decided to hold a talkfest to celebrate the Earth's 6000th birthday over the weekend October 18-19.

Contact details are shown on page 3. ☞

Tasmanian topics

Fred Thornett

The Scrivener presents his views of sceptical happenings in the Great South Island. He has tried to be objective, but not too much. Although entirely to blame for any factual or policy errors, he seeks exculpation on the Prime Ministerial grounds that he either just forgot or his legal advice is that no police investigation is necessary.

* * *

After a meeting in late, 1996 mentored by Roland Seidel, esteemed Supreme Pontiff of the Victorian Skeptics, the Tasmanian Branch has arisen from a few years in limbo. Our new committee has four public meetings and a couple of social events scheduled for 1997. As we progressively establish a network of personal contacts with Skeptical folk and sympathizers in Tasmania we hope to gradually expand our activities.

Embryonic ideas being tossed around are: a Dial a Skeptic phone line and an occasional Salamanca Skeptics Stall near the tarot readers and numerologists in the famous Saturday market in Salamanca Place. We also contemplate a public debate twixt a paranormalist of a yet to be selected flavour and one of the couth and eloquent Skeptics in our Branch. The adult public may also be amused and enlightened with a Skepticism: Do it Yourself course at the CAE and our sundry secret plans (ie things we hope to think of very soon).

* * *

On 7 February we had our first public meeting at the Royal Tennis Club in Hobart. Prof Carmichael from the Tasmanian Medical School told us a fascinat-

ing, but worrying, tale about the low current immunisation levels in Australian children and the probability of avoidable infant deaths or even epidemics if this is not corrected.

Serendipity struck with this topic because when we planned the meeting last November we had no idea that the federal government was going to roll a pro-immunisation bandwagon a couple of weeks before our meeting. Attendance was moderate, but we got lots of publicity. May our good luck continue!

* * *

On 21 February we had a successful fund raising Quiz Night. Our Committeeman, Informal, was quizmaster. His bent towards the classics, the literary, the erudite, the obscure and the downright difficult was obvious in the scores.

The winning team scored only 59% or so. (The Scrivener's team achieved a few points less, but claim bias in that several of our expert and eloquent answers were not preferred by the quizmaster whose pedantry exceeded even our own.) The winners received six bottles of fine champagne most generously donated by Dr James Marchant.

Some 50 people attended the quiz night. A wonderful turnout for a small town. Sydney or Melbourne would need about 1,000 punters to achieve pro-rata. Two potential subscribers were identified and another chap wisely confirmed that his cheque was in the mail.

* * *

We intend continuing to raise the Skeptics profile in Tasmania. We

want to be seen as a responsible group who are reliable, trustworthy and persistent in the contest with irrationality and quackery. This will require us to overcome the prejudice we have detected amongst some good folk that Skeptics are a bunch of mean spirited and atheistic curmudgeons who want to stop nice people having fun. No matter how rational and reasonable we see ourselves, too many people see us as boring, scientific neo-puritans.

We need to change these views if we are to be effective in helping people to be less often gulled. To do this I hope that most of us in Tasmania will oppose irrational ideas and pseudo-scientific silliness in general, but reserve our big guns for those who provide high priced but false comfort to the gullible or who promote socially damaging activities in order to advance their own interests in other spheres.

* * *

As Monty Python said, "And now for something completely different". The following is an unsolicited, and wholly unauthorized, review of a frothy, but amusing 60 page booklet called, *A Guide to the New Age*. (It is Must Not be confused with the excellent, comprehensive and erudite, *A Skeptic's Guide the New Age* by our own Harry Edwards.)

A Guide to the New Age has been published in Hobart by Jason Betts (Self styled sensitive New Age Guru) and Jon Kudelka (who really is a widely published cartoonist). The book is certainly sympathetic towards New Ageism, but the authors do not seem take themselves too seriously. Each page of the book has an amusing

Notice

summary of one new ageist cult, con, belief or business opportunity illustrated by a clever cartoon.

For example, the page on Clairvoyancy advises, "Don't make an appointment, they'll know you're coming." The associated cartoon shows a pizza delivery chap at the door wearing a hat inscribed "Psychic Pizza". He announces to the bemused looking householder "Here's the Pizza you were about to order".

Interestingly Betts and Kudelka regard Skepticism as an aspect of new ageism. This is a viewpoint I have never considered. How about you? They also proffer the stereotype view of Skeptics as wet blankets by warning Skeptics that William of Occam had no friends and was never invited to parties. Still as our good Committeeman Informal tells me, Occam was a Catholic monk so it would be unsurprising if his social life included but little public jollity.

The booklet which costs \$6 including postage, is currently only available in Hobart. It may be available later in quality newspapers everywhere. Why wait? Arrange that long postponed trip to Tasmania now! If this seems too dramatic: email or phone me and I will tell you where to send the money. But - make sure you also send off a cheque for Harry Edwards brilliant, *A Skeptic's Guide to the New Age*, available by mail order from Australian Skeptics Inc. 

**Doing a
moonlight flit?
Don't forget to
tell us your new
address.
the Skeptic -
don't leave home
without it!**

Eugenie Scott to visit

Dr Eugenie Scott will be visiting Australia in April to appear as an expert witness in Prof Ian Plimer's court case (see p 15). She has agreed to address Australian Skeptics meetings in Sydney (see below), Canberra (see p 11) and Melbourne (details in next *Vic Skeptics Newsletter*)

Dr Scott has been since 1987 the Executive Director of the (US) National Center for Science Education, Inc, a pro-evolution non-profit science education organization with members in every state. A human biologist, her research has been in medical anthropology and skeletal biology. She holds a PhD in physical anthropology from the University of Missouri.

She has worked nation-wide to communicate the scientific method to the general public and to improve how science, as a way of knowing, is taught in school.

She is frequently called upon by the print, radio, and television media as a spokesperson for "the scientific view" when conflicts arise between scientific and pseudo-scientific explanations.

Eugenie Scott is listed in *Who's Who in Science and Engineering*, and has been made a Fellow of the Committee for the Scientific Investigation of Claims of the Paranormal, from which in 1991 she received the Public Education in Science Award.

She has been both a researcher and an activist in the creationism/evolution controversy for several years, and can speak to problems created by this sectarian challenge to science education from many directions: educational, legal, scientific, and/or social. A dynamic speaker, she offers stimulating, thought-provoking and entertaining lectures and workshops.

NSW dinner meeting

The NSW branch will host a dinner meeting, with Eugenie Scott as the special guest. The function will consist of a three course dinner (drinks not included) and a talk by Dr Scott entitled, "Evolution and Creation: From Scopes to Plimer"

As this is sure to be a very popular event and, as space is limited, readers are urged to respond immediately by forwarding their cheque and a list of the names of those attending to:

Skeptics Dinner
PO Box 268
Roseville 2069

Date: Friday, April 11
Time: 7.30 pm
Venue: North Sydney Rugby League Club
20 Abbott St Cammeray
Cost: \$35.00

Carl Sagan, 1934-96

Barry Williams

Carl Sagan died on December 20, 1996 at the age of 62, after a long battle with a bone marrow disease. Carl Sagan was one of America's pre-eminent scientists, science popularisers, educators and Skeptics. He was also a founding member and Fellow of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP).

Sagan's career as a populariser began in the early 1970s when he started publishing science books aimed at a lay audience. His book *The Dragons of Eden: Speculations on the Evolution of Human Intelligence* won the Pulitzer Prize for Literature in 1978. His 1974 work, *Broca's Brain* was one of the earliest popular scientific works to look at the growing public acceptance of pseudoscience.

Sagan achieved international acclaim with his award-winning 1980 TV series *Cosmos*, which explored scientific understanding of 15 billion years of cosmic evolution from the Big Bang to the origin of life and human consciousness. His presentation of his subject was so fascinating, so comprehensible (and so ebullient) that *Cosmos* attracted an audience of over half a billion people in 60 countries. His exclamations of "billions and billions", in the unmistakable Sagan accents, became a staple of comedians speaking of scientific matters.

He continued his work as a populariser of science and critical thinking right up until the end of his life. His article in the March 1996 issue of *Parade* magazine, titled "In the Valley of the Shadow", spoke movingly of his illness and his attitude to death as a non-theist and sceptic:

I would love to believe that when I die I will live again, that some thinking, feeling, remembering part of me will continue. But much as I want to believe that, and despite the ancient and worldwide cultural traditions that assert an afterlife, I know of nothing to suggest that it is more than wishful thinking.

The world is so exquisite with so much love and moral depth, that there is no reason to deceive ourselves with pretty stories for which there's little good evidence. Far better, it seems to me, in our vulnerability, is to look death in the eye and to be grateful every day for the brief but magnificent opportunity that life provides.

A life-long sceptic, in 1987 Carl Sagan was the recipient of CSICOP's "In Praise of Reason Award", and, in 1994, he was awarded CSICOP's inaugural "Isaac Asimov Award", created to honour Asimov for his extraordinary contributions to science and hu-

manity. This award was in recognition of "an individual who throughout his or her life has shown outstanding commitment and ability in communicating the achievements, methods, and issues of science to the public". It would be hard to conceive of a more worthy recipient than Carl Sagan.

But Sagan was not only a science populariser and TV personality. He was, first of all, a working scientist and academic. From 1971 until his death he was Professor of Astronomy and Space Science at Cornell University. He also worked for NASA and was responsible for the interstellar messages that went into space with the Pioneer 10 and 11 and Voyager I and II space probes. He also worked with the Mariner, Voyager and Viking planetary exploration teams.

In his last book, *The Demon-Haunted World: Science As a Candle in the Dark*, Sagan sounded a warning that surely resonates with us all:

I worry that, especially as the Millennium edges nearer, pseudoscience and superstition will seem year by year more tempting, the siren song of unreason more sonorous and attractive. Where have we heard it before? Whenever our ethnic or national prejudices are aroused, in times of scarcity, during challenges to national self-esteem or nerve, when we agonize about our diminished cosmic place and purpose, or when fanaticism is bubbling up around us-then, habits of thought familiar from ages past reach for the controls.

The candle flame gutters. Its little pool of light trembles. Darkness gathers. The demons begin to stir.

I knew that Carl Sagan had been ill, and his appearance on the recent TV programme *Kidnapped by UFOs?* confirmed just how ill he had been, but the news of his death at 62 shocked me. Sagan was one of the great Skeptics; one of the truly dedicated fighters for reason and scientific understanding of the world we inhabit.

On behalf of all Australian Skeptics I sent this message of condolence to our friends at CSICOP and the *Skeptical Inquirer*:

I am sure that all Australian Skeptics, and all who experienced the feelings of wonder and love of science that he inspired, will feel deeply the loss of Carl Sagan. He was truly a front line warrior in the battle against ignorance and superstition and the 'armies of the night'. He was far too young to have left the scene and, although I never had the pleasure of meeting him, I will miss him.

Barry Williams



Plimer in court

Barry Williams

In the 1991 an Australian citizen, Allen Roberts, claimed he had been kidnapped by Turkish dissidents after finding Noah's Ark on Mt Ararat. His story caused a brief flurry in the Australian media and in 1992 he began touring the country giving lectures on his findings and offering for sale books, pamphlets and video tapes. Now billed as "Dr" Allen Roberts, he claimed to be an archaeologist. At various meetings attended by scientists and members of Australian Skeptics it became clear that Roberts had no qualifications, nor any skills, that entitled him to call himself an archaeologist and his talks were nothing more than thinly disguised fundamentalist dogma, with no scientific validity at all.

Research conducted by Australian Skeptics, in conjunction with other interested parties, showed that his assumed title of "Dr" was from a non-accredited Bible school operating from a small church in the southern USA.

At meetings in Melbourne and Hobart, he was confronted and challenged by Professor Ian Plimer, Professor of Geology, and Head of the School of Earth Sciences at the University of Melbourne. Ian, who is a visiting Fellow at universities in Europe and who has worked professionally in Turkey challenged every claim that Roberts made about the formation he 'discovered' in Turkey and explained that the object was a commonplace geological formation. After one of the meetings, Roberts instituted legal action for defamation against Ian Plimer in the Supreme Court of Victoria, over some remarks allegedly made on a radio program.

At this point, Australian Skeptics heard from David Fasold, a US citizen, retired merchant mariner and author of a book on Noah's Ark. He contacted the Skeptics because he had heard that Roberts was using some of his diagrams and writings without asking permission. Fasold is a former fundamentalist who has fallen out with his one-time colleagues and is now very unhappy with them.

Ian Plimer and David Fasold then entered into linked actions against Roberts and his associates under the Trades Practices Act for misleading and deceptive conduct while engaged in trade and commerce, and a copyright action.

As one of Australia's most public scientists, Ian Plimer is leading the fight in Australia against the pernicious anti-science dogma of religious fundamentalists who seek to give their spurious claims respectability under the title of science. In his book, *Telling Lies for God* (Random House, 1994) he merci-

lessly exposed the utter vacuity of the claims of the creation 'science' movement. It has been a lonely battle for Ian, with regrettably few other scientists regarding it as worth their while to stand up against the assaults being made on their profession by a fanatical foe.

Creationists can no longer pretend that their dogma has anything to do with science. Their pretensions to theological respectability have also been challenged on many sides by people knowledgeable in that discipline. But regardless of their lack of credibility in these fields, they certainly do engage in trade, and the laws of this country do not allow you to mislead and deceive people with whom you wish to trade. This law should apply no less stringently to new age practitioners who offer for sale items of dubious efficacy.

If Professor Plimer is successful in prosecuting this case, then all such bodies, be they creationist or new age, will be shown to have no special privileges or exemptions from the normal commercial laws of the land. Of course they don't have any such privileges in law, but our consumer protection authorities have shown a distinct unwillingness to prosecute these groups, or even to investigate them, despite complaints made.

The Trades Practices case finally comes to trial in the Federal Court in Sydney on April 7, 1997.

Such is the cost of litigation, and the inordinate delays in the legal processes in Australia, that this action has cost Ian Plimer his house, most of his money and a great deal of his time. He deserves the support of all who believe that science should be protected from the depredations of those who would like to see everyone accepting their narrow and bigoted religious dogmatism.

The Australian Skeptics Science and Education Foundation has promised a substantial sum of money towards Ian Plimer's defence for the final trial, but more is needed. Supporters and well-wishers can make donations to:

**Ian Plimer Defence Fund
Rev Brian Nicholls, OAM,
511 McGowan Street,
Broken Hill NSW 2880**



Immunisation: a rational perspective

Michael Meyerson

Why is Australia's rate of immunisation so poor when we have what appears to be an excellent immunisation programme which is free, well advertised and well administered?

The most recently released figures from the Commonwealth Department of Public Health indicate that only 52% of children between three and six years are fully immunised and, if the new vaccine against *Haemophilus influenzae* type b is included, then this figure falls to only 33%. The low immunisation rate has led to a significant increase in the incidence of the life threatening diseases measles and whooping cough (pertussis). There have been at least 137 unnecessary deaths from these preventable diseases in the past decade in Australia.

Opposition

Parents who do not immunise their children can be divided into two groups. The first group is apathetic, uninformed, afraid of immunisation or remote from available services. Improvements in immunisation education and access would probably significantly increase the number of immunised children from this group.

The second group of parents actively opposes immunisation as they believe that the complications following immunisation are more common and more serious than the medical profession is prepared to admit. Education of this group with regard to the benefits of immunisation is unlikely to be successful. However, to disregard this group would be a dangerous mistake. Not only do the media frequently support their views but they constitute a serious threat to the health of Australian children. Their own children are liable to contract preventable diseases and they can pass them on to infants who are too young to be immunised. It is the irrational thinking behind the beliefs of this anti-immunisation group which is typical of a more pervasive anti-science movement.

Their beliefs are based on evidence which has not, or cannot be, scientifically verified. This makes their evidence unacceptable or, at the best, questionable until proven. They hold to their beliefs despite scientific evidence to the contrary. This type of behaviour has been elegantly discussed by Stuart Sutherland in his book entitled *Irrationality*, where he gives a detailed explanation of why people's beliefs become remarkably resistant to change. He outlines six

reasons for this phenomenon (the first four of which have experimental support):

1. People constantly avoid exposing themselves to evidence which might disprove their beliefs.
2. When confronted with evidence against their beliefs they often refuse to accept it.
3. People cunningly twist evidence to suit their own beliefs.
4. People consistently remember items which are in line with their beliefs.
5. People stick to their beliefs in order to protect their self esteem.
6. People excel at inventing explanations for events or phenomena.

What are the beliefs of the anti-immunisation group which are so remarkably resistant to change? Firstly they believe that the risks of immunisation outweigh the benefits, despite well documented scientific evidence which calculates the risk of a serious reaction to any vaccine to be minute. Further they do not understand the concept of benefit versus risk although every day we all make conscious and unconscious decisions weighing up benefit against risk.

When you decide to cross the road to buy the newspaper you have effectively decided that the benefit of obtaining the newspaper outweighs the risks of injury associated with crossing the road such as twisting an ankle on the curb, getting run down by a car or becoming the victim of a mugger. Similarly when you choose to accept penicillin to combat a serious infection you run the small risk of an adverse reaction which may even result in your death. The vast majority of us would never choose to undergo extensive dental work without the comfort of an injection of local anaesthetic. Yet that injection itself may have very serious side effects and can, on the very rare occasion, result in death.

Benefit v risk

The benefits of immunisation should be beyond debate. We all enjoy huge benefits in health by being able to avoid diseases such as smallpox (already eradicated worldwide), polio, whooping cough, diphtheria, tetanus, measles, mumps and rubella. These diseases used to occur commonly, and frequently resulted in marked debility or death. Our quality of life is improved, knowing that we can live

without the worry of being afflicted by one of these many awful diseases.

What then of the risks of immunisation? Side-effects include minor and major problems. Pain or swelling at the site of the injection, mild fever, rash, headache, irritability, loss of appetite and vomiting are all minor side-effects which may occur quite frequently. They are of short duration, easily managed and have no lasting effect. The more serious reactions are acceptably rare. The diphtheria, tetanus and whooping cough vaccine (DTP) has occasionally been followed by convulsions and hypotonia (floppiness). Permanent neurological damage is however extremely rare and affects one person in a few hundred thousand. The risk of suffering encephalitis as a result of contracting measles is 200 times the risk of suffering encephalitis as a result of immunisation against measles.

The oral polio vaccine has eliminated polio from this country. For this benefit we run the risk of one in three million people becoming paralysed following the immunisation.

It is therefore clearly illogical to refuse immunisation when the risks of the procedure are so insignificant when compared with the benefits. If the anti-immunisation group was consistent in holding to its illogical viewpoint then it follows that they would be able to participate in very few things in life. They certainly should never consider going anywhere by car or public transport as the risks in so doing are far greater than the risks associated with immunisation.

Anecdotal evidence

The anti-immunisation group is unduly influenced by anecdotal evidence with regard to the complications of immunisation. Anecdotal evidence has been shown to be unreliable in the vast majority of cases, although occasionally it may be the basis for further scientific evaluation. Anecdotal evidence is the recounting of one's own (or someone else's) experiences as proof of a claim. For example, your friend was diagnosed as having cancer. Following conventional treatment at the hospital, an alternative health practitioner gave her naturopathic treatment and now she claims to be cured thanks to the naturopath. We would all like to believe that sort of evidence. However, there are many questions to be asked. How do we know she is cured? Has enough symptom free time elapsed since the treatment of her cancer for a cure to be pronounced? Is it not more likely that the conventional medical therapy cured her? Anecdotal evidence is usually emotive, inaccurate and biased to the beliefs of the observer. It is irrational to be swayed by anecdotal evidence without careful analysis of its relevance.

A powerful factor that causes people to blame immunisation for illnesses that have not been scientifically linked to the procedure is the tendency to incorrectly link cause and effect. It is tempting to assume that because event B follows shortly after event A, then event B is likely to be caused by event

A. It is therefore not surprising that some parents whose children become ill shortly following immunisation assume that the illness was caused by the immunisation. This may be the case - but it may not. Bear in mind that there are children falling ill daily. Some of them are bound to have had an immunisation in the days or weeks prior to their illness. This however does not necessarily mean that the immunisation caused the illness as the illness may merely have occurred by chance at that time. In order to establish a causal relationship between these two events it would be required to show that significantly more children contracted a specific illness or suffered a specific set of symptoms following immunisation than a matched group of children who had not received immunisation.

Media responsibility

The media must bear some responsibility for the beliefs of those who oppose immunisation because they frequently report on the matter either in a way that is not objective or is clearly supportive of those opposed to immunisation. Journalists, like everyone else, are vulnerable to the lure of irrational thinking and because they wield such influence they should be particularly wary of reporting on subjects which can reinforce or encourage the development of irrational beliefs. It is vital therefore that journalists who report on scientific matters must have a basic knowledge of statistics and logic and at least some training in science.

The immunisation debate should not be viewed in isolation. It is really only one of the many problems that are to be expected as a result of a burgeoning anti-science movement which sets itself up in opposition to the findings of conventional science. The idea of pseudo-science becoming as credible to the public as genuine science, unfortunately, is not as far-fetched as it sounds. The danger posed by the anti-science movement should not be underestimated. Its supporters cling to entrenched beliefs which are irrational. They cannot be persuaded by scientific evidence to the contrary - they exhibit "invincible ignorance".

Perhaps it would be opportune to reflect on Stuart Sutherland's advice to help guard against irrational thinking:

1. search for evidence against your own beliefs;
2. try to entertain hypotheses that are antagonistic to each other;
3. don't distort new evidence;
4. be wary of your memory: you are likely to recall whatever fits with your views;
5. beware of being influenced by any explanations you may have concocted in support of your own beliefs; and
6. remember that changing your mind in the light of new evidence is a sign of strength not weakness.



Anti-immunisation scare: the inconvenient facts

Stephen Basser

Introduction

Over the last few years immunisation rates in Australia have fallen. As a result there have been outbreaks of the infectious diseases immunisation is designed to combat. Earlier this year there was a significant outbreak of pertussis (whooping cough) with at least three children dying from this preventable disease.

There has been a lot of media attention focused on the immunisation issue, and in an attempt at 'balanced' reporting the views of individuals and groups who oppose immunisation have been given plenty of coverage. The most well known example of this was the ABC TV *Quantum* two part series aired on September 26 and October 3, 1996.

The Australian Skeptics have been critical of the media in the past when they have unquestioningly given coverage to issues such as alien abductions or astrology. Can we now have our cake and eat it too? Is it reasonable to expect the media to only present the 'immunisation is good' message? Are there really two sides to the immunisation 'debate'? This is the question the sceptical scientist should be asking.

Perhaps the answer lies in the distinction between scientific evidence and individual opinion. There will be a number of different opinions, or beliefs, about immunisation but, as the Australian Skeptics have so often observed, believing something to be so does not necessarily make it so.

There is no scientific doubt about the efficacy of immunisation, and my concern about some of the media coverage is that this has not always been made clear.

This has not entirely been the fault of the media, though. Part of the responsibility must lie with so-called mainstream scientists, who have at times been unwilling to appear alongside immunisation opponents. The latter are often more media savvy, and are always willing to accept airtime or print space to state their views. Whilst I can well understand the reticence felt when faced with an invitation to respond to an anti-immunisation spokesperson armed mostly with anecdotes, I believe more attention should be paid to combating their misinformation.

Initially it was my intention to write an article that reviewed the scientific evidence for and against immunisation, but I have decided, instead, to review the quality of the science of one particular, very public, opponent of immunisation - Dr Viera Scheibner.

Dr Viera Scheibner describes herself as a retired principal research scientist. She has a PhD in micropaleontology and in 1993 published a book - *Vaccination 100 Years of Orthodox Research shows that Vaccines Represent a Medical Assault on the Immune System*.

I decided to review Dr Scheibner's work because she is highly regarded within anti-immunisation circles. She has given lectures both here and overseas, and more importantly she was the sole expert witness called to oppose immunisation in the Human Rights and Equal Opportunities Commission hearing regarding the right of Maroochy Shire Council to exclude unvaccinated children from their child care centre.¹

Dr Scheibner is staunchly anti-immunisation and she claims that she has come to this view as a result of collecting "just about every publication written on the subject of the effectiveness and dangers of vaccines".^{2(pxxv)} Lest there be any confusion I will allow Dr Scheibner to make her own position quite clear:

...there is no evidence *whatsoever* that vaccines of any kind - but especially those against childhood diseases - are effective in preventing the infectious diseases they are supposed to prevent. ^{2 (pxxv)} [emphasis added]

Before I go on to examine Dr Scheibner's claims, and the objectivity of her research, in more detail it is important to make the following points unambiguously clear:

1. Vaccines are not 100% safe.³⁻¹¹
2. Vaccines are not 100% effective.¹²⁻¹⁸
3. Parents have a right to objective information prior to deciding whether to immunise their children.

It is not my intention to argue the first two points, and I am prepared to agree that, like any medical procedure, there are occasional individuals who suffer a seriously adverse reaction to immunisation. This reality, though, is not an argument for cessation of all immunisation, just as the occasional tragic outcome from coronary bypass graft surgery is not a valid argument for stopping all such surgery.

My primary concern is as follows: Are parents who base their decision not to immunise their child on reading Dr Scheibner's book making a truly informed choice? Has Dr Scheibner presented her ma-

terial in a scientifically balanced way? Is she telling the whole story?

Immunology 101

Immunisation is the process of artificially inducing immunity or protection from disease.¹⁹ This may be done either by stimulating the body's immune system with a vaccine or toxoid to produce antibodies, or through the use of an externally produced antibody.

A vaccine is a suspension of live or killed organisms (bacteria or virus), or parts of organisms. A toxoid is a modified bacterial toxin that has been rendered non-toxic but is still able to stimulate anti-toxin production.¹⁹

Immunising agents usually also contain a suspending fluid, preservatives, stabilizers and adjuvants. The most commonly used adjuvants are aluminium salts, and are used to enhance the immune response.¹⁹

The aim of an immunisation program is to reduce the incidence of, or to eliminate a particular disease. Immunisation has both a direct and an indirect effect.²⁰ The direct effect is the protection induced in the individual receiving the immunising agent. The indirect effect is the reduction of the incidence of the disease in others - so called 'herd immunity'.²¹

Deciding whether a particular immunisation program is successful depends upon a comparison of the number of cases of disease prevented with the range, severity, and incidence of adverse effects. That is, a comparison of the risks and the benefits.

The paradox of a successful immunisation program is that the more widespread immunisation becomes the more attention will be given to vaccine related illness. When immunisation rates are low, and the incidence of infectious diseases such as whooping cough are high, the risk from the disease is clearly far greater than the risk of harm from the vaccine.²⁰

As immunisation rates increase, though, the disease becomes scarcer and eventually a point will be reached at which the risk from the vaccine approximates the risk of contracting the disease.²⁰ It is important, if high immunisation rates are to be obtained, for this 'conflict' between the individual (risk of immunisation) and society (benefit of herd immunity) to be acknowledged.

This imperfect match between the individual and society is one important reason why, when one reviews the history of immunisation research, so much effort has gone (and is continuing to go) into the development of safer and more efficacious vaccines.

Pertussis

Pertussis (also known as whooping cough) is a highly contagious respiratory infection caused by the organism *Bordetella pertussis*.²² Pertussis causes violent episodic coughing which can make it hard for a child to eat, drink, and in some cases, breathe. Children under six months of age and children born prematurely, or with congenital abnormalities are particularly

susceptible to complications, and suffer higher fatality rates.

Because of the decrease in the incidence of this disease over the course of the twentieth century it is difficult to fully appreciate how serious a condition it can be. At the end of the nineteenth century in the UK one child in every thousand under the age of fifteen died from the disease.⁴ In the US in the early 1940s it caused more deaths in children under two years-of-age than any other acute infection besides pneumonia and diarrhoeas.²⁴

The pertussis vaccine is usually given in combination with those for tetanus and diphtheria. This immunising agent is commonly referred to as DTP, or Triple Antigen. In Australia it is routinely given at two, four, six, and 18 months of age. A booster may also be given at age four to five years, prior to school entry.

Dr Scheibner asserts that DTP immunisation is ineffective and unsafe. More than this, though, she specifically claims that DTP immunisation is an important cause of Sudden Infant Death Syndrome (SIDS).

The battle lines are drawn

In reviewing the development of the pertussis vaccine earlier this century Dr Scheibner mentions two studies reporting on epidemics that affected the Faeroe Islands, and reports that:

In both epidemics six patients of the 3,926 vaccinated died and 26 among the 1,073 unvaccinated cases died.^{2(p15)}

This result appears to support a contention that is anathema to Dr Scheibner - namely that immunisation is effective - but she is not about to be discouraged, going on to say:

So the vaccine seemed to provide some degree of protection; however, *the numbers of vaccinated and unvaccinated are so different that any comparison is scientifically invalid.*^{2(p15)} [emphasis added]

Any first year statistics student will be able to tell Dr Scheibner that this is incorrect. In performing a statistical analysis between two populations such as this (vaccinated vs unvaccinated) the samples do not have to be the same size, or even similar, as long as each *separate* sample is large enough.²⁴

In this case the sample sizes are more than adequate and when the analysis is done on the figures provided by Dr Scheibner the difference between the populations is highly significant, with a p value of <0.0001.

It is difficult to understand how a "principal research scientist" could make such a fundamental error, and does not instill great confidence in Dr Scheibner's ability to critically and objectively analyse the literature.

Dr Scheibner goes on to discuss the trials conducted in the UK in the 1940s under the auspices of

the Whooping-cough Immunisation Committee of the Medical Research Council. She particularly refers to the trials conducted between 1946 and 1950, reported in the *BMJ* in 1951.²⁵

There were approximately equal numbers of children (3,358 vs 3,352) in two study groups. The 'vaccinated' group were immunised with pertussis vaccine, whilst the 'unvaccinated' group were given a vaccine containing no pertussis organisms. This 'anticatarrhal' vaccine contained killed suspensions of *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Corynebacterium hofmannii*, and *Neisseria catarrhalis*.

For all the trials there were 149 cases of pertussis diagnosed in the vaccinated group, and 687 in the unvaccinated. The average attack rate in the 'home exposures' group (children exposed in their own homes to infection in one or more siblings) was 18.2% for the vaccinated and 87.3% for the unvaccinated.²⁵

This time Dr Scheibner cannot attempt to dismiss the result based on sample size difference, so she tries a different approach:

This difference in attack rates cannot be attributed solely to a protective effect of the pertussis vaccines because the so-called unvaccinated group who served as a 'control' were in fact given the anti-catarrhal vaccine ... like the pertussis vaccine, this anti-catarrhal vaccine contained a number of foreign proteins (antigens) and had the ability to lower the resistance of the recipients. For this reason alone, the above trial cannot be considered valid. ^{2(p16)}

Because a truly inert placebo, such as water or normal saline, was not used in these trials it is theoretically possible that the control vaccine had an effect such as Dr Scheibner proposes. Unfortunately for Dr Scheibner the attack rate in the 'unvaccinated' group was compared to the rate in the general population, and over the whole period of the trials there was no difference noted.

If, as Dr Scheibner suggests, the anti-catarrhal vaccine was making children more susceptible to pertussis, why was the disease incidence in this group no different to the general population that did not receive the vaccine?

Once again one can only speculate as to why Dr Scheibner would choose to exclude this important information.

One can also ask why Dr Scheibner chose to exclude the final report of this Committee, published in 1959.²⁶ Perhaps the answer lies in the report's general conclusion:

The results of the trials clearly showed that it was possible by vaccination to produce a high degree of protection against the disease. ^{26(p1000)}

Dr Scheibner proceeds to discuss a number of reports from the 1940s and 50s that comment on adverse effects from the pertussis vaccine. As noted earlier it is not my intention to try and prove that vaccines are 100% safe. There is no doubt that these early versions of the pertussis vaccine were associ-

ated with a number of adverse effects, and it is not unreasonable to comment on this in a historical review of the development of the vaccine.

What is unreasonable is to imply, as Dr Scheibner does, that the safety profile of the pertussis vaccine in the 1930s and 1940s should be a determining factor in deciding whether to use it today.

Dr Scheibner's apparent lack of objectivity is again on display when she mentions a 1976 paper by Noah²⁷:

Although there was a lower incidence of whooping cough in fully immunised children compared with those partly immunised, the fact remains that the incidence in both groups was quite high. If the pertussis vaccine were effective, *no immunised child should have contracted the disease.* ^{2(p20)} [emphasis added]

This assertion by Dr Scheibner is, not surprisingly, unreferenced, and she would be hard pressed to find any immunologist, or immunology text, who would support it. Such a statement appears to demonstrate a poor understanding of the basis of immunisation, and the epidemiology of disease.

Effect of reducing immunisation

One important demonstration of the efficacy of immunisation, including pertussis immunisation, is the observed increase in incidence of diseases that occurs when there is a decline in immunisation rates in a previously well-immunised population. Dr Scheibner discusses two of these 'natural experiments' that took place in the UK and Japan respectively. There is, once again, no confusion regarding her opinion:

Reports of increased epidemics shortly after a fall in vaccination are quite untrue and, at best, exaggerated. ^{2(p29)}

In the UK during the 1970s concern about the efficacy of the pertussis vaccine led to a decline in immunisation rates. There followed two epidemics in 1977-79 and 1981-82.²⁸ Dr Scheibner is keen to find a reason other than reduced immunisation for these epidemics, and so she concentrates on a letter written by Professor Gordon Stewart²⁹ that offers her some support.

Professor Stewart enumerates a number of criticisms of the conclusions that had been reached in an article by Miller *et al* reviewing the risks and benefits of pertussis immunisation Dr Scheibner carefully documents Professor Stewart's criticisms, but chooses to ignore the reply to Stewart that immediately follows his letter, and addresses these criticisms.³⁰

If Dr Scheibner is attempting to provide balanced information to allow parents to make up their own mind then this would not seem to be the way to achieve this.

In Japan in 1974-5 two children died following DTP immunisation.³¹ The Ministry of Health and

Welfare temporarily halted the DTP immunisation program, and though this only lasted a couple of months public confidence had been eroded. The DTP immunisation rate, which had reached 85% by 1972 fell to 13.6% in 1976.³¹

Before looking at what happened to the incidence of pertussis during this period it might be useful to remember that Dr Scheibner states there is no evidence “*whatsoever*” that vaccines are effective.

Dr Scheibner discusses an article on the history of pertussis immunisation in Japan by Kanai³¹, but once again she appears to have kept from her readers information that fails to accord with her views.

The following are the figures for the cases of pertussis, and deaths from the disease, for the years just prior to the decline in DTP immunisation (1974-5) and for the years following.

Year	Cases	Deaths
1970	655	5
1971	206	4
1972	269	2
1973	364	4
1974	393	0
1975	1,084	5
1976	2,508	20
1977	5,450	20
1978	9,626	32
1979	13,092	41

Table 1.
Pertussis cases and deaths in Japan 1970-79.
Immunisation suspended in early 1975.
Data taken from Kanai³¹

In addition, it was reported that 90% of the 1975+ cases were in unvaccinated children.³¹ These figures were thought to clearly demonstrate “the importance and effectiveness of pertussis vaccine”^{32(p123)}, and also served to provide “convincing evidence... that pertussis is still a fatal disease of babies...”^{31(p114)}

On the basis of these figures no other conclusion is scientifically valid, and this is probably the reason why Dr Scheibner ignored the results.

Dr Scheibner’s review of the Japanese situation provides further support for the contention that her research methods are somewhat sloppy. For example, she mentions the two Japanese deaths and claims that *following* these “doctors in the Okayama Prefecture boycotted the vaccine.”^{2(p46)}

The two deaths in Japan occurred in December 1974 and January 1975. In the Okayama Prefecture doctors had not been using DPT vaccine since *April 1973*, because of concerns over adverse effects. This Prefecture experienced an epidemic in 1974 and in 1977 was considered a pertussis prevalent area.³¹

One can only wonder at the irony of Dr Scheibner’s comments later in her book:

Proponents of vaccination are so enmeshed in their belief in the efficacy of vaccines that they appear totally oblivious to evidence to the contrary.”^{2(p53)}

It would not be stretching things too far to suggest that this is the proverbial pot calling the kettle black!

Sweden, Sweden, Sweden

Another of Dr Scheibner’s key points is the situation in Sweden, where immunisation against pertussis was suspended in 1979 in response to concerns about the efficacy of the vaccine then in use.³³ It seems that we are supposed to conclude that because a country like Sweden stopped immunising their children all other countries should follow suit.

What Dr Scheibner may not want her readers to know, though, is that following suspension of immunisation there was an increase in reported cases of pertussis in Sweden.²⁸ She also omits to explain why Sweden, if it is a country opposed to immunisation, has been so involved in research into newer pertussis vaccines?³³ Why waste the time and money if they believe immunisation is ineffective?

Dr Scheibner apparently repeated her claims about Sweden when she appeared before the Human Rights and Equal Opportunities Commission in July 1996.¹

It is difficult to understand how Dr Scheibner could appear as an expert witness on immunisation, and not be aware that in many areas of Sweden general immunisation against whooping cough was recommenced in 1995. This decision was based upon the results of trials of newer acellular vaccines, such as the one reported by Gustafsson *et al.*³³

It is also difficult to understand how such an expert witness, who has “collected just about every publication written on the subject”, could not be aware of Sweden’s experience with other immunisation programs.

For example, combined measles, mumps, rubella (MMR) immunisation was commenced in Sweden in 1982.³⁴ Table 2 shows the resulting change in the number of hospitalized cases of measles and the number of cases of measles encephalitis.

If immunisation was not responsible for the post 1982 decline then what was?

Year	Cases	Encephalitis
1981	372	15
1982	388	15
1983	248	8
1984	81	1
1985	9	0
1986	11	0
1987	10	0

Table 2.
Hospitalised measles cases, and encephalitis cases in Sweden. MMR immunisation commenced in 1982.
From Christenson.³⁴

Another example is Hib vaccine, which was introduced in Sweden in 1992, and was accompanied by a rapid decline in the incidence of *H. influenzae meningitis* and *bacteraemia*.³⁵ In the pre-vaccination period of 1987-91 the average annual incidence of these conditions was 34.4 per 100,000 children aged 0-4. By 1994 the incidence in this age group had fallen to 3.5 per 100,000.³⁵

Did Dr Scheibner mention these results when she appeared before the Human Rights and Equal Opportunities Commission?

DTP and SIDS

One of the more important concerns regarding immunisation, particularly with the DTP, is a possible link with Sudden Infant Death Syndrome (SIDS).³⁶ This is a matter of great concern to parents and health care workers alike, and it is important to carefully examine the available evidence?

The peak time for SIDS is between two and four months of age, which is also the recommended time for the first two doses of DTP. We would therefore expect many cases of SIDS to occur in close time proximity to immunisation merely by chance.

Particularly in those cases where autopsy is unable to identify a cause of death such a close temporal relationship, and the understandable need by grieving parents to understand why this happened to their child, are easily exploited by anti-immunisation advocates.

I will let readers of *the Skeptic* decide for themselves whether Dr Scheibner's research in this area qualifies her for the title 'expert witness'.

Dr Scheibner notes a 1982 report of four unexplained deaths that occurred in Tennessee in the late 1970s.³⁷ She first attempts to draw a link between these deaths and immunisation:

All four deaths were classified as sudden infant death syndrome (SIDS), and all had received their first vaccination of diphtheria-tetanus toxoids-pertussis (DTP) vaccine and oral polio vaccine^{2(p59)}

She is forced, however, to concede that the author of the paper found "no evidence to support ... a causal relationship."^{37(p421)} In her discussion of this study she fails to mention that the author of the paper concluded:

The findings of our study combined with the NIH results provide no support for reducing efforts to immunise infants with DTP.^{37(p421)}

Dr Scheibner then mentions the preliminary results of a study demonstrating a possible association between DTP and SIDS presented at a meeting in 1982.³⁸ Though the final results of this study had not been published at the time of the publication of Dr Scheibner's book (nor published since) she seems to be prepared to accept these preliminary results as sound science because they support her beliefs.

Dr Scheibner devotes nearly a whole page to this 'study' and only one sentence to formally published studies that found no link between SIDS and DTP.^{39,40} She also manages, in her discussion of SIDS, to ignore completely the Institute of Medicine Report discussing the DTP vaccine.³⁶ This found no link between SIDS and DTP immunisation.

The Japanese experience

One of Dr Scheibner's trump cards is her claim that in Japan, following the shift in age of immunisation to two years, the SIDS rate declined. She makes much of this in her book:

In 1975 Japan raised the minimum vaccination age to two years; this was followed by the virtual disappearance of cot death and infantile convulsions.^{2(pixix)}

When Japan moved the vaccination age to two years, the entity of cot death in that country disappeared...^{2(p43)}

The most important lesson from the Japanese experience is that when the vaccination age was moved to two years, the entity of cot death disappeared.^{2(p49)} The seeming and widely perpetuated dilemma: 'is there or is there not a causal relationship between DTP injections and cot death' has, quite adequately and indeed without a shadow of a doubt, been resolved by the Japanese experience with cot death.^{2(p62-3)}

This claim of Dr Scheibner's has been unquestioningly repeated in other anti-immunisation material.⁴¹⁻⁴³

Dr Scheibner's claim rests upon her analysis of two papers, one by Noble *et al*⁴⁴ and the other by Cherry *et al*.²⁸ After reviewing both these papers it is clear that Dr Scheibner's analysis of them is at best sloppy, and at worst blatantly dishonest.

In Japan during the period concerned there was in place a Vaccine Compensation System, and the data presented by Noble and Cherry relate to claims made through this system.^{28,44} Compensation was commonly awarded for events considered possibly due to immunisation, unless there was clear evidence that this was not the case. Approximately two thirds of claims submitted were accepted.

Noble and Cherry both report that when the minimum immunisation age was moved from three months to two years there were no claims made through the compensation system for vaccine related sudden death.^{28,44} They do not claim, as Dr Scheibner suggests, that there were no deaths from SIDS in Japan following the change in immunisation age.

Claims for vaccine related sudden death stopped, not because children were no longer dying, but because their deaths no longer occurred during a period when they were also receiving immunisation. How can you claim for a vaccine-related death if no vaccine was given?

If Dr Scheibner is really claiming that no children in Japan died from SIDS once the DTP immunisation age was changed she provides no evidence to support this claim, and I do not believe she can.

The drop in compensation claims suggests that

... the purported reactions in infants were in large part unrelated developmental events expected commonly in that age group but attributed to vaccine because they were time related ... analysis of cases with paid claims in the Japanese national compensation system indicates many of the putative cases to be related to other medical conditions. ^{28(p973)}

Additionally, if immunisation is ineffective, as Dr Scheibner claims, then the change in the minimum age of DTP immunisation from three months to two years should not have been associated with any change in the incidence of the disease.

On the other hand, if Dr Scheibner is wrong, and DTP immunisation protects children from pertussis, we would expect that a shift in minimum age to two years would result in an increase in the incidence of pertussis in children under the age of two. This is exactly what happened.

During the period 1970-74, when DTP immunisation was begun at three months the incidence of pertussis in children aged under one was approximately four per 100,000. In 1975 the minimum immunisation age was moved to two years, and by 1984 the incidence of pertussis in children aged under one was over 20 per 100,000.⁴⁴

These figures, which demonstrate well the expected change in pertussis epidemiology following shift in immunisation age, are particularly damaging to Dr Scheibner's case, so it comes as no surprise to see her not mention them.

If DTP immunisation caused SIDS, as Dr Scheibner claims, we would expect to observe the SIDS rate rise as immunisation rates increase. As noted earlier, in the UK during the mid 1970s pertussis immunisation rates fell. Following the pertussis epidemics of 1977-79 and 1981-82 there were intensive efforts to improve immunisation rates. These efforts were successful and by 1992 pertussis immunisation rates were higher than they had ever been.⁴⁵

Over the same period SIDS deaths in the UK were falling, and by 1992 the number of deaths was lower than it had ever been.⁴⁶ If DTP is an important cause of SIDS then how is this explained? Isn't this the exact opposite of what would be expected according to Dr Scheibner?

Finally, in reviewing the DTP/SIDS literature Dr Scheibner found a study by Baraff *et al*⁴⁷ that described a possible link between SIDS and DTP, but she managed to miss the criticism of this paper (no account taken of the age distribution of SIDS cases) by Mortimer.⁴⁸ She also failed to find the work of Bouvier-Colle *et al*⁴⁹, and Taylor and Emory⁵⁰, both of which offer no support for her belief.

Measles

Table 3 lists the number of cases of measles and reported deaths from measles for the years 1960-69 in the USA. ⁵¹

Year	Cases	Deaths
1960	441,703	380
1961	423,919	434
1962	481,530	408
1963	385,156	364
1964	458,083	421
1965	261,904	276
1966	204,136	261
1967	62,705	81
1968	22,231	24
1969	25,826	41

Table 3.

Measles cases and related deaths in the USA, 1960-69.

What these figures demonstrate is a period of no significant change in cases or deaths (1960-64) followed by a period of marked decline (1965-69). Anyone with even a rudimentary knowledge of epidemiology would look at these figures and hypothesize that something occurred around about 1963-64 that resulted in a marked decline in the number of cases and deaths from measles.

What happened at this time? Measles immunisation was introduced in the USA in 1963-64.

Dr Scheibner, not surprisingly, does not report these figures, but she does claim that:

...vaccination against measles is *totally* ineffective, and

measles occurs irrespective of and despite vaccination. ^{2(p82)} [emphasis added]

If measles immunisation is "totally ineffective" then I would be interested in her explanation for the above figures, and for the experience in Finland, where a nationwide immunisation program resulted in a 99% decrease in the incidence of measles.⁵²

Dr Scheibner's preferred approach in the case of measles is to ignore evidence such as this and instead she tries to portray measles as a disease that it is not worth immunising against. She quotes in a supportive manner from a paper expressing the view that measles is "...a mild disease with rare serious complications..."^{2(p83)}

The facts yet again tell a different story.

Measles is regarded as the most common vaccine-preventable cause of death among children in the world.⁵³ In 1989 it was estimated that across the globe 1.5 million children per year died from measles and its complications. Up to 10% of children who get measles suffer middle ear infection and nearly as many suffer bronchopneumonia, which is the commonest cause of death. Encephalitis (inflammation of the brain) occurs in approximately one in every 1-2,000 cases. Approximately 15% of patients who suffer encephalitis will die, and 25-35% will suffer permanent brain damage.⁵³

A rare degenerative disorder of the neurological system - Subacute Sclerosing Panencephalitis (SSPE) - occurs in roughly one in every 100,000 patients with measles, and is characterized by progressive deterioration in neurological functioning with death occurring over a period of months or years. The use of measles vaccine has resulted in the virtual disappearance of SSPE from the USA.⁵⁴

So much for a mild disease!

Conclusion

I do not believe that Dr Viera Scheibner's claims regarding DTP and measles immunisation are supported by the available scientific evidence. On the contrary, the evidence strongly supports the view that the benefit of these significantly outweighs the risks.³⁶

In addition I believe that the gaps in her research in this area call into question her objectivity and cast doubts on her ability to speak as an expert witness. It should be a matter of great concern that material such as Dr Scheibner's is being promoted by groups who ostensibly argue for the right of parents to make up their own minds. How can parents be expected to do this when they are being denied access to so much information?

Dr Scheibner's claims regarding immunisation are of the 'all swans are white' variety. Her scientific credibility is dependent upon her being able to defend the claim that there is "no evidence whatsoever" that vaccines are effective (all swans are white). Such a claim is easily disproven with just a single example of unequivocal vaccine efficacy (That is, by finding just one non-white swan).

In conclusion, therefore, I offer the following additional swans for colour coding:

1. Typhoid - In 1911 immunisation of US army troops with typhoid vaccine became compulsory. In World War 1, with a fighting force of approximately two million there were 1,529 cases of typhoid, with 169 deaths. In the Spanish-American War of 1898 with an unvaccinated fighting force of 108,000 there were 20,738 cases of typhoid, and 1,580 deaths.⁵⁵

2. Neonatal tetanus - In China in 1994 approximately 10% of pregnant women were immunised against tetanus. Over 90,000 babies died from neonatal tetanus. In contrast in Sri Lanka in 1994 80% of pregnant women were immunised, and the disease declined to the stage where it was considered rare. In Bangladesh, where it is estimated that only 10% of women have access to a clean delivery, the incidence of neonatal tetanus has been cut from 41 per 1,000 live births to six per 1,000 live births as a result of a mass immunisation program.⁵⁶

3. Epiglottitis - Is a potentially fatal condition occurring in young children caused by *Haemophilus influenzae* (Hib). In Finland the incidence rate of acute epiglottitis in children aged 0-4 years fell from 7.6 to

0 cases per 100,000 following the introduction of Hib immunisation.⁵⁷

4. Japanese Encephalitis - This acute neurological condition occurs predominantly in India, China, and Japan, and is associated with significant morbidity and mortality. The incidence of the condition has dropped markedly as a result of immunisation and mosquito control. Studies have shown the effectiveness of a two dose vaccine regimen to be over 90%.^{58,59}

5. Polio - In the Netherlands in 1992-93, after 14 years with no endemic cases of polio there was an outbreak involving 71 persons. There were two deaths and 59 cases of paralysis. None of the patients had been vaccinated, most for religious reasons. No vaccinated person contracted the disease.⁶⁰

Though I have been unable in the space available to address Dr Scheibner's comments on other immunisations, such as Hepatitis B, Rubella, Hib, and Polio, I am happy to do so at a later time.

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The 1997 National Convention will be hosted in Newcastle by the Hunter Region branch. The programme is under construction and papers are being called for.

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Victor J. Stenger is professor of physics and astronomy at the University of Hawaii. He has had an active research career in elementary particle physics and astrophysics.

He has written many articles for skeptical journals and three books: *Not By Design: The Origin of the Universe, Physics and Psychics: The Search for a World Beyond the Senses* and *The Unconscious Quantum: Metaphysics in Modern Physics and Cosmology* (all published by Prometheus Books).

Dr Stenger's books have been critically acclaimed. The *Times Literary Supplement* had this to say about *The Unconscious Quantum*. "... is an interesting, provocative, informative and impassioned attempt to rescue physics from the contemporary unscientific or anti scientific appropriations of its softer-edged theoretical self-description."

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The silicone witch hunt

Cholm Williams

Those “unnatural” polymers, the silicones, were synthesized some 100 years ago, but were of little use until WWII when their lubricant properties enabled glass syringes to be used in battlefield first-aid packs, and their extreme chemical and thermal stability and water repellency enabled their use in aviation and electrical applications. They continued to be developed by Dow Corning, an offspring of Dow Chemical and Corning Glass, and exist in many forms, from low viscosity liquids, through gels and putties, to rubbers and hard solids. Since that time, the silicones have become an integral part of our civilisation, in every area, not least medicine, because of their extreme inertness.

The first medical implant was as an artificial urethra, later (and ever since) as a life-saving neurosurgical shunt to decompress the brain, and in 1964, as breast implants, to replace many other foreign materials which had produced uniformly disastrous results. These implants consisted of a thin bag of solid silicone, filled with a viscous silicone gel to simulate a normal consistency. Not long afterwards, similar bags filled with saline were devised, but they were less reliable or natural feeling. Elsewhere, a bewildering variety of implants has been utilised to replace body parts, silicones are widely used in skin creams and cosmetics, ingested by all of us in prepared foods and drinks, and in antacids and other medicines. Silicones still lubricate every syringe, and coat the inside of the plumbing in cardiac surgery bypass machines. In short, most humans on this planet continue to have some, and often intimate, daily contact with this evil substance, and many of us have had for about 50 years. Due to widespread silicone use, the US FDA did not require data proving “safety and effectiveness” (whatever that may mean) until 1982.

Large numbers of breast prostheses were implanted, in perhaps two million women, and certainly complications ensued, some severe, but these were in general related to technical and surgical problems. Implant failure often occurred, but was not commonly heard of, as the gel was encapsulated by the body, or produced local lumpiness and scarring. Adulterated silicones had been used since the forties, and produced many complications, but the first allegations of immune toxicity of medical-grade silicones occurred with US court cases in the mid 1980s, though these were lost in the growing avalanche of other litigation.

The witch hunt began in 1988 with a cancer scare

revealed by a “consumer group” actually funded by the US Bar Association. This scare was based on experiments in inbred rats that were long known to get fibrous cancers from many common solid substances. It took some years to “prove” that there was no risk in humans, perhaps even a protective effect.

In the meantime certain attorneys began to suspect that they could make silicone the “asbestos of the nineties” and the greatest product liability litigation in history took off, aided by a media which delighted in showing disgusting pictures of leaking silicone gel during the evening meal. Certainly local complications, such as hardening (a normal phenomenon), rupture, displacement, nerve effects etc could occur, and be serious, but these were indiscriminately mixed with other allegations. There were graphic interviews with women, often crippled with severe and recurrent medical problems due to technical complications of surgery, or with specific immune diseases such as lupus, which was now being attributed to silicone.

Slowly, scientific evidence has accumulated showing no relationship between silicone and any immune diseases, but the goal-posts have been shifted again, to incriminate common symptoms (insomnia, anxiety, hair loss, joint pains, memory loss etc). These are now attributed to a “new disease” which somehow did not occur until the early nineties. Most of us have some of these symptoms as we age, and they are classically associated with anxiety states, such as those the scare campaign would produce. Epidemics of these symptoms seemed to follow media exposure and varied with the media emphasis.

Curiously, no other silicones were targeted, only those of the most vulnerable group; women with their breast implants, and their babies. Silicones used to reconstruct men’s “crown jewels” and in many other areas, were ignored. One of the worst episodes involved allegations of “poisoning” of babies by breast feeding, although one of the most commonly used infant colic medicines contains liquid silicone.

A guilt-inspired panic ensued amongst pregnant and nursing mothers, and deliberate abortion of wanted babies was reported. Asthmatic children were paraded in the media, and were told they were irretrievably poisoned by their mother’s implants. The effect on their disease management can only be imagined, but to my mind, using children as media fodder is gross child abuse. Extremist feminists became involved, as their worst fears about cosmetic surgery were confirmed, seriously likening this vol-

untary surgery to foot binding, genital mutilation, and female infanticide!

In early 1992, ignoring recommendations from its own scientific advisors, the FDA banned gel filled implants despite the fact that newer implants seemed much less likely to produce the technical complications which generated most concern (sweating, rupture, hardening etc). The ban was followed in Canada and Australia and, temporarily, in New Zealand. The UK never saw cause to ban them. Our TGA told us privately that they had no concerns about cancer or immune disease, but "political and media imperatives" forced the ban.

The effect on the two million or so women with implants was catastrophic, but they were told not to have these "time bombs" removed until after they had problems! Local taxpayer-funded consumer groups who began the campaign here were often closely aligned with certain legal firms who competed to generate most clients for vast class actions, with outrageous and unscientific publicity. Anxious women who contacted "support groups" were passed on to the lawyers, often without their consent. Some women patients have been approached by lawyers who appeared to have had illegal access to their private medical records.

Dow Corning, under pressure from its shareholders, abandoned the medical silicone market, and tried to help recipients of its implants, thus "proving its guilt". Smarter manufacturers kept a low profile. US court cases resulted in huge settlements, but even winning a case could cost a manufacturer more than \$1 million. An army of "Plaintiff's Experts" were recruited, who saw claimants on referral from lawyers, provided supportive reports and presented junk science to sympathetic juries. Described as "pariahs" by mainstream science, they still form a travelling circus in the USA, since so much legal money has been outlaid that the campaign cannot be allowed to die. A "*Malleus Siliconarum*" now exists, in the form of a vast computerised database, to kick-start any plaintiff's litigation. The Witchfinder General should have been so lucky!

The deliberate and unconscionable fomenting of public anxiety, under the catch cry "you can't prove they are safe" resulted in so many litigants that a "global settlement" was formed in the USA, with a kitty of about \$5 billion promised by the manufacturers, with the legal take limited to 25%. No proof of damage was required. When 440,000 women applied, the settlement collapsed, although a more limited settlement is in place, which at least requires some medical justification. Dow Corning, faced with large numbers of law suits, applied for bankruptcy. Other manufacturers moved off-shore.

As hard evidence of the safety of silicones accumulates, the panic is receding, and a new generation of women is requesting breast augmentation, many of them too young to have fully comprehended the anti-silicone campaign at its height. In Australia, saline implants are freely available, but gel implants

are usually only available if the patient has had them in before! Most other countries still allow unrestricted use.

Slowly, science is gaining the upper hand, but now the scientists and journal editors who dare to publish such data are being personally attacked by the plaintiff's bar as lackeys of the manufacturers, as are respected institutions such as the Mayo Clinic. Not much is said about the amplexus between the plaintiff's lawyers, their tame experts, and the self-styled "silicone survivors" support groups. Recently, however, a US judge has refused to allow plaintiff's experts to testify about a "hypothetical disease", so there is some hope.

Lessons can be drawn from this campaign, which serves as a paradigm of recent anti-scientific, litigation-driven attacks on modern technology. A witch-hunt of this type may include such attributes as:

- *A minority of real and severe problems, preferably with great visual impact, plus other minor problems, whether related or not, which are exacerbated by a pervasive media, hungry for sensation. An accusatory media one-liner may take ten minutes to refute. How can anyone ever concisely answer the remark "can you guarantee that silicone is safe", let alone in the world of the 30 second sound-bite?

- *A suggestible population, bred to believe that if anything goes wrong, someone must be to blame, someone must pay, and under no circumstances must any adult be responsible for their own decisions or actions.

- *Some official support. This campaign only really took off where Government bureaucracies, for political or other reasons, lent their authority to the allegations, or were unable or unwilling to stand up for the truth.

- *An attempt by the defendant to be "socially responsible" ie to try to help those perceived to have been harmed. This is invariably read as an admission of guilt, as is any attempt at a financial settlement, no matter how commercially realistic.

- *Legal avarice within an adversarial system, in courtrooms where legal and scientific "proofs" are incompatible, and where many participants are totally incapable of comprehending evidence from conflicting "experts".

- *Courts which see themselves as agents of social redistribution, and initiators of socially desirable laws. Governments may encourage this by funding precedent-setting test cases to avoid the nuisance of defending their agendas in open Parliamentary debate.

- *True believers, who, like the zealots of old, are psychologically incapable of seeing the other side, are blind to unwelcome evidence, and come to regard their crusade as their ultimate goal in life.



Alternative? What alternative?

John Foley

History

alternative n. a possibility of one out of two things.

Macquarie Dictionary

When you have a health system that has been in place and running for thousands of years, then it is the mainstream.

If, around the time of the French Revolution, when the Church had lost most of its hold on science and there were plenty of cadavers to work on, another medical system came into existence, then it became the alternative to the mainstream. Your General Practitioner, the Royal North Shore, St. Vincent's, the Royal Adelaide and the World Health Organisation are all examples of the alternative to mainstream medicine. The new alternative system was called 'evidence based medicine'.

Instead of relying on what had always been done in the past, remedies handed down from mother to daughter, diagnoses based on folklore and rumour, the alternative practitioners did exhaustive experiments using new instruments such as the thermometer and the vacuum pump.

In the 1670s, Anton van Leeuwenhoek peered through his home-made microscope and discovered bacteria. 200 years later, Louis Pasteur of France discovered the relationship between disease and bacteria, and hygiene was introduced.

Circulation of the blood was discovered; blood pressure; mutation of germs; what would kill them; what would stimulate their reproduction; the immune system of the mammal; the chemical composition of the food we eat, as well as genetics - that mysterious thing that makes you look like your grandmother, and your son look like you.

In 1796, Edward Jenner took some pus from a milkmaid's cowpox sore and put it into the arm of a boy. The boy got cowpox as expected but, 48 days later, when Jenner put smallpox pus into his arm, he was not affected. Alternative medicine had invented vaccination.

All manner of cuts and wounds could cause gangrene, and the only cure was amputation, but such was the pain that most patients died of shock. In 1847, Sir James Simpson of Scotland demonstrated the use of chloroform as an anaesthetic, and alternative medicine took another giant leap forward.

All of this was alternative to the mainstream. Mainstream medicine was still letting bad blood out, putting leeches on people and hoping that sunshine and rest would cure whatever it was that was ailing the patient, because they couldn't diagnose it any-

way. Mainstream medicine thought that bad air was causing the Black Death. The cure was to get people to carry 'a pocket full of posies', reasoning that if the smell was better, the bad air was kept away and people would survive. It didn't help the 40 million people of Western Europe who died in 50 years as a result of the Black Death, but it does sound suspiciously like aromatherapy.

Late in the 19th Century, the alternative, evidence based medicine lost a lot of ground to all manner of quack remedies and diagnostic tools. A look at a newspaper from last century would show you a large part of the advertising was for potions and tonics for everything from baldness to fatigue, usually all in the same pill. Dr MacKenzie's Menthoids was one of the longer lasting examples. Coca Cola and Cooper's Stout are two that are still on the market, but with the claims of efficacy removed. Kellogg's Corn Flakes was another which cured, among many other things, masturbation! Phrenology, hypnosis, hydrocures, chiropractic, iridology and homeopathy all gained favour late last century, with no evidence to back them up.

In the USA, the Food and Drug Administration was formed to scrutinise these dubious claims, and in Australia we have the Therapeutic Goods Administration.

Modern times

After WWII, industry and economy took off and many synthetic products were available to the public. Nylon carpets covered polished wooden floors, plastic paint hid Baltic pine cupboards and cedar dining suites were burned in favour of Laminex and tubular chrome steel. Synthetic was affluence, natural was poverty.

During the late 1960s, hippies gained a popularity among the young and advocated a more natural lifestyle. Cotton clothing, fresh food and planting trees all became popular. Coca Cola changed its slogan from "The Pause that Refreshes" to "The Real Thing". Amoco introduced a final filter at their service stations, their advertising featured a handsome couple in an open sports car driving on a country road and talked of the nice, clean petrol. Drop-out was a word we had to learn for the people who no longer wanted to live in the city, working hard to make money to buy bigger cars and houses. We had to find Nimbin on a map. Getting back to nature was fashionable.

The Beatles were huge. They went to India to

study Transcendental Meditation and millions began to take an interest in Eastern culture.

Chemistry advanced. In 1974, the first artificial penicillin was manufactured. Prior to that, the entire world's supply had been cultivated from Fleming's tiny crucible in Paddington in 1921. Totally synthetic drugs such as paracetamol were produced.

Thalidomide was a sedative used to control morning sickness in pregnant women. Unfortunately, it went horribly wrong and many children were born with deformed limbs. When it was discovered by evidence based medicine, it was removed from the market.

The hippies grew older, they spread the word of folklore, wood fires and less artificial living. They looked for natural ways of curing and preventing disease. They rediscovered herbs, laying on of hands, wearing amulets, self-induced trance, a lot of Eastern superstition and many of the old diagnostic tools. The old mainstream medicine was back in business under a new name - alternative medicine.

Government recognition

In South Australia in the late 1970s, chiropractors got organised and had their patients sign petitions that chiropractic was medically valid, and should be recognised by the government. They also lobbied public servants and Members of Parliament and finally, in 1981, a Chiropractic Registration Board was created. As a marketing exercise, the chiropractors decided to call themselves Doctor, and bestowed the letters CD after their names. Other states gave the nod to chiropractors around the same time.

As Colonels Sanders and Tom Parker well knew, it is not illegal to give yourself a title or put letters after your name, provided it is not to defraud someone.

Chiropractic is already well established in Australia so I am not going to concern myself with it. The horse has already bolted. My greater concern with chiropractors is that all the ones that I know of or have met use other practices that are dubious, to say the least. Kinesiology is one such, and I wrote of it in *the Skeptic*, (Vol 16, No 4, p 50). One successful Adelaide chiropractor who runs three clinics practises kinesiology as well as NOT -Neural Organisation Technique which means manipulating the jaw. Among other things, his printed literature claims that dyslexia, scoliosis, menstrual disorders and even Down's syndrome can all be improved and often corrected by NOT. Down's syndrome is caused by one extra chromosome. To say that NOT can cure it is to say that manipulating the jaw can get rid of an extra chromosome.

The dangers

Iridology is commonly used for diagnosis. I worked with a young man who developed testicular cancer. Had he been diagnosed by iridology, supposedly it would have shown the cancer in the testicle region

of his eye, meaning that there are male and female irises. That is an absolute nonsense. And, if iridology had failed to pick it up, then he would have died.

I knew an older man who was feeling generally unwell, and his daughters talked him into going to a chiropractor, rather than a doctor. The chiropractor diagnosed that his back was out but after two visits a week for six months, he was not improving. He went to a GP who correctly suspected stomach cancer and arranged an appointment with a specialist that afternoon. He died two months later.

A workmate went to a chiropractor with stomach pains. The chiropractor diagnosed that his diaphragm was out by two centimetres, so he plunged his fingers into his abdomen and pulled and tugged it back into place. According to that idea, when racing motor cyclists roll across the grass after a crash, or footballers get tackled, their insides would look like a loosely packed suitcase after baggage handling.

In the late '70s, before AIDS, a lot of the Aussie tourists to Bali used to hire prostitutes on their last night. They would fly back to Perth, Melbourne or Sydney the next day and go straight to the VD clinic for a penicillin injection, 'just in case'. They never saw a symptom of a disease. New alternative medicine teaches us that AIDS can be cured by oxygenating the blood. If young tourists believe that and indulge in the same habit as their elder brothers, then they are in for a very rude, and fatal, shock.

A technique used by some of the natural practitioners is vaginal manipulation. This requires the patient to lie naked while the practitioner, inevitably male, inserts his fingers in her vagina and manipulates the nerves. I can remember two cases of this practice being successfully prosecuted.

I asked the state Department of Public Prosecutions about such activity. Hypothetically, two men take a redundancy package. One uses his money to set up a lawn mowing round while the other sets up as a naturopath. A woman goes to the naturopath with a rash on her genitals. Is there any crime if the naturopath looks at her genitals, or touches the rash as part of the diagnosis? The answer was no. If she walked outside and saw his friend mowing the lawn, can he look at her genitals and touch them? At this point, it all got too difficult. The broad answer was, provided the woman is agreeable, then there is no crime. If the patient is under legal age, then it is up to the parent or guardian to grant permission.

In other words, if you wear a white coat and talk with authority, she will think it's all part of the treatment. With no training at all, you can do pretty much whatever you want, even to children, without fear of prosecution.

There are few, if any, alternative practitioners who indulge in one single dubious activity. If an unsuspecting person who is not feeling well goes to a neo-alternative practitioner in good faith, they are in contact with the New Age. Recommendations to various courses and other healing modalities are not just common, they are usual. The New Age is a life style

where critical thinking is abandoned. What was someone with a tummy ache becomes a Zombie under the thrall of one or more gurus. At its extreme, I would remind you of the Jonestown massacre and Waco, Texas.

For many years, neo-alternative medicine has told us that immunisation is not necessary, not natural, and just a plot to make the drug companies rich. The recent spate of babies dying from things like whooping cough and diphtheria are the grim testament that immunisation is still essential. There can be no greater child abuse than to let helpless babies die from neglect.

In four years, WW I killed 19 million people. During the peace talks in Paris in 1919, Spanish influenza killed 16,000 people in Australia and 21 million world wide. What did natural medicine do for them?

Politics

At the '96 Federal election, part of the Labor Party's platform was to put chiropractors on the Medicare Schedule, using your money.

During the same election campaign, the Labor Party also circulated printed information that they were going to include counsellors on the Medicare schedule. In South Australia, anyone can call themselves a counsellor. There is no need for training, there is no registration, no governing body or professional confidentiality. Anything said to a counsellor can be given or sold to the news media. I wonder how many people disclosing their innermost secrets to counsellors are aware of that?

Most private health funds cover their members for drinking a soup made from cicada shells- an ancient preventative for flatulence...". I would need a lot more evidence before I accepted that claim.

Part of a natural health book I have seen claimed that if a woman finds lumps in her breast, she should try homeopathic treatment for two months. If there is no improvement, she should try 'allopathic' treatment. Hopefully, there are few women out there who have not been informed of the dangers neglecting lumps in the breast.

In 1994, the then Attorney-General, Michael Lavarch, won the Australian Skeptics' "Bent Spoon Award for the Perpetrator of the Most Preposterous Piece of Pseudo-Science or Paranormal Piffle". As part of an Enterprise Bargaining agreement, he allowed sick certificates to be issued by naturopaths.

Naturopathic qualifications

To be a naturopath, you do the same as you would if you wanted to be a part-time window cleaner ... just put an advertisement in the paper and you are in business.

Of course, you can attend on of the eight colleges in the Adelaide Yellow Pages, or one of over one hundred colleges Australia-wide. Like window cleaners and naturopaths, they have no regulations either. To start a naturopathy college, you just put an advertisement in the paper.

If you are too lazy (or sensible) to attend a college, then you can just do the course through one of a plethora of mail order colleges. It doesn't matter much, as they rarely ever fail anyone. There is not a lot of repeat business in unhappy customers.

There are lots more controls on hairdressers than there are on naturopaths. These are the people Mr Lavarch authorised to diagnose illness and declare that public servants should be paid taxpayers' money until they are fit for work.

Of course, if you want to be a fully qualified naturopath, the simple thing to do is to register your own naturopath college. The rules vary slightly from state to state, but in South Australia, you simply pick a name that is not currently being used, pay the State government \$91 for three years for registration of that name, and then write out your own diploma. It's just as valid as any other. If you want to belong to a professional body, you pay \$91 to register the business name of your professional body, and make yourself a member of your own organisation. Any typesetting bureau will print you a beautiful certificate for a small fee.

As an exercise, Australian Skeptics could start their own naturopath college and professional body and sell diplomas. It would go well with Warren Boyle's Skepticare, *(*the Skeptic*, Vol 16 No 4, p 58.)

Austudy

Many naturopath colleges in Australia are Austudy and Abstudy approved. In April, 1996, there were 727 students receiving Austudy or Abstudy from taxpayers' money for attending such institutions. In the 1995-'96 Financial Year, \$10.5 million was paid to such students and the figure is growing each year.

Several Adelaide natural health colleges have government accreditation. The problem is that accreditation is conferred by the Department of Further Education which knows nothing of, and has no interest in, medicine or efficacy. That is not their job. Put simply, they accredit quacks.

At the Body-Mind Expo held in Adelaide in April, 1996, there were thirty different healers. The main spiritual healer taught people how to heal themselves and others of cancer and other chronic illnesses, all for \$35. It seems a shame to waste money training oncologists, doesn't it? According to the SA Medical Practitioners' Act, anybody other than a Medical Practitioner treating people for cancer is breaching the law.

The best book I have read on the subject is *Alternative Medicine* by Dianne Weisner, a Sydney pharmacologist. She made many references to a Victorian government inquiry into alternative medicine, held in 1980.

Previous action

I have sent my state MP this information in writing. He replied that it was up to the naturopaths to decide how they get accreditation.

I wrote to the Liberal Party who didn't reply. Af-

ter several phone calls from me, they decided that none of it was the party's business, and I should contact the Minister.

I wrote to the Labor Party who replied, eventually putting me onto one of their workers who decides the money allocations for various health projects, but wasn't interested in frauds.

I wrote to the Democrats who lost the letter, so I sent a second copy. That was ignored until I made several phone calls. Eventually, I was told to write to one of their Senators.

I wrote to the Senator, was ignored, and after 6 phone calls to the office in as many months, was finally told that they had better things to do.

What can we do?

My belief is that we cannot stop people choosing to go to quacks, and neither should we. My health is my concern, and I don't want some bureaucrat telling me what to do with it. However, I should be able to make an informed choice, and if the Federal or State Governments sanction something, I should be able to trust it. Garibaldi mettwurst and Kraft peanut butter are two examples of that system breaking down.

I believe that the way to combat the problem is to call quacks what they are. Just that, quacks. Any reference to healing, therapy, well-being or other words that infer that a cure or prevention is taking place should be restricted by legislation to those practitioners and products that can demonstrate it.

In South Australia, the Office of Consumer and Business Affairs administers the Fair Trading Act. In the event of a member of the public putting in a claim of misrepresentation through advertising, that office can issue a Substantiation of Advertising Claims form. The trader is then obliged to demonstrate to the Commissioner that the advertised claims are valid. Other states have similar legislation. Can somebody demonstrate that Reiki or Non-Contact Therapeutic Touch actually moves energy?

The Federal government has two bodies where Australian Skeptics can have an input. One is the Medicare Benefits Consultative Committee and the other is the Private Health Insurance Administration Council.

The first determines who and what will receive your compulsory Medicare dollar. The second controls the behaviour of the private enterprise funds who are driven by their members wishes, but give a lot of tacit support to naturopaths by including them on their schedules.

My position

My first interest is modern history leading up to the exciting world we live in. From Copernicus and Galileo to the invention of the steam engine, the automobile, telecommunications, anaesthetics and space travel. In studying such history, I have learned that Hertz (as in megahertz) died of toothache, that two thirds of the casualties of World War II were not from

the enemy, but from disease. Penicillin was first used on a policeman in Oxford, England. The new drug improved his condition temporarily, but he eventually died, from a shaving cut.

I am not a medical practitioner, nor am I employed in the health industry. I have no connection with the AMA and will put a rocket into a medico any time I have solid information that he or she is practising pseudoscience. I am a consumer and I very selfishly want what is best for me.

The Skeptics' role

I have heard it said by naturopaths that they have to get the charlatans out of their industry. Australian Skeptics must get ready to make a submission when the question of quacks getting government recognition inevitably arises, so we can be the ones to determine who the charlatans are. Otherwise, like the chiropractors, the horse will have bolted. 

Notice

1997 Eureka Prize

Nominations for the 1997 Australian Skeptics Eureka Prize for Critical Thinking will be invited in May-June and will close on July 11.

As the upper age limit for the 1997 Prize has been extended from 30 to 35, the Prize for Critical Thinking of \$10,000 will be now presented to "a postgraduate student or postdoctoral researcher, under 35 years of age, for work in the physical or life sciences and related humanities areas, which investigates issues related to the acceptance of popular beliefs that owe little or nothing to the rigours of scientific method".

The 1996 winner, Trevor Case, has achieved a very high media profile since his award, which has made many more people aware of the work Australian Skeptics is doing to counter irrational beliefs in our society. Trevor has an article on his excellent research in this issue.

With a much longer lead time in which to seek nominations, we hope to attract a larger field from which the judges will select a winner for the 1997 Prize.

Readers who know of potential nominees for the Australian Skeptics Critical Thinking award, or for any of the other Eureka Prizes, are invited to seek further details from:

The 1997 Eureka Prizes
The Australian Museum
6 College St
Sydney NSW 2000



Blood money

Harry Edwards

The *Wentworth Courier*, May 15, 1996, published the following article under the heading 'Naturopathic blood analysis.'

Christopher Manton, a naturopath and nutritional biochemist, says you can discover if you are healthy, or likely to develop a serious condition like cancer or heart disease, by looking at photographs of your blood. The photos, taken as part of two new blood testing procedures, are able to accurately show the state of your health. Consequently, you may be motivated to change any negative lifestyle patterns, before they lead to serious illness.

Often the only signals of body damage are those vague symptoms of sub-par health we constantly suffer such as bloated stomachs, chronic hormonal problems and ongoing sinusitis. Normal blood pathology through your local GP only detects abnormalities once clinical disease is well established. Live blood analysis and the free-radical blood test will detect abnormalities that cause those symptoms of sub-par health many people suffer on a day-to-day basis. The two blood tests involve magnifying your microscopic blood picture via a video camera to a large screen monitor, so you see your own blood in full, living colour. They provide hard core evidence of blood organ system damage before the development of major health problems.

Mr Manton runs a naturopathic practice performing live blood analysis and the free-radical (HLB) screening blood test through the William Vayda Health Clinic at 260a Bondi Road, Bondi. Tel: 365-1333.

Professor John Dwyer, who has a regular weekly column in the same newspaper, had this to say in the June 5, 1996 issue.

...While we are discussing evidence-based medicine, I should comment on the expensive nonsense called 'living blood tests'.

Not infrequently these days, concerned patients will come to our clinics clutching under their arm a video which, they have been told, contains the 'proof' of just how seriously ill they are. Liver diseases, fungal infections sweeping through the bloodstream and numerous other disasters that can produce everything from anxiety to fatigue and even a loss of libido are said to be there for all to see. Many unsuspecting, over trusting souls may pay as much as \$180 of their hard-earned money for this misinformation. What is this particular useless piece of charlatanism all about?

Well, to carry out a 'living blood test', blood is obtained from a gullible individual, placed on a glass slide and photographed in living colour by a video camera attached to a microscope. Well understood physical forces produce a phenomenon known as 'Brownian movement' which, ensures that, for a few minutes after being placed on the slide, red blood cells will move vigor-

ously under the microscope as if they were alive and had a mind of their own. In fact, such movement has nothing to do with health or otherwise of the red blood cell, nor the health of their erstwhile owner.

Having said that, I let you image my distress when I noticed printed on the back of my column last week an advertisement for this nonsense, complete with exaggerated claims for its usefulness. *Caveat emptor.*

False advertising? Unsubstantiated claims? Misleading information? Charlatanism? Fraud? Although Live Cell Analysis is comparatively new to Australia, it has been around in the United States for some years. Marketed by Livecell Analysis, Inc., of Laguna Hills, California; Nutriscreen Live Blood Analysis, of Covina, California; and Physicians Cyto Laboratories, of Fort Lauderdale, Florida, equipment and protocols for live cell analysis can be purchased for upward of \$10,000 to be used to identify a wide variety of health problems by examining characteristics of blood cells and other matter visible on the video screen. At least, that's what the companies selling the equipment claim.

Darkfield microscopy is a valid scientific tool in which special lighting is used to examine specimens of cells and tissues. Telepathology, in which a television monitor is connected to a microscope is also a legitimate practise for diagnostic purposes. However, there are serious questions about both the value of live cell analysis and the credibility of those promoting it. A mixture of science and pseudoscience, the test is useless in diagnosing those conditions claimed by its proponents.

A copy of this article was sent to the Hon. Faye Lo Po' MP, Minister for Fair Trading, for comment. Based on the response times of previous correspondence with the Minister (two months), hopefully a reply may be available for inclusion in the next issue of *the Skeptic*.

The Minister's reply arrived six weeks later, informing me that,

...as the issues raised fall primarily within the administrative responsibility of my colleague the Hon. Dr A J Refshauge MP, Minister for Health, I have arranged for a copy of your correspondence to be forwarded to Dr Refshauge for his consideration and reply to you direct.

Passing the buck? Surely this is false advertising and comes under the jurisdiction of the Minister for Fair Trading. We will see.

Some weeks later the response from the NSW Health Department arrived and, in part, read:

As naturopaths are not registered health practitioners they are not regulated by a health registration Act. The Health Care Complaints Commissioner does have statutory powers to investigate complaints in relation to care provided by any health practitioner (including naturopaths).

Dr Andrew Wilson,
Director,
Centre for Clinical Policy & Practice.

Subsequent to writing this article, I have been informed that the Australian Medical Association has also brought the matter to the attention of the Minister for Health. 

A doctor's plea

May I applaud your articles addressing the issues of health care. As a doctor it concerns me that such large amounts of money are being spent by the population on vitamin tablets and multitudinous untested and unproven remedies, not to mention already disproven ones.

Our recently departed Prime Minister coined the term "the clever country". It is not clever to squander limited health care resources on ineffective treatment. (The Keating government rebated chiropractors requests for X-rays of "subluxations"!). Life is difficult enough as it is without wilfully behaving in an irrational way and making it even more difficult.

Since it appears that government has abrogated the responsibility for guiding the populace in these areas might I solicit the help of my fellow Skeptics and fellow doctors in amassing material which can be made available to people to educate them in a way which will enable them to make more intelligent decisions.

I myself have already moved along these lines by making material of this nature available to patients in my waiting room. However, if we could all pool our intelligence and resources (on the Skeptics Bulletin Board?) then perhaps we could all share the material and references etc for the common good.

If there are any Skeptics in positions of power and influence in the Government or medical organisations perhaps they could recognise that this change of government might be an opportune time to re-examine the whole question of how government guides the population in health care matters and limits the burgeoning unsubstantiated claims of myriads of "practitioners".

Skeptics unite and act; we can achieve something that will help everyone.

(Dr) PK Gillman
Mt Pleasant QLD

A plea for equal treatment

Warren Boyles, in his article (Vol16, No4) dealt with an issue close to my heart, that is the proliferation of quacks and purveyors of folk remedies who prefer to describe themselves as practitioners of alternative medicine.

These people are dangerous, deluded and incompetent. Worse they often exploit the terminally ill. But even worse than this diseases that could have been treated early by correct diagnosis have resulted in death.

What is needed is not a Skeptics Health Fund as proposed by Mr Boyles, but rather that they be treated exactly the same as bona fide doctors. It is plain that there are two standards, one for legitimate doctors, drug companies and manufacturers of various implants, testing and monitoring equipment and no such test of competence or efficacy is expected of alternative practitioners. Mere assertion is sufficient in the latter case.

When any legitimate practitioner makes an error or merely fails to detect and correctly diagnose even an unlikely disease they are often sued. Treat the alternative practitioner the same, sue them.

Unpalatable as you may find it, rational discussion will achieve no more than has been achieved to date. Nothing. In fact less than nothing as the types and numbers of the alternatives is on the increase. The whole gamut of restrictions on smoking are litigation driven. The first Australian pay out for court accepted passive smoking illness resulted in insurers refusing to provide compulsory workers compensation. One either adopted a no smoking policy or closed shop. This will give you an idea of the power of such court decisions be they right or wrong.

Why not mail out to various doctors telling them to suggest to unfortunate patients who find themselves in a position similar to Mr Boyles' friend that they be just as demanding of their alternative practitioner. I warn you in advance not to expect any help from the AMA.

Can you imagine these practitioners being simply asked to demonstrate their diagnostic capabilities to a court. Even properly qualified doctors need x-rays, blood tests and so forth. Yet these alternative jokers have not as yet come up with germ theory. Demonstrating the efficacy of their treatments should provide great sport. Yes your honour, I prescribe coffee enemas for cancer.

I would like to see The Skeptics take this on as a project. What do others think?

Darell Irving
Ryde NSW

Hypnosis: the facts

Sydney Bockner

The controversial Viennese physician Franz Mesmer (1734 - 1815) was the first to describe what we now call hypnosis. He ascribed his therapeutic successes to a physical agency he called Animal Magnetism. James Braid (1795 - 1860), a Manchester doctor, coined the term hypnotism when he rejected the animal magnetism theory. He attributed the altered state of consciousness to prolonged fixation of the eyes on a bright object.

Pain relief

Experimental evidence obtained under scientific conditions does not support the extravagant claims made about the hypnotic state. It is true that analgesia can be produced by hypnosis. However this is no more than the normal ability everyone has to suppress pain. Minor sports injuries such as cuts, abrasions and bruises are common and often pass unnoticed until long after the injury was sustained. Pain is related to the degree of attention focused on it. Insertion of a hypodermic needle for an injection may feel unduly painful when carefully observed by the patient. Attention focused on sporting activity diverts attention from pain. Hypnosis can teach a subject to disregard pain, and may be useful in dental surgery. Claims of major surgery under hypnotic anaesthesia alone have not been scientifically confirmed, and in most observed cases drugs, sedation and chemical anaesthesia have been used in addition.

Hypnotic analgesia differs from that which occurs in 30% of patients taking a placebo, that is an inactive medication such as a sugar pill or a sterile water injection. In the latter case the body produces powerful morphine-like chemicals - endorphin is one which block pain reception. This has been proved by the fact that Naloxone, a morphine antagonist, neutralises morphine's pain killing property, and also prevents the analgesic effect of a placebo. Naloxone does not block hypnotic analgesia, which shows that endorphin is not involved in this case. Hypnotic analgesia depends on the mind-body relationship, and the power of suggestion. When Bertrand Russell went to his dentist with toothache, the dentist examined his mouth and asked "Where does it hurt?" "In my mind, of course" Russell answered. Acupuncture as a treatment of pain probably has its effect by inducing endorphin secretion.

Everybody has the ability to choose deliberately when to react to pain and when not to. Hypnosis helps you to decide. From this it is clear that it is you yourself who makes the decision, not the hypnotist.

There is no such thing as hypnotic power. This is a myth, as exemplified by the Rasputin story. Hypnosis is actually self-hypnosis, the so-called hypnotist simply guiding the subject. In fact the hypnotist is not actually essential for the experience. Hypnosis may be induced by a tape recording.

The method of inducing hypnosis usually starts by the subject being instructed how to consciously relax voluntary muscles by first contracting them, and then releasing them. He is told to fix his eyes on a bright object, such as a torch with a dimming circuit which can slowly be extinguished. Speaking in a slow, quiet but authoritative voice the hypnotist suggests relaxation and sleep. The subject's eyes will often close spontaneously.

Memory recall

There is no scientific evidence that hypnosis increases memory recall, or muscle strength. Some therapists believe that hypnosis can produce age regression to early childhood, and even early infancy. They suggest that memories from this early period in the subject's life can be recovered. However there is no reason to believe in the validity of recovered memories. Memories that are not kept in mind repeatedly, or refreshed regularly will decay. They are not recoverable as the identical episode originally experienced.

Therapists and "counsellors" have described memory retrieval from the crib onwards. These memories have almost invariably involved sexual abuse. As a result adults have accused their parents of sexual abuse in childhood which they had forgotten until "memory" was restored to them under hypnosis. In the hands of therapists who believe in immediately searching for these events, the patient is quickly encouraged to produce childhood memories. This has resulted in law suits and the break-up of families, and many parents have lost contact with their children. A False Memory Syndrome Foundation has been formed in the USA to assist such parents. The fact is that hypnosis alters the mood state and thereby affects memory retrieval. Mood has a powerful effect on memory. The common belief that hypnosis increases memory retrieval has been shown experimentally to be false. Memories retrieved under hypnosis have proved to be highly unreliable. There is generally a desire by susceptible subjects to please the hypnotist. They will readily agree to a suggestion, even if untrue. The general belief that hypnosis will always bring out the truth is incorrect. Lying and fantasy are far more common than truth.

Harry does it again

Barry Williams

A Skeptic's Casebook, Harry Edwards, Australian Skeptics Inc, \$18.00

When Harry Edwards, the indefatigable Secretary and Chief Investigator of Australian Skeptics is not secreting and investigating, or chairing meetings of the AS Science and Education Foundation, or writing letters to the editors of assorted metropolitan newspapers, or articles for *the Skeptic*, or insulting the editor thereof, or visiting other Skeptics in various foreign climes, or generally messing about the house, he writes books.

His most recent book catalogues some of the many cases he has investigated in his never-ending and largely fruitless search for some gold dust among the dross of psychic ratbaggery that infests the world.

Harry doesn't confine himself to one or two categories of strange beliefs. He looks at astrology, numerology and other vacuous systems for predicting the future; UFOs and abduction fantasies; psychic sleuth's claims to have assisted police in solving crimes; alleged miracles; assorted pseudoscientific scams; and many other examples of peurilities.

Along the way we meet some very strange people indeed, and are also made privy to some of the incredible correspondence Harry has received from people who seem determined to "cure" him of his scepticism. Some chance.

Harry's scepticism is ingrained very deeply indeed, not because he has closed his mind to the possibility of any of these things being true, but because he has been confronted so often by very widespread beliefs, and a distressing paucity of evidence.

The approach to this book differs from his previous works in that Harry does not merely seek to catalogue and explain the myriad odd beliefs he comes across, but shows how he goes about dealing with the believers. Some of these encounters fully justify the term "mind boggling".

Written in Harry Edwards' unmistakable style, this book is a valuable addition to the growing library of books he has written on these and other similar topics.

A Skeptic's Casebook is available from Australian Skeptics and the details are listed on the inside back cover. 

...Hypnosis from previous page

Multiple Personality Disorder

In recent years Multiple Personality Disorder has attracted attention, particularly in the USA, and hypnosis has been involved in most cases. In 1954 two American psychologists reported a case in which they produced three different personalities in their patient under hypnosis. They later produced a book, *The Three Faces of Eve*, and a film was made of it. From then on (1957) reports of cases multiplied enormously, and Multiple Personality Disorder is common - but only in the USA. It is very rare in Europe, the UK and Australia. Professor Harold Merskey of the University of Western Ontario, a world expert on this subject, has pointed out that the condition is almost certainly created by the implicit demand of therapists using hypnosis. He quotes the case of a 27 year old waitress in Oshkosh, Wisconsin who claimed to have 46 different personalities, six of whom were sworn in and gave testimony in a trial. The record at present stands at 110 different personalities claimed by one patient.

Post hypnotic suggestion is the term used when the subject responds to a suggestion made earlier in the hypnosis session, and usually with the claim of no memory of the suggestion. Whether the subject

truly has no memory of the suggestion is doubtful. The desire of the subject to please the therapist, and some degree of play-acting is involved. There is no evidence that a subject will perform a post hypnotic suggestion act which he would not normally do.

On stage

Stage hypnosis generally is condemned by psychiatrists. The reason is that emotionally unstable subjects may be adversely affected by the procedure. For example it may be incorporated into the delusional system in paranoid schizophrenia. Stage hypnotists usually select vulnerable subjects by a simple test of their suggestibility. He may say to his audience "When I count three you will feel compelled to stand up". Those who obey this command are then selected to come up on the stage.

Despite the criticism and scepticism put forward in this article, hypnosis is very occasionally a useful therapeutic procedure, particularly in the rather rare cases of hysterical amnesia. However, the imaginative claims often made about hypnosis do not stand up to vigorous scientific testing and critical evaluation. 

No links missing

Colin Groves

This is the text of a presentation by Dr Colin Groves on the ABC Radio Ockham's Razor programme in January 1997.

In 1864 the great British palaeontologist Hugh Falconer wrote to a relative about a primitive looking skull from Gibraltar, about which he and a colleague had just presented a paper at a scientific meeting, "If you hear any remarks made, you may say from me, that I do not regard this *priscan pithecoïd* man as the 'missing link', so to speak. It is a case of a very low type of humanity - very low and savage, and of extreme antiquity - but still man, and not a halfway step between man and monkey".

As far as anyone can trace, this is the first time that the phrase "missing link" appeared in print. Trinkaus and Shipman, in their recent book on Neanderthals (of which the Gibraltar skull is one), suggest that the way Falconer used the term, in a letter and putting it in quotation marks, implies that it was already in popular currency, presumably since Darwin's Origin of Species had got people discussing human origins five years earlier. Whatever. It has become part of the English language with a vengeance - and a more misused term I cannot imagine.

Has the Missing Link been found? Obviously not, by definition: it is the *Missing* Link. Just as open to abuse is that other word in the phrase: "Link", rather than "Links", implying that there is only one, and that if it is found all will be well with the theory of human evolution, otherwise we may take leave to doubt it.

Human evolution

Human evolution is much more complicated than all that. Creationists, doggedly determined to be both simplistic and out-of-date, talk about "*australopithecus*", "Java Man" and "Peking Man". The reality is far more complex, and far, far more exciting. There are "*australopithecines*", different species of *Homo*, and all kinds of intermediates and side branches. And controversies. Creationists will have you believe that because "experts" disagree the subject is in disarray. On the contrary, it is a sign of a dynamic field of enquiry.

The first controversy concerns the time of separation of the human line from that of other living apes - specifically from the line leading to the chimpanzee, our closest living relative. In the 1960s it was proposed that we had an ancestor called *Ramapithecus* that lived between 10 and 15 million years ago. *Ram-*

apithecus consisted of some partial upper and lower jaws from fossil sites in India, Pakistan, Kenya and Turkey. The specialists who promoted this particular ancestor carried on excavating in these same sites in the 1970s, hoping to find more complete specimens, and indeed they did - but the new specimens showed that, actually, *Ramapithecus* was hardly different from a better known, larger fossil ape called *Sivapithecus*, which is an early version of an orang utan. But that's what science is all about: putting forward a hypothesis and testing it - even at the risk of proving yourself wrong.

If the evidence that the human line was already separate 15 million years ago had thus evaporated, what really was the separation date? Vince Sarich, basing himself on calculations of the rate of evolution of blood proteins, had insisted as long ago as 1966 that it was only five to eight million years ago; after the *Ramapithecus* fiasco, a more recent date like this began to look much better. In the 1980s and 90s new methods, such as DNA sequencing, gave support to the five-to-eight-million date, or even lowered it further.

Suppose the date when the human and chimpanzee lines diverged was around five million years ago. What would a human-line fossil from shortly after the divergence look like - say, about 4.4 million years old?

Ardipithecus ramidus

Well, we now have such a fossil, *Ardipithecus ramidus*, from Ethiopia. It was described (in 1994) from jaws, teeth, part of a skull, and some upper limb bones; since then, further material has been discovered but not yet published. Every bone and tooth was intermediate between human and chimpanzee - for example, it had canine teeth smaller than a chimpanzee's but larger than a human's - and, by implication, it was already adapted to standing and walking upright.

Then come the fossils we call "*australopithecines*". Known by plentiful material from hundreds of individuals from sites in South Africa, Tanzania, Kenya, Ethiopia and, quite recently, Chad. There were half a dozen or more distinct species, some more primitive and *Ardipithecus*-like, some more "advanced" and human-like, some in between. They range in time from a bit over four million to 2.5 million years ago, and the forms that used to be known as "*robust australopithecines*", but now usually called the genus *Paranthropus*, survived to as recently as 1 million

years ago. The category "*australopithecine*" is no longer a formal taxonomic designation; it merely means a stage in the human line when we know they walked upright, but without the refined human striding gait; when their brains were still not, or only slightly, larger than those of chimpanzees; when their canine teeth were already not, or not much, larger than our own.

Intermediate fossils

People sometimes seem to expect that, in an intermediate fossil, every organ system should be intermediate; that canine tooth reduction should be almost there, while brain enlargement had hardly started, comes as a bit of a surprise. In fact, this is a well known phenomenon, called Mosaic Evolution. Simply put, evolution can be fast or slow, or even nearly static, and this applies to different anatomical parts of the same species as well as to different species.

There are excellent fossils of early *Homo* dating from about two million years ago; they had bigger brains than *australopithecines*, though of course there are intermediate fossils that have been classified as *australopithecines* by some, as *Homo* by others. Fragmentary fossils from Kenya, Malawi and South Africa suggest to some specialists that *Homo* was already detectable 2.4 million years ago. Certainly, it is about this time that we get the first evidence of modified stone tools in the fossil record. Chimpanzees use stones to crack nuts, and modify sticks and grasses to serve as tools, but only *Homo* is known, so far, to modify stone.

The earliest fossils of *Homo* - the small brained *Homo habilis* and its relatives - gave way to larger brained ones like *Homo erectus*. Some time between two and one million years ago, fossils of the human line begin to turn up outside Africa for the first time: China, Java, Georgia, Israel, Spain. Our forebears were becoming able to cope with an ever wider range of environments.

Controversies

The controversies continue. Was *Homo erectus* the only widespread species in the human line after one million years ago, or should we place African and European fossils of that period in a different species? Did *Homo sapiens* emerge only in Africa, or simultaneously in different regions of the world? And what of the Neanderthal fossils (of which the Gibraltar skull, with which I started, is one): are they our ancestors too? And were they confined to Europe and western Asia between 100,000 and 35,000 years ago, or were they more widespread than that, and can their ancestry be traced much further back?

Notice that up to now I have avoided talking about "ancestors". Creationists seem to think that if a particular fossil - "Java Man", say - can be proven not to have been an ancestor, then that refutes the whole idea of human evolution. I hope you'll see by now that it is completely irrelevant whether a par-

ticular fossil is an ancestor or not. That the corpus of fossils start off pretty chimpanzee-like and, progressively, get more and more human-like until they merge into the modern human form, that is "the fossil evidence for human evolution", if you want to use that phrase.

If you are really anxious to point to a fossil species as an actual ancestor, I suggest *Homo ergaster*. This was already known by a number of skulls from Kenya dating between 1.6 and 1.8 million years ago, when, in the mid-80s, the startlingly near complete skeleton of a subadult one was found at Lake Turkana. Some authorities class it as a very early variety of *Homo erectus*, but whereas the well-known *Homo erectus*, from a later period in China and Java, seems rather specialised, *Homo ergaster* has everything one might have predicted in a fossil of its age: clearly more "advanced" than any *australopithecine* or *Homo habilis*, it is primitive enough to have given rise to any or all of the later humans - whether the real *Homo erectus*, the Neanderthals, or modern humans.

Yet it is just about impossible, really, to confirm that some fossil or other is ancestral to something else. But it doesn't really matter, does it? In a very real sense, the links are there. They are not "missing" at all.



Superstitious beliefs and uncertainty

Trevor Case

Uncertainty, in the presence of vivid hopes and fears, is painful, but must be endured if we wish to live without the support of comforting fairy tales.

Bertrand Russell

What are the psychological factors that contribute to the widespread acceptance of superstitious beliefs? I initially believed that superstitious people lacked well developed reasoning skills. This belief, however, has not enjoyed strong scientific support. The evidence suggests that lower intelligence and lack of reasoning ability may account for only a small part of why people hold superstitious beliefs.

In my doctoral research, to be carried out at the School of Psychology, University of New South Wales, under the supervision of Prof Joseph P Forgas, we are attempting to develop, and experimentally test, a new and more complete model of the psychological reasons for superstitious beliefs. Specifically, we are proposing a two dimensional model that predicts that the adoption of irrational belief is due to the interaction of two variables: (1) people's desire and motivation to achieve certainty in an uncertain world, and (2) lack of critical standards (an absence of scepticism, if you like) in evaluating available explanations. While, in themselves, neither of these factors is critical for superstition to arise (as the existing literature shows), together we believe that they can explain a great many apparently irrational behaviours and beliefs. We have called this the theory of 'cognitive vacuum' because it predicts that people will search for and accept irrational ideas to the extent that (1) their subjective need for certainty is greater than can be fulfilled by available rational explanations (thus, there is a difference -a 'vacuum' between what is available and what is desired), and (2) the level of critical evaluation and exclusion of irrational explanations is low (as if a valve was left open for superstitious beliefs to be 'sucked in' to satisfy needs for certainty).

It is clear from the literature that neither critical ability nor need for certainty can, by themselves, explain superstition. We can all think of people who are both superstitious and yet quite critical and reasonable in other ways. I once knew a student writing a thesis on animal learning who was a born again Christian. Whenever he was forced to refer to evolution in his thesis he wrote "...creationist / evolutionary accounts" He argued that evolution was not inconsistent with the bible.

Another example, from a Skeptic's list on the internet (skeptic@listproc.hcf.jhu.edu. 1112-1996):

The boss is a techie, a computer nerd from way back, but still tenaciously clings to the idea that there must be something to astrology. The guy in the office next to me is a brilliant programmer, but is mired down in the UFO scene

Although some studies claim to have found support for the contention that people who believe in superstitions have lower reasoning ability or intelligence (for example Alcock & Otis, 1980; Wierzbicki, 1985), this link has been quite unreliable (Zusne & Jones, 1989; Royalty, 1995). Even when such a relationship between lower intelligence or reasoning ability and greater superstitious belief has been found, the link tends to be small. Thus, lack of intelligence and reasoning are not, by themselves, greatly correlated with superstitious belief (Zusne & Jones, 1989).

In any case, psychological research suggests that the failure to correctly reject false, irrational explanations is extremely common, even in otherwise intelligent and rational people. People often give personal, allegedly psychic experiences as one reason for their irrational beliefs (Alcock, 1981; Blackmore, 1990), yet these experiences are invariably the result of mistaking everyday events as evidence of the paranormal. For example, when betting on the outcome of a tossed coin and a few wins in a row occur, many people are prone to believe that the outcome is 'affected' by luck or fate, because of their inability to correctly estimate the natural probability of such repetitions in random sequences. Thus, most people are quite poor at making probability judgments, often drawing connections between events where there are none.

Many people are also biased in the kind of evidence they seek and rely on from the extremely complex data-rich environment that everyday life provides. Not surprisingly, we tend to seek-out evidence that confirms our hypotheses, while ignoring disconfirming details. Consider the claim that the telephone always rings while you are in the shower. This may seem compelling until you duly consider how many times you are in the shower and the phone doesn't ring, and how many times the phone does ring when you are not in the shower.

Another common error, also motivated by the need to believe that the universe is more controllable and predictable than it really is, occurs when

people assume that they can exert control over purely chance activities. For example, many people believe that by picking their own lottery ticket rather than being allocated one, their chances of winning increase (Langer, 1975). There are many such common errors of information selection and judgement (see Gilovich, 1991; Nisbett & Ross, 1980, for review), suggesting that universal shortcomings in human inference may account for much more of the story of superstitious belief than individual differences in intelligence or reasoning. In terms of our model, it takes more than mere judgmental shortcomings for irrational beliefs to take hold: there has to be a strong motivation, a need to seek and create certainty where there is none, for 'cognitive vacuum' to occur.

Thus, uncertainty and subsequent motivation to seek and accept whatever explanations are available to fill the 'cognitive vacuum' is the second psychological variable involved in superstition to be explored in our experiments. Relatively little attention has been directed at uncertainty as an antecedent of superstitious beliefs. In terms of our model, we expect that when people are made to feel more uncertain in our experiments, and lack rigorous rational standards, they will be more likely to accept and follow irrational explanations.

There is much anecdotal evidence that uncertainty plays a role in superstition, even when people otherwise possess adequate reasoning ability. Indeed, wars, depression, and illness are characterised by great uncertainty and are prosperous times for the psychic. Moreover, there has been a boom in belief in clairvoyants, superstition and faith healing even in countries such as the old Soviet Union, despite the apparently high quality science education there. It seems that people who have learnt, over three generations now, that their social and physical circumstances can be radically altered by sudden, unexplained and unpredictable changes may have a particularly strong need to absorb theories and explanations that hold out the promise of order and predictability in an unpredictable world. In a similar vein, seekers of alternative therapies mostly come from the ranks of those whose conditions are either so vague and superficial as to defy medical diagnosis, or those who suffer terminal and uncontrollable illnesses. In either case, the motivation to control and create certainty far outstrips the level of rational explanation available.

Additional evidence for the role of uncertainty in fostering irrational beliefs comes from the work of Malinowski (1954) and Vogt and Hyman (1959). In his investigation of the Trobriand islanders, the anthropologist Malinowski found that practices that were safe, certain, and reliable, such as fishing in the calm inner lagoon, did not involve superstitions. In contrast, activities that were uncertain and dangerous, such as fishing in the open sea, were surrounded by superstition or magical rituals (Malinowski, 1954).

Further support for a relationship between uncertainty and superstitious beliefs was obtained in a

field study on water divining. Vogt and Hyman (1959) found that in farming counties, characterised by a shortage of water, diviners were more numerous. Even some who had previously thought the practice of water divining to be nothing more than superstitious nonsense, turned to diviners when their wells went dry. Even though uncertainty seems to play a role in many superstitious beliefs, there are of course, occasions where superstitious practices occur without uncertainty (Alcock, 1981).

My research, then, will attempt to experimentally show that superstitious beliefs are more likely to be embraced in circumstances characterised by 'cognitive vacuum' -that is where there is a high subjective need for certainty and the available rational information is unsatisfying or incomplete. In addition, a lack of critical ability is predicted to predispose some people more than others to accept superstitious theories in uncertain circumstances.

Currently, we are directly testing the parameters of this model in a series of experiments. In one experiment, participants are given the task of achieving the highest score possible in correctly guessing the identity of the next card to be drawn from a pack. Their motivation - need to get it right - can be influenced by the level of rewards they expect to obtain, manipulated by the experimenter. Their willingness to succumb to irrational, superstitious explanations will be tested by telling them that a 'psychic' has previously performed exactly the same task on this deck, and his choices can be used by the participant, if desired. A person's willingness to substitute the psychic's answers for their own provides a simple and handy way of measuring an individual's willingness to succumb to irrational beliefs. Within this paradigm, the degree of uncertainty can also be manipulated by asking participants to make low frequency, uncertain (is the next card an ace?) or high frequency, more certain (is the colour of the next card red?) choices.

Where the task is important (with significant rewards at stake) and there is great uncertainty, superstitious behaviour will be more likely. However, we expect this tendency to be most marked for those individuals whose critical acumen has been found to be weak on previous tests.

Of the many factors thought to contribute to superstitious belief, uncertainty and critical standards may be productive avenues of experimental investigation because they can account for why even rational people can be susceptible to superstition. The cognitive vacuum model incorporates these two factors to provide a new framework for investigating an area much neglected by the literature. This experiment and others will provide more exact information about the link between uncertainty and superstitious beliefs and will consequently, elucidate factors that entice people to take the seductive way out and chose superstition over science.

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Simulacrum

Laurie Eddie

Adelaide has been agog recently with reports of a miraculous event taking place in the small southern township of Yankalilla. The faithful have been witness to the manifestation of the Madonna and Child appearing on the rear wall of the small local Anglican Christ Church, an appearance which many claim is a great miracle. Of course one must ask the obvious question - why should Mary, who is worshipped by Catholics, appear in an Anglican Church?

Sorry to disappoint the believers, but the "apparition" at Yankalilla appears to be nothing more than a common type of visual illusion, what is called a simulacrum, an abstract pattern which produces the impression to people viewing it, of some recognisable shape. These are quite common and can be found in or on both natural and artificial structures.

There are two types of simulacra. The first is the chiaroscuro simulacrum, where abstract patterns of light and shadow combine to produce a recognisable figure or a face. The second type is where naturally occurring objects, such as rocks, have weathered and taken on a recognisable shape, such as the outline of an animal or a face.

The chiaroscuro effect, by far the most common example of this phenomenon, results from a complex mental process which enables us to "see" figures, or faces, in abstract or random patterns. As a result simulacra are quite common and can be "seen" in a diverse range of locations, such as patterned tiles or wallpaper, in clouds, on hillsides, or in rock formations. Another very common location is amongst trees and rocks. Some examples of sylvan simulacrum have been elfin faces, a sleeping puppy, and the Madonna. One can even see the simulacra of a running man in the opening screen of the latest Windows '95.

In 1988, in Melbourne, a simulacrum appeared on a wire fence beneath the Southeastern Freeway, created by a random combination of leaves and debris. The fence was photographed by researchers to determine the height of water levels after a recent storm. The "face" was not noticed until the photo was turned on its side, and one of the researchers noticed what appeared to be a bearded face, which "looked like Jesus". There have been several examples where the chiaroscuro effect has produced faces on snow covered hillsides, "faces" which were claimed to have been the "face of Christ".

In the West, such faces tend to be "identified" as Jesus, while other cultures identify them as figures from their own religious milieu. Thus, in a Taiwan-

ese waterfall, where the combination of dark background rocks and cascading white water combine to produce what is, apparently, a human face, it is identified by locals as the Buddhist goddess Kwan Yin.

There have been numerous reports of rocks whose rough surfaces have produced the appearance of human faces. Even one of the standing stones at Stonehenge has one surface which looks like a sunken "face", rather like a boxer with a broken nose.

Like the "image" at Yankalilla, such abstract patterns are often found on the walls of buildings. In one example an image of a shaggy dog emerged from a newly plastered wall. The image bore a remarkable resemblance to the home owner's dog. As the plaster dried over several days, the image gradually faded and disappeared.

The reason that such abstract patterns are perceived as "recognizable" images is closely related to the complex manner in which our brains process and interpret images of the external world, for it is a fact that we do not "see" with our eyes, we "see" with our brains.

The eyes are complex receptors, which convert light from the outside world into at least four separate components, colour, depth, form and motion. These signals are conveyed to specific areas of the brain. Most travel to the primary visual cortex, but others are processed elsewhere in the brain. The decoded information is shunted between the various processing areas, combining all of the parts into a single image.

Just as a television picture is composed of thousands of parts, so too what we "see" are actually millions of separate pieces of information ingeniously blended together within the brain, to create the impression of an integrated image.

In addition to the four "visual" elements of sight, there are two other very important components of vision. The first is the memory component, our ability to recall specific visual shapes and cues. Learned in early childhood, we refer to this knowledge throughout our lives.

Occasionally, however, we can encounter problems in the recognition of a shape or pattern, usually because there is insufficient detail to allow us to recognize the object. In such situations the brain compensates for the lack of detail by adding elements to supplement the missing detail, until it finally produces, at least in the brain, a recognisable image.

The second component, *Einsellung* or Mind-set, is very important in the creation of illusions, for our

visual experiences are greatly influenced by what we want to see! This process appears to be the one which is operating amongst those who have seen "miraculous" things at Yankalilla.

A famous example of this process involved the renowned American astronomer Percival Lowell. In 1877, Italian astronomer Giovanni Schiaparelli observed marks on the surface of Mars, which he described in his reports as *canali*, an Italian word that can mean either "channels" or "canals". Unfortunately, the word was translated into English as "canals", which suggested artificial waterways. This error was enthusiastically embraced by Lowell, who earnestly believed there was intelligent life on Mars.

Eager to provide additional evidence, Lowell commenced a vigil which was to occupy him for the rest of his life. He spent virtually every night peering through his telescope at the distant image of Mars, looking for these canals. Even though, for most of the time, the image of the planet was indistinct and blurred, he was convinced that he could see the canals. To him they appeared to wax and wane with the "Martian seasons". Because telescopic images were too poor to record on film, he carefully sketched these constantly changing "seasonal" patterns.

Although he produced hundreds of sketches of these "canals", other astronomers who looked at the Martian surface were unable to see them. The matter was finally resolved this century when the first interplanetary probes finally reached Mars. The pictures which they transmitted back to Earth showed no evidence of any Martian canals. They simply did not exist - they had existed only in Lowell's mind.

Likewise, during the Crusades, after Saladin had recaptured Jerusalem, it was widely reported that many Christians witnessed crucifixes and images of the saints shedding tears of blood.

In more recent times, during the paranormal research hoax, Project Alpha, instituted by James Randi, subjects were asked to project thought-images onto the film in an 8mm movie camera. One subject produced quite spectacular results:

One of the independent researchers, a psychiatrist with a long standing interest in parapsychology, found an unexplained 'swirl' on an eight-millimetre film. In it he discovered moving faces, a portrait of Jesus, a UFO, a woman's torso, a nipple, a breast, a thigh and a baby being born.

The subject of this particular experiment later admitted that he had produced this inexplicable "swirl" simply by spitting onto the lens of the camera, and allowing the camera to record the shapes made by the saliva as it dribbled down the lens. The wonderful things which the researcher "saw" were merely the products of his own subjective, and obviously extremely fertile, imagination!

Brierre de Boismont, in his book, *Hallucinations: or, The Rational History of Apparitions, Visions, Dreams, Ecstasy, Magnetism, and Somnambulism*, mentioned an example of Mind-set. Novelist Walter Scott, who

had only shortly before received news that his friend Lord Byron had died, was in his library thinking about his friend, when:

...suddenly [he] saw his friend's image before him. Astonished at the natural appearance of the clothes, he approached the phantom and discovered that it was an illusion, and that the clothes of the figure consisted of the folds of a curtain. Scott was struck by the precise accuracy with which his imagination had reproduced every detail and peculiarity of the clothing of the dead poet.

Illusions, such as the one at Yankalilla, are simply optical aberrations. The one at Christ Church is of extremely poor quality. Proper simulacra - even though they may take some time to "see" - usually produce a quality representation of the subject. I have studied the newspaper photographs and television reports of this image and, despite the claims of the local minister that he can see the Madonna's eyes and other fine details, I can see only a most rudimentary outline. I get a much better image when I turn the picture upside down - then I can quite clearly see the Phantom's skull cave.

Even attending at the actual site of the miraculous image was a waste of time. I was unable to see anything which vaguely resembled what the media claimed was able to be seen by so many others.

It seems that I am not the only one unable to see the miraculous figure; a number of people interviewed in the media admitted that they too were unable to see anything on the wall, or else admitted that all they can see is an indistinct outline which could be the Madonna and Child, or "anything else". A fact rarely mentioned in the media is that the "pictures" which appear in the newspapers and on television are "enhanced" pictures of the "image".

This same pattern of observation was repeated at the scene, a number of men who were at the church when the author was in attendance admitted they too could not see anything definite. Several women, however, claimed they could clearly see the image on the wall.

Since that time it has been reported that the "image" is becoming clearer, and more obvious, that it is taking a definite shape, similar to the *Pieta*, and that a rose is appearing below the framed portion. This is taken as clear proof that the image is that of the Virgin Mary, since it is claimed that the rose is Mary's flower. One should perhaps point out the fact that the red rose has long been identified as a symbol of unbridled lust and sexuality and was originally the symbol of the Goddess Venus. The rose also was traditionally the flower most closely identified with prostitutes.

Overall, the evidence suggests strongly that the observers who see the Madonna are unconsciously creating their own visual delusions; transforming what is simply a piece of rough plaster into something miraculous. Perhaps they are seeing what they want to see rather than what is actually there! ☹

So the camera never lies?

Geoff Sherrington

Personal computers have become extremely powerful; graphics programs have become astounding. People are enhancing photographs, some in subtle ways, some with blatant tongue in cheek.

We can expect to see a rash of images which are claimed to be of the paranormal. There will be pictures of Loch Ness monsters and UFOs purporting to show irrefutable evidence of their existence. (Q: If a UFO becomes identified, what will its name be?)

How true is a photo now? How far can fakery go?

There is no doubt that photographs can be enhanced by the gifted amateur so well that the average audience would be fooled. On the other hand, it is difficult or impossible to make a convincing fake that fools the experts, particularly when the hardware and software and digital image files are made available to the examiners.

It is likely that the serious forgers will produce a blurred image rather than a sharp one. To a degree, the better the hoax seems to be at first glance, the easier it is for experts to defuse. Good forgers leave clever fingerprints. We might say that the higher the polish on this silver, the more Brasso there is in the cracks.

Here is a brief run through some possible paths to fake photos and how to pick them.

Cameras

The quality of the camera matters little. Critics should not expect the hoaxer to be able to afford a Nikon.

Action photos are often blurred because there is no time to use a tripod and to check that all the camera settings are correct. The forger has an excuse for blurred photos.

Film processing is not critical. If the processing is very poor, it can leave marks on the photo which can be hard to match if a false image is added later as an insert.

Some interesting consequences arise if the UFO is said to be in motion. If the shutter speed is known, the velocity of the UFO can be roughly calculated if it is great enough. Next, suppose that it is dark and that a flash is used. This constrains choices greatly. The brightness of the UFO can roughly give its distance from the flashgun. Modern cameras have shutters which open for much longer than the flash duration. Typically the shutter will be open for about 1/100 second, but the flash takes a few 10,000 of a second. Most cameras fire the flash first, to fix the image, which then leaves a faint trail as it moves on.

The object seems to move backwards. Some cameras allow you to switch the flash to the end of the exposure, so the object looks as if it moved correctly to its position, leaving a trail behind it.

The point of all this is that you need to know exactly which camera the hoaxer used, because some effects are impossible on some cameras. No camera, no proof.

Scanning

Most photo manipulation by digital means (as opposed to darkroom methods) is done with bitmapped images. That is, the photo is scanned and its contents stored as numbers, in pixel form. Modern technology allows so many pixels per unit area that several pixels make up a piece of native film grain. It is therefore hard to tell that the image under inspection has been digitised, because under magnification the irregular grain is seen, not the regular pixel array.

However, high quality scanners are beyond the means of most people. Scanning is a service offered by bureaus. The hoaxer can be asked which bureau is used and the job record can be sought.

Portability

We will assume from here that this essay is about digital enhancement using bitmapped images.

To date, the new line of digital, filmless cameras do not have the resolution of normal cameras. If we want a bitmapped image that has resolution better than the film grain, we will not get it yet from a digital camera.

To get the resolution by scanning, we are talking of digital files of 30 megabytes or more for a 35mm format camera. This is much more than will fit on a floppy disc. If a bureau is used to scan the picture, the hoaxer has to receive the scan in special form, such as a portable disk or CD-ROM. Devices to read these files would need to be confirmed as available on the hoaxer's computer. Likewise, when the forgery is finished on the hoaxer's computer, it has to be portable back to a bureau where it can be converted to a film print. Some bureaus routinely keep the negative made from the portable file, so there is another way to check on the forger.

There are no cheap computer printers of higher resolution than good photographic paper properly used.

Enhancement

The scanned image is read into the computer, where a large range of effects can be applied. Basic items of photography can be altered - hue, saturation, brightness, tonal range, focus etc. Even the shape of the subject can be distorted, by change of size, mapping onto a surface such as a sphere or distorted mesh, change of perspective and change of texture. False textures can be inserted; there is scope in some programs for 'ray tracing' to cast shadows and make highlights from imaginary light sources.

However, in the final analysis, there is a need for two main objects to be in the frame. We need a background, for relative inspection, and we need the object which I'll simply call the UFO.

It is child's play to snap off a background. It is harder to make the UFO. This is true with movie special effects as well. That train that crashes in the movie often looks like the model it is. The toy boat going down is easy to pick because the behaviour of water at full scale is not preserved at toy scale - drops of water don't get smaller in proportion. In some ways, the still photo with one frame is easier to fake than the movie, which needs 30 frames per second.

Take it as a given that an excellent model UFO can be made. It can be photographed either alone for later insertion into the background, or in an existing background. The model has to stand close scrutiny and the human eye is quite sharp when it comes to textural definition, sharpness of shadows, reflections and so on. When separate photos are combined digitally, the fakery is much harder. The UFO has to show the correct sun angles and reflections with respect to the background. It has to be focused or defocused to the extent needed to place it the right distance from the camera lens, compared to background objects around it. A sharp UFO on a blurred background, or the reverse, is easy to see.

Computer graphics users tend to fall into a pattern of preferences as they gain experience. For example, suppose that there is a small object to be deleted from the image. Method 1, put a mask around it and fill it with a chosen colour. Method 2, use the programme's airbrush tool to paint over it in the required colour. Method 3 is mostly used. This is cloning, where two virtual brushes are used, one to 'duplicate and pick up' pixels from a chosen area and the other to lay down an identical copy in the required place. This clone method has the advantage of preserving texture.

Now, it is not uncommon for graphics pro-

grammes to have 16.7 million possible colours (24-bit RGB). If we pick up a set of colours from one place and replicate it in another, there is a great deal of mathematical matching. If the digital file the hoaxer used is available, mathematical analysis will rapidly tell if cloning has taken place and where.

Normal photos do not have areas of colour similar to one part in 16.7 million. Yet, if a colour fill method is chosen, there will be a cluster of near identical pixel values, all too plain to see by numerical analysis.

When an image of a UFO is dropped into a background, the edges will seldom match. You can see this effect in newspaper photos where the heads have been moved around. It is very hard to retain the strands of hair in the image, so the result often looks like a head full of Brylcreem.

Some form of cloning or smoothing will very likely be used to drop the UFO into the photo. It will generally be detectable if the digital file is available for analysis.

Printing

This is where the clever hoaxers can get away with it. Suppose that the hoax photo is printed in a newspaper. The newsprint machine has its own resolution, its own array of dots which cannot be identical to the pixel array on the digital file. Therefore, numerical patterns will disappear and defy analysis. The same is true with a good quality photo made from the digital file. Close inspection will reveal only film grain, not pixels that can be matched to one part in 16.7 million.

Further camouflage is possible when the image is fiddled in colour and later printed as grey scale, or black-and-white, which is just two colours.

Summary

The end point is that a hoaxer can get away with poor work if there is no way to verify the type of equipment used, or to see the digital file.

It follows that authentication of a purported UFO photograph requires inspection of the means used to obtain it. Unless every step in the hoaxer's process is made available for inspection, the photo has to be treated as a potential hoax.

When every step available to the forger is openly known, the chances of detection are very high. In particular, the digital file contains important information. I think that the best efforts will not come from the amateur, but from people who have use of rather expensive equipment, such as a worker in a film lab or a special effects studio. Such people know of more tricks than I have described here.



Psychic spies?

Marc Hillman

The Real X-Files - America's Psychic Spies
ABC TV, December 11, 1996 at 21:30

I don't know what possessed me, perhaps a look at the TV schedule for December 11 will reveal why, but I decided to watch *The Real X-Files* on ABC TV. I was immediately hooked when I saw the film was made by Jim Schnabel (more about him later), and settled down for an interesting hour. Within 10 minutes I was checking my calendar to see if it was April 1.

The film documented the psychic dabblings of the American military and the CIA with a technique known as remote sensing. This enabled suitably trained people, given a latitude and longitude grid reference and a date, to be able to remotely sense what was at that location. Boy, does that make the business of spying and military intelligence easy.

We were treated to numerous examples of occasions when the technique worked. It involved the sensor and a 'reader'. The sensor made a number of single word statements and the reader noted them down. When the session finished they would establish what was at the location and verify it with the sensor's predictions. At no time were we told how many times the sensor was way off, in fact some of the sensors actually complained that they were never told the results.

The film showed a spectacularly unconvincing demonstration by Mr Schnabel of how it could be done by anybody with only a few weeks training. The co-ordinates he was given were of a famous landmark known to the reader. The reader was definitely giving verbal feedback by grunting and wincing at every statement by the sensor. I thought Jim Schnabel was kidding, but apparently he was serious.

All of this took place at the height of the Cold War, when there was a very real threat of a 'Psychic Gap' developing with the Soviets. Its military applications were amply demonstrated by an account of a sensing of a Soviet nuclear submarine and a wander around a military base.

Of course, all the results of the program are classified and some of the crucial personnel who could *prove* the story have since died, but the film was nevertheless amusing as another demonstration as to just how gullible some people can be. I suspect the files are still classified out of an acute sense of embarrassment.

The reason for my interest is that the film's presenter is the same Jim Schnabel who is the author of

Round in Circles (Penguin, 1993). Now, this is a really good book, and I commend it highly to all Skeptics. Mr Schnabel went to England to investigate crop circles. He started off with an open mind, but he soon realised that the circles were fakes and started to make his own. When other 'investigators' were told of this they still wouldn't believe him. Further, when the original perpetrators were uncovered, many of the 'investigators' still wouldn't believe the whole field of study was a fake. He was very critical of all the pseudo-scientists who were sucked in by this harmless little piece of fun. Overall, a ripping good yarn, and an essential element in any Skeptic's library.

My question is, how could someone suffer such a change in philosophy in such a short time? In *Round in Circles* he delights in fooling Rupert Sheldrake, whilst in *The Real X-Files* he makes an argument that is very Sheldrakian.

Rupert Sheldrake wrote *Seven Experiments that Could Change the World*, (Fourth Estate 1994) and offers seven hypotheses that are truly amazing. For example, some pets can tell when their owners are about to return, even when the return is not a routine one. Anyway, enough of Sheldrake. I think his book is worthy of an extended review all of its own.

Human nature will never cease to amaze me. 🐉

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Secret conspiracy revealed

Sir Jim R Wallaby

Roswell: the Fair Dinkum Good Oil at Last
Williym Barjars, Thylacine Press, 1997

A new book, due to be published in April, will finally blow the lid, sides and bottom off the famous "Incident at Roswell" which has exercised the minds of American and other UFO conspiratologists since 1947.

Author and investigative journalist, Williym Barjars, doyen of the press room of the *Coonabarrabran Times and World Review*, first became interested in this case when he noticed that the airfield mentioned in reports of the incident was always referred to as the "RAAF Base". Americans, incorrectly as it transpires, assumed this was an acronym for Roswell Army Air Force Base in the state of New Mexico, but Barjars had a niggling suspicion that this explanation was far too simplistic to represent the whole truth.

Australians will instantly recognise that RAAF is also the acronym for the Royal Australian Air Force, and it was to this organisation's Super Ultra Over-the-Top Secret records that he directed his investigations. Exercising his rights under Freedom from Information legislation, he was frustrated as his best attempts failed utterly to discover any reference at all in RAAF records to the town of Roswell, or even to the state of New Mexico. As a journalist, he was fully aware of the tendency of all government agencies to cover-up sensitive information and this lack of evidence only served to confirm his suspicions that something was indeed being hidden from the public; something, he was now convinced, that would prove to be one of the most sinister conspiracies in Australia's history. But all avenues seemed to be closed; where could he turn next?

Then he had a stroke of luck. In the early hours of July 29, 1996, Barjars woke with a start, convinced that there was an alien presence in his bedroom. The son of stolid Flemish migrants, he was not the sort of man to believe in ghosts, and he was right; this presence took a much more tangible form. Standing at the foot of his bed was the figure of a man. The man, dressed from head to toe in khaki, handed Barjars a package, wrapped in brown paper and secured with green garden twine. The man then left without speaking a word. Hurriedly dressing, and pausing only to make himself a cup of tea and two slices of toast spread with Frank Cooper's Oxford Marmalade, Barjars lost no time in unwrapping the package, to find that it contained a number of notebooks, the pages of which were covered in meticu-

lously neat handwriting. These books purported to be the war diaries of Air Vice Marshal Sir Jim R Wallaby*, VD, DDT, VSOP and the story they revealed was dynamite; a story which has led Williym Barjars to one of the best kept (and most sinister) secrets of WWII (or any other WW for that matter).

In July 1945, Australian bomber ace and national hero, Sir Jim R Wallaby, returned to his native land, fresh from leading the triumphant RAAF bombing raid on Zurich. His triumph was short-lived, however, as he was soon to discover. In his absence, his wife, Lady Raelene, had entered into a carnal liaison with an American officer, Lieutenant Colonel Filbert F Filbert XI, vice-commandant of General Douglas MacArthur's fast-food catering staff. Steadfastly maintaining an external facade of the urbanity for which he was justly famous, inwardly he was enraged by the affair. With great skill, Wallaby plotted his revenge.

His contacts on the Air Board agreed with Wallaby's request to have him designated as Project Officer for the Fantastically Ultimately Exquisitely Secret new multi-role aircraft, the fighter-bomber-maritime-reconnaissance-troop-transport, Wombat II, then being developed by the Mandy the Moth Soft Toy and Aviation Company in their secret "Koala Works" facility at Woolloomooloo. Using remarkable technological inventiveness, the company had fashioned their paradigm-breaking machine from kitchen foil, cloth tape, string and rubberised fabric. It was to be the very first "stealth" aircraft and Wallaby had plans for its deployment.

However, even the best laid plans can be set at nought by unexpected events and Wallaby's plan was no exception. In August 1945, the Emperor of Japan inconsiderately surrendered and WWII came to an end. This could have spelled disaster for Wallaby's vengeful plans, but he had not achieved his high status by being unresourceful. Because of the extraordinary level of security that surrounded the Wombat project, he easily managed to keep news of the cessation of hostilities from the management and workers of the Koala Works. To his colleagues in government and military circles, he had little difficulty in explaining that the new aircraft was a crop-duster, vital to the postwar reconstruction of the agricultural industry, and so funding was maintained.

In mid-1947, unbeknownst to the Australian Government, Wallaby deployed a full squadron of these remarkable air weapons, crewed by hand-picked loyalists from his old unit. With the fires of revenge still

burning brightly in his bosom, he next planned an attack on Beaut, Montana, the home town of the now demobilised Col Filbert.

However, (and here Barjars exposes yet another closely maintained wartime secret) all was not well with this daring plan. Wallaby, the brilliant aviator, strategic genius, master tactician, political manipulator and useful second change bowler, could not navigate for toffee. For the very first time we learn here that the famous Zurich raid, the one which ensured that Wallaby's name would be pre-eminent whenever deeds of aeronautical derring-do were discussed, was actually planned as a raid on the Mitsubishi aircraft factory in Yokohama. One reason for the outstanding success of the raid, Barjars argues, was that Switzerland was at the time unaware that it was at war with Australia.

On July 3, 1947, the squadron took off from its Unimaginably Secret base on the outskirts of Goondiwindi, and set course for North America. But Wallaby's nose for navigation, never acute, had not improved with time and the sortie made its American landfall on the coast of the Gulf of California, which Wallaby mistook for Hudson Bay. Turning right to seek, as he thought, Montana, the aircraft flew on, with dangerously low fuel reserves, until they sighted an airstrip. Desperate, Wallaby ordered the squadron to land on the strip, which, as is now revealed, was located at Roswell, New Mexico.

By one of those strange quirks of fate that make history such a fascinating study, this was the very day of the opening of the Roswell and District Gold Cup Golf Tournament. Among those attending this gala event were President Harry S Truman, General Dwight D Eisenhower and the cream of the American political and military establishment. Armed to the teeth, Wallaby's disoriented team sprang from their craft and took the entire official group prisoner. President Truman, a pragmatist, realising that he had no options, immediately surrendered the United States to Wallaby's band of desperadoes. Intensely loyal to his service, Wallaby lost no time in designating his new command Royal Australian Air Force Base, Roswell.

At first enthusiastic, Wallaby soon realised that he had no desire to be head of government of a very large country, with all its attendant problems (such as exhibiting enthusiasm for American football and hamburgers). Two days later he offered to return control of the US to its properly elected authorities, asking only in return that the US agree to take Errol Flynn off Australia's hands. This Truman readily agreed to do, while also promising that ex-Col Filbert would be investigated by Senator McCarthy.

(In another curious historical footnote, it was discovered that Filbert was not the scion of an old Montana family as he had claimed, but the unacknowledged love child of Joseph Stalin and the widow of V I Lenin, Mrs Lenin. His life story is the subject of Williyam Barjars' next book, *From Traitor to Televangelist*, due for release in December 1997.)

Honour satisfied, Wallaby and his gallant band set course for home. In leaving US territory, however, an incident occurred which was to develop into the most significant mystery in American folk-lore. One of the Wombat aircraft, which, as chance would have it, contained the Squadron mascot, experienced loss of flight control functions outside Corunna NM and crashed on a local ranch.

The crew, escaping uninjured, thereafter made their way to Hollywood where they subsequently all became successful film directors and cinematographers. The mascot unfortunately and tragically died in the crash. It was the post mortem investigation of this animal (a bunyip yearling) that later surfaced as the notorious "alien autopsy" film. The remainder of the squadron returned home, after some minor deviations through Kazakhstan, Bolivia and Chad and disbanded, their secret remaining safe until now.

Williyam Barjars has been impeccable in his research and his story is indeed a sensational one. Tragically, he was unable to check the facts with any of the protagonists. Sir Jim R Wallaby died, a much feted national icon, in 1983 and at his request his ashes were scattered over the deep backward square leg position (to a right-handed batsman at the Paddington end) of the Sydney Cricket Ground. The last surviving member of the expedition, Squadron Leader Henry "Cecil" Edwards, vanished in 1992 while attempting to be the first person to scale Mt Everest on a mountain bike.

As an historical aside, this incident gave the American security authorities an idea. The United States, which had recently emerged triumphant from WWII and which was now the bastion of democracy in the Cold War era, could hardly admit that its government had been usurped, however briefly, by a band of antipodean adventurers. It would have been made the laughing stock of the world.

So began the deliberate planting of stories of flying saucers, aliens, weather balloons, Project Moguls, and all the carefully constructed myths that have been confusing Americans for half a century. These planted stories have been so successful that entire sections of libraries have been dedicated to a plethora of books seeking to explain "The Roswell Incident". By his brilliant research, Barjars's has rendered all of the other books redundant and libraries can now return their shelves to books on macrame and other useful activities. 

* The editor feels constrained to point out that the Sir Jim R Wallaby mentioned in this story is not in any way connected with, nor related to, the author of this review.

The fact that they share their names is one of those pure coincidences that makes being a Skeptic such an interesting pursuit. **Ed**

Honour among thieves

John O'Neill

Geoffrey Guilfoyle ("You Can't Keep A Good Crackpot Down", Vol 16, No 4) laments as to how over half a million Victorians persevered through an hour of the rebirth of Erich von Daniken in Channel Nine's special presentation of *Chariots of the Gods: the Mysteries Continue*. I am willing to raise my hand as a second viewer of this masterful 'documentary', and as such think it is pertinent to raise an issue missed by Guilfoyle, and an issue that I felt to be perhaps the most telling in the entire program.

Guilfoyle certainly raised many very valid points in his review. The programme's superficial treatment of basically every issue mentioned, inevitably attributing the lot to extra-terrestrials; the re-dredging up of every mystery (and non-mystery) from ancient times, regardless of how often or thoroughly they have been explained in more rational terms, and the lack of any acknowledgment of these alternate explanations. Actually the show seemed to me to be more the Mysteries Reiterated than the Mysteries Continue, but then again I am no von Daniken expert, having read only one of his books several years back (I was embarrassed enough borrowing that from the public library and didn't wish to repeat the episode), and possibly having watched the original Mysteries as a ten year old kid.

However the most striking difficulty I had with the program concerned the comments offered by the unexplained author Graham Hancock, of whom Guilfoyle had clearly never heard before, and I thus suspect that many other readers are possibly in the same boat. Perhaps if the name does not immediately ring a bell, the mention of some of his books will. He is (reputedly) a former East African correspondent for *The Economist* and has written several books, most importantly as regards this issue *The Sign and The Seal: A Quest for the Lost Ark of the Covenant*, and the proclaimed "number one bestseller", *Fingerprints of the Gods: A Quest for the Beginning and the End*. He is also co-author of the fairly recent *Keeper of Genesis* along with Robert Bauval of *The Orion Mystery* fame. Having only read his 1993 *Fingerprints of the Gods* book, that is the book I will discuss, however, and fortuitously, that book is deeply related to this issue.

As presented in the *Chariots* special, Hancock is clearly a strong supporter of von Daniken's views. In mystery after mystery Hancock's well presented and articulate head would pop up, reinforcing von Daniken's comments about how inexplicable the situation was and how it could not be explained by

the conventional views of science or history. What then is the value of Hancock's own books, published some twenty years after von Daniken's, if they merely repeat the same arguments?

To begin with, Hancock's books are more scholarly in approach than I can remember von Daniken's ever having been. *Fingerprints of The Gods* stretches to over 500 pages of text in my Mandarin Paperback version. In addition it contains citations throughout (with some 50 extra pages of 'references' or notes at the end), it contains a 'selected' bibliography of over 200 books, articles, etc, and is well indexed. Furthermore, just as Hancock's talking head in the program was far more articulate and convincing than von Daniken himself, so too are his books better written, with the arguments more fully developed and cogently presented. There are apparently rave reviews in the blurb from such respected publications as *The Times*, the *Literary Review*, *The Sunday Times*, the *Sunday Independent*, and many more. From this one could almost be forgiven for thinking that this was a genuine scholarly report of a scientific investigation.

To fill better than 500 pages you would expect that Hancock must go into a lot of detail and present a lot of arguments, and you would not be mistaken. In fact Hancock does the lot. The Piri Reis and Oronteus Finaeus maps, among others. American mysteries such as the Mexican Pyramids, Machu Picchu, Tiahuanaco, and the Nazca lines. The Pyramids of Egypt, the Sphinx, and other great Egyptian constructions. And chapter after chapter on ancient legends and myths, numerological and astronomical mysteries tied up in the dimensions of Nile monuments and also interwoven into the legends, as well as tales of long forgotten disasters (noticeably including the deluge, although not necessarily in the global sense), and predictions of forthcoming destruction in the very near future passed on from antiquity by people around the world.

But just how good are the arguments presented by Hancock? Well in short, better than those of von Daniken, but still ultimately flawed. Nonetheless, to give credit where credit's due, I could not off the top of my head fully explain all the issues raised, and some of his arguments do make you shift slightly uncomfortably in your seat. But then again no one pretends that we fully understand all these relics and the reasoning of the people behind them. However, rather than necessarily trying to explain every specific case (which would take the 500 pages plus of his original argument) it seemed to me that it may

be productive to look at some generalities and see where that line of reasoning led.

On my original reading I began by cross-checking the citations given in the text with the reference notes at the back of the book, and this immediately raised a dilemma. Out of a total of 54 citations for the first two chapters, all but four were references back to books from a single author (Charles Hapgood, and a total of 47 of the 54 referenced just one of his books, *Maps of The Ancient Sea Kings*). Chapter three followed in a similar vein, with 17 more references to this book out of a total of 25. As for the other eight references in this chapter, all of them were to do with a short account Hancock gave on the eighteenth century quest to find an accurate way to measure longitude, and, again, seven out of the eight were references to just one book.

It may be reasonable then to suspect that *Maps of the Ancient Sea Kings* is a startling new academic tome bringing to light amazing revelations on the history of maps. Well, sadly, no. It was first published way back in 1966, with a revised edition in 1979. It's nice to see Hancock providing his references, but, perhaps in the future, someone could explain to him the value of their correct usage. A variety of sources is preferable, especially when your work is presented as though this is the case - if he is merely repeating Hapgood's arguments he should acknowledge this.

Additionally a few up to date sources also add weight to an argument, particularly when it is supposed to be a current scientific argument. But then I would doubt that many of his readers would actually go to the trouble of checking the references anyway, and few would understand their correct usage. Still further troubles appeared throughout his references. I stopped even checking them when I started to come across serious references back to Immanuel Velikovsky's *Earth In Upheaval*. Although Velikovsky's name was never mentioned in the text, there were several citations to his work throughout the book. Curiously as far as this article is concerned, von Daniken never got a mention - anywhere.

Elsewhere a quotation from *The New York Times* discusses correlations between the position of the planets and electrical disturbances on the Earth. The article states that "Such an electrical balance is not accounted for in current astrophysical theories". As Hancock says, the paper "does not attempt to clarify matters further." (p245). He then goes on to draw a rather odd parallel between this quotation and that of Berosus, a third century BCE Chaldean seer. But the real problem is that *The New York Times* article was dated - wait for it - 15 April 1951! No acknowledgment of this is made in the body of the book, the impression being that this was a current article. One would imagine that even the most naive observer would be cognisant of the fact that any 'astrophysical theory' would more than likely have been worked on and updated since 1951.

It would be unfair to attempt to dismiss Hancock simply on the basis of his copious, yet at times dodgy,

references. This being the case, then what about his science? Well to his credit he does not fall for the first pitfall of many cranks and attempt to deny or avoid the reality of evolution. He states:

...then all the evidence of human evolution, painstakingly accumulated by distinguished scientists from Darwin on, must be wrong. It seems inconceivable that this could be the case...(p.20)

Elsewhere he goes into a reasonable discussion of the hominid fossil record with legitimate references, although some of these are again becoming a bit dated (pp. 222-224). But do the details he gives following the quote above truly indicate his level of understanding, or is it just a simplification for his lay readers, a literary turn of phrase. He comments that:

...the fossil record makes it abundantly clear that only the unevolved ancestors of humanity existed millions of years ago - low-browed knuckle dragging hominids incapable of advanced intellectual tasks like map-making. (p. 20)

"Knuckle-dragging"? Sounds more like a creationist bastardisation than a scientific statement. "Unevolved ancestors"? Is he referring to some type of proto-bacteria? If our ancestors were "unevolved", then when exactly did evolution commence? Statements like this reveal much about a person's true conceptions and scientific knowledge.

His biology would seem a bit shaky, but perhaps his geology is better. He claims that:

Modern geologists are opposed to catastrophes, or rather to catastrophism, preferring to follow the 'uniformitarian' doctrine... (p. 508)

His reference is almost not a surprise any more. A 1966 book by Donald Patten called *The Biblical Flood and the Ice Epoch: A Study in Scientific History*. And the flaw? Basically Hancock uses an invalid concept of catastrophism which referred to forces acting beyond the normal forces of nature, in short forces invoked by God. Most modern geologists have been opposed to this type of catastrophism, certainly since the time of Charles Lyell's *Principles of Geology* published in the 1830s. Many had also been opposed since long before then, based on the arguments of James Hutton, and the general desire to make geology a scientific pursuit. Of course current geologists do not subscribe to this type of catastrophism (Andrew Snelling perhaps withstanding), but they are in fact not opposed to catastrophes at all. Virtually any geologist would acknowledge that catastrophes (massive earthquakes, volcanic eruptions, etc) can and have certainly played an important role in the Earth's history. The sharp distinction between catastrophism and uniformitarianism was in fact largely created by Lyell himself to support his own uniformitarian viewpoint, it has been exaggerated

by textbook writers ever since, and is rather inaccurate.

Perhaps I am being picky, hitting upon what may be considered both minor and widespread scientific misconceptions, but more realistically this is just an indication of further problems plaguing the rest of the book. Indeed throughout the book he displays a limited true understanding of science and a lack of sceptical insight. He also comes up with many curious statements for a supposedly scientific book, a case in point being: "...while we may never hope to fathom the plans of the Creator..." (p. 214). It certainly weakens his credibility.

Hancock may be looking a bit suspect at this point, but my aim was not to expose Hancock, but to point out the difficulties I had with his association with the von Daniken program. And here's the rub. Despite the implications in *the Mysteries Continue*, Hancock does not actually subscribe to the von Daniken extra-terrestrial theories at all. For example, discussing the Nazca lines, he says:

...the Nazca lines have been identified by a number of observers as landing strips for alien space ships ... it is difficult to understand why extra-terrestrials advanced enough to have crossed hundreds of light years of inter-stellar space should have needed landing strips at all ... there is really no question of the Nazca lines ever having been used as runways - by flying saucers or anything else...(p. 39)

His explanation for the mysteries is far more down to earth, as it were. An ancient, and now lost, technologically advanced civilisation that was responsible for the ancient maps, the incredible megaliths, and an attempt to encode information into both the constructions and the ancient folk tales that would be able to be passed down through the ages and decoded by intelligent observers of later times.

This may sound suspiciously like another Atlantis theory, but he explicitly attempts to distance himself from that as well. He states:

...this ... had scuppered Plato's Atlantis as a serious proposition for scholars... Modern oceanographers had thoroughly mapped the floor of the Atlantic Ocean and there was definitely no lost continent lurking there... Ditto every other ocean and every other sea. (pp. 488-489).

But he does not distance himself too far. He continues:

...the evidence kept mounting that precisely such a civilisation had once existed.. So where could such a landmass have been located, if not under any of the world's oceans? (p. 489)

The answer to this dilemma is in fact that the lost continent lies under the Antarctic ice sheets, and the civilisation flourished somewhere a bit over 10 000 years ago when Antarctica was ice free (thus also

explaining the maps supposedly showing Antarctica's actual coastline). Not only was Antarctica ice free, it was not even at the South Pole during this time, and the Ice Ages, as we know them, never actually occurred.

As it was not my intention to specifically review Hancock's theories I will comment no further on his evidence and justifications for these claims, but will return again to my original point. Hancock appeared repeatedly in the von Daniken program as an apparently ardent supporter of von Daniken's viewpoint, but the only thing they really had in common was a questioning of the orthodox explanations for some historic sites. I imagine that Hancock would have been as shocked by his representation in this program as we were by the fact that von Daniken had reared his head again.

Hancock may lack a proper understanding of much of science, be a little limited in critical thinking skills, and have his outlook biased by religious preconceptions, but my impression of him is of a genuine believer in his ideas, and someone who has at least made some attempt at applying logic and science to his investigations. His copious citations and references indicate a real desire to bring together ideas and acknowledge outside sources, despite the flaws in practice. He even pleads for further research into his theories, as well as into the Egyptian sites and the subglacial landscapes of Antarctica.

It is likely Hancock was offered a chance to have his views aired on this television program, but has instead fallen victim to a big time charlatan, a wily old master of the trade, Erich von Daniken, and his backers. They have taken Hancock, who could have been considered one of their own, and pulled the classic ploys of their ilk, involving misquoting and quoting out of context. Hancock's comments were undoubtedly craftily edited to imply his support of von Daniken - some viewers may have read his books or heard good things about him, or even just been impressed by the more convincing style than von Daniken could offer.

Sir Walter Scott commented two centuries ago that "There is honour among thieves". The likes of Erich von Daniken are cast in the mould of thieves, taking genuine scholarly research and debate and turning it to their own ends, and preying on the minds of the hopeful and the gullible in the process. In *the Mysteries Continue* Erich von Daniken has shown, by his lack of honour, to be lower than a common thief, distorting the views of someone ostensibly of his own kind. We have learnt to expect genuine science to be distorted, but where do we stand when we cannot even rely on cranks to be honest and fair with each other's claims?

As Shakespeare put it: "A plague upon't, when thieves cannot be true one to another!" (I Henry IV, Act 2, sc. 2). May a plague of logic and reason descend upon the von Danikens of the world. ☹

Sacred secret unshrouded

Keith Fifield

Relic, Icon or Hoax? Carbon dating the Turin Shroud. Harry E Gove.

Institute of Physics Publishing, Bristol 1996. UK £19.50 (hardcovers) ISBN 0-75030398-0

Willard Libby is reputed once to have said, "Never offer to date a religious object". Willard Libby, you may recall, invented radiocarbon dating, for which he received the 1960 Nobel Prize for Chemistry. Harry Gove would have done well to heed his advice.

Harry Gove was a co-inventor of the technique of accelerator mass spectrometry. Overnight, the amount of carbon needed for a radiocarbon date dropped by a factor of a thousand, from 1 gram to 1 milligram. As Gove says, "It was one of those sweet, instantly recognisable triumphs that occur all too infrequently in science." News of the breakthrough was carried by *Time* magazine, and prompted a June 1977 letter from an American cleric resident in England. At last, he noted, it should be possible to date the Turin Shroud.

Difficult as it is to believe today, neither Gove nor his collaborators had ever heard of the Turin Shroud. Reputed to be the burial shroud of the crucified Christ, it bears a striking negative image of a crucified man, the source of which remains a mystery to this day. It enters the historical record in 1353 when a French knight, Geoffroi I de Charney, placed it in a church in Lirey, France. It passed into the hands of the House of Savoy, and was moved to Turin in 1578 where it remains.

With the invention of accelerator mass spectrometry it became possible to establish the harvest date of the linen flax from which the shroud is woven using only a fingernail-sized piece of cloth. In February 1979, in a letter to Cardinal Ballestrero, Archbishop of Turin, Harry Gove offered to do it, "if you wish to have it done." Little did he realise what a Byzantine chain of events he had set in motion. It was to be ten years before the shroud was finally dated by three different laboratories, and Gove's laboratory was not to be one of them. This book is the story of that intervening ten years.

The book has elements of thriller, parable and high farce. It has a scrupulous scientist stumbling through the quagmire of Catholic Church politics while at the same time trying to reconcile the different agendas of his scientific colleagues, a shadowy and slightly sinister organisation of true believers masquerading as scientists, a Machiavellian science adviser to the

Archbishop, the religion correspondent of *Rolling Stone*, and at the end of ten years of astonishing persistence in the face of myriad frustrations and disappointments, the bittersweet prize of a date for this famous and revered object.

There are a number of threads woven through the book, some of which will have resonances for many of us. First there is the link between public funding of science and publicity; the latter makes it easier to maintain the former. What then is the legitimacy of occasionally spending taxpayers' money on projects which are "not of high scientific import but that capture the interest of the general public" who are, of course, those same taxpayers? Gove argues that it has its place, and I suspect that, in these pragmatic times, few of us would take issue with him. The US National Science Foundation was certainly worried. A proposal from Gove for \$6000 to attend a workshop in Turin on dating the Shroud was sent to seven referees. Gove notes wryly that "A proposal to fund a space shot to land monkeys on Mars would need half that number." Secondly, co-operation between research groups may be a casualty of pressure on funding. Gove's pleas for a united front fell ultimately on deaf ears because none of the three chosen laboratories felt that they could afford to run the risk of losing the chance to date the Shroud. Thirdly, there is the theme that it is in the nature of the game that scientists usually play by the rules, but that it can be a profound shock when they don't. This was particularly true of the roles played by the science adviser to the Archbishop and the STURP organisation, but some of Gove's colleagues do not come out smelling of roses either.

Finally there is the conflict between science and religious belief. Gove argues often and persuasively that there must be a separation between the two. A firm conviction that the Shroud is 2000 years old is hardly likely to lead to a dispassionate application of the scientific method. On the other hand, Gove is led to ponder whether science itself might not sometimes be a trespasser in the field of religious belief. "The deep emotional reaction of the people viewing (the Shroud), that I had just seen at first hand, made me wonder more than ever whether there was a proper role for science to play in establishing its age and the nature of its image." Notwithstanding his reservations, and largely due to his persistence, the Shroud was dated and the result (1325 CE, with a

Continued p 53...

Lost opportunities, Australian style

Colin Keay

Australia's Uranium Opportunities: How her scientists and engineers tried to bring her into the Nuclear Age but were stymied by politics. Keith Alder. Published by Pauline M Alder, Warawee, NSW 2074, 1996. ISBN 0-646-29942-5.

It is remarkable the way Australian politicians, and their hangers-on, uphold some international agreements as totally inviolable while others are disregarded whenever it suits, despite signatures of adherence. Take the Greenhouse 2000 protocols for instance. Australia, on a per capita basis, is one of the world's worst offenders. There is no way the year 2000 target can be met because the combination of cars and coal-fired power stations will be puffing away harder than ever.

I have always maintained that the profligate burning of the world's petro-chemical resources, and that includes coal, will be regarded as plunder by future generations. From a slightly different standpoint, Keith Alder agrees. He maintains that Australia blew its chances of a clean, indigenous nuclear power industry, thereby increasing our dependence on burning coal and gas. Later, by listening to junk science, Australia threw away a unique opportunity to provide the ever-increasing number of Asian nuclear power reactors with our uranium, suitably enriched and fabricated into fuel rods on a strict supply and return basis to prevent diversion for weapons use. We have the best disposal technology in the world and the most stable geological structures to sequester the high-level wastes from the returned rods.

As a former Director of the now-defunct Australian Atomic Energy Commission, Keith Alder bristles at the media canard that the AAEC "lost its way". It was never lost, only a loser in the arena of politics. As a result Australia, then and now, is losing out.

So how did things go wrong? At first it was lack of clear vision by governments, certainly not on the part of the scientists and engineers of the AAEC. Then changes of government allowed the escalating intrusion of specious arguments by groups seeking self-aggrandisement and a recognition they've never deserved, on nuclear issues at any rate. Minister Rex Connor had a vision of Australia supplying the world with cheap processed uranium because we sit on over one third of the world's known resources of the element. By that time the anti-nuclear lobby had scotched the Jervis Bay power reactor and were soon to dash Rex Connor's high hopes. By way of contrast, Canada is laughing all the way to the bank:

with ten percent of the world's known uranium reserves they supply forty percent of world demand. For our poorly led country the percentages are pretty well reversed.

Looking back from twenty years into Rex Connor's future, those of us with some ability for clear thinking can see that Australia was scuppered by a litany of lies, meretricious media reporting and the ever-present public preference for noisy nonsense. "Don't listen to the experts. They are a: all corrupted because of their dedication; b: in the pocket of vested interests; c: incapable of impartiality; d: too narrow-minded and can't see beyond their laboratories; e: show a lack of responsibility to the world on wider issues...", and so on ad nauseam. In reality the sins are in the other camp. The parallel between the practitioners of pseudoscience and those antagonistic towards the advancement of science for the benefit of the world, is most striking to a sceptic.

These neo-Luddites, together with the media, continue to hamstring nuclear power. Take Chernobyl. Any report mentioning that disaster - and it certainly was a disaster - is still regarded as newsworthy more than ten years after the event. The death toll from its radiation is officially still in the thirties. Yet as far as the doomsayers are concerned any death in that region is eagerly attributed to the disaster. Contrast this with the news of a Sri Lankan dam burst which, by coincidence, was reported on the same day that news of Chernobyl broke. The dam disaster received only a fraction of the media coverage on that day and has never been heard of since. Two thousand Sri Lankan lives were lost in the ensuing flood. Is this a case of media double standards, or what? Are black-skinned victims less newsworthy than whites?

Aha! I can hear someone say. Most of the deaths from Chernobyl radiation are still to come. True, to a limited extent. The majority of those will have their lives truncated by a few years at most and their cancers will be hard to distinguish from those caused by exposure to natural background radiation. On the other hand the Sri Lankan victims were snuffed out on the spot, with no extra years of life.

I give this as just one example of the double-standard in news coverage when nuclear radiation is involved. This has also bedevilled reporting of anything ever done by the AAEC. Keith Alder's book is of immense value because he was involved practically from go to whoa, as they say. He tells the real story of events - one that puts into perspective the destructive influence of those zealots who convinced

themselves that they have done the world a favour by neutering an organisation that could have greatly enhanced our quality of life, reduced our balance of payments problems, and aided the future stability of the Asia-Pacific region. Alder points out that Japan and most other Asian dynamos are deliberately choosing nuclear power for the major component of their future energy supplies. Should their uranium supplies contract they will start looking toward Australia to provide their nuclear fuel. If we continue to withhold it we are asking for a repeat of the Japanese desire for resource security which led to their 1930s expansionism, and their part in WWII.

Keith Alder outlines the magnificent contributions of our scientists and engineers over many years which could have given us environmentally clean power and a positive role as a resource supplier to our Asian neighbours. It is a story you won't find anywhere else. As such it is an essential contribution to the true history of Australia. He wryly observes that we kid ourselves every time we boast of being "The Clever Country".

...Shroud from p 51

95% probability of being within 65 years of this date) was hardly likely to reinforce the beliefs of those who believed it to be the burial shroud of Christ. But as Father Peter Rinaldi responded to a sympathetic friend, "Do you really think that the Church will fall apart because the Shroud is not what many of us supposed it to be?"

Writing this book could not have been a comfortable experience. With hindsight, Gove must have found some of his responses almost unbearably naive, but he is scrupulous about recording them nevertheless. Clearly, he is not a professional writer, but he has a delightfully wry sense of humour and the force of the narrative allows one to overlook the occasional awkwardness of style. The narrative is embedded in the real world, and unlike fiction, it is littered with untidy loose ends. What might King Umberto's papers tell us about the origin of the Shroud; who leaked information at various stages of the drawn-out process; why did the head of the Oxford laboratory send all the 'girls' home early when the BBC came to film the removal of the Shroud sample from its stainless steel canister? These and many other questions remain unanswered for the simple reason that Gove hasn't been able to discover the answers.

As must be clear from the above, I found this a fascinating book. On balance, I suspect that Gove is glad that he did not follow Libby's precept. If nothing else, it was a wonderful demonstration of the revolution in carbon dating which had been brought about by accelerator mass spectrometry. Oh, and years earlier Libby too offered to date the Shroud, but his offer was declined.

Skeptic a "star"

Barry Williams

A very big note of congratulations is due to the author of the preceding review, Colin Keay, a member of the NSW committee and president of the Hunter regional branch. As such, Colin will be the host of the 1997 National Convention in Newcastle and is already planning big things for it.

The February 22, 1997 issue of *Minor Planet Circulars*, from the International Astronomical Union contained the following news item:

(5007) Keay = 1990 UH2

Discovered 1990 Oct. 20 by R H McNaught at Siding Spring.

Named in honour of Colin Stewart Lindsay Keay (b 1930), past president of IAU Commission 22 and chairman of the IAU Working Group on the Prevention of Interplanetary Pollution, who has made several major contributions to our understanding of the meteoroidal flux to the earth.

His well-controlled radar patrol from the University of Canterbury during 1960-65 in collaboration with Clifton Ellyett remains our best knowledge of the southern-hemisphere influx. Since 1965 Keay has worked at the University of Newcastle (NSW), one of his most noteworthy achievements being the development of a physical theory for the production of electrophonic sounds by bright fireballs.

Name proposed by the discoverer following a suggestion by DI Steel, who prepared the citation, and an endorsement by BG Marsden.

This means that Colin Keay has had an asteroid named in his honour by the official body charged with such naming (and he didn't have to pay some entrepreneur with a Box Number for the privilege). The "DI Steel" who suggested the award is, of course, our regular contributor, and Colin's fellow astronomer, Duncan Steel.

Colin will also be honoured by the naming, on March 1, of the new Astronomical Society of the Hunter observatory, the Keay Southern Cross Observatory.

Despite what the headline says, this honour doesn't quite make Colin a "star", but more of a "starlet", if we have translated the Latin correctly. Those who know Colin will recognise that he hasn't really got the figure to be a starlet, and we believe he has never attended the Cannes Film Festival. Friends and visitors to the 1997 Convention are therefore invited to refer to him as either "5007" or "Rocky".

Needless to say, Colin is justifiably pleased to have his work thus recognised by his professional peers. We at *the Skeptic*, and all of his Skeptical friends who have benefited from his dedication and enthusiasm in our cause, are delighted to add our congratulations on his well-deserved honours.

Leaving the Cave

James Gerrand

Leaving the Cave - Evolutionary Naturalism in Social-Scientific Thought, Pat Duffy Hutcheon. Wilfred Laurier University Press 1996 521pp hbk \$55.00

I found this book one of the most important and informative books I have read. The author is a now retired Canadian sociologist; her thesis is that the social sciences have failed us in the 20th century. Practitioners in the social realm - politicians, therapists, educators and economists - are unable to provide the answers we seek to meet the challenges of our everyday lives.

She ascribes this failure to human society throughout history being opposed to the scientific approach, to the operation of cause and effect in human behaviour. This scientific approach to human studies must be based on evolutionary naturalism - human beings are part of all nature and all nature is evolving. So Hutcheon's approach is very humanist.

Her book is a study of the lives and writings of selected thinkers who have contributed to the evolution of ideas in scientific sociology. She discusses crude beginnings in Hellenic Greek, early Buddhist and Confucian writings, through the re-emergence of naturalism with Erasmus, on to Montaigne, Hobbes and Hume, then to Rousseau, Helen Martineau, to Karl Marx, to Charles Darwin, to Herbert Spencer, to Sigmund Freud, to Ivan Pavlov, to John Dewey, to Henri Bergson, to Edmund Husserl, to Durkheim and Weber, to George Herbert Mead, to George Santayana, to Bertrand Russell, to Julian Huxley, to Hannah Arendt, to Eric Fromm, to Jean Piaget, then to the more modern era, to Karl Popper, to B F Skinner, to Richard Dawkins and Stephen Jay Gould, to Thomas Kuhn.

Hutcheon devotes a chapter to each person or pair she has selected. For a non-sociologist like myself, a regular discussion on each chapter in turn, as one of a small interested group, would be the way to get the most from her writing which are often on fundamental questions. However much enlightenment can be gained from a first reading. I mention some highlights that took my attention.

In the preface Hutcheon shows her objectivity when she states "she wanted to include as many female contributors as male. ...I came to realise that we feminists cannot have it both ways. ...women in the past have seldom enjoyed the leisure or credentials necessary for advanced intellectual pursuits ..." So we cannot "insist that our (female) contribution

... has been equal ...(to males) who benefited as well from the support of their female partners."

In this context Hutcheon does feature two outstanding women. Harriet Martineau (1802-1876) was unknown to me before Hutcheon revealed "her remarkable - albeit sadly ignored - accomplishments as a social reformer, educator, social scientist, novelist and children's writer, journalist, historian, philosopher, pioneering feminist and environmentalist. She was one of the greatest Renaissance figures of the 19th century, yet we scarcely know her name!" She was a victim of institutionalised sexism and also of religious hostility to an admitted atheist. It is pleasing to read that "Charles Darwin was obviously entranced with her, and described how she tended to attract the brightest men in the country." As a tribute to her feminist endeavours one of her biographers concluded "that Martineau will be remembered for all time as one of the women - perhaps the first among them - who made the 19th century the dawn of freedom for half the human race".

The other outstanding woman featured was Hannah Arendt (1906-1975). Her main strength was her political understanding, generated first-hand by growing up as a Jew in Germany between World Wars I and II. Her book *The Origins of Totalitarianism* (1951) "established her as an authority on the subject of that new form of terror-based centralised power made possible by 20th century technology in the service of 19th century ideology."

One observation particularly interesting to me was how Jewish culture had two opposing motivations; towards internationalism or to tribalism. As a boy growing up before WWII, I admired the Jews because so many promoted a universal message and they provided Australian leaders like our first Australian Governor-General Sir Isaac Isaacs and Australia's leading general of WWI Sir John Monash. But after WWII Jewish tribalism came to the fore with the adoption of Zionism. Arendt was one who disagreed with the Zionist insistence on a sovereign Jewish state, instead favouring a federal Palestine incorporating Jews and Arabs on an equal basis.

As a Humanist, it was pleasing to read of the important roles our Humanist icons, John Dewey, Julian Huxley, Popper and Skinner play in Hutcheon's pantheon. Hutcheon gives great credit to Popper for his belief that science "represents our wish to know, our hope for emancipating ourselves from ignorance and narrow-mindedness, from fear and superstition."

However I, as many scientists do, disagree with Popper's dismissal of induction and probability as part of science on the grounds they were difficult to prove logically.

Her chapter "The Radical Behaviourism of B F Skinner" details its importance. Skinner's theory of operant conditioning, established by scientific experimentation, gave a clear understanding of much of human behaviour. "All behaviour operates on the environment and produces effects which, in turn, contributes to either its extinction or reinforcement". We tend to repeat behaviour that we find rewarding and stop behaviour that doesn't reward us. Skinner's answer to criticism that his theory belittled human nature and reduced humans to an animal level, was that nothing can take away humanity's accomplishments but we must accept human nature as science reveals it, not as we might wish it to be. The difference in different environments and in peoples' genetic endowments guarantees the uniqueness of each individual. "What is one man's meat is another man's poison".

Hutcheon's concluding chapter, "Toward a Unified Social Science", is a strong argument that progress in our human society is through a scientific approach. What progress we have achieved is through our understanding that "nature is continuous and all-inclusive, and that the human animal has developed ... the ability to forge reliable knowledge from the chaos of immediate experience ...and a capacity to imagine and bring to fruition objects of art, and to make both aesthetic and moral judgments".

Hutcheon makes the point that in "organic functioning, individual development, social behaviour and cultural growth ... causality is after the fact, with effects being contingent on the environmental conditions as altered by the consequences of previous actions." This differs from inorganic reactions where the fact causes the effect.

"...humans are being forced by technology to inhabit one global culture. But we are without the reliable beliefs and values that would enable us to move from a state of international anarchy fuelled by race-thinking to one of world order. ...we are poorly equipped to deal with the problems of environmental degradation, overpopulation and ethnic conflict ..."

For a solution Hutcheon calls for a scientifically informed education. Only through this emphasis can

we develop a "social science capable of explaining and organising all the available, disparate, documented facts about the human condition - and of generating fruitful hypotheses." Unfortunately the prospect for such a "sea change" is currently remote with the standard of teaching of science deteriorating, flooded as we are with commercial TV "infotainment".

Hutcheon concludes her opus with a poem "Evolutionary Spiral". Here are its final two stanzas.

And finally in scientific process we can see
the path of evolution writ by humankind quite consciously.
Hypotheses created by the minds of those who seek to know
the regularities of that great order all surrounding and
immersing and propelling us to grow.
And in their testing, truths are ferreted with ever finer
eye,
and some are found to hold and to withstand attempts
to falsify,
and thus give grounds for action with predicted
consequence.
But many fail, and thus are cast aside for propositions
new with better fit to circumstance.
And, gradually, by rigorous unforgiving test an edifice
of knowledge builds;
endowing us with power to shape that natural ordering
force -
and by this means determine paths whereby the culture
will evolve.
Thereby to change for good or ill the future's course,
by our resolve.

But many now recoil in terror at the thoughts that in
our might
we hold potentially the power of heaven's throne.
So too must hominids in dim-lit caves have shuddered
at the sight
of fire new-captured and employed as tool -'til then
the instrument of gods alone.
For power gives us choice and choice demands
responsibility,
and we are ill prepared by our beliefs in godly wrath
and godly grace;
so it may be that humankind rejects the opportunity
for evolutionary spiral far above the current habits of
our race;
the violent depredations of our past -
and by rejecting science may prefer to pave the way
that none can stay,
in unremitting spiral down and down;
and into Hell at last!



Items for *the Skeptic*

Contributions for inclusion in *the Skeptic* may be emailed to our address, mailed as a 3 1/2" disc or as hard copy.

Items emailed or on disc should be sent as plain ASCII text and should not be formatted, although a formatted hard copy may be included. Printed items are most easily recovered if printed by laser

or bubble jet printers or typewritten. Handwritten items, such as letters and news items, should be kept short if possible.

Relevant photographs and illustrations are also welcomed.

The deadline for contributions to Vol 17, No 2 is May 16

Vanishing species

Geoff Sherrington's *Forum* contribution (Vol 16, No 4:56, 59) makes some valid points but is a bit naive zoologically

It is irritating to hear statements like "Australia has one of the worst records of extinction..." repeated again and again with very little in the way of documentation. Claims like this get copied from one source to another without checking and without qualification. They may be true, but the research on which they are based ought to be more accessible than it was to Geoff, and certainly ought to have been cited in the Commonwealth Endangered Species Protection Act.

What we mean by "species" has been worried over quite a bit in the past 20 years or so. The definition by Ernst Mayr, first proposed in 1940, known as the Biological Species Concept, is "Species are groups of actually or potentially interbreeding natural populations which are reproductively isolated from other such groups". Various biologists have been dissatisfied with aspects of this, so that during the 1980s we had the Recognition Species Concept and the Cohesion Species Concept. Aside from debatable matters like what you mean by "potentially interbreeding", "natural populations" and "reproductively isolated" it is almost impossible to apply his definition in practise without a good dose of inference - to paraphrase Charles Kingsley, in order to prove that two species do not interbreed, you must see them not interbreeding. This is why many taxonomists now prefer to cease pretending that they know what is going on in the wild, and go back to what always has been the taxonomists' working definition, formalised by Joel Cracraft in the early 1980s as the Phylogenetic Species Concept: "A species is the smallest group of organisms living at a particular time that is recognisable by a unique set of properties shared by its members". If one can make the (generally reasonable) inference that these "properties" are under genetic control, then species, as diagnosable entities, are *ipso facto* distinct gene-pools, and one need spend no sleepless nights over whether they possibly might, or even do, interbreed from time to time.

I am not sure what philosophical problems Geoff is getting at when he asks us to distinguish between a remnant population and a nascent one, to consider how new species arise on islands, or to take population size into account. But I don't think we are at liberty ever to assume that a population was "on the path to extinction in any case". Circumstances - climatic change, the impact of new competitors, whatever - may have forced a species to relinquish its grip

on a wide range of habitats, but it could still be secure and numerous in a more specialised habitat. The Giant Panda was widespread across southern China in the Middle Pleistocene but then suffered a swingeing range retraction, yet was until the present century perfectly secure in its remnant habitat, the bamboo forests of Sichuan and Gansu.

I cannot say much about birds, except that island populations are, of course, uniquely vulnerable and it is true that we appear to have lost few mainland Australian species. But on mammals I am on safer ground, and I can report that all the cited cases are of perfectly valid species.

I fear that Geoff has misunderstood the nature of "folk taxonomy". When Europeans began to become familiar with the funny beasts that jumped around on their hind legs they called the big ones Kangaroos and the small ones Wallabies. Because they were familiar, the common names stayed the same even though these kangaroos and wallabies came to be classified in a plethora of different species and genera. We are still learning more about them, and continuing to reclassify them: the ones called Hare-Wallabies for example are a very diverse lot and will doubtless be split up among two or three genera but we will continue to refer to them as Hare-Wallabies, because that's what everyone calls them.

It is a bit different with those species of Hopping-Mice: there are no vernacular names for them, and the lay public seems to have a marked antipathy to scientific names, so what do we use for "book names"? Answer: we just invent some. The Short-tailed, Long-tailed and Big-eared Hopping Mice differ from other species by far more than their tails or ears: size, colour, skull shape, aspects of tooth shape, the presence or absence of a big gland on the neck, and (in the case of the Long-tailed Hopping Mouse) the genitalia. If, as seems likely, these species are extinct, then we really have lost unique gene-pools. You can read about all these species, and get references to what has been written about them, in the Australian Museum's *Complete Book of Australian Mammals*, edited (in several editions) by Ron Strahan.

So why have we lost them? Two major causes: one, the introduction in colonial times of the rabbit, fox and cat - especially, I would think, the fox. The other may well have been the forced cessation of burning of the landscape by Aboriginal groups in the arid zone in the 1950s; species like the Desert Bandicoot may have been adapted not strictly to burning regimes but, as Tim Flannery has argued, to the vegetation changes caused by the prehistoric giant marsupials ("megafauna"), which the burning mimicked.

What we can gain from these past extinctions goes beyond guilt and breast-beating: we can learn how to prevent any more. And perhaps, by reversing some of the causative factors where we can, we can start to restore some that are nearly gone. By locally exterminating foxes in the southwest, the Western Australian authorities have succeeded in bringing back the Numbat and the Woylie from the very brink of extinction. That's the way to go!

**Colin Groves
ANU ACT**

Another view

Geoff Sherrington raises some interesting questions in "Australia's extinct species" (*Forum* Vol. 16, No 4). I have often wondered how many species have become extinct in populous countries such as India, China or Southern European countries.

Mr Sherrington also highlights some difficulties with defining a biological species in terms of their ability to interbreed. Clearly if two individual animals exist naturally at the same time in the same place then they can attempt to experimentally determine whether they are able to interbreed. Otherwise defining a species using the test of interbreeding is not a valid definition. Zoologists consider a species to be the smallest grouping of similar individuals that is consistently different from other such groups. Apart from obvious anatomical differences, just what constitutes a "consistent difference" may be quite subtle. It may be a feeding preference, a behavioural difference, or nesting habits (see for example the Ground Finches of the Galapagos Islands). The description of new species and the revision of existing species classification is an active area of research and keeps taxonomists happily occupied. A species will be recognised as such if there is a strong argument for it to be so classified. Ambiguous situations (such as geographically separated populations) produce classifications such as sub-species, races and poly-

morphic forms and provide great sport for taxonomists.

However back to Geoff Sherrington's search for information about Australia's extinct species. "A ring around over a couple of days" does not constitute a good sceptical research methodology (as I am sure Geoff would know). As sources of facts on Australian mammals and birds I would suggest *Australia's Vanishing Mammals* by Tim Flannery (1990) Readers Digest Press, and *Ecology of Birds: An Australian Perspective* by Hugh Ford (1989) Surrey Beatty and Sons (both available from The Australian Museum Shop). Also try phoning the Threatened Species Network on (08) 83575069. I would suggest that relying on common names as the basis for a critical argument against the contention that Australia has a poor record with extinct species does not make sense. It may well be that ten extinct mammals have "rat" or "mouse" in their name. However they are marsupials not placentals and bear little resemblance (except for their size, I suppose and perhaps their ecological niche) to the European animals that bear those names. Furthermore sharing the term mouse (or wallaby for that matter) in a common name does not mean that two marsupials are closely related. The Eastern Hare-Wallaby (*Lagorchestes leptorides*) and the Crescent Nailtail Wallaby (*Onychogalea lunata*) are in distinct genera - and are both extinct.

The declaration of birds as being extinct is more problematical especially if their natural range is very large. Both the Lewin Water Rail (western race) *Rallus pectoralis* and Macquarie Island Rail (= Banded Land-Rail *Rallus philippensis*) may well be extinct in Australia (and on Macquarie Island!) however they both range from India to the South West Pacific, so some of their genetic material still exists (probably). Even so, the local extinction of races of birds is nothing to be proud of and the rapid contraction in the ranges of our remaining small marsupials means that those animals are extinct from most of their former range. And they probably will be forever without an effort to allow their habitat to regrow and to keep it clean of feral predators.

**Martin Caon
Clarence Park SA**

Symposium

"Responsibility in a Free Society"
organised by

Council of Australian Humanist Societies

The symposium, organised as part of the National Conference of the Council of Australian Humanist Societies, will be addressed by Prof Stuart Rees (Social Work, U. Syd) and Prof Michael Puset (Sociology, UNSW) and other controversial speakers.

It will be held on Sunday, March 23, at the Rose Bay RSL Club, Vickery Ave, Rose Bay at 2.00pm.
Cost \$5.00

For further details, phone (02) 9389 4559

Owning our history

Richard Buchhorn

From the outset, let me declare myself thoroughly in accord with Keith Windschuttle, Mark Newbrook, Roderick Shire *et al* on the value of history as an empirical domain, the study of which might help us avoid reliving the past, and also furnish the best possible liberal (and even liberating) education.

In the late 1950s, after some eight years of tertiary studies, I read John Henry Newman's *Idea of a University*. The concept of liberal knowledge as its own end caused me to re-assess priorities, and to look beyond the subjects I was studying in Rome at that time. Within a few years I was in demand as a guide for visitors to the Roman Forum, Palatine, Circus Maximus, and other sites around the city: dazzling them with historical reconstruction of times past, and partial on-site re-enactments of "Et tu, Brute!", "Friends, Romans, Countrymen!", and Christians facing lions in the Colosseum.

One American visitor found those ruins awesome: wide eyed, he exclaimed: "What happened?" I suspect that he was terrified of the prospect of foreigners some centuries hence looking at the ruins of the Empire State Building etc, and asking the same question. An historical perspective can rein in an inflated self image.

My interest in history was rekindled some 17 years ago, early in an eight year sojourn at Boggabilla, on the NSW/Qld border opposite Goondiwindi. Some Aboriginal people asked if I could find out anything about some places important to them - former Mission sites, Bora grounds, Boobera Lagoon etc, - and certain events and people in their oral tradition.

Journey of discovery

That launched me on a fascinating and exciting journey of discovery, characterised by:

1. Amazement at the abundance of material available: from old newspapers, reminiscences both published and in manuscript form in State Libraries and Archives, etc. I was able to share this with Mark Copland, a former Goondiwindi resident, who retrieved more material from the NSW State Archives: handwritten depositions concerning the 1848 murder of "Bootha, an aboriginal female of the Peichamboul tribe", and the subsequent investigation and reports by Richard Bligh, Commissioner for Crown Lands for the Gwyder, as well as early correspondence regarding the exploits of the Native Police. I suspect that much of this material had not been looked at by anyone since it was placed in the Ar-

chives. They provided the basis for Mark's 1990 UQ Honours thesis, "A System of Assassination", the title a quote from Bligh. This material also filled out and corrected the picture of white-black relations in the first decade of white occupation which emerged from other sources.

2. Surprise that no one had taken the trouble to collect such material. Attempts at local history had largely been confined to anecdotes and family journals.

3. The number and resilience of inaccurate and incomplete accounts of incidents which entrench the image of the ignoble savage. Let me give two examples.

Inaccurate accounts

(a) Early on I found numerous references, contemporary and in later writings, to the killing by Aborigines of the 11 year old son of James Mark on Goodar Station on 10/9/1847. Details of his age, and accounts of how his body had been disposed of varied dramatically, as if vying to provoke outrage about this brutal deed. Archive material filled in some of the detail: Margaret Young of Umbercollie Station described Mark in her reminiscences as "a hater of all Aborigines (who) would shoot any seen approaching his property", and fears of Aboriginal reprisals among the squatters after he had killed two "native boys" a neighbouring squatter had sent to take some fresh meat to him.

Later enquiries led Crown Lands Commissioner Richard Bligh to report in January 1849 that Mark's son was killed to avenge this unreported act: he said that according to the Aboriginal people, "their persons are sacred when carrying a letter or a message", they should have enjoyed diplomatic immunity. Such acknowledgment of Aboriginal perspective and morality was extremely rare in those days.

(b) In 1874, the newspaper story in southern Queensland comparable to that of Azaria Chamberlain was: "Girl Found after 14 years with Blacks". Sarah Downing, who in 1860 had gone missing near Goondiwindi at two-years-of-age was reported as having been found, taken from her Aboriginal husband to face Court in Narrabri, and now en route to Warwick, where her parents then lived.

Sometime after the reunion, the mother thanked everyone, but declared that "there is no redeeming feature in the whole of (the 'black's') treatment of

my child". She had been told that they had struck her nose to flatten it, and held her over a fire to darken her skin.

Five months later, she admitted that from the moment she first saw her, she knew that this girl was not her daughter. This was confirmed by a squatter from the Namoi who had known her as an infant, Mary-Anne, in 1856: the daughter of a fair-skinned Aboriginal woman and a white stockmen, both of whom had died some years later. Mary-Anne was not returned to her people: she died some years later in an asylum.

Sensational stories

But the story which appeared under the original dramatic headline keeps popping up: in *The Queenslander* in 1934; *The Goondiwindi Argus* in 1985 (a garbled version, where Mary Ann's insanity was blamed on torture by the "blacks"); and in Brisbane's *Sunday Mail* in 1990. On the first two of these occasions, generous space was subsequently given to a correction and fuller account of the whole incident. The *Sunday Mail* carried a short letter from me (which contributed to the Editor describing me as "an obsessive and vexatious writer", a title I wear with some pride), and an amending sequel to the story from their columnist.

Given the appetite for such stories, I suspect that "Aborigines stole shepherd's baby" and "Aborigines killed young boy" will continue to appear in books and newspapers in the years to come.

This is an appropriate point for me to acknowledge that there are many examples of exaggerations and inaccuracies which tend in the opposite direction: *viz.*, to demonise the colonisers. More reliable contemporary accounts indicate that Mark killed only one messenger on this occasion, rather than the two from Margaret Young's account - which, incidentally, has two of James Mark's sons being killed in reprisal. Further afield, there is good reason to question inflated estimates of Aboriginal people killed in many massacres; stories of Aboriginal people jumping to their death from cliffs and bluff rocks in the face of attacking squatters or troopers - or women to escape rape - which are sprinkled around such fea-

tures along many main roads; and the story of the clash between the Native Police and the Kalkadoons at Battle Mountain in 1884 - possibly an amalgam of a number of clashes and killings over a wider area and time.

Nevertheless, the assessment of Richard Bligh from 1849 is still valid today: "I feel justified in stating that could these miserable savages give evidence in a court of justice or even support their case with a little of the eloquence employed against them the balance of injury and crime would be fearfully against the white population."



4. The relevance of the material to the understanding of the origins and nature of many current attitudes towards, and perceptions of, Aboriginal people in that area. Some of these are mentioned in Judge Marcus Einfeld's 1987 "Toomelah Report" for the HREOC, which, *inter alia*, debunked the modern-day myth about Aboriginal people being able to get the Government to pay for new cars for them, and commented on its resilience. This myth continued to surface subsequently: six months after Einfeld's Inquiry, the Mayor told a reporter that race relations in the area had improved, "especially since the Government stopped paying off those cars for them. That used to cause a lot of resentment."

Hal Wootten QC's 1996 Heritage Report on Boobera Lagoon was even more detailed in its analysis of local white attitudes and perceptions. An observation similar to mine led Roger Milliss to add a chapter on the 1982 killing of a young Aboriginal man Ronald McIntosh at Moree to his massive *Waterloo Creek*, which focused on events in that area from 1838/9, and draw some parallels.

5. Surprise at the reactions to the story emerging from the collected documents. Some were interested and wanted more, others went on the defensive. Accusations of trying to re-write history, when it had never really been written, were common, and of "only telling one side of the story" despite my efforts to include all the material gathered, and to highlight the courage, humanity and decency of a number of people from that era. "It's no good digging up

things like that from the past" - especially when they expose popular myths from that past which support negative attitudes today and especially when the events are geographically close to home.

The Goondiwindi Council did not reply to an offer to provide copies of the documents for the town Library. Goondiwindi High School took a set for their library; I had occasion to introduce a group of teachers preparing a local history course to them. One heaved a sigh, "We'll have to be careful how we use these. Some of our students come from properties mentioned in them." Their first effort scarcely mentioned local history: Aboriginal legends about dolphins, and other quotations, were imported from a safe distance. It included an exercise inviting students to write a diary in the role of "an Aboriginal Australian living in Sydney Cove, 1788", telling of events, feelings, fears - not "living on the MacIntyre, 1838": that would be too close to home.

The importance of that history, and the need for it to be local, were emphasised by Elliott Johnston QC in his *Overview of the National Report of the Royal Commission into Aboriginal Deaths in Custody*. He described as "a principal thesis of this report that (the history of Aboriginal / white relations) must become more known." (1.4.1). That Aboriginal society was local, and that they "have had very different experiences arising out of the taking over of their country" (1.5.3 & 4). Consequently, he recommended that staff in departments and agencies, especially where there is a significant Aboriginal population, should "be trained ... in something of the history and circumstances of the local Aboriginal people and the history of race relations in the area." (1.10.4)

Colonial history

My experience of writing and speaking in this area, and in research into some of the myths of the supposed preference of Aboriginal cannibals in North Queensland for the flesh of Chinese over that of Europeans (cf. my article "A Taste for Chinese?", *the Skeptic*, Vol 14 No 1) leads me to suggest that white Australia is still a long way from owning its history in this land. Many reactions to the High Court Mabo and Wik decisions support that perception: the strident demands of squatters on the Gwydir and MacIntyre in the 1830s and 40s for secure title to land beyond the Limits of Settlement, for Governor Gipps to help put down any Aboriginal resistance, and forecasts of dire consequences for economic viability of squatters and the colony if he failed to do so eerily over one and a half centuries.

That history is one of colonisation. Underpinning that process and its brutality lay a perception of "The Native" not just as "the other", but as inferior, savage, primitive, cannibalistic, sub human. The Australian scholar Gilbert Murray, Professor at both Oxford and Cambridge in the early part of this century, put it well: "Unnatural affection, child-murder, father-murder, incest and the violation of the sanctity of dead bodies - when one reads such a list of

charges against any tribe or nation, either in ancient or modern times, one can hardly help concluding that somebody wanted to annexe their land."

Perceptions, attitudes and relationships which have their origins in the colonisation process persist. They continue to be supported by myths, and inaccurate or incomplete anecdotes. Dependence on these is every bit as unhealthy and entrenched as belief in creationism, astrology or numerology and, I suggest, every bit as worthy of the attentions of sceptics.

In working through this process, I have received encouragement and assistance from a number of historians and academics. I have approached others to provide information which has led them to modify previous statements, and found them generally appreciative of my efforts.

From this challenging, exciting, relevant and liberating experience, Mark Newbrook's "Postmodernism And History" articles (*the Skeptic*, Vol 16, Nos. 2 & 3) have led me to discover a very different world of discourse about history. With some apprehension, I started with Keith Windschuttle's *The Killing of History*. Had I inadvertently become one of the killers, a postmodernist, a de- or post-structuralist?

Or perhaps even worse, a post-colonialist, which for some includes "those European-descended authors in the white settler dominions of Australia and Canada who can be regarded as literary 'outsiders' or as writers identifying not with the mainstream but with the 'other' within their own societies, especially homosexuals, feminists and postmodernists" (KW p.32).

Was I being culturally masochistic in questioning the myth of the noble coloniser, promoting a black armband version of history?

Postmodern history?

Being totally unfamiliar with the vast majority of the writers cited by Newbrook and Windschuttle, and the matters discussed, I can't really engage in the debate about postmodernism and history. However, from the background and experience outlined above, I feel competent to comment, and raise some relevant questions.

I had no "desire to rewrite history from the viewpoint of minorities" (MN pt.I p.36) either as an overt or covert agenda. My sources are all white, and while I acknowledge that Aboriginal people have provided leads and confirmations, and more importantly insights into my inherited colonial perceptions and biases, I have found it sufficiently challenging to research the plain story of white history, the history of our interaction with the indigenous people of this land.

As Windschuttle points out, until recently "historians had confined Aborigines to the first few pages of their general surveys of Australia and, once 1788 was reached, allowed them to disappear" (KW p.117). While the contributions that Rowley, Reynolds and others have made to fill the gap are

acknowledged, I suspect that the gap persists in many areas, and many minds.

It is good to see the suggestion that as they identify biases in their sources, scholars should declare any biases of their own of which they are aware. I'm with Newbrook on the need for more attention to "breaking out of the mindsets and frameworks in which individuals' ideas are developed" (pt.II, p.34).

I would suggest, however, that both fail to recognise the prevalence and impact of the generally unconscious bias, mindset and framework inherent in the relationship of coloniser to colonised.

The Aztec example

Let me turn to an example of this from Chapter 2 of Windschuttle's book, which focuses on histories of the conquest of America published around the celebration of the quincentenary of Columbus' 1492 discovery of the New World. The Aztecs, "with their tradition of mass human sacrifice" (MN pt.I p.37), take centre stage. Windschuttle gives gruesome details from Inga Clendennin's *Aztecs: An Interpretation* (CUP 1991), described as "one of the most disturbing books that many will have ever read" (p.63). "The existence of these practices is something that most people brought up in Western society find very hard to come to terms with" (p.61).

Unfortunately KW abandons the restraint and qualifications Clendennin adopts in her rare mention of cannibalism and follows the more popular line: the bodies of those sacrificed were "butchered, . . . and the parts were cooked and eaten" (p.64); "In Guyana and Brazil, limbs of victims were skewered and roasted over a spit before being consumed" (p.61). He quotes, without qualification, American anthropologist Harry Turney-High's statement that the Caytes of the Brazilian coast ate "at one meal ... the first Bishop of Bahia, two Canons, the Procurator of the Royal Portuguese Treasury, two pregnant women and several children" (p.61).

The rhetoric and fervour of these accounts is remarkably similar to those of Chinese and European people being eaten by Aboriginal people in Australia.

Is the evidence any stronger? I claim no expertise on the Aztecs, and have no wish to acquire it. To use an image from Bruce Dawe's poem "Nemesis", there are enough of "us who tread domestic grass and thrill to 'foreign' crimes".

However, I would invite those interested in the issue to read Windschuttle (pp.60-67) in conjunction with pp.54-79 of W Arens' *The Man-Eating Myth* (OUP 1979), and draw their own conclusions. Let me summarise Arens's chapter.

For a practice supposedly so ubiquitous and frequent, there is not a single credible eye-witness account of Aztec cannibalism. Neither the five letters written to King Charles by Cortes between 1519 and 1526; nor the secondary account of the conquest by Gomara, Cortes' personal secretary, nor the reports sent to Cortes from Alvarado, contain any reference to observation of the practice. There are allusions to

fears and threats of cannibalism, and the usual accusations of one tribe against another.

At a time when the consequences of the conquest had become a matter of moral concern in Europe, memoirs appeared which alleged Aztec cannibalism more strongly. Francisco de Aguilar, one of Cortes' major lieutenants, wrote fifty years after returning to Spain.

The Anonymous Conquistador said that the Aztecs went to war for the sake of human food, and were drunkards and sodomites as well. Bernaz Diaz del Castillo (one of two contemporary writers cited by Windschuttle, presumably from secondary sources), whose name does not appear in other accounts, compiled his recollections during his later years in Guatemala. While being one of the earliest sources for details of sacrifice and cannibalism, even he does not claim to have seen anyone eaten. Fray Diego Duran, a missionary born in Spain after the conquest, has become a basic source for knowledge of Indian customs. He refers to cannibalism as a correlative of human sacrifice a score of times as evidence of the unworthiness of Aztec culture, and an obstacle to their finding God. But neither he, nor his colleague Fray Bernado de Sahagun, observed an instance of Aztec cannibalism. Sahagun's extensive and scholarly research into Aztec society contain only fragmentary references to cannibalism, and no eye-witness accounts from his informants. This contrasts with the detailed descriptions they provided of other customs, including human sacrifice. His 13 volume *Florentine Codex* has a history of its own, various versions sanitised and revised in the shadow of scrutiny by Spanish secular and religious offices.

Among the hundreds of pictographs included in *Sahagun's Codex* there is only one depicting cannibalism, and that of an Aztec being eaten by an enemy. (Clendennin points out - p.279 - that the pictographs show signs of Spanish influence, and are clearly not pre-Cortes.)

Arens also critiques later writings on the Aztecs: Harner's thesis that "large-scale cannibalism, disguised as sacrifice" was caused by lack of protein.

This thesis was supported by his mentor Harris, and rejected by Price, who has a more powerful explanatory model for a practice which has not been demonstrated to exist. They ignore both Gomara and Sahagun's accounts of emaciated survivors of the siege of Tenochtitlan amidst uneaten bodies of those killed by Cortes' men. Others get around this by suggesting that only the bodies of those killed in sacrifice could be eaten.

Arens does not claim to have proved the Aztecs did not engage in cannibalism, only that the evidence for the practice is too sparse, ephemeral and suspect to say they did, and that their reputation as cannibals has flourished and solidified over time, and been used to denigrate their moral standards and cultural achievements.

That Todorov, Windschuttle's target on this issue, accepts (KW p.61) Aztec cannibalism as a given, and

includes a drawing - possibly the one from Sahagun's Codex mentioned above - indicates the extent to which that reputation has solidified. Demolishing it, and the colonial mindset which it supports and exemplifies, will not be an easy task. Arens tells of a German graduate student who had chosen cannibalism in the Amazon as his dissertation topic. When his meticulous examination of the documents failed to discover any first-hand accounts of the practice, his examiners declared that he must be mistaken, and suggested that he was too enamoured of these uncivilized Indians to be objective!

We "thrill to foreign crimes". There are more books on Cortes' conquest of the Aztecs on the shelf of the Queensland State Library than on the conquest of Australia. The factors which influence our interest in particular dramatic events from history, our choice of targets for moral indignation and condemnation, and our capacity to ignore, deny, suppress, sanitise, romanticise and excuse matters nearer to home merit greater attention. Is it cultural relativism to suggest that other peoples and future generations might see the sacrifice of young Australians, and Americans, on the battlefields of Vietnam - along with Vietnamese - as repulsive, and the gods to whom they were offered as unsubstantial and incomprehensible as those of the Aztecs?

Canibalism myths

Closer to home, the cannibalism myth still has legs. Until the eighties, Australian historians over a broad spectrum generally accepted that Aboriginal people had commonly eaten Chinese and European people in various parts of the country. When Pauline Hanson revived it (*The Courier-Mail*, 29/5/96) former Senator Peter Walsh came to her defence (*The Financial Review*, 177/96) when she was rebuked for this by "the chattering classes", who he said had a problem: "If the guardians of contemporary orthodoxy wish to deny cannibalism, they must repudiate one of their favourite icons, Manning Clark. What a dilemma!" Wow! Don't expect academic historians to respond to every harmfully inaccurate distortion of history appearing in newspapers or magazines. But it is regrettable that none of them, whether traditionalist, postmodernist, -structuralist, or -colonialist, nor any of their students, past or present, to correct the statements of Hanson and Walsh on this matter. As happens so frequently, that was left to an amateur like me.

Reacting to some statements from the Prime Minister last year, Robert Manne put a case simply: "To be an Australian is to be embedded or implicated in this country's history in a way outsiders or visitors cannot be. . . to be open to the possibility of pride in achievement is also, necessarily, to be open to the possibility of shame in wrongdoing" (*The Australian*, 8/7/96). At this stage, calls from the Prime Minister for a "more balanced approach", and rejection of the "black armband" view of our past, are an invitation to close off that possibility for shame. It is

consistent with his goal of having us feel comfortable and relaxed. Calls on Aboriginal people to thank us for the "benefits of civilisation" emanating from people apparently closed to the possibility of that shame suggests they are evading the question, and are obviously offensive to Aboriginal people.

Owning our history

Owning our history in this land would be a requirement for our humanity and integrity even if not a single person of Aboriginal descent had survived. If we are now to live together in this country in a relationship characterised by harmony and justice, that task becomes even more pressing. It will help us acquire the respect and sensitivity needed if we are to take advantage of an opportunity to learn important things about ourselves, and the society which has moulded us. As Jean-Paul Sartre put it, "it is enough that they show us what we have made of them for us to realise what we have made of ourselves". It has been the experience of many that Aboriginal people show a great patience, understanding and willingness to assist those of us who locate the bulk of our race history in other lands to learn a lot about ourselves we might never come to otherwise. It can be a harrowing and at times painful process, but basically one which is humanising and liberating.



Egomania? the Australian Skeptics Web Links Project

James Lakes

The Australian Skeptics web site on the Internet has been completely revamped, with many more interesting and educational pages included. This site will help us to spread the philosophy of scepticism to a global audience. The web pages will also assist in the dissemination of national paranormal and pseudo-scientific news and events to other sceptical organisations.

In this article I will give you a summary of our ongoing project to construct a list of "sceptical links", in the Australian Skeptics web pages. I'll also give you addresses for some of the "must visit" sites on the Internet, and finally I'll be asking for contributions.

At hours when most of us are more than occupied in having exotic (sometimes erotic) dreams of Aliens, Ghosts, Nymphs and everything else that goes bump/bang in the night, our wonderful Web Master, Greg "The Web Wizard" Keogh, has been painstakingly uploading a multitude of files onto the Australian Skeptics web page. To be completely honest though, Greg has confessed to me, privately, that he "sometimes would prefer to be engaging in these aforementioned, more absorbing, nocturnal pursuits of paranormal perverted pleasure... and pain", just like the rest of us!

And that URL for the Australian Skeptics web page you may ask:

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

The most time-consuming but highly rewarding and informative project of these pages will be titled "Topics and Links". This mammoth undertaking has been engineered by Greg Keogh and myself. We modestly claim that, when it is completed, it will be the most comprehensive information resource on the Internet for any subject floating within the realm of the paranormal and the pseudo-scientific. There will also be a distinctively Australian presence to keep everyone aware of what is happening in their own respective back yards regarding UFO Societies, Alternative Health Practitioners, Miracles, Cults, Anomalous Geological Formations (AGFs) in Alice Springs and the like.

As the prophets, gurus and living-forever proponents pass us by, many more topics such as Angels, Drum Healing, Hypnosis, Reincarnation, Stigmata

etc will be included, until absolutely not one skerrick of relevant information escapes our roaming eye.

We'll even include the purported survival of George Burns, which was actually claimed by an alleged "acquaintance", of mine (no I wasn't visiting at the time). In this person's opinion, Mr Burns had used his vast wealth and influence to enter a Cryonics programme.

The obvious question in response to this amazing scoop was, "Why did George leave it so late to enter the program, as he was already 100 years old? ... as he could possibly have slipped quietly into the night at any moment during the last 10-30 years of his life". This person is busily searching for more evidence to satisfy my curiosity and scepticism, but feels he has more than enough to publish in the *Woman's Day* and/or *New Idea* when the time is right, and we wouldn't be at all surprised if they published it.

It is then possible that George Burns one day may have a link on the "Topics and Links" page, which can be found at:

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

I have had access to the Internet for just over six months, and having accumulated a lazy two hundred and thirty hours of "looking around", I must announce that I have discovered some truly astonishing sites. Among the "must see" sites I have unearthed in my travels so far are:

Australian Alternative Health Directory
<http://aahd.netconnect.com.au/>

New Age Online
<http://accessnewage.com/#origin>

Creation Research Society
<http://www.iclnet.org/pub/resources/text/crs/crs-home.html>

Fasting
<http://citus.speednet.com.au/~nida/fasting.htm>

Ouija Boards
<http://www.uq.oz.au/~micoddy/ouija/indexframe.html>

Cults - Aggressive Christianity
<http://www-user.cibola.net/~prophet/demons.html>

Alien Abductions:
<http://www.cybergate.com/~ufonline/52questi.htm>

Links not directly related to sceptical topics but still of great general interest to Skeptics will be grouped into topics like the following:

Skeptical Resources
Great Science Sites
Australian Universities
Skeptical People
Junk Email & Net Abuse
Weird News Reports
Skeptical Quotes
The Loon List

The Richard Dawkins web page maintained by John Catalano is a web masterpiece. It contains numerous articles and interviews on creationism, evolution and the paranormal, and also features a free mailing list for those who are interested in up to date information.

The Richard Dawkins web page can be found at:

<http://www.spacelab.net/~catalj/home.html>

Greg and I will require some additional help from any interested and available persons who wish to assist in the Australian Skeptics Web Links Project. This could take the form of simply sending me your **Bookmarks** file (for Netscape users) or your **Favourites** files (for Internet Explorer users). I will then pore through these respective listings and separate the links into various categories for inclusion on their corresponding pages.

Unfortunately, there will be no financial payment offered for the various files sent to me, but I would like to add that if any of our contributors at some stage of their spiritual journey are burdened with a penance within Purgatory, I will pray for you. Hopefully, this will keep your time there as short-lived (!) as possible. It is therefore extremely important that when sending the files to me, that you ensure no errors are contained within the spelling of your name; I'd hate to pray for the wrong person.

A preferred mode to send the information is in this format:

Topic
URL
A sentence to explain what the link is.
For example:

Crop Circles
<http://www.geocities.com/SoHo/3671/circlema.html>
The Beginner's Guide to Crop Circle Making.
or
<http://www.schmitzware.com/IUFOG/Headlines/Month/News/sagcrop.html>
Crop Circles and Aliens: What's the evidence? by Carl Sagan.

Face On Mars
<http://www.netfeed.com/pstevens/hyperd.htm>
Hyperdimensional Physics - finding the message and decoding.
or
<http://bang.lanl.gov/solarsys/raw/face/pio.htm>
JPL Viking Press Release - July 31, 1976.
or
<http://www.psrw.com/~markc/Other/mars/erjavec.html>
Geologist questions differential erosion at Cydonia.

Send all files and links to me at lakes@senet.com.au with an individual email preferably not exceeding 500KB!

Barry Williams has stumbled across some of the most "loony" web sites around. He has an uncanny ability in finding these, and Greg and I are still trying to ascertain what devices - psychic or otherwise - that Barry possesses or uses for his growing obsession. He even seems to be inviting them to contact him!

These particular individuals in the future will be listed on our web page under, what else but, "The Loon List".

One of many such individuals that Barry has notified me of is one Riley G, who bills himself as a psychic detective and he can be laughed at/with on:
<http://www.psicop.com/>

The Australian Skeptics Web Links project will require many collaborators and many hours of searching the Internet for the most entertaining links for our web page. In the near future, no doubt, it will become one of the most visited pages of any Skeptic organisation on the Internet. 

Need an Umbrella?

Tastefully emblazoned with the Koala logo, these large sized umbrellas carry a guarantee that the owner will be protected against brain-frying rays from space, repeat performances of Noah's flood,

mind-control experiments by intelligence agencies and bad feng shui. From Victorian Skeptics, purveyors of fine requisites to the dubious. (Details inside back cover.)

Where are the psychics?

I am a recent subscriber to your excellent publication. While reading the back issues supplied for my subscription dollars I am afraid I have found a serious fallacy affecting the Skeptics Challenge \$30,000 for any person who can offer proof of psychic ability. The rationale behind the offer appears to be that any real psychic will come forward, tempted by the prize and the recognition, and take your money. The fact that nobody has yet done so is used as strong evidence that psychic ability does not exist.

This is where the defect in your challenge occurs. The people who claim psychic ability can be divided into three classes: those who know their claims are untrue, but make a good living from the practice; those who are sincere in their belief but who are deluded; and those who really are psychic. The first group will avoid any outright confrontation with your experts; members of the second group will unsuccessfully attempt to dowse their way across the hidden pipes to the boredom of all concerned; but from the third group, contrary to your expectations, you will here nothing but silence.

The evidence for this assertion is already in your hands - no real psychic has yet come forward, despite the apparent generosity of your offer and the even bigger prizes offered by Randi *et al.*

The fact is that psychic ability is best practised far from the glare of publicity. The truth of this can be illustrated by a short moral tale - of the psychic who revealed his skills. Let us assume a run-of-the-mill clairvoyant with a limited ability to predict future events. We are not talking omniscience here - there is no need to know the winners of all races, just the fourth at Randwick will suffice. Likewise we don't require all seven Lotto numbers, one or two will make a fortune.

In our story the clairvoyant takes

Letters

An opportunity for readers to present their views on matters that have appeared in the magazine, or anything else that takes their Skeptical fancy.

up the challenge, you devise the test and he succeeds! The Skeptics retire discomfited and our hero goes on national (and international) television and proclaims victory. Sensation! Fame! Our man's name is put forward by some as the first President of the Republic. To emphasize the victory a quick jackpot win in Saturday's Lotto draw is easily accomplished.

The public is instantly outraged. This is equivalent to cheating! All governments, heavily dependent on gambling revenue, legislate to exclude our psychic from these events. His portrait adorns the foyers of casinos and the bouncers are instructed to throw him out. He is warned off every racecourse.

And now the mail begins to arrive. Thousands of letters from people wanting to know where they lost their children, dogs, cats and sunglasses. Thousands more from promoters of doubtful schemes whose only possibility of success is with the aid of 20/20 foresight. Even his mother is on the phone wanting next week's numbers. Soon the post office is charging for the extra staff it has been forced to employ. All the rest of the gains are quickly expended on the eight QCs employed in the attempt to recover lost civil rights.

There is worse to come. The religious hate mail claiming connivance with the devil grows larger and more vitriolic by the day. In less than a fortnight a local mullah proclaims a *fatwa* and our man is forced into hiding - a Rushdie attracting the public sympathy of a Skase. But before he can flee the CIA decide his very existence is a threat to the US nuclear deterrent and a Stealth bomber is despatched to irradiate his back yard.

A tragic and inevitable outcome of psychic hubris. And, of course, as even the meanest psychic will foresee their fate, I wouldn't advise your challenge organisers to wait by the phone for the calls.

No, all real psychics are either living in luxurious obscurity, or up there, psychically anonymous, challenging statesmen and kings for the control of the planet.

Mr Kerry Packer, as an example, is almost certainly clairvoyant. Not only is there ample anecdotal evidence of him successfully frequenting casinos, any analysis of his profitable investment decisions will show a statistical significance that removes mere chance as an explanation. But, if I can make a modest prediction of my own, your chances of getting him to let the Skeptics into the secret by sitting down with Mr Harry Edwards and picking stars, squares and circles from little packs of cards, are not good.

**Graham Henderson
Kyneton VIC**

Cold comfort

Though not medically trained, I am glad to be able to shed a little light on the subject of the two meanings of the word "cold", raised by Peter Morris ("I Want to Know", Vol 16, No 4)

The ambiguity exists in only a few languages. You find it in German and Spanish as well as English but it is absent in Arabic, French, Greek, Hebrew, Hindi, Portuguese, Russian, Serbo-Croat and Turkish and who knows how many others.

The trouble was started by Galen, a second century Greek physician who practised in Rome. He propounded the four fluid theory of disease which dominated medical thinking for over a thousand years, as well as leaving a mark on our language and per-

sisting in some myths held today by some of the laity.

The theory was that disease is caused by an imbalance or superfluity or deficiency of one or other of the four fluids of the body, namely phlegm, blood, yellow bile and black bile. The idea was based on an analogy to an old chemical theory that there were four elements, earth, air, fire and water. Each of these was supposed to be characterised by pairs of the four qualities, hot, cold, wet and dry.

Thus water was cold and wet, fire was hot and dry, air was warm and wet and earth was cold and dry. By analogy phlegm was cold and wet and its purpose was to cool the brain, blood was warm and wet and so on. Because the most conspicuous symptom of the common cold is a profusion of phlegm or nasal mucus, the patient must have somehow got cold.

Cold cream was another of Galen's inventions, so called because it contains a lot of water.

The theory left behind the words "phlegmatic" (cool-headed), "sanguine" (hot-blooded), "bilious" and "melancholy" (black bile). For centuries a fever was treated by letting out the excess blood. Even today magnesia (obtained from earthy sources) is used by some to "cool the blood".

I do not know if common colds are more prevalent in cold, wet weather, but it seems reasonable to suppose that people coming in out of the cold and inhaling humid air in poorly ventilated rooms and public conveyances would considerably increase the opportunities for transmission of viral infections.

It would indeed be interesting to read some authentic contributions from our medical luminaries.

**Harold Barker
Marlo VIC**

Lapel Badges \$5.50



PO Box 268, Roseville 2069

Santology

I enjoyed Allan Lang's Father Xmas research (Vol 16, No 4). The following has little to do with the legends but does have an interest. When aged five, my daughter woke late on Xmas Eve and went into the kitchen where she had left some supper for the old gentleman. There were **six** Santas sitting there, gossiping while sharing her biscuits. (With magical powers they could presumably stretch two biscuits satisfactorily.)

Thirty years later, the picture is as clear and **real** in her mind as any other of that period. However, she soon came to recognise that it had been a dream, remembered by frequent retelling. Everyone accepts it as just a funny story. Yet if she had had such a **real** experience of seeing fairies or spirits or 'aliens' there would presumably be many who would accept its reality. There is the one difference. None but the very young believes in Santa because to drop one's belief in him is an important rite-of-passage for a child.

**J T Wearne
Fremantle WA**

Scatology

Harry Edwards, in "A Piddling Matter" (*the Skeptic* Vol 16, No 4 p22), asks "But why stop with the liquid waste? Solid waste is rich in protein!" No doubt a throw-away line; and indeed, that is what should be done with it.

Does yesterday's breakfast still cling dearly to its protein, withstanding a barrage of protease enzymes sent to pummel them into easily-absorbed amino acids? Or does the gastro-intestinal lining have some kind of exchange agreement, that for every two

amino acids absorbed, it will offer one in return in the form of a desquamated cell?

I contend, Mr Edwards, neither is the case. The word 'rich' is a poor choice. My medical texts state that the protein content of stools is 'minimal', mostly leftover digestive enzymes, at approximately 0.1g/day. In addition, its nitrogenous content is less than 2g/day (protein is our major dietary source of nitrogen), but this is mainly as non-proteinaceous bile pigments, ammonia and porphyrins.

The human body requires around 0.8g protein/kg body weight each day. A 75kg person would therefore need 60g protein daily. To get this as faeces would require you to banquet on around 600 days, or 90kg, of accumulated waste, based on the passage of a relatively healthy 150g of stools a day (see below). This is not possible as most adults would eat only 1.5kg of solid food daily. You could dehydrate the product. In the healthy, non-constipated human, stools are about 70% water, hence dehydration should reduce the volume to 27kg. Still not a feasible feast, so let's just leave it there.

As this is a subject of great fascination, please permit me to take a little more space. Plant foods are our source of dietary fibre. Simply put, the more plant foods we consume, the more fibre, the more bacterial (friendly) growth in our large intestine, the bulkier our stools, and the easier they are to pass. It is Dr Denis Burkitt who is credited with putting fibre on the health agenda 20 years ago. His research found that rural Africans passed 400-500g of stool daily, which contrasted to the 80-120g passed on a fibre-depleted Western diet. Aren't you glad you weren't his research assistant?

How long does food take to get from mouth to south? With adequate plant food, a normal transit time is 36-48 hours. With very little fibre, expect 3-5 days or longer. What you save on toilet tissue is more than spent on laxatives.

It is often stated that a criterion for health is a floating stool. If it sinks, so has your health. I disagree. If your waste falls easily out of your rear then it matters little whether you produce battleships or submarines. The guidelines I give to people are:

* If you can read the newspaper on the toilet and pass a motion without losing track of the story, you're fine.

* If you have to put the newspaper down and place both hands over your eyes to stop them popping out, then it's time to call in the roughage cavalry.

And a word of warning to prospective parents: sure, Melena is a cute name for a girl, but as it means bloody faeces, 'tis best avoided.

Finally, as my grandmother would say, "If ever the bottom falls out of your world, eat more fibre, and watch the world fall out of your bottom".

Good health,

Glenn Cardwell
(Dietitian & Hobby Scatologist)
Kensington WA

More Koch

I feel that I must make a response to the letter from John Gibbs (Vol 16, No 4) in which he says he was "dismayed to read in an earlier edition of *the Skeptic* [last] year replies to lay questioning of modern science by specialists which almost universally ended with a sneer (not excluding the contribution of Paul Davies) that science has to be left to the specialists, sonny".

I assume he is referring to the replies in Vol 16, No 2 to the letters from Messrs Towsey and Winckle about relativity and other matters (one of which was from myself). I have re-read the letters carefully and I am unable to find any sneers, nor any suggestion that science must be left to experts.

Earlier in his letter Mr Gibbs likens the paradox of the finite Koch snowflake to the problem of the hare chasing the tortoise. This comparison is appropriate, as the mathematics of the two problems is exactly the same. (I am not clear whether he was aware of that fact, or whether it was simply a lucky coincidence.) This does mean, however, that Mr Gibbs would have to say that the tortoise cannot remain forever ahead of the hare "because the rules of the game specify that it cannot".

A comment about Hans Weiler's answer to Nigel Sinnott's question: Hans says that if a plane figure is entirely inside a square, the area of the figure must be less than that of the square. Quite so, but it is not obvious why the plane figure in question (the Koch snowflake) does indeed remain within the square. That is what I thought Nigel was asking.

Chris Manning
Pahran VIC

Koch again

John Gibbs' answer to Nigel Sinnott's question (Vol 16, No 3) as to why the area of a Koch snowflake is not also infinite if the perimeter is infinite was excellent, so far as it goes, but I feel it did not go far enough.

The fact is, a Koch curve is simply not infinite, for two very sound logical reasons.

The most cogent is that, if you select any point on a Koch curve and then follow the line round, you must come back to the point you started from, just as you would on the circumference of a circle, and any line which starts and ends at a fixed point is by definition not infinite. This fact remains true no matter how many times you extend the line, and no amount of mathematical fudging can get away from it.

The second reason is that the length of the line is always calculable. Steve D'Aprano gives the formula (Vol 16, No 2, p 35). (The formula as printed is incorrect, however, though that may not have been Steve's fault. $3 \times 4N-1$ should read 3×4^{n1} and $L/(3N-1)$ should read $L/3^{n1}$, and so on.) This formula holds no matter how many times you extend the line. And if you can calculate the length of a line, again it follows that it is not infinite.

The fallacy seems to me to lie in trying to substitute the infinity sign for the index n, which makes this "proof" of the infinity of the line about as valid as the classical "proof" that $1 = 2$. Whenever you stop to calculate the length of the line, you are dealing with a definite number of stages, which is why both the perimeter and the area of the figure are always finite.

What surprises me is that this obvious fallacy has been passed on from one generation of mathematicians to another for nearly 100 years, and no-one, so far as I have been able to ascertain, has ever queried it!

Alan Towsey
Tahmoor NSW

Speedy

Drs Ken Smith, Martin Bridgstock and Colin Keay did a great job in debunking Setterfield's 1983 and 1987 publications advocating the slowing of speed of light to account for anomalies in creationists' "science". His 1992 effort, *Creation and Catastrophe*, however, seems to have escaped notice and deserves similar treatment, especially the "speed of light" section. The "geology" section of this tripe is provided by Dr Andrew Snelling, with all that implies for scientific rigour.

I realise that people like the good Drs have better things to do with their time, but it would be interesting to see their views on this.

I have one major criticism of Australian Skeptics. You still have not given support to the proposal that the noble Sir Jim R Wallaby be the first President of the Australian Republic. After all, he is the obvious choice.

**Maurie Evered
Oakleigh VIC**

Sir Jim has been approached about this and is firm that he will accept no title less exalted than Arch Duke. We are therefore planning a "Third Alternative" to the republic/constitutional monarchy options and will be strongly promoting the Arch Duchy model at the coming constitutional convention. We see it as an enlightened form of benign tyranny. Ed

Mars matters

"Martian Matters" by Dr Ken Smith (*Forum* Vol 16, No 4) discusses likely creationist's responses to life being found on Mars. He quotes from a twenty-five year old publication by creationist Henry M. Morris in which Morris, not surprisingly, had, even then, a biblical explanation for life elsewhere in the universe.

I have been eagerly awaiting a response to the question of life on Mars from contemporary mainstream Church leaders and at last I have discovered one.

In the December/January issue of the National Seniors Magazine *50 something*, Anglican Archbishop Peter Hollingworth was asked by the magazine editor, "...did Christ die for life millions of light years away rather than just for us?" The Archbishop replied, "Christ died for all people at all times, before and after. The idea of salvation is essentially for people. The question is, 'Have there been human beings in existence in earlier eons, in other galaxies?' and we've yet to uncover that. I don't find it a problem. It's only

an extension of the original issue. God comes from the Jews, Christ to Jerusalem, the chosen race. Go from the particular to the general; in other words, here on Earth there was a particular group of people who were then charged with the task of sharing that good news (Christianity) around the world, to people, tribes and nations as yet unknown and who couldn't possibly be known because they weren't part of the civilised world at the time; people of other faiths and no faith who were still in the process of evolving. It's the same thing really when you apply it to other planets."

Either the good Archbishop regards all senior citizens as simpletons or he believes that load of cods wallop.

**John Stear
Coombabah QLD**

Off the planet

I would like to urge you to adopt a less sceptical attitude towards the existence of extraterrestrial (ETs).

I used to be sceptical of ETs until last year. After watching some 'backchat' programmes on ABCTV, listening to 'talk-back' programmes on ABC Radio and reading letters to the Editor in the local rag (Cairns Post), I am largely convinced that some of those who partook/indulged could not possibly be living on this planet. Logically therefore, they must have come from somewhere else, ergo they must be ETs.

Long may you and your contributors continue to question, expose and report on all the undesirable 'isms' which seem to abound/thrive to take advantage of the gullible for the purposes of power, revenue, etc.

**Tony Jurgensen
Innisfail QLD**

Coriolis (again)

The first words to greet me when I arrived in Oz were "Welcome to Australia, the bath water flows away in the opposite direction to the bath water in England".

It seems a shame to throw cold water on this Australian icon. But not to put too fine a point on it - it's complete utter nonsense. Imagine a large ball with a stick penetrating it through its north and south poles. On each end of the stick is a small propellor. The ball rotates on this axis and the rotation of the propellers will be influenced by the ball's rotation. But put the propellers on any other part of the ball except the north-south pole axis and their rotation will not be affected at all. The only force acting on them now will be centrifugal.

So on Earth it is only at the geographic poles that the outflow of water may be affected. However, at the North and South Poles the water will be frozen into rock-solid ice - which does complicate things, doesn't it?

**Sydney Bockner
Crafers SA**

Struth Doc, you don't know what you have done. You obviously weren't around in early 1994 when the Great Coriolis Effect War broke out in Skeptic circles. Lifelong friendships were shattered, blood was spilt, tactical nuclear strikes were threatened. It almost got to the same degree of tedium as the Koch bloody snowflake debate.

The final consensus was that water would go down the plug-hole in opposite directions in the northern and southern hemispheres, but only if you had a very large bath tub and were extremely careful. I suggest you get Vol 14, Nos 1 and 2 to get the full flavour of this debate. Ed

Editor(s) exposed

Back in Vol 16, No 3 of your magazine, "Barry Williams", in a footnote to an article by "Harry Edwards" (or was it the other way around?) alluded to the confusion arising from their boring Anglo names.

It is not surprising that such confusion should exist, because Barry and Harry are in fact the same person. Just like Patty Duke in that 60s American TV sit-com.

It is a well known fact that no photo exists showing both of them together. And if it did, it would be a fake. Digitally manipulated, you know. And just like Coca-Cola executives entrusted with the secret formula, they have never been known to travel on the same aeroplane! And if they did, they used body-doubles. The two names are in fact anagrams. This can be proven with the aid of any decent Scrabble set.

James Randi could uncover the scam in a flash but he won't because he too is Harry/Barry. As is Phillip Adams. And Colonel Sanders.

So come clean Larry, before your wives find out. Bigamy is illegal in this country.

I don't expect this letter will be published, since Garry has uniquely positioned himself, as editor of this magazine, to censor the truth.

**Andrew Conomy
Redfern NSW**

You are right in at least one respect, Andrew. No power on Earth (or in Heaven, come to that) could induce us to publish these scurrilous allegations against such fine, upstanding pillars of the community, no matter how true they might be. However, you made on small tactical error. *We know where you live.* You can expect to hear from our enforcers legal advisers Messrs Lefty and Spike in the very near future.

**Clarry Edwills
Decommissioning Editor**

4004 BC and all that stuff

Barry Williams (*the Skeptic*, Summer 1996, page 6) notes that a lot of fuss was made lately by people celebrating our non-destruction on October 23rd, AD 1996, imagining that to be the 6000th anniversary of the origin of life, the universe and everything, according to James Ussher, Archbishop of Armagh and Primate of All Ireland back in the seventeenth century. Barry wrote that they were "premature by one year", basically because they forgot that there was no year zero between 1 BC and AD 1 (or 1 BCE and 1 CE if you prefer).

Sorry, Barry, you blew it. Not "one year", but a little bit less.

The etymology of the word "anniversary" is pretty clear: it's a number of years, but what do we mean by "year"? For civil purposes (that is, leaving aside meanings only of interest to astronomers, like the Besselian Year or the Anomalistic Year), one is interested in the Tropical Year. That is the time between equinoxes, which is just a little less than 365 and a quarter days. The Gregorian Calendar (introduced by Pope Gregory XIII) recognizes that, having a Leap Year every fourth year except for years divisible by 100 but not by 400 (so that 2000 *will* be a Leap Year, but 1900 was not). That keeps the date nicely in step with the equinoxes.

Now, Ussher arrived at a day of creation on the first Sunday after the (northern) Autumnal Equinox in 4004 BC. The reason that his date was October 23rd and not September 22/23 was that, back in 1650, Great Britain and Ireland were still on the Julian Calendar, it being another century before they'd accept that the Pope had been correct. Since Ussher had, on the Julian Calendar, a Leap Year every four years, his equinox date was too late in the year, according to the Gregorian Calendar.

But, going back to the origin of

the word "anniversary", and the meaning of the word "year", it is clear that since we count in Tropical Years, and that's the time between equinoxes, then the 6000th anniversary must be a few days after the Autumnal Equinox in 1997; ie, in late September. You can work out for yourself *which* day, if you know the date and day of the week of the equinox in 4004 BC.

If you really want to know more, see Chapter 12 in Stephen Jay Gould's lovely collection of essays, *Eight Little Piggies* (Penguin, 1993).

I must admit that I have a vested interest in ensuring that we get the above correct, having been charged with doing so by the present Archbishop of Armagh and Primate of All Ireland, back in November. He helps to organize the Robinson Lecture at the Armagh Observatory, celebrating the founding in 1790 of that observatory by Archbishop Richard Robinson; I gave the 1996 lecture. The present incumbent, Archbishop Eames, likes his other notable predecessor, James Ussher, to be properly remembered and not maligned. Barry did a good job in pointing that out - Ussher was doing the best that the scholarship of the day would allow - but let's get the date right, as well as the year.

**Duncan Steel
Adelaide SA**

I did think of pointing out the discrepancies in dates due to calendular fiddling, Duncan, but I realised that this would pose too much of a strain on our Canberra readers. Canberra Skeptics always have a function celebrating the Birth of the Earth and they always hold it on the weekend nearest October 23.

You can imagine the chaos that would have ensued if Canberrans had been given the task of working out a true date from an equinox, given their propensity to get any sums wrong by several orders of magnitude.

[For Canberra readers only] I'm only kidding. Honest! **Ed**

About our authors

Stephen Bassier is a medical practitioner and member of the Victorian committee. He has an insatiable appetite for researching facts, and "facts" regarding health matters.

Sydney Bockner is a psychiatrist from South Australia. His item on hypnosis is instructive and his letter on plugholes may precipitate WWII.

Richard Buchhorn began training as a priest but decided against it. He has had a long standing interest in Aboriginal history.

Kathy Butler, former president of Vic Skeptics, is a medical scientist and is the Victorian correspondent for *the Skeptic*.

Trevor Case is a psychologist conducting doctoral research at UNSW. He is the 1996 winner of the Australian Skeptics Eureka Award for Critical thinking

Laurie Eddie is a psychologist and member of the Skeptics SA committee.

Harry Edwards is secretary and chief investigator of Australian Skeptics. He also has a few more strings to his bow, as constant readers will be aware.

Keith Fifield is a nuclear physicist at the Research School of Physics and Engineering at the Australian National University. His review first appeared in *The Australian and New Zealand Physicist* and is reprinted with permission.

John Foley is the publicity officer of Skeptics SA (sounds like a German engineering company). He is a frequent guest on the electronic media and is particularly concerned about claims made about healthcare that are not backed by evidence.

James Gerrand is a member of the Victorian Skeptics committee and is the founding secretary of Australian Skeptics.

Richard Gordon is a medical practitioner and president of Australian Skeptics Inc. He is very interested in exposing fraud and delusion in medical and pseudo-medical claims.

Colin Groves is a physical anthropologist at ANU and a stalwart of the Canberra Skeptics. He is also a very entertaining dinner companion.

Marc Hilman is a software technical manager and has been interested in scepticism since Von Daniken and Geller. He always admired what Dick Smith and James Randi were doing to expose charlatans.

Colin Keay (or 5007 as his friends know him) is a heavenly body. While on Earth, he presides over the Hunter Skeptics.

James Lakes is a member of the Skeptics SA committee and is the driving force behind the Web Links Project. He is believed to be involved with chooks.

Allan Lang is a member of the Skeptics SA committee (and aren't these crow eaters prominent in this issue) and is our SA correspondent.

Julie McCarron-Benson is a leading light of Canberra Skeptics and our ACT correspondent. Fortunately she has given up her unhealthy preoccupation with politics.

Michael Meyerson is a Sydney radiologist who has worked in South Africa. He is very concerned about irrational health claims

James Muth is a professional graphic designer, photographer, and writer, who lives in Baltimore. He has had an interest in the sky for as long as he can remember and has yet to see a UFO he couldn't explain.

John O'Neill is a teacher from Melbourne. We would like to say more, but he didn't tell us any more. We like his style, though.

Linden Salter-Duke is our Darwin correspondent and is one of those responsible for the rapid growth of Skepticism in that fair city, which has more than trebled in size in the past year.

Roland Seidel, a mathematician, is president of Vic Skeptics and a man of many parts, many of which have been described in the medical literature.

Geoff Sherrington has an abiding interest in computers and endangered species. He lives in Melbourne (if you can call that living).

Fred Thornett is secretary and Lord High Scrivener of Tasmanian Skeptics. We have photographic evidence that he is quite sound otherwise.

Sir Jim R Wallaby, a natural aristocrat, is planning his campaign to be pronounced Arch Duke of Australia when the population comes to its senses.

Barry Williams is the man who puts all the typos in this magazine. He believes this entitles him to a round of applause. Shrdlu etaion.

Cholm Williams is a Sydney based plastic surgeon and a prominent defender of scientific evidence in medical matters. He is responsible for the fetching dimple in the editor's nose.