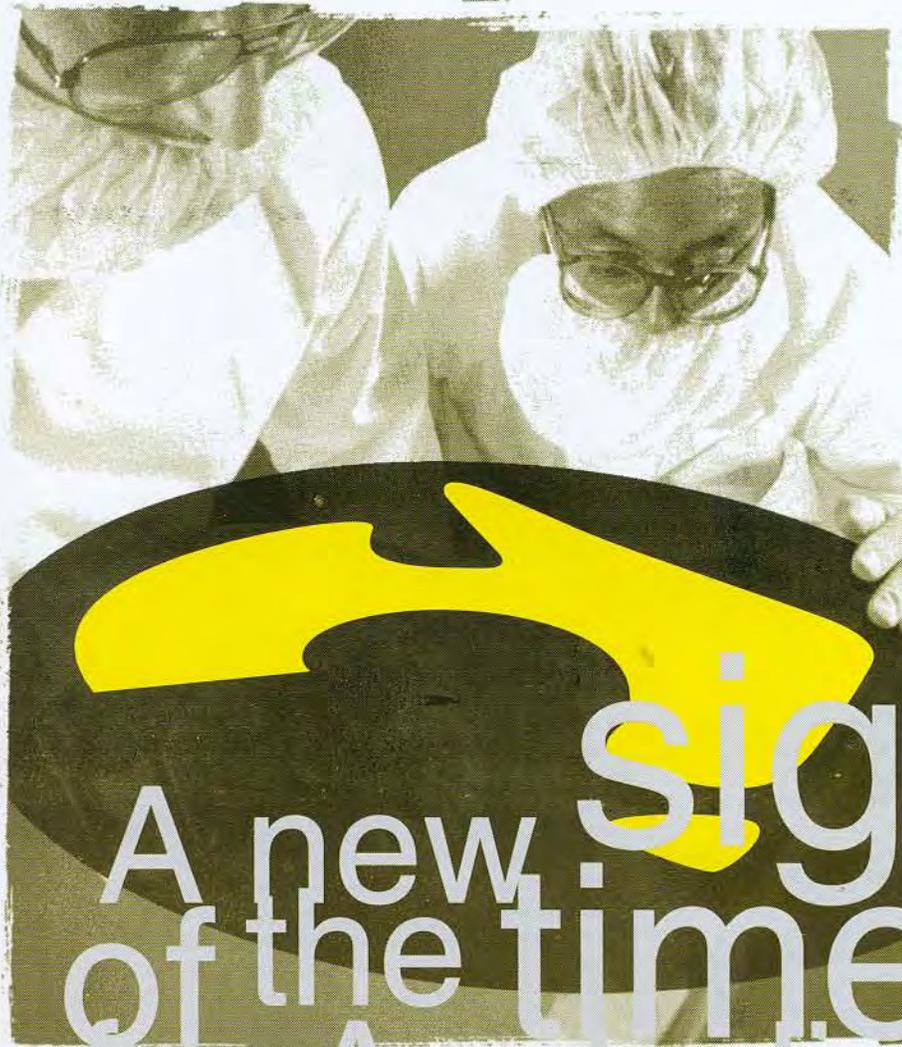


# the skeptic

VOLUME 16, NO. 3

SPRING, 1996

A journal of fact and opinion



A new sign  
of the times  
for Australian  
skeptics

We're bold enough to think critically, seek the evidence and challenge the claims

# CONTENTS

4	<b>Editorial: Changes</b>
5	<b>Editorial: The Coming of the Martians</b>
7	<b>News and Views</b>
9	<b>Victorian Attitudes</b>
10	<b>Southerly Aspects</b>
11	<b>Life on Mars</b>
15	<b>Notice: Scepticon 96</b>
15	<b>Urine</b>
16	<b>Report: World Skeptics Congress</b>
18	<b>Tele-psychics Follow-up</b>
19	<b>Agenda for the New Battleground</b>
28	<b>Creationist Misquotation</b>
29	<b>Yellow Pages - Yellow Psychics</b>
33	<b>The Astrologer and I</b>
35	<b>Postmodernism and History Pt I</b>
41	<b>Bad Writing Contest</b>
42	<b>Forum: Postmodernism</b>
44	<b>Chinese Pyramids</b>
46	<b>Review: Margaret Mead and the Heretic</b>
47	<b>Review: The Unconscious Quantum</b>
48	<b>Review: Mindbender</b>
49	<b>A Critique of the Soul</b>
51	<b>Forum: Religious Freedom</b>
52	<b>Forum: Religious claims</b>
53	<b>Wasted Years?</b>
55	<b>Forum: Relativity and all That</b>
56	<b>Skeptics on the Net</b>
59	<b>Letters</b>
68	<b>About Our Authors</b>

**the Skeptic**

Vol 16, No 3

ISSN 0726-9897

All correspondence to:  
Australian Skeptics Inc  
PO Box A2324

Sydney South NSW 2000 Australia

Tel: (02) 9417 2071

Fax: (02) 9417 7930

e-mail: skeptics@spot.tt.sw.oz.au

web page <http://www.skeptics.com.au>**State Branches****New South Wales:**

As above

**NSW, Hunter Region:**

PO Box 166

Waratah NSW 2298

Tel: (049) 689 666

**Victoria:**

GPO Box 1555P

Melbourne VIC 3001

Tel: (03) 9850 2816

Fax: (03) 9841 0581

**ACT:**

PO Box 555

Civic Square ACT 2608

**Queensland:**

5 Lamington Crescent

Dutton Park QLD 4102

**Old Gold Coast:**

PO Box 8348

GC Mail Centre 4217

Tel: (07) 5527 9884

Fax: (07) 5577 4784

**South Australia:**

PO Box 91

Magill SA 5072

**Western Australia:**

PO Box 899

Morley WA 6062

**Tasmania:**

GPO Box 1124K

Hobart TAS 7001

Tel: (002) 62 4332

**EDITORIAL****Change is in the Air****Barry Williams**

Eagle-eyed readers will have noticed that we have instituted some changes in the appearance of *the Skeptic*. For sixteen years we have retained the same typeface for the cover title, while the stylised map of Australia with adjacent ? logo has been with us since mid-1986. In that time the magazine has grown from a small and modest publication of 24 pages into one of the three largest sceptical publications in the world. We would like to think, at the same time, that the quality of the contributions has improved commensurately.

Until recently, improvements in the format of *the Skeptic* had been constrained by the fact that our only funds were those of the subscribers. These not only had to cover production costs, but also had to provide for the needs a branch in each state to ensure that a Sceptical voice was available locally to counter the proliferation of credulous propositions. Fiscal stringency has curtailed some of the activities we wanted to conduct and constrained us from publicising our existence, which hitherto has relied on word-of-mouth. Any branch treasurer will tell you that it hasn't been easy.

The Whalley bequest has removed some of these financial constraints on expansion. We recently undertook a series of advertisements in *New Scientist* magazine, selected as the medium for our trial because its subject matter reflects the interests of our readers. We are delighted with the results so far and other avenues for advertising are under investigation.

As well, Victorian Skeptic, Greg Keogh, installed an Australian Skeptics Web Page, which is also very successfully attracting new subscribers (see Greg's story in this issue).

For the past few years, as the No 3 issue went to print, subscriptions have been slightly below the total number for the previous year, the numbers then continuing to increase, to register an average annual increase of 10% by the final issue. As a result of our present advertising, we passed last year's total on July 30, by far the earliest date that this has occurred. At the date of writing we are 8% ahead of the 1995 total and the number of new subscriptions shows no sign of diminishing.

The advertisements and the new cover and logo design are the work of an old friend and longtime supporter of Australian Skeptics, Charles Rose of Cogency Communications, (he designed the cover of our book, *In the Beginning*). Charlie has been very generous with his talent and time and has offered us many new ideas on how to promote our presence and our views. Further improvements in presentation are being investigated, with the ultimate aim of increasing the frequency *the Skeptic* to bi-monthly and making it available through newsagents.

Of course, the technicalities of production are only part of the story and we will always be reliant on you, our readers, for your continuing support with the sort of contributions that have made the magazine a success.

Finally, for all those who have expressed an interest in becoming "card-carrying Skeptics", we have commissioned the production of, not one, but two lapel badges, the details of which are shown on page 67. These will be available at the National Convention and through *the Skeptic*.

We hope that these changes will be seen by our readers as improvements, and welcome your comments.

**Editors: Barry Williams  
Harry Edwards****Subscription:****1996 - \$25.00 pa**

*the Skeptic* is a journal of fact and opinion, published four times per year by Australian Skeptics Inc.

Views and opinions expressed in articles and letters in *the Skeptic* are those of the authors and are not necessarily those of Australian Skeptics Inc.

Articles may be reprinted with permission and with due acknowledgement to *the Skeptic*.

## EDITORIAL

# The Coming of the Martians

Barry Williams

The announcement by NASA, that a rock found in Antarctica and identified as having originated on Mars, contains certain features suggesting the fossilised remains of bacteria-like organisms, is arguably the most important discovery in the history of the human species. It is arguable because many caveats must be observed before we hail this as a discovery that outstrips in importance even those of Galileo, Newton, Darwin and Einstein.

To decide if it is as important as it seems, first we need to establish absolutely that this rock originated on Mars. Next we need to establish that the features found in this rock are really evidence for life. Finally, we must establish that these fossils, if fossils they are, are not caused by Earthly contamination.

Professor Ian Plimer, in the article that follows, shows how these objections have been addressed and overcome by the application of the latest scientific tools and techniques. While it does not yet constitute absolute proof of the existence of life on Mars, and there have been objections raised by reputable scientists to each of the claims made, taken as a whole, it constitutes very good evidence that life once existed on a planet other than Earth. It is an exciting story and one which cannot fail to inspire anyone who appreciates just how vital scientific research and exploration is to our understanding of the universe we inhabit.

If life once existed on Mars, and the evidence very strongly suggests that it did, then the consequences of this finding are quite profound for all of us. Ian Plimer considers the devastating effect it will have on those who masquerade as scientists while promoting the profoundly anti-scientific, anti-intellectual, infantile religious dogma of creation 'science'. If any intellectual honesty exists within those circles, and it would take a very brave punter indeed to bet that way, then the whole creationist movement must recognise that their simple-minded dogma has finally been laid to rest by the rigorous application of science.

This event will also have serious implications for those mainstream religions that have, for centuries, accommodated (albeit often reluctantly) the fruits of the restless human imagination made manifest in scientific discovery. It will be interesting to see how the accommodation is made in this instance.

To the proponents of space-age crypto-religions, whether in the guise of UFO and alien abduction cults, New Age channelling or a plethora of conspiracy theories, this discovery will give no comfort (though they may not see it that way). This discovery represents the very first *evidence* that life may have existed beyond the confines of planet Earth. The claims of others are purely speculation and extrapolation on those speculations. While specu-

tion is an important early step in the enterprise of science, it must always be followed up by a rigorous search for evidence, examination and re-examination, making and testing of hypotheses and reaching tentative conclusions.

Many of the claims of proponents of UFOlogically based hypotheses begin with an observation and end with a speculation, presented as a conclusion. They circumvent all the all-important steps that distinguish science from wishful thinking. There may be intelligent extraterrestrials visiting Earth, but the only *evidence* we have is that sometimes people see things they cannot explain. The rest is pure speculation. The evidence for Martian life is evidence for very primitive life; we still have no evidence of advanced life-forms from anywhere but Earth.

The ramifications are no less profound for Skeptics and for all those others interested in scientific matters. We should always maintain scepticism towards extraordinary claims and there can hardly have been a more extraordinary claim made than that life has existed outside our own planet. But our scepticism should always be moderated by our requirements for evidence and should not become a dogma every bit as inflexible as those of our opponents.

Some commentators in the media have sceptically (even cynically) pointed out that the release of this information occurred just when NASA needed funding for further exploration and when the President of the USA was facing re-election and have sought to cast doubt on the findings because of that. As it is not entirely unknown for bureaucracies or politicians to behave opportunistically at times, such scepticism may be warranted. But we must consider in this context the ramifications of a deliberate fraud by a body such as NASA, designed to boost their funding. As Ian Plimer shows, the testing of the Martian asteroid has been rigorous and it is difficult to see how a fraud could have been perpetrated *which could be guaranteed not to be discovered*. If it could be shown that NASA had perpetrated such a fraud, then it would be utterly destroyed as an organisation and the President would be handing his opponents an election, which polls suggest he should win comfortably, on a platter. It would have been an extraordinarily risky, and probably fatal, procedure for all concerned. Opportunism in timing may have been a factor, but it is hard to reasonably conceive of anything more sinister than that being attempted.

While the evidence we have for life on Mars is not incontrovertible, it is nonetheless very good evidence and it has been adduced by the rigorous application of a variety of well tested and interdisciplinary scientific methods. It also involves speculation, but in this case it is informed speculation, something distinctly lacking in the claims of many non-scientific proponents of extraordinary ideas. We

should maintain scepticism, but we should also be heartened that science has again been shown to be the one reliable method of showing some extraordinary claims to be true claims.

Until very recently the only *evidence* we had for life was that it exists solely on our small planet. The only *evidence* we had was that the only planetary system that existed was our own. There was plenty of speculation, even informed speculation, that other planets and other life *should* exist, but we had no evidence for it.

Now research by astronomers, using the Hubble Telescope and new techniques, has discovered very good evidence that seven new planets are orbiting other suns in our galaxy. This, together with the findings from ALH84001 strongly suggests that we, the life on this Earth, are not the result of a unique cosmic accident in one small corner of the Universe, but may well be part of a much larger whole.

To some, that discovery may be very disconcerting but to me the thought of a lifeless universe beyond the narrow confines of Earth is decidedly unappealing.

In his article, Ian Plimer claims that this is the most important discovery of this century. I think his claims are too modest. If further exploration of Mars confirms these findings with incontrovertible evidence for life, either existing or extinct, then I believe we will have been privileged to have witnessed the most profound discovery in human history.

## In Defence of Science

In this issue, we are honoured to publish the text of Dr Peter Pockley's 1995 T G H Jones Memorial Lecture, delivered at the University of Queensland Dept of Chemistry on October 12, 1995.

The TGH Memorial Lecture, commemorates the work of the late Prof Gilbert Jones, a distinguished chemist who spent 25 years as Head of the Qld University Chemistry Department.

Dr Peter Pockley, who qualified in Chemistry, is Australia's most experienced communicator of, and commentator on science, was the founder of the ABC Science Unit and has held positions as a science communicator in universities and in media organisations for more than 30 years. He is the recipient of an Australian Skeptics Journalism Award. He now works as an independent commentator and is the Australian representative for *Nature*.

His paper, which we publish in full, is a clarion call to scientists to interact with the com-

munity in presenting the real story of science and to challenge the inroads being made by counter-science forces from all sides. He targets the irrational triumvirate of religious fundamentalists, New Age gurus and academic post-modernists and shows how each group presents a real threat to science and reason.

He doesn't merely identify the dangers, but also advises practising scientists on how to go about selling their message. In passing he makes some very complementary references to Australian Skeptics and our role in trying to keep reason alive. We commend his article to all who value science and the scientific method.

## A Tribute

On behalf of *the Skeptic* and all Skeptics, we would like to record our profound gratitude to Kathy Butler, who will step down as President of the Victorian Skeptics at the national Convention. At a time of unfortunate internal turmoil in the organisation, just prior to the 1995 Annual Convention, Kathy took the chair of the Victorian body and, by her hard work, good sense and calming personality, with the support of a dedicated committee, she overcame a situation that had the potential to cause some fragmentation in the organisation.

Kathy indicated on her election to the presidency that she would only stay in office for one year and, much as many of us would wish her to stay, she has now completed her term and wishes to spend more of her time in her professional role as a geneticist and with her husband Vince and young son Christopher. She will not be lost to the Skeptics however, as she intends to remain on the Vic Skeptics committee, where she will pursue a number of professionally related topics. Our thanks and affection go with Kathy in her new roles.

The new President-elect of the Victorian Skeptics is Roland Seidel, mastermind of the 1996 Convention. Roland, is a professional mathematician and computer expert and amateur poet.

## Skeptics Patron Honoured

Congratulations to Skeptics' Patron, Phillip Adams, honoured at the recent World Skeptics Congress in Buffalo. Phillip received the Responsibility in Journalism award at the Congress which celebrated the 20 years existence of CSICOP, the world's first organised Skeptics group.



Phillip Adams accepts his award

# News and Views

## Barry Williams

Perception is a funny old thing that can sometimes play tricks with one's thinking processes. This was brought home to me twice in recent months and on each occasion a small frisson ran up my spine.

On the first occasion, I was travelling home from work by train. As the train left the underground and trundled onto the Harbour Bridge, I was astonished to see a large, brightly lighted, golden rectangle, to the east of the railway line. It looked for all the world like a window in a building, but its altitude and the fact that there were no large buildings obscuring my view of Sydney Harbour, all the way to the heads and beyond, ruled that out.

I puzzled for a few seconds until I noticed, coming into view some distance above the rectangle, a semi-circular shape of the same colour, and recognition was instant. It was the moon which, on initial sighting had two roughly parallel strips of cloud covering its top and bottom arcs, leaving only the mysterious 'rectangle' of its centre section showing.

The second occasion happened when I was sitting in my high-rise city office, which has a view due east of the city of Sydney over Bondi and neighbouring beaches. It was late in a July afternoon and the sun would have been close to the horizon behind me. Off the coast there were some rain squalls and broken cloud and amidst all this, I suddenly saw a very bright light, white in colour, and again rectangular in outline. This light came and went in a slow and irregular sort of pattern which completely nonplussed me.

Fortunately, I keep a binocular on my desk (in season I can make out replays on the scoreboard at the SCG with it) and I focused it on the mysterious light. It was a large freighter, heading south, and as it rolled in heavy seas, the low sunlight was reflected back towards me. Though the hull of the ship was red, the reflected light was quite brilliantly white. As the vessel was in a light rain squall, when

it rolled the other way and the light was not reflected in my direction, it disappeared from naked eye view and was quite difficult to make out through the glasses. The sun filtering through breaks in the cloud was the cause of the irregularity in the flashing light.

As a long-time Skeptic, and one who always prefers a mundane to an arcane explanation of anything I see, I confess to being momentarily mystified on each of these occasions. On these occasions, my scepticism was well justified, but I can now easily understand why people whose world views tend towards the mystical are so ready to believe that misperceived sightings are evidence for something outside the realm of the real world.

\* \* \*

Andi Stevenson, our intrepid correspondent from Moulamein (a town famous for its pagodas\* and for being via Swan Hill), sent us a clipping from her local newspaper in which a letter writer held forth on the dangers of sugar and the infinite superiority of honey as a sweetening agent.

Among other things, he claimed that "sugar completely breaks down the immune system" and "...causes gluttony, produces a yo-yo effect (?), contributes to arthritis, contributes to alcoholism, causes mental disturbances, nervous disorders and stress". Honey, on the other hand, "contains 15 nutrients" is a "natural antibiotic" and has various other beneficial properties.

The letter writer does not base his claims on any serious research into nutrition, however, but relies on (yes, you've guessed it) The Bible. God did not lead the Children of Israel into a land of milk and *sugar*, the correspondent assures us, but to a land of milk and *honey*! He concludes his diatribe with the observation "There is not a subject one cannot get the answer to. The Bible always is the final yardstick in our life".

I can think of any number of subjects on which the Bible is noticeably

reticent, like "On a Gabba gluepot, should we open with Shane Warne from the Vulture Street end?" or "Should one wear tartan socks with a dinner suit?", to name but two.

However, I am concerned that, in the fine traditions of the loonies who think the Bible is a science text book, we are about to see the emergence of Fundamentalist Cuisine? Unskilled as I am in biblical exegesis, I hereby plead for some information from those who know about such matters. Apart from milk, honey, locusts and assorted burnt offerings (is God responsible for the typical Oz barbie?) what other tucker has the Divine imprimatur? Answers to be sent in time for the next issue.

\* You need to be old enough to have been brought up on Kipling and the Glories of Empire to understand this reference, but then most subscribers seem to fit that bill.

\* \* \*

Sometimes we get messages on our answering machine that don't seem to have much to do with our areas of interest. Recently we had a call from an unidentified man, who told us "Just as John Howard is disarming Australians, countries in northern Africa are sending arms to southern Africa, especially Madagascar." He then went on to talk about the "symbolism" of this, but had a little difficulty with the word and clearly said "symbollocks", which seemed to accurately sum up his call.

He concluded with the question "Can this be a coincidence?" We are not sure what the guns issue has to do with the Skeptics; we have made no statements about it, but we agree that it is not a coincidence. What it is, is a *non sequitur*.

\* \* \*

In a rather unappetising sequel to the previous story, we later received a fax from an unknown destination.

Madagascar again featured prominently and the message seemed to be a warning about the fecundity of non-

white people, although its message remains obscure because of its total illiteracy. Does anyone know of a quaint conspiracy out there featuring fear of Madagascan incursions among its *raisons d'etre*?

\* \* \*

Being married to the President of the USA must be quite a strain on the spouse, but we are a little concerned whether the effect it has on the bedmate of the individual who controls the world's most powerful arsenal might result in some odd decisions.

We had Mrs Nancy Reagan consulting astrologers and advising her husband on times to have meetings, which was worrying enough,

Now we find that Mrs Hillary Clinton has been having consultations with a New Age guru, Jean Houston, who advises her to have 'virtual' conversations with Ghandi, Eleanor Roosevelt and Jesus Christ.

As Houston has since visited Australia we wonder if the Australian Government asked her to have a talk with Harold Holt, so we can all find out what happened.

\* \* \*

Our gratitude to **Geoff Schmidt** of North Fitzroy knows few bounds for bringing to our attention a story that appeared in his local *Dingley Dossier* of June 9.

It appears that the City of Kingston has begun registering the local cats because, in local environmentally sensitive areas, "certain wildlife species are decreasing in numbers because of *viscous* cats".

We anticipate that the establishment of Feline Viscosity Testing Units in every Victorian local government area will solve unemployment among the chemist fraternity at a stroke.

Ailurophiles, needless to say, are outraged.

\* \* \*

In the past two months I have had occasion to visit Queensland and WA on business and took the opportunity to have meetings with the Gold Coast Skeptics, the committee of the Qld Skeptics and the Western Australian Skeptics.

I must say it made me feel like one of those mediaeval bishops who spent their time in visitations of the faithful in the outlying parishes (mind you, no-one called me Your Grace, so the analogy can't be stretched too far).

The good thing about being a Skeptic is that, while fellow Skeptics will pay you the courtesy of listening to what you have to say, they are not constrained from arguing points with you, which is the sort of healthy attitude that scepticism should foster, as Letters and Forum pieces in *the Skeptic* will attest.

I was most impressed with the activity being conducted in these places and congratulate all those dedicated Skeptics who keep the fires of reason burning.

\* \* \*

Our congratulations go to *Skeptic* subscriber **Dr Ric Charlesworth**, coach of the Olympic Gold Medal winning Hockeyroos.

Apart from coaching our women's hockey team, Dr Charlesworth is (or has been), a medical practitioner, a Member of the Federal Parliament, a champion international hockey player and a WA state cricketer. We wonder what he does in his spare time?

Congratulations also to another Skeptical Olympian, **Steve Moneghetti**, who ran a creditable seventh in the Marathon.

\* \* \*

A speaker at a major UFO conference in Brisbane in August claimed that 2% of the world's population have been abducted by aliens. That works out at more than 100 million people, 360,000 of them Australians (about the population of Canberra - now there's a thought) if the abductions are shared around equally.

We suspect that 2% is more than the number of Earthlings who fly with regular airlines and wonder why there isn't a No Spacecraft Noise Party in the affected countries?

\* \* \*

Meanwhile, an enterprising British insurance broker is offering a policy costing around \$200 that will pay

\$200,000 to abduction victims and double that if the victim is impregnated by the aliens.

The insurance industry must be a bastion of scepticism as underwriters don't even charge higher premiums for vessels sailing through the notorious Bermuda Triangle, a good sign that the risk is no higher than anywhere else.

\* \* \*

On August 17, the Premier of NSW, Mr Bob Carr, turned the first sod to begin the construction of the Age of Fishes Museum at Canowindra in the central western part of the state. The brainchild of palaeontologist and Skeptics Life Member, Dr Alex Ritchie, the museum will be one of a select group of internationally renowned fossil sites.

The only comparable museum in the world is the Parc de Miguasha in Eastern Quebec, Canada, whose founder and Director, Dr Marius Arsenault, is a world recognised expert in the establishment of such museums. Seeking funds to bring Dr Arsenault to Australia, to advise the Age of Fishes Museum, Alex asked Australian Skeptics to approach the AS Science and Education Foundation for a donation.

Australian Skeptics believes that it is vital that the people (particularly the children) of rural NSW should have access to a world class scientific and educational facility, to inform them of the extremely ancient evolutionary heritage that we are heir to in Australia. This is important for a number of reasons, not least of which is to counter the targeting of rural Australia by those spreading the pernicious dogma of creation 'science'. We were therefore delighted to comply with Alex's request and the Foundation agreed to contribute substantially to Dr Arsenault's airfare.

While Dr Arsenault is in Australia he will also visit a recent discovery of fossils near Eden on the NSW South Coast, where unique specimens of fish and amphibian fossils have given a new insight into how our remote ancestors first travelled from a marine to a land environment.

Alex Ritchie will be asked to write an article on this exciting find for a future issue. ■

# Victorian Attitudes

Kathy Butler

Ah, it's great to be a Victorian! Take for instance the recent Case of Captain Cook's Chest. Victorians and visitors are pretty familiar with Captain Cook's cottage in Melbourne's Fitzroy gardens. This tiny some-time abode of the intrepid explorer was transported brick-by-brick from England and is open to the public.

The problem arose in June when a sea-chest on display went missing (suspected stolen). This elicited immediate furious searching and wringing of hands, as this artefact is one of the few remaining personal possessions of James Cook.

Enter our local talk radio station. Now, the morning DJ's are a pretty sceptical pair, likely to hold any psychic up to scorn and ridicule, so I was surprised to hear them enlisting the help of a local "psychic". She informed them on-air that the chest was still in the gardens and was to be found near metal (not particularly hard, one might think!). So searchers were urged to look in dumpsters and near bits of old corrugated iron. She also "saw" the colour yellow. During the next day she stuck with her story.

I was about to ring the studio with my own prediction (the chest will be found far away associated with the colour blue- hey, I'm a professional psychic too, y'know!) when it was announced that the missing item had been found-in Adelaide! Here are the alleged movements of the chest during its two-state tour: The alleged thief brazenly removed the chest from the cottage, in front of cameras and other security. He was apparently stylishly dressed in a ladies' coat, hat and gloves, and carrying a yellow umbrella. He then (it is reported) drove up to the Dandenongs and was spotted driving his purple hire care through Olinda at 40Km/hr, waving his femininely gloved hand out the window. This behaviour attracted the attention of bemused locals, one of whom rang the aforementioned radio show with a report!

The thief is then alleged to have travelled to Adelaide with his illicit cargo, where Adelaide's finest asked him to come down to the station for a little chat (the chest in custody, safe and sound.) It is unknown whether the thief will be brought up on some sort of charge relating to contravention of good taste in fashion.

Back to the radio station, and despite the many bizarre aspects of this crime and the chest being found in Adelaide, the psychic was claiming success because the alleged thief's umbrella was yellow! The DJ's kindly pointed out that the prediction of a finding near metal may have been the plane's fuselage!

Boys! You disappoint me! I am making sure you receive a courtesy copy of this edition that you may repent of your excursion into credulity!

\* \* \*

Our globe-trotting correspondent, Vic committee member **Shane Delphine** has sent us another tasteful postcard, this one featuring the Grotto at Lourdes.

The picture is printed with the inscription "At the Blessed Grotto I have prayed for you" (thank-you Shane. I feel much better now). He informs us that it is known as "Lourdes, place of miracles (TM)" and attracts over 5 million pilgrims each year.

He also reports that a depressingly large amount of money is made by the rent-a-wheelchair vendors, at the expense of desperate, chronically-ill people.

\* \* \*

Our mailbag this month also contained an invitation to receive a FREE audiocassette program showing how to UNLEASH UNLIMITED POWER!

This would allow you to get people to like you in minutes! awaken the opposite sex's love switch! and fulfil your dreams! (send my offer right now!) It includes the usual unsigned

"I was sceptical at first, but now...".

The best part, however, is a photo of a businessman "unleashing his power" walking over a bed of hot coals! Will people forever fall for that one?

Every sceptic knows (or they will soon!) that anyone can walk over hot coals! If you'd like to try it, you can do it for free and without the hype at the opening of the Shepparton Science and Technology centre! Australian Skeptics is a major sponsor of the event (as you can read in Bob Nixon's article) and all are welcome! Why not come up and fly the flag? Helpers are especially welcome!

It's on at Shepparton South Secondary school on October 18 & 19.

\* \* \*

Skepticon 96, the annual Australian Skeptics convention draws near! You can purchase tickets at your local BASS outlet, or phone BASS on 11500, or FREECALL 1800 338 998 for out-of-towners. I'll see you there on September 21.

You can keep abreast of the convention news and all things Sceptical on our web site at:

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

Feel free to E-mail us at:

**[contact@skeptics.com.au](mailto:contact@skeptics.com.au)** . ■

## State Branches Note

Victoria and South Australia are represented in this issue with items of interest to their state subscribers.

Isn't it about time that your branch took up the challenge to let the wider audience know what is going on in your far-flung outpost of the Australian Skeptics Empire?

# Southerly Aspects

Allan Lang

We are now officially the South Australian Skeptics, known to all as Skeptics [SA] Inc. We did it that way so that everybody could find us simply by simply looking up "Skeptics" in the phone book. Of course, most people still look up "sceptics", but that's another problem.

\* \* \*

## Beaumont Dig:

(See "Psychic Cops or Bumbling Clouseaus?" in *the Skeptic*, Summer 95; and *News & Views*/ Winter 96) Due to the topical nature of the renewed search of the Beaumont children, all press outlets were issued with a press release and *Channel 7 News* featured our opinion on clairvoyance and our 30,000 challenge. *Channel 2* gave us national coverage on the *7.30 Report*.

The interview was done in the actual warehouse and the story was instigated by Skeptics SA. Dr Hayden Bunton also gave our views on Keith Conlon's morning program on 5AN.

That was back in May.

The drill-holes turned up nothing except a few old bricks. It was then decided to dig out the floor.

The excavation has been completed to a point where continuing will require an environmental impact statement. To anticipate any possible environmentalist protest, a Cone of Silence has descended, and the warehouse site has been padlocked. (Or; that couldn't have any connection to us, could it? Nah!)

But Cones of Silence are not totally effective, and we are preparing an article for *the Skeptic*.

\* \* \*

At last, South Australia has its own religious apparition.

For those who came in late, a patch on the wall of the Yankalilla Anglican church has been said to bear a resemblance to the Madonna. Others have seen other resemblances, and it is really no closer to Santa Maria than it is

have begun, and it is hoped that it will be established as a world-famous pilgrimage site.

For early worms, John Foley has a regular spot, *Skeptics Corner*, on *Breakfast with Julia*, 5AN891, on the thirteenth of each month. It goes to air sometime between 5:50 and 7:30 AM.

Also, there is a longer session on the SA regional network on the same day at 3:05 PM. (For Adelaide listeners try tuning to 650 on the AM-dial). Several of our regional subscribers will eventually rotate that position between them.

\* \* \*

The first Wednesday of every even numbered month South Australian Skeptics hold a Super Special Sceptical Saracen Soiree at the Saracen's Head, 82 Carrington St.

\* \* \*

On 7 August, we had Dr Graham Wicks of the Australian Society of Hypnosis as the guest speaker. He gave us a good rundown on hypnosis, answered questions and then showed us a video of surgery being performed with no anaesthetic, a needle pushed through the flesh of the hand with no apparent pain and other amazing things.

\* \* \*

For the rest of this year, the dinners will be at 7:30 PM, on October 2 and December 4. There will be a guest speaker of surprising interest.

Do ring me (we're in the book) and tell me you'll be there - the last event severely tested the capacity of the venue, and we have to know how many will turn up.



to Santa Claus. Nowhere near as clear as the image of Tim Mendham on a rock in Western Australia. (*Septic Autumn* 96)

As the local minister the Reverend Nutter, said, the real miracle was that people were actually coming to look at it. [No comment.] Late reports are that sales of trinkets and keepsakes

## DISCOVERY

# Life on Mars ... Extinction for Creationists

Ian Plimer

If, as has been alleged, life exists at the Creation Science Foundation, then why should there not be life on Mars? The exciting discovery of fossil primitive life on Mars shows that, among the primitive life still surviving on planet Earth, are creationists.

The announcement by NASA that there is evidence of primitive life on early Mars is one of the great scientific discoveries of this century. It gives us a profound sense of our place in the Universe. The NASA announcement of new work on a Martian rock supports existing evidence from geology. The 1976 NASA Viking mission revealed the unique chemistry of Martian rocks and the meteorite with evidence of primitive Martian life has this unique Martian chemistry. What is this evidence? Can we be confident that this is indeed a great discovery?

As with all science, evidence is integrated from a diversity of sources and examined, re-examined and re-examined again. The aim of this article is to show how existing evidence supports the NASA announcement of fossilised life in Martian rock and to raise the obvious questions that face creationists. Creationists are now the embarrassed red face on Mars.

### Early Earth

The Earth and other bodies in our Solar System enjoyed an early history of intense bombardment by meteorites between 4500-3800 Ma (million years ago). Now that we have settled down to being just an ordinary old Solar System, meteorite impacting is far less common. Most meteorites came from the Asteroid Belt between Mars and Jupiter. These meteorites are iron (iron-nickel alloy), stony-iron (iron-nickel alloy plus silicates) and stony meteorites (silicate minerals).

A rare type of stony meteorite called carbonaceous chondrite added significant quantities of the building blocks of life (amino acids) and complex molecules of non-biological origin to Earth, Mars and the other planets during the early history of the Solar System. If these organic molecules could become self-replicating and then organised into cells, then there is life. The when and where questions have been answered but the how question has not.

The complete history of Solar System bombardment is preserved on the lunar landscape which, because our moon has never had an atmosphere or oceans, has not been reshaped by weathering and erosion. Impacting of other bodies in the Solar System has produced rare meteorites which derive from the Moon, Mars and places unknown. This detective work is helped by the fact that the Viking exploration showed that Martian rocks have an unique chemistry, while the Apollo missions showed that lunar rocks also

have an unique chemistry.

The impacting of Earth has blasted material into space. Some of this material returned to Earth and some of it left the Earth's gravitational field for the unknown. For example, at 0.8 Ma, a meteorite struck 1100 Ma rocks in Cambodia. The impact was so great that the meteorite vaporised and molten fragments of Cambodia splashed into space. The molten material froze into glass and some rained over SE Asia and Australia as tektites. Re-entry to Earth of these Cambodian glass fragments melted the leading edge of the tektites into a peculiar shape (the shape of tektites was copied by NASA for space capsule re-entry vehicles).

Tektites have a chemical and isotopic fingerprint of the 1100 Ma Cambodian rocks, an isotopic signature resulting from cosmic ray bombardment during their journey in space and another isotopic signature resulting from the melting of the edge of the tektite during re-entry. This process has occurred many times in the history of our planet and shows that Earth material has been blasted many times from Earth into space.

We are therefore able to confidently trace the history and origin of our extraterrestrial visitors. Just as we are confident that material from the Solar System has bombarded Earth, we are equally confident that Earth material has blasted onto our moon and other planets.

### The First Life

When the Earth's atmosphere and its crust cooled to less than 100°C, rain was able to fall and water eroded the surface of planet Earth. This occurred at 3800 Ma and the running water deposited mud, silt, sand and gravel at Isua (Greenland). Extraction of the organic material from these rocks at Isua has yielded organic molecules of biological origin. Because sediments form at the interface between the atmosphere, the hydrosphere, the biosphere and the lithosphere, a study of ancient sedimentary rocks gives an insight into the early days of Earth history. Sedimentary rocks older than 2200 Ma contain abundant primitive single-cell fossils and have a chemistry which shows that the early atmosphere of Earth was oxygen-poor and rich in nitrogen, methane, carbon dioxide, ammonia, sulphur dioxide and hydrogen sulphide.

As soon as there was water on Earth, life appeared. Water is the essence of life and the reason that planet Earth can sustain life is that Earth has had a remarkable period of 3800 million years when Earth's atmosphere prevented water from totally freezing or vaporising. The first life on Earth was single-celled primitive life that needed no oxygen (anaerobic bacteria). Such life still exists in specialised habitats on Earth.

In 1979, the discovery of metal-rich submarine hot springs in the middle of the oceans led to a revolution in the understanding of primitive life. The stretching and pulling apart of the ocean floor has led to submarine volcanoes and the formation of mid-ocean ridges at a water depth of 3 kilometres. The new volcanic material on these ridges is cooled by circulating sea water which enters the 3 kilometre-deep sea floor at temperatures of 2°C and exits via hot springs at 250 - 420°C.

A whole new ecology exists in such dark, high pressure, hot environments and is represented by bacteria identical to those in old rocks, worms and clams. This thermophilic life needs no sunlight, no oxygen from the atmosphere and no warmth from the sun or air. Thermophilic life also exists in hot springs such as at Rotorua (New Zealand) and Yellowstone National Park (USA). Modern hot springs contain chemical nutrients and can be extremely acid. The similarity of thermophilic life to early single-celled life led to suggestions that life on Earth originally evolved in hot springs.

Deep drilling beneath continents and the ocean drilling program revealed another remarkable habitat of thermophilic life. Primitive life, similar to early life on Earth, occurs deep beneath the surface. This thermophilic life survives in rock fractures and utilises heat from rocks and nutrients from water-rock chemical reactions. It has also been suggested that the first life may have appeared in fractures deep beneath the surface of Earth.

### Extraterrestrial Life

The possibility of extraterrestrial life has been one of the great questions. In former times, Giordano Bruno was burned at the stake for suggesting that we are not alone. Television and science fiction has had a good innings exploiting the possibility of all kinds of fearful extraterrestrial life.

If life were to be elsewhere in the Universe, then the argument went that there needed to be another planet just like Earth rotating around another star the same age and size as our Sun. Because there are hundreds of billions of galaxies each with hundreds of billions of stars, many scientists suggested that the chances of there being another star identical to our Sun with another planet identical to Earth were 100%.

However, there was just one problem. The Earth's atmosphere prevented astronomers from getting a clear picture of the heavens and no planets outside our Solar System had been observed. This has now changed. The Hubble Telescope has focused on distant stars and, in 1996, it was shown that seven stars in our galaxy have a wobble due to the gravitational pull of rotating planets. This is only the tip of the iceberg and it is expected that numerous solar systems will be found with similar features to our own Solar System. Because our Solar System is less than half the age of the Universe, it is expected that many of these solar systems will have had enough time for the evolution of life. Those in the space and earth sciences are now of the view that there is a 100% chance of life elsewhere in the Universe. Whether this life is primitive or not, is not known.

Scientists have long thought that primitive life could have existed on Mars because of the similar early histories

of Mars and Earth. There was disappointment when neither life nor fossil life were found in the Martian soils sampled by the 1976 Viking mission. However, with the later discoveries of a great diversity of thermophilic life in ancient and modern hot springs and deep in the Earth, hopes for life on Mars were revived. NASA planned to visit Mars to search for life in these habitats. This was all changed by the re-investigation of meteorites from Mars by techniques which were not available five years ago.

### Water on Mars

The surface features of Mars show that it has contained running water, the vital ingredient for life. As soon as there was water on Earth, life appeared. There is no reason why Mars should be different. Large dry branching water-courses, flood plains and deltas formed by running water exist on Mars. These can be seen by a powerful optical telescope and have led to some rather bizarre ideas. For example, in the 18th Century, Giovanni Schiaparelli observed these old river systems and suggested that they had been built by Martians!

Because of the lower gravitational attraction of Mars, most of its atmosphere gradually escaped into space and it is now thin and running water no longer exists on the surface. Things went horribly wrong for Mars and the atmosphere disappeared and much of the water went underground. However, if there *was* life on Mars, when the atmosphere and running water disappeared did Martian life become extinct or did it go underground? This is a question that exploration can solve.

### Martian Volcanoes

Mars is a volcanic paradise; more than half of Mars is covered by volcanic material. As on Earth, two main types of volcanoes exist on Mars. On Earth, basaltic shield volcanoes such as Hawaii are the most common. On Mars, the most common volcanoes are also of the basaltic shield type, some of which are very large. For example, the largest Martian volcano, Olympus Mons, is three times the height of Mt Everest and has a central crater 90 km across. On Earth, there are hundreds of active steep-sided explosive volcanoes; the same steep-sided volcanoes are present on Mars.

On Earth, new volcanic rock is cooled by circulating water which commonly reaches the surface as hot springs. Hot springs precipitate sinters and, in both modern and ancient hot springs, evidence of thermophilic life is abundant. Martian volcanoes, like terrestrial volcanoes would have been cooled by water when Mars had surface water. Like Earth, this would have been the ideal environment for the appearance of thermophilic life on Mars.

### Mars Revisited

There are 12 known Martian meteorites on Earth. Although Australia has one meteorite per square kilometre, these are hard to detect and can be contaminated by soils and organisms. Antarctica presents happier hunting grounds because meteorites fall into ice, with the flowing ice, over time, concentrating meteorites at the base of the Antarctic mountain ranges. Martian meteorite ALH84001 was found in the Allan Hills meteorite field in Antarctica in 1984.

Meteorite ALH84001 has been dated at 4,500 Ma - the age of the Solar System and is the oldest of the 12 Martian meteorites. Past research on this meteorite, using low magnification microscopes and old technology, did not detect Martian fossils. The NASA discovery was only possible because of new technology.

When life on Earth dies, it decomposes to polycyclic aromatic hydrocarbons (PAHs). We see this with all plant and animal matter on Earth and PAH pollution is detectable in the air. A new technique, dual laser mass spectrometry, has just been developed to look for PAHs trapped inside minerals. ALH84001 contained abundant PAHs trapped inside globules of carbonate minerals in the meteorite. These carbonate minerals were dated at 3600 Ma, the meteorite showed that it had undergone cosmic ray bombardment for 16 million years and the melting at the edge of the meteorite showed that it entered the Earth's atmosphere 13,000 years ago.

It was concluded that Martian rock, which became solid early in the history of the Solar System (at 4500 Ma), was altered to carbonate minerals in the presence of water and carbon dioxide at 3600 Ma. The early Martian atmosphere must have had both water and carbon dioxide - ideal for primitive single-celled anaerobic bacterial life. A meteorite impact at 16 Ma blasted this rock into space for an eccentric orbit around the Sun and 13,000 years ago it fell into Antarctica.

All quite logical, but what about the PAHs? Couldn't they be from contamination by Earth PAHs? The answer is a very definite no! No PAHs were detected on the surface of ALH84001. The PAHs in ALH84001 were the same as those from fossilisation of ancient primitive bacteria on Earth. The only PAHs detected in ALH84001 were totally enclosed by carbonate minerals in the middle of the Martian meteorite and could not have been from contamination. Furthermore, Martian PAHs are different from PAHs derived from the decay of modern life on Earth or PAHs previously measured in non-Martian meteorites.

This Martian meteorite with carbonate globules containing PAHs dated at 3600 Ma left Mars at 16 Ma and managed to fall through the Earth's atmosphere 13,000 years ago. Then, in 1984, ALH84001 was found on the Antarctic ice sheet which is no older than 5 Ma. The Martian meteorite had never been in contact with fossilised primitive Earth life in rocks billions of years old and so could not have been contaminated by fossilised ancient primitive Earth material.

All bases were covered and it seemed obvious that the PAHs could not have come from Earth. This evidence certainly suggested that the PAHs were left by thermophilic bacteria on early Mars, similar to thermophilic bacteria which exist in fractures and hot springs on Earth or as early life on Earth.

Such radical ideas needed checking. The Martian meteorite was examined by high resolution scanning electron microscopy. The microbiologists using this new technique found minute egg- and tubular-shaped structures identical to ancient thermophilic bacteria fossils on Earth. The evidence was getting stronger. Just in case some deviant bacteria had crawled into Antarctic meteorites, non-Martian meteorites from Antarctica were checked. No such bacte-

ria-like structures were found in any non-Martian Antarctic meteorites and it was again concluded that ALH84001 was not contaminated by bacteria from Earth.

Again, it appeared that Martian meteorite ALH84001 contained evidence of former life on Mars and again the evidence was re-checked. The minerals in the carbonate globules were investigated and magnetite and pyrite were found together in the carbonate, directly associated with the fossil-like bacteria and the PAHs. On Earth, magnetite and pyrite are very commonly associated with fossils of primitive life. Furthermore, the trails of minute magnetite crystals in ALH84001 had the shape of bacterial cells, just as they do with fossilised primitive life on Earth. Fossils of primitive life on Earth are associated with a number of minerals and these minerals were also found in the carbonates in ALH84001.

### Fossil Life on Mars

Although the evidence from ALH84001 is compelling, a reserved press release by NASA stated that there is "evidence that strongly suggests primitive life may have existed on Mars more than 3.6 billion years ago." As with all scientific discoveries, they tend to be inhibited and are announced to the sceptical international scientific community for scrutiny, checking and re-checking. In science, scepticism and criticism is encouraged - science is married to evidence. With more evidence, re-checking, re-calculation, re-measurement and re-thinking, scientific concepts are refined. In my opinion, the evidence from ALH84001, when combined with our knowledge of thermophilic bacteria in all sorts of habitats on Earth, the early history of Earth, the early watery and volcanic history of Mars and the statistical probability of life elsewhere in the Universe, compels us to accept that life once existed on Mars and may still do so.

### Questions for the Rational

Now that there is strong evidence for primitive life on Mars, there are some interesting questions for which we await answers.

1. Did the first primitive life on Earth come to Earth on a meteorite from Mars?

If this were indeed the case, then we humans have evolved from Martians!

2. Did the first primitive life on Mars arrive on a meteorite from Earth?

If this were the case, then we are genetically-related to the fossil primitive life on Mars!

3. Did life independently appear on both Earth and Mars?

If this were the case, then life could independently form elsewhere in the Universe!

4. Was water on the surface long enough for Martian primitive bacteria to evolve into life that needed oxygen (aerobic bacteria)? This we might know from more NASA exploration of Mars but there is one matter we know for certain: Martian life never had sex.

### Implications for Creation 'Science'

The expected creationist responses will vary from various forms of denial, catatonic apoplexy to the creation of data

and explanations *ex nihilo*. Denial may take the form of disbelief or claims of NASA scientific fraud, especially by those creationists who do not have a copy of the NASA press release or by those who are scientifically illiterate. (This caters for the vast majority of creationists.) The (arguably) more literate leaders of the Creation Science Foundation and other similar groups, who probably also do not have a copy of the NASA press release or the *Science* article, will probably:

- (i) raise semantic arguments about the nature of proof;
- (ii) cast doubt about fossil microorganisms, contamination and the chemical signatures of life;
- (iii) quote various scientists who are somewhat sceptical. (The nature of science is that of scepticism and, where convenient, these 'atheistic, God-hating scientists' can be useful for the creationist cause. However, as has been demonstrated numerous times by the CSF, they feign umbrage at being exposed to scepticism and public criticism); and
- (iv) claim that to acquire such evidence requires a belief in evolution hence scientific research is only undertaken to prove evolution. (This view is common in creationist writings and gives a great insight into what creationists consider to be scholarship).

Wait patiently folks. The announcement of evidence of life on early Mars might create some insecurity in the deluded faithful followers of the Creation Science Foundation. We can expect some wonderful wailing waffle from the creationist gurus as they struggle to keep their flock together to pray and pay while they prey on insecurity and ignorance. The gurus might once again write about ethics as the smoke screen for their junk science and junk religion! One can expect the even-more-lunatic fringe of the creation 'science' cult to create a marvellous Martian back-to-Genesis fantasy unsupported by either Biblical or scientific scholarship.

The evidence for early life on Mars poses insurmountable problems for creationists. If God created the Heavens and Earth (as well as life on Earth), how can the creationists reconcile this discovery? In the somewhat timely June-August 1996 issue of *Creation Ex Nihilo*, we are told that the search for extraterrestrial life is exciting science fiction, that the suggestion of life elsewhere in the Universe is based on faulty reasoning and that those sinful atheistic scientists looking for extraterrestrial life should remember Romans 1:22 (Professing themselves to be wise, they became fools). We are, of course, told that scientific problems are due to SIN and that evolution "has no biblical or true scientific basis to begin with". In predictable creationist style, the non science-trained writer, David Laughlin, is able to state with authority about the true scientific basis of evolution. Laughlin closes his article with the clincher "The Bible, God's Word, does contain the answers to questions philosophers and scientists have been asking for centuries."

Well folks, one of the questions philosophers and scientists have been asking for centuries is: Is there extraterrestrial life? The question has been answered. Bruno was not burned at the stake in vain. Wither junk science and junk religion. The face on Mars is grinning.

In the creationist dogma, all life had a berth on that

deluge dreadnought, Noah's Ark, during a mythical "great flood". Despite reams of mythinformation, numerous unsuccessful expeditions to Mt Ararat and the publication of "proof" of discovery, creationists have never been able to provide one iota of evidence for the discovery of Noah's Ark. If there was both life and water on Mars, then just one small geographic blip, Biblical mistranslation or topographical error could put the Ark on Mars. Why not go looking for the Ark on Mars? The chances of finding it on Earth are identical to the chances of finding it on Mars. Why not double the chances of an Ark discovery?

Our dear creationist friends have some explaining to do and might care to answer the following ten questions:

- a. Was the creationist God experimenting on Mars?
- b. Was Martian life also created by the creationist God?
- c. Why should evolution exist on Mars and not on Earth?
- d. Were bacteria banished because of sin to that Godless planet Mars by the creationist God?
- e. Did Martian critters also die in a great flood sent to purge their world of sin?
- f. If sin is so rampant on Earth, why did the innocent brainless single-celled Martian critters cop the bullet? 'Tis a tad unfair considering that Martian life couldn't have sex.
- g. If Martian life derived from a vadoso Earth meteorite, why is this creation story not in the Scriptures?
- h. If Earth life derived from a Martian meteorite, why is this creation story not in the Scriptures?
- i. If life on Earth and life on Mars appeared independently, did the creationist God get it wrong on Earth or wrong on Mars?
- j. If the statistical arguments for the improbability of evolved life on Earth are correct, why are the same arguments incorrect for life on Mars?

Surely the exciting discovery of evidence for early life on Mars is far more evocative and compelling than the repetitive boring creationist dogma? This discovery will require a fertile re-evaluation of some aspects of theology and the concepts of universality of the Christian God. Surely the intertwining of interdisciplinary integrated science is far more stimulating than the theology and science of the Dark Ages.

How sad. Sad because creationist 'scientists' can not savour one of the greatest scientific discoveries of all time.

## Richard Dawkins in Sydney

Professor Richard Dawkins will make public appearances in Sydney on Thursday, September 19 at the following venues:

- 11.00am Abbays Bookshop, York St Sydney
- 1.00pm- 2.00 pm Stanton Library, North Sydney (book through The Constant Reader, Crows Nest)
- 6.00pm Masonic Centre, Castlereagh & Goulburn Sts Sydney (book through The Australian Museum Society),

# Skepticon 96

**Roland Seidel**

**September 21-22, 1996**  
**South One Theatre, Monash University,**  
**Clayton.**

\$70 both days (concession \$40)

\$40 one day (concession \$25)

\$30 Dinner on Saturday (Must Book Ahead For Dinner).  
 Tickets through BASS

## Programme:

### Saturday September 21

9:00 Opening.

Kathy Butler, President, Victorian Skeptics

9:30 "Public Thinking"

Lesley Vick, President, Rationalists Society of Australia,

11:00 "False Memory"

Dr. Andrew Gibbs, Neural Psychology, RMH

1:30 "Making Medicines"

Dr. Michael Ablett, Bristol-Myers Squibb.

3:00 "The Gene's Eye View of Creation"

Prof Richard Dawkins, Oxford University.

8:30 Dinner, "Pyramids & Cricket"?

Barry Williams, Editor, *the Skeptic*.

### Sunday September 22

9:00 "Forecasting, economics, weather, astrology"

Peter Smark, journalist.

10:30 "Adventures of a Skeptical Journalist"

Annie Warburton, radio journalist.

12:00 Bent Spoon award

1:30 "Spontaneous Human Combustion, UFOs, falling cats..."

Dr. Karl Kruszelnicki, wild man of science,

3:00 QA panel with all speakers:

Richard Dawkins, Karl Kruszelnicki, Annie Warburton,  
 Peter Smark, Barry Williams, Lesley Vick ....

## Merchandise

We will have on sale all of Richard Dawkins' books, all of Karl Kruszelnicki's books, books from such greats as Harry Edwards, Ian Plimer (Telling Lies for God), books from Prometheus, mags from everywhere. We will have Skeptics Umbrellas to keep your brain dry, Darwin Fish products (a brilliant counter to the fundamentalist fish symbol), brand new Skeptics Lapel Pins in two designs, and lots of other goodies.

# Urine

**Richard Gordon.**

Urine drinking is in the news again. It seems to me to be a fad something akin to the wearing of hair shirts and the use of beds of nails. However it seems that the benefits or otherwise of the practice of urine drinking are a mystery to the editor of this august publication who has therefore asked me to comment. My first reaction to this request was to simply say that water is much preferable to urine as a thirst quencher and that the reasons for this should be obvious to even the most casual observer. This was apparently not enough for our esteemed editor, so I will attempt to enlighten him as follows.

Adults pass 600-1600 ml of urine per day and this is usually clear and yellow in colour. The clarity, colour, aroma and volume can be altered by diet and fluid intake. Over 24 hours the weight of solids excreted in the urine is around 55-70 gm. These solids are made up of many substances most of which are the by-products of metabolism and include amino acids, ammonia, urea, creatinine and various electrolytes along with a few things that are excreted unchanged such as millions of dollars worth of unnecessary vitamins.

The passage of urine is necessary to clear the body of these by-products of metabolism which are toxic in large amounts and to allow the kidneys to maintain the balance between water and electrolytes (salts) such as sodium, potassium, hydrogen (acid/base), and chloride. If we fail to have an adequate intake of water in our diet we cannot maintain this balance, as the food we eat contains not only protein, fat and carbohydrate but minerals (salts) as well.

The practice of drinking one's own urine, or anyone else's for that matter, therefore confers no benefit on the imbibitor as the substances contained therein are at best recycled food in a less than tasty vehicle and, at worst, the already rejected by-products of metabolism (ie waste). If taken to the extreme where the only fluid taken were urine then a vicious cycle would be established ending certainly in death.

In conclusion, if you want to drink your own urine then provided it is only occasionally and you otherwise maintain an adequate intake of water it is unlikely you will come to any harm. It is also extremely unlikely to be of any benefit.

## Editor's Note:

As I am being blamed for this rather tasteless contribution, let me compound the error by saying that this fad gives a whole new meaning to the phrase "getting on the piss". Not that we would normally use such language in *the Skeptic*, which is a journal renowned for its propriety and sobriety. But sometimes one cannot resist the bleeding obvious when a pun is in the offing, so complain to the Press Council if you must.

## NEWS

# World Skeptics' Congress

Steve Basser

The Committee for the Investigation of Claims of the Paranormal (CSICOP) came into existence in 1976 at a conference titled 'The New Irrationalism: Anti-science and Pseudoscience'. This conference was held at the Amherst campus of the State University of New York (SUNY) in Buffalo.

Twenty years later the First World Skeptics' Congress was held at the same site, and I was very pleased to be able to attend. The Congress was held over four days from 20-23 June 1996. There were approximately one thousand registrants, including representatives from Skeptics groups of countries such as Belgium, Mexico, China, Japan, India, Canada (Quebec and Ontario), Norway, Russia, and Italy. Australia was also represented by Colin Keay.

Following the official opening by Paul Kurtz (Chairman, CSICOP), and welcoming remarks from Kendrick Frazier (Editor, *Sceptical Inquirer*), and SUNY staff, the first session began on the topic "The Role of the Mass Media in (Mis)Informing the Public".

One of the speakers at this session was Phillip Adams, a co-founder and Patron of Australian Skeptics, and he wasted no time in declaring that the battle against pseudoscience was well and truly lost. From my audience vantage point it was clear this suggestion was not universally well received, in spite of this being a Skeptics meeting!

Phillip questioned the ongoing use of valuable resources in combating astrologers and spoon benders (Uri Geller hasn't disappeared yet) when the real danger is the committed ideologues, such as the creationists, and on this point the majority seemed to be in agreement.

As Skeptics we obviously would not argue for a cessation of all activity against phony psychics and Geller 'wannabe's', but faced with limited resources isn't it time we acknowledged that our personal autonomy or liberty is not as overtly threatened by these people as it is by the likes of the creationists? We may wince at the New Age fraternity selling crystals at the Mind and Body Festival, but they are not trying to dictate what our children will learn at school, or what books they may read.

Phillip also offered his special thanks to US society (particularly the West Coast) for its tireless efforts at exporting to the world all manner of craziness! Another victory to free enterprise!

Another speaker at this session was Piero Angela from Italy, who has a two hour prime time science show that has on some nights out-rated the soccer! There were many in the audience who wanted to know the secret to his success, as prime time television viewing in most of the countries represented would politely fit into the 'less than sceptical' category. Piero noted, though, that it's not all plain sailing. A survey had been done showing that initial expo-

sure to the program resulted in a shift of beliefs from the pseudoscientific to the scientific, but follow-up after two months revealed a shift back! The six and twelve month follow-ups are eagerly awaited.

One of the key messages of the whole Congress emerged at this session - the importance of efforts aimed at improving the public understanding of science - and this was a prominent theme of the speech delivered by Leon Lederman, Emeritus Director of Fermilab, and Nobel Laureate, on the first evening.

Lederman challenged the audience to start thinking about how we can influence the public to be bothered with learning about, or taking an interest in science. To start with we must acknowledge that we are starting a long way behind. Pseudoscience will always prove more enticing to the public because it is positive, authoritative and certain, whereas science is hesitant, questioning and always evolving.

To Lederman the answer to the question 'why bother?' is that "Burning incense will not tell you when Halley's Comet will be able to be seen". In other words, the public must come to understand that it is only through the application of science that real world problems can be solved. If we are to find new means of providing energy; if we are to feed the growing world population; if we are to reduce ozone depletion we need science not mantras. In addition, according to Lederman, if the public understanding of science is going to improve we must concentrate our efforts on the young. We must find ways to interest children in science and, most importantly, keep their interest.

Of course I agreed with these thoughts, how could I not, but something just didn't seem to fit. It was only the next day, when Chris Carter, the creator of the *X-Files*, spoke over lunch that I realized what was missing - an ethical basis for our scepticism.

Chris Carter was criticized by some members of the audience for not providing a more sceptical foundation for the *X-Files*. The fact that some people watch the program and think it is 'real' was felt to adversely reflect not on those individuals, but rather on Carter himself. He defended himself (though he didn't really need to) by reminding all present that he worked in the entertainment industry.

Even in the space of three or four days I had seen enough of American 'culture' to wonder why anyone would even bother to question Chris Carter in this way. How successful will scepticism ever be in a society that values wealth creation, and the fuzzy concept of 'fame' so highly?

In a society such as the US (and Australia??) why wouldn't or shouldn't someone sell diet pills, or UFO books for fame and money? Surely to do so is to merely follow the rules laid down from an early age. I was reading the

daily newspaper one morning and came across a *Dear Abbey* column. A woman had written in about how her son had fallen in love with a married woman who was very wealthy. She was seeking advice about the situation her son and the other woman found themselves in. The reply was that the married woman would be crazy to leave money for the sake of love!

On the television one evening I watched an advertisement that featured visuals of business suited people whilst the announcer asked questions such as 'why do you get up so early?', and 'why do you work so hard?'. The answer came in the last few frames - because I get to buy a luxury car!

It may be true that burning incense has little predictive value, but if the public understanding of science is ever to be improved we must face up to the fact that knowing how many planets there are will not provide a BMW. If there is an ethical basis for our scepticism we need to communicate it. If there is not we need to find one.

Prior to the Chris Carter lunch there was a session titled 'The Growth of Anti-Science', in which speakers such as Paul Gross and Norman Levitt discussed the way that old fashioned quackery has changed, undergoing a transformation into an intellectual movement loosely called 'postmodernism'.

The result of this process is that much of what used to be called quackery is now viewed as just one of many 'valid' alternative realities and this transition has occurred without any requirement to provide supporting evidence and without adequate resistance from the scientific community.

There were a number of concurrent sessions run on days two and three on topics such as UFOs, Creation/Evolution, and Astrology, and by all reports these were well worth attending. Not surprisingly, though, I chose to attend the sessions on alternative medical therapies.

The most interesting of these was the session on chiropractic by Dr Stephen Barrett, in which he showed some truly alarming video footage demonstrating testing techniques used by some US chiropractors. I wouldn't even begin to try and explain in words what was being done. Suffice to say that to describe it as 'wacko' would be being polite.

When Dr Barrett shared the material he had collected with the official chiropractic organizations there were a few that were apparently privately horrified, but none that were willing to publicly condemn the activity or take action to discipline those involved. We are very lucky in Australia that we do not have anywhere near as large a 'lunatic fringe' as this, and we have far more uniform educational standards, but we do share this problem of official reticence.

In spite of ongoing doubts being expressed by many within the chiropractic profession concerning certain practices (maintenance adjustments and the treatment of non-musculoskeletal conditions being the prime examples) the Australian chiropractic organizations and/or Registration Boards have failed to speak out publicly against these, nor advise practitioners that such practices are not at present scientifically supported.

I also attended a very interesting session on 'The Paranormal in China' in which Mr Lin Zixin, the former editor of *Science and Technology Daily* discussed the pseudoscience behind the so-called Qi-Gong Masters who travel around China performing ostensibly superhuman feats by channelling their Qi-Gong, another form of undetectable energy.

Mr Zixin and his fellow Skeptics in China form a very small minority in a country with a long history of paranormal beliefs, but their enthusiasm is unquestionable. The growth of scepticism in China is of particular interest to CSICOP and the latest copy of *Sceptical Inquirer* contains the first in a two part report from the most recent delegation to visit this country.

The Awards Banquet was held on the last night of the Congress at the Buffalo Hyatt and awards were presented to a number of people including Stephen Jay Gould (Isaac Asimov Award), Leon Lederman (In Praise of Reason Award), James Randi (Distinguished Skeptic Award) and Phillip Adams (Responsibility in Journalism Award). There was also a surprise announcement that two asteroids had been identified and named - one for CSICOP and the other for Paul Kurtz.

The final half day session was for presentations from world Skeptics groups, and I presented on behalf of Australia. This was a very interesting session and it was disappointing, given the supposed international basis of this World Congress, that it was tacked on at the end. The audience was approximately half what it had been on the previous days.

I have covered only a small amount of what was a very interesting and very full Congress. Hopefully I can return to some of the material and/or themes in the future. The next World Congress will be held in 1998 in Germany, and the one after that will be due in 2000. What better venue could there be for this one than Sydney?

In closing I would like to pat us all on the back. The Australian Skeptics should be mighty proud of themselves. We have a world class organization that would not exist were it not for the support of our subscribers and the efforts of those around the country who run the State Branches. There is no reason why the tremendous growth of recent years should not continue into the future.

Finally, thanks to the Victorian Committee for their support and for 'allowing' me to make this trip. I didn't take it too personally that they seemed so eager for me to go!

**Skeptics Convention  
Monash University  
South One Theatre  
September 21-22**

## INVESTIGATION

# Tele-phonies Follow-up

Harry Edwards

Prior to the publication of the 'Tele-phonies' article (*the Skeptic* Vol 16, No 2), 30 members of the print and electronic media were contacted to solicit interest in publicising the findings of the investigation - with the following results.

The Sydney *Sunday Telegraph* printed a quarter page story ("Tele-seers' advice read from script"), covering the main points. The story was picked up by Adelaide Radio 5DN, who then conducted a telephone interview with me for their current affairs programme. Bob Byrne, the presenter, was totally sympathetic with my findings (blatant fraud), and expressed the desire to be kept informed of any future developments.

Requests for a copy of my article followed in quick succession from ABC Radio 2BL, the Sydney *Sun-Herald*, *The Manly Daily*, the Melbourne *Herald-Sun*, *The Canberra Times*, News Limited's *Daily Telegraph*, Pacific Publications, Milton Black (the astrologer), TV Channel 7's *Today Tonight*, Channel 9's *A Current Affair* and *60 Minutes*. A copy was also sent to the Hon Faye Lo Po' the Minister for Fair Trading and to the Federal Minister for Telecommunications, Senator Richard Alston.

Subsequently, an interview followed on Radio 2BL, and Barry Williams appeared on *A Current Affair*. The four minute showing on Channel 9 prompted phone calls from people who had seen 'Harry Edwards' on TV, (It's quite amazing how people confuse me with the Skeptics' elder statesman, it'll be at least another twenty years till I look that ancient!)\* and who complained about receiving telephone bills amounting to several thousands of dollars after using the tele-psychic hot-line services. (One victim told us of trying to save her marriage with advice from tele-psychics and ended up no better off and with a phone bill for \$15,800, a sum that would have allowed them to fly first class to visit the very best marriage guidance counsellor, anywhere in the world.) This information was passed on to *Today Tonight* for inclusion in their proposed in-depth coverage.

*Today Tonight's* promo advertising the story appeared several times over a period of three days prior to featuring it on Monday, June 10. It was given good coverage in so far as it exposed the fraudulent activities in Melbourne - the ease with which one can become a psychic hot-line operator without any pretence to having psychic abilities; the scripts used, and the enormous telephone bills received by clients as a result of deliberately prolonged readings given by the operators. Kathy Butler, our representative in Melbourne who infiltrated the principal business operating in that city, appeared twice to make brief statements. It was also mentioned that she had infiltrated one of the hot-line services although the proprietors of that particular busi-

ness were not interviewed. The scam operating in Sydney was not mentioned, possibly because *A Current Affair* had already covered the subject. I was not interviewed nor quoted, and the presentation was formatted to give the impression that the investigation was undertaken solely on the initiative of the producers of Channel 7's *Today Tonight* programme.

In reality, it was a condensation and re-enactment of a six month investigation undertaken by Australian Skeptics. Despite prior assurances given by the producer that Australian Skeptics would receive considerable publicity, we received little, and no credit or acknowledgement whatsoever was given to Australian Skeptics for the original idea, the information provided and the witnesses produced. However, the programme did a good job of getting the message across, and while the lack of publicity for our association was disappointing, we can take consolation in knowing that thousands of potential victims have now been warned and hopefully will take heed. This after all is what we are all about.

Following the publication of the June issue of *the Skeptic*, another radio interview ensued on ABC Radio Hobart and a piece appeared in the June 21 edition of the *Sydney Morning Herald's Stay in Touch* column.

We have also brought the matter to the attention of various state and federal authorities whose job it is to protect the public from consumer rip-offs. To date we have had little success in interesting these bodies in carrying out their duties, however, we have not been deterred and are proceeding with various actions that may well bring more satisfying results. More of this in future issues.

\* Not really surprising, given the film star good looks of both editors, Mr R Redford in the case of the Editor-in-Chief and the late Mr L Chaney in the case of the Editor-in-Ordinary.

That aside, we are frequent recipients of letters addressed to either Harry Williams or Barry Edwards. The confusion is not ameliorated by the fact that both Editors' family names indicate Cambrian antecedents (or pre-Cambrian in Harry's case).

So much confusion reigns in fact that we once convened a meeting in the Editorial Suite (not to be confused with the Editorial Sweet, one Mlle Fifi la Douce), to consider the proposition of ending the confusion by using our middle names as *noms de editor*. This compromise was ultimately rejected on the grounds that even an enlightened readership might draw some stereotypical inferences from a magazine edited by Justyn and Cecil. **BW**

## SCIENCE V COUNTER-SCIENCE

## An Agenda for the New Battleground

Dr Peter Pockley

**Summary**

Despite a greater willingness among scientists to communicate with the wider public, they seem largely unaware of the danger to the scientific enterprise from a multi-pronged anti-science movement. While most reports in the media are positive about science, these seem inadequate for reversing the scepticism, the latent hostility, and, in some cases, the outright opposition directed against science. Much of this anti-science is associated with the counter-culture and is better classed as 'counter-science'.

For scientists whose work is grounded in the well-founded belief of the predictability of inanimate matter and life according to the continual refinement through observation and experiment of laws of nature and mathematical logic, it is perplexing to confront people who happily buy and apply the fruits of research in their daily lives and, yet, who reject the tenets of science. It is not sufficient, however, for scientists to dismiss their disbelief as irrational and to find comfort in the mutual support of colleagues. An effort must be made to comprehend a different world view and to debate it.

In the community at large there is an astonishing range and penetration of counter-scientific beliefs, for example, in the billion-dollar 'alternative medicine' industry and the healing power of crystals. Fundamentalist groups promote creationist, anti-evolutionary beliefs especially among the young. Australia has yet to experience the full force of the philosophical, ideological and moral moves against science among sections of academia overseas. These movements get favourable treatment in the media and weaken the position of science in the realm of public finance, where politicians keep the purse strings tight under the antithetical influence of 'economic rationalism'.

Publicity of scientific achievements through the media is useful but, by itself, inadequate. The scientific community has placed excessive faith in the power of the news media to carry their insights and messages to the wider public. The media should not be treated as a sufficient, constant, obedient mouthpiece for science.

Scientists need to appreciate the historical roots of their image problem, stemming from stereotypes which have persisted over centuries in popular culture and from the dark side of science. The figures of 'Doctors' Faustus, Frankenstein, Jekyll and Strangelove may be fictional but they are so powerful they have become synonymous with the alleged characteristics of scientists as dangerous, unreliable, authoritarian, secretive, impersonal and amoral.

The time has come for scientists to become more self-aware and well-informed about their critics. The responsibility for mounting a credible, skilful counterattack - on national and international fronts - rests squarely with practising scientists and their professional groups. An agenda

of ways for the scientific community to change gear and direction and to seize the initiative is suggested.

**Promoting public understanding of science - a change of gear and direction.**

In recent years there has been a greater willingness among scientists to communicate with the wider public. Channels have been opened by a talented and dedicated group of specialist science reporters in all media. Most reports in the media are positive about science. When presented well, there is huge popularity for science-based stories in all media, as those of us in the thick of it know well.

That science does 'sell' is shown by the commercially successful magazine, *Time*. Out of 39 issues of *Time* from 1 January to 9 October 1995 a whopping 21 of the covers (54 per cent of all issues) have promoted major feature articles having a science-based theme. This does not take account of the large number of other science stories in the same and other issues. Australian media do not rival *Time*'s prominence for science. We don't do too badly, but the coverage of science here, as in most of the English-speaking world, seems to have reached saturation point as far as editorial agendas go. It will be hard work to sustain this level, let alone achieve any significant increase of volume and range.

While there is scope for some expansion in the media, overall, it is my view that we should not entertain unrealistic expectations of greater attention for science in the near future. Where coverage in the media is weak scientists should organise themselves to strengthen it. They should not take for granted that media attention will be sustained of its own accord. As far as changing public perceptions of science is concerned, the media avenue will support only fractional changes to the understanding of science's way of studying the world and applying the findings to human welfare.

The time has come for a change of gear and direction. Promoting a broad public understanding of science is more far-reaching than a passive 'awareness' of science for which there has been a paltry government scheme in Australia (increased slightly in the government's Innovation Statement on 6 December 1995).

The new direction points scientists towards reversing the scepticism, the latent hostility, and, in some cases, the vociferous opposition directed against science. The gear change is to an assertive campaign by practising scientists, including budding professionals. The media are important players and all schemes must incorporate them, but scientists should not deflect their central responsibility to the media ('blame the messenger!') when the solution lies squarely in their own court, in their own personal commitment and professional involvement.

### Why promote science?

Sharing scientific insights and unsolved problems with the wider public should be second nature to scientists and should not be treated as something special or exclusive to the professionals. Scientists need to be seen as holding true to their ideals and placing their communications strategy on the high ground where they can truly engage the interests of 'everyperson'. It is no accident that stories about the 'big questions' of origins and futures are among the most popular with the public. The burgeoning of popular books by distinguished scientists who write about science in a highly literate, broadly cultural context provides some signposts. Encouragingly, as they provide role models close to home and at the highest level, several of these authors are Australian or have close Australian connections, for instance:

- Dr Tim Flannery of the Australian Museum in Sydney on sustainability of Australia <sup>1</sup>.
- Professor George Seddon of Western Australia, whose environmental history of the Snowy River won the 1995 Eureka Science Book Prize <sup>2</sup>.
- Professor Richard Dawkins of Oxford University on a Darwinian view of life <sup>3</sup>.

An interesting twist is the number of writers now tackling, in a wider context, the once-thorny relations of science with mainstream religion, a topic of great fascination which provides scientists with avenues of contact with the general public. While there is no consensus among scientists or between them and theologians, there is now more dialogue than dissension and crossing the divide no longer seems an impossible jump. Read, for instance:

- Professor Robert Hanbury Brown, astrophysicist formerly of the University of Sydney <sup>4</sup>;
- The Rev Dr John Polkinghorne, theoretical physicist and ordained Anglican President of Queen's College, Cambridge <sup>5</sup>;
- Professor Charles Birch, biologist formerly of the University of Sydney <sup>6</sup>;
- Professor Paul Davies, mathematical physicist of the University of Adelaide <sup>7</sup>.

### Counter-science

Under the term 'anti-science' several oddballs are evident. Following is a selection:

Aerobic oxygen	Iridology
Alchemy	Kirlian photography
Alien abductions	Horoscopes
Alternative medicine	Noah's Ark
Aroma Therapy	Numerology
Astrology	Ouija
Auras	Palmistry
Biorhythms	Parapsychology
Channelling	Perpetual motion machines
Clairvoyance	Psychic powers
Creationism	Psychic surgery
Crop circles	Pyramid powers
Crystal power	Spoon bending
Divining	Tarot cards
Extra-sensory Perception	Telekinesis

Extraterrestrials  
Flying saucers  
Fortune telling

Telepathy  
UFOs  
UFO cover-up conspiracies

Many of these are harmless enough, some are confined to a few believers, but others are virtual cults and moneymaking industries. Commonly they reflect the emerging counter-culture and, taken together, we may more appropriately label this significant segment of the anti-science movement as 'counter-science'.

Typically, the promoters of 'counter-science':

- draw on a smattering of science to give them credibility;
- add a strong dose of semi-religious belief in unusual powers;
- get the science wrong once they move past their level of knowledge;
- cite phenomena which 'science cannot explain';
- give pre-eminence to 'feelings' as reason for dismissing the scepticism of mainstream scientists;
- use very few anecdotes to claim remarkable results;
- have not subjected their claims to rigorous testing; and
- blame any opposition on a conspiracy of institutional interests.

Most 'counter-science' fits into, and forms a plank of, the so-called 'New Age' philosophy about which there is a flourishing literature and business. Some aspects, such as creationism, fall into the camp of religious fundamentalism which has a large number of adherents.

It is strange there is so little evidence of scientists taking notice of the astonishing range and penetration of these beliefs in the community at large. As a whole, scientists in Australia seem largely unaware of the danger this multi-pronged movement presents to the scientific enterprise. It is all too easy to laugh it off, when it demands critical attention and should not be lightly dismissed.

Some have suggested that a life in science can be so engrossing and fulfilling that there is no room left for other contemplations by its practitioners. I'm not so sure about that. Scientists can be as widely read and accomplished in non-scientific pursuits as any group of professionals. The reason may be more that academic credit is not given by colleagues to those being seen to deal with non-science seriously. I suggest, though, that it does matter greatly. Scientists should be placing mirrors before science itself, answering the sceptics and critics of science and showing that scientists are not isolated or arrogant - that they do care about what people think of them.

Here is a very fruitful way of involving young, up-and-coming scientists in the debate. As lecturers, you could give each of your honours students a project of documenting the claims of one of the counter-scientific groups, making personal contact with them and formulating answers which can be shared and developed with others in open debate. The project would be worthwhile, intellectually challenging and a lot of fun.

In Australia public challenges to the proponents of counter-science have been left almost entirely to the Australian Skeptics, a body comprised of critics who,

largely, are amateurs (in the best sense of the word). They act free of institutional restraints and (I speak of them as a non-member) should not to be dismissed as cynics. Harry Edwards, Secretary of the Skeptics, has published a little volume on the subject which is a useful starting point <sup>8</sup>.

For a chemistry audience, I've chosen two appropriate examples for brief comment - 'alternative medicine' and the fad for healing crystals.

### Alternative medicine

The greatest penetration of the community from counter-science stems from 'alternative medicine' which is clearly popular and is now a substantial industry (*The Sydney Morning Herald* recently estimated its value at over \$1 billion annually). Proponents of acupuncture and chiropractic have persuaded three universities in NSW (one of which has a medical school) to add respectability to the practices by providing fee-paying courses, while naturopathy is being proposed at two other universities.

I am informed by Dr Richard Gordon, a General Practitioner working on Sydney's North Shore and a member of an AMA committee monitoring 'alternative medicine'\*, that there are several GPs in his district who offer their patients 'alternative' therapies and/or support the work of naturopaths in integrated 'health clinics' by ordering pathology tests for them which, otherwise, would not be permitted under Medicare. These doctors, supposedly, were well trained at university in science-based medicine and subsequently have access to the latest findings of clinical research. But, Dr Gordon knows of at least eight of 400 GPs in his district who are involved in these practices and believes a survey could find more than 15 per cent.

Little is known of these doctors' motivations and their personal beliefs about the practices, let alone about the outcomes of 'alternative' therapies as compared with science-based methods. The National Health and Medical Research Council advises it has no information to offer on 'alternative medicine'.

Dr Gordon has studied the practices of naturopaths and homoeopaths and debated with them. He concludes their treatments are basically palliative and claims for benefits to patients are largely anecdotal and are likely to be short-term, placebo effects. He says, while it is really up to the proponents of 'alternative medicine' to prove their case, not for others to disprove it, it is long overdue for a thoroughgoing investigation into their well-publicised claims.

Anecdotal claims are notoriously unrepresentative of the population when compared with greatly more reliable double-blind trials performed on a large-scale. Journalists, then, should be critical and cautious in reporting 'alternative therapies', just as they expect any new science-based drug or clinical practice to have been expertly and exhaustively tested.

### 'Healing' crystals

In a street close to where I live, there are two thriving shops specialising in crystals of quartz and other minerals and polished coloured stones. One is a substantial warehouse importing nearly all its crystals from Brazil. Promoting

'crystal power' in the name of science is big business and, yet, few Australian scientists (Professor Ian Plimer, quoted below, is one) are taking the crystal people seriously and exposing the claptrap they peddle.

I let their literature speak for itself (the quotes are verbatim):

*"Today research has shown that crystals are superb amplifying reflectors capable of vibration. Science has shown how effective quartz crystal can be as an energy boost.*

*"As we are walking powerhouses, crystals are important agents in harnessing our energy to heal and nurture and enhance our spiritual, psychic and intuitive faculties.*

*Crystals are very old - very often millions of years old. And the traditions associated with them are many and ancient. The tremendous growth in popularity of crystals in recent years simply reflects the necessary resurgence of that ancient way of knowing.*

*"Crystals have electromagnetic power - or piezo electric properties. This can intensify the human electromagnetic field - or aura - that we all have, helping to clarify thoughts, channel energy and heal. The flow of electrons through the crystal combined with its ability to resonate with, amplify, and transmute your own personal energy shows how crystal can be such a powerful and positive energy tool for working on the human mind, body and soul.*

*"Crystals can clarify your thoughts, increase your physical energy, create emotional balance, enhance your intuition and creativity, and heal your body.*

*"As tools for higher consciousness, crystals are particularly effective, for they can be programmed to vibrate in sympathetic harmony with human energy.*

*"You can dedicate crystals to anything - to healing, empowering yourself, to increasing your intuitive powers. They can be dedicated to such things as keeping your home in balance, keeping it safe and generally enhancing the energy of those who live there. You can also dedicate them to support you to achieve a very specific outcome or goal, such as getting a new job, or a new car.*

*"Dedicating a crystal requires you to concentrate your own thoughts into the crystal so that its energy is directed along with your own to help you achieve your goals. Before dedicating your crystal, first cleanse it. Hold the crystal in the right hand and place the right hand in the left hand. Concentrate on visualising your goal and imagine it projected into the crystal. Also speak your goal aloud into your crystal. It's important when dedicating a crystal to include all details, including by what date, year and how much you want, location, etc. When the programming is completed, the crystal is either worn on your body or put in a silk bag or a purse close by. Crystals are like tape recorders from this point of view, they will keep repeating the vibrations indefinitely which means you can keep your dedication constantly active."*

### The forceful anti-scientists

The most visible anti-scientists in Australia are found in fundamentalist religious groups promoting creationist beliefs, especially among the young. This is one instance where some scientists have reacted to their campaign of

opposing the teaching of evolution in scientific education. The conflict with science has been dramatised by Australia's most vigorous opponent of creationism, Professor Ian Plimer, geologist of the University of Melbourne, winner of the 1995 Eureka Prize for Promotion of Science and author of *Telling Lies for God* <sup>8</sup>:

Science is wedded to evidence. The scientific view of our planet and Universe changes because of new evidence. In contrast, creation 'science' is wedded to dogma. Evidence must be fitted to a preordained unsubstantiated view of our planet and the Universe. Creation 'scientists' engage in blatant scientific fraud. They misuse their authority and distort scientific knowledge in an attempt to show that the Earth is only a few thousand years young and there was a 'Great Flood' ...

By demanding, as a democratic right, that creation 'science' be given equal time, the great weakness of democracy (ie tolerance) has been cleverly exploited. Creationists misrepresent scientific theories and scientists' motives, they suppress relevant evidence, and they unashamedly fabricate imaginary facts to support their dogma.

Even though scientists may believe they have won this battle on an intellectual plane (see, for example, Richard Dawkins' recent blockbuster book, *River Out of Eden* <sup>3</sup>), the hearts and minds of many young people lie elsewhere, as shown by surveys of first year biological students at the University of NSW where, persistently over nine years, there have been between 9 and 16 per cent who believe in the literal interpretation of the Biblical account of creation\*.

More worrying because it exists at the academic level alongside science-based faculties, there is a philosophical and ideological move against science. This has gained a firm hold among a vocal group in the humanities in the USA and UK. With the usual time lag, this act is waiting in the wings in Australia and will come on stage here, unless it is nipped in the bud.

This critique claims that science is only one way of comprehending the natural world, and a very imperfect one at that. In a more extreme form, reality is said to be only what is perceived by an individual. What research tells us about earth, air, fire and water, therefore, is transient. This means that the products of science, on which all of us, including the critics, depend for daily existence - telephones, cars, vaccines, safe food - are figments of individual imagination and that you and I can't rely on anything being certain or common between us. Heisenberg's Uncertainty Principle (which applies on the quantum scale) is cited as scientific support for imprecision at the human, global and universal scales. This may sound absurd, but associated with it is a damaging social and political attack. Scientists are bundled together as politically conservative, male-dominated, servile members of an industrial-military complex.

In sharp contrast to this:

- The work of chemists is grounded in the well-founded, repeatedly-confirmed belief that atoms and molecules behave in predictable ways.
- Physicists depend on their devices working because of the reliability on laws of nature and mathematical logic.

- The understanding of life by biologists and medicos is continually refined through observation and experiment.

For scientists it is perplexing to confront people who happily buy and apply the fruits of research in their daily lives and, yet, who reject the tenets of science. Without the reliability continually refined by research and application, life and society would tend to the chaotic.

In their book, *Higher Superstition*, Professors Paul Gross, a biologist of the University of Virginia, and Norman Levitt, a mathematician of Rutgers University, have recently taken apart the views of the 'academic left' of the USA and their quarrels with science <sup>10</sup>. Within the academic left, hostility extends to the social structures through which science is institutionalized, to the system of education by which professional scientists are produced, and to a mentality that is taken, rightly or wrongly, as characteristic of scientists. Most surprisingly, there is open hostility toward the actual content of scientific knowledge and towards the assumption, which one might have supposed among educated people, that scientific knowledge is reasonably reliable and rests on a sound methodology.

It is this last kind of hostility that scientists who are aware of it find most enigmatic. There is something medieval about it, in spite of the hypermodern language in which it is nowadays couched. It seems to mock the idea that, on the whole, a civilisation is capable of progressing from ignorance to insight, notwithstanding the benightedness of some of its members. We have the sense, encountering such attitudes, that irrationality is courted and proclaimed with pride. All the more shocking is the fact that this challenge comes from a quarter that views itself as fearlessly progressive - the veritable cutting edge of the cultural future. On the surface at least, the phenomenon is not a case of nostalgia. These critics of science do not repine for the traditional mores and devout certainties of a prescientific age. They accuse science itself of a reactionary obscurantism, and they revile it as an ideological prop of the present order, which many of them despise and hope to abolish.

A strand related to that identified by Gross and Levitt blames science for moral degradation of society. See, for example, British writer Brian Appleyard's highly-publicised attack in his book, *Understanding the Present* <sup>11</sup>:

The public image of science changed in our century. It changed because the smiling mask it had been wearing suddenly fell away to reveal a face that was as horrible as it was wonderful. Primarily this happened because science over the last hundred years has become so visible to so many. A technological explosion as well as environmental anxiety, nuclear weapons, mechanized total war and all the moral and political complexities of economic growth have put science at the centre of the public realm. It has been brought to trial before a new kind of jury - the jury of popular sentiment, whose verdicts are cruder and whose anxieties more politically potent than those of the philosophers. Suddenly, science's achievements can simply be viewed as crimes, its knowledge as sin.

Appleyard and company have recently been answered by another British writer, Michael Allaby, in his *Facing the Future* <sup>12</sup> but with much less publicity. Stating a positive

case does not make sensational news, showing the importance of not relying on the media as the sole channel to the public. Referring to how financiers find the uncertainty of curiosity-driven research highly unsatisfactory, Allaby says:

“There is a real chance that scientists may be able to discover the answers to some of the most searching questions: how life originated and how our own species evolved; how the universe began, whether or not it will end and, if so, when; whether we are the only intelligent beings, and our planet the only one, out of the countless billions that must be orbiting other stars, to support life of any kind. The story is but partly told and we cannot leave it there, for the rest to be fabricated by fools and charlatans. It is too important for that, and to reduce scientific research to no more than widget design is to trivialise both it and ourselves ...”

Until non-scientists can converse as comfortably about, say, cosmology or molecular biology, as cosmologists and molecular biologists do about novels or music, we can neither claim to be an educated, whole society nor can we embark on the next, most difficult step. This will require the unified culture to engage the problems generated by what has now become a third culture, composed of anti-rationalists and anti-scientists. Confronted with scientifically founded information about an objective reality whose existence all members of the newly unified culture accept, neosolipsism, ‘new ageism’, and cosy sentimentalism can be exposed as the vapid nonsenses they are.

All of these counter-science movements get favourable treatment in the media and weaken the position of science in the realm of public finance, where politicians keep the purse strings tight under the antithetical influence of ‘economic rationalism’ (which needs to be distinguished from the rationalism at the roots of science).

### **The enduring stereotypes of the scientist**

An excellent start for encouraging critical thinking and self-awareness about science would be for every science student (and older, established ones) to read a recent landmark study, published internationally, by an Australian scholar of English literature. Associate Professor Rosslyn Haynes of the University of NSW has documented the historical roots of the image problem faced by scientists and shown that the current stereotypes are not new, but have persisted over centuries in popular culture and stress the dark side of science<sup>13</sup>.

Myth prevails over reality. Whenever something scientific seems to go wrong, one-liners appear in the media about modern-day equivalents of ‘Doctors’ Faustus, Frankenstein, Jekyll and Strangelove. While the figures are fictional, they are portrayed as archetypes of scientists - dangerous, unreliable, authoritarian, secretive, impersonal and amoral. Stereotypes tend to feed on each other and, when embedded in popular culture, are exceedingly hard to live down. According to Haynes, there is a tradition of presenting scientists in literature and film as mad, evil or naive or as monsters - more frequently than as heroes.

As nuclear weapons scientists fade from public view (despite the best efforts of the French to revive them as

national saviours), the latest manifestation of this latent fear is seen in scare campaigns against genetic engineers. Haynes says genetic engineers are being attacked just as the medieval alchemists were for supposedly unlocking genies from bottles, or they are likened to Mary Shelley’s Dr Frankenstein creating monsters which get out of control.

Haynes, a former biochemist, is not one of the assertive group of ‘anti-scientists’ emerging in the humanities. Being married to an astronomer, Dr Raymond Haynes, she is very sympathetic to scientists and the image problems they face. According to her study, there are six enduring variations on the stereotype of the scientist:

- the stupid virtuoso;
- the unfeeling scientist who has reneged on human relationships and suppressed all human emotions (‘the most enduring stereotype’);
- the heroic adventurer;
- the helpless scientist losing control over discoveries or their application (as in war);
- the idealist working towards a utopia (‘the one unambiguously acceptable scientist’).

These lingering images of scientists are quite inaccurate, Haynes concludes, but are partly of their own making, having been born of their secrecy, arrogance, complex language and seclusion from society. She says the solution lies in less secrecy and more open communication of their lives and work.

### **The dark side of science**

I mention two aspects briefly. Each has made a deep impact on the public’s perception of science. Each challenges the scientific community for convincing explanations.

### **The science of death**

Scientists who are free to speak are loath to acknowledge the effect of so many other scientists who work in science directed, ultimately, at new and better ways of maiming and killing people, including nuclear weaponry (not only in France). Dr Bob Hunter, distinguished chemist of the University of Sydney, estimates that three-quarters of the world’s scientists are employed by governments in ‘defence’\*. The boundaries with ‘civilian’ science are becoming increasingly blurred. Protestations by academics of their non-involvement in defence make the family of science seem like a house divided.

### **Chemical disasters and industrial pollution**

Dramatic episodes of pollution have invariably involved the products of industrial chemistry and the fuel and mineral industries, which depend on chemistry. Chemists working in other areas have found themselves unfairly tarred with the brush of irresponsibility.

### **Science under suspicion**

I list here some of the factors which work against the public’s uncritical acceptance of the claims of science. Each has its origins in times past, making all the more relevant for science students the study of science in literature, history and current society. Just ask young people how they feel about:

- Secrecy and commercialisation - tarnishing the ivory tower of disinterested inquiry.
- Risk from experiments, especially with 'life' - genetic engineering.
- Fraud - the high priesthood betrayed.
- Covert suppression of politically damaging findings, especially about the environment - demolition of the ideal of open communication in science.
- Unrealistic or premature claims - eg (in chemistry) cold fusion, support for homoeopathy.

These dark and suspicious aspects of science are issues neglected in science education and popular communication to the peril of the long-term credibility of the scientific enterprise. See, for example, Professor Dorothy Nelkin of New York University on how the press covers science and technology <sup>14</sup>.

Sir John Maddox has added his weighty voice in one of his last commentaries in *Nature* before retiring from 23 years as Editor in December 1995 # :

"Why, given all (the) benefits of health, wealth and wisdom, to which science has made such important contributions, does there persist the deep distrust of science we see around us? The standard answer is that science and scientists have in the past made exaggerated claims of what innovation will do for the world at large, so that scientists are no longer trusted. There is something in that charge, but what are called the 'false promises' do not account for the continuing distrust of science ...

Technical people have three lessons to learn from the recent history of innovation. First, they must be ready to moderate their enthusiasm for new ideas with an awareness of the difficulties of turning them into reality.

Second, the difficulties may not be technical at all, but social; the brightest ideas (thermonuclear fusion, perhaps) may prove to be uneconomic, others may be practicable but unacceptable for other reasons.

Finally, the enthusiasm of researchers for their discoveries can easily appear as a kind of triumphalism. The nuclear power saga of the 1950s may be one illustration; molecular genetics is at risk of becoming another ...

Although the 'false promises' charge may not be the wellspring of distrust, giving hostages to fortune by over-optimism must be avoided at all costs ..."

It seems important that people at large should be helped to a deeper understanding of what the scientific process is like. It's not a matter of education in the simplest sense - knowing the structure of DNA, for example - but of understanding the necessarily tentative character of scientific conclusions, or theories, which all begin life as hypotheses."

### **Countering the counter-scientists - first know your opposition!**

It is all too easy to dismiss members of counter-science groups as harmless, misguided fruit loops. Put together however, they do constitute a significant section of our supposedly educated population. Their misinterpretation of science, and their consequent lack of support for it, should be a cause of serious concern. The alternative medicine industry now provides a large base for promoting

disbelief about science in the community. The philosophical, ideological and political attacks are harder to answer, especially when they work from the same academic institutions as the scientists.

Professor Ben Selinger, well-known chemist of the Australian National University and public promoter of chemistry, put it to me at the ANZAAS Congress in September 1995: "It is easy for scientists not to realise how narrow their social group can be. Chatting with colleagues in the tea room about how the rest of the world is wrong does not help one to see how other people actually behave". Selinger says that arts students get more training in critical thought than those in the sciences, which can leave the latter group floundering in debates.

This is reinforced by Professor Gerald Holton, physicist and historian of science of Harvard University, in his recent seminal analysis, *Science and Anti-Science* <sup>15</sup>. Holton urges scientists to recognise that their opponents entertain totally different world views and to make an effort to comprehend and answer them. He shows it is not sufficient for scientists to dismiss their opponents' disbelief as irrational and to find comfort in the mutual support of colleagues. His concluding warning:

"History records that the serious and dedicated portion of the anti-science phenomenon, when married to political power, does signal a major cultural challenge. At its current level, this challenge may not be an irreparable threat to the modern world view as such. But it cannot be dismissed as just a distasteful annoyance either, nor only as a reminder of the failure of educators. On the contrary, the record from Ancient Greece to Fascist Germany and Stalin's USSR to our day shows that movements to delegitimize conventional science are ever present and ready to put themselves at the service of other forces that wish to bend the course of civilisation their way - for example, by the glorification of populism, folk belief, and violence, by mystification, and by an ideology that rouses rabid ethnic and nationalistic passions.

In short, it is prudent to regard the committed and politically ambitious parts of the anti-science phenomenon as a reminder of the Beast that slumbers below. When it awakens, as it has again and again over the past few centuries, and as it undoubtedly will again some day, it will make its true power known. To comprehend this is one of two steps towards framing a cogent response."

The other step is for scientists to become more self-aware and more self-critical about their own place in the wider scheme of things. Professor Ian Lowe of Griffith University argues that courses about the place of science in history, philosophy, ethics, economics and politics should be an integral part of the education of students in science and technology. He laments that only three or four universities in Australia (out of 36) offer such courses.

On how a low political standing stemming from a lack of well-informed and vigorously independent proponents for science, can adversely affect institutions and the practice of research, we only have to look across the Tasman to New Zealand. There, massive 'reforms' were inflicted by the government over a short space of five years (initiated by the Labour Party and concluded by the National Party, sharing a similar agenda). New Zealand science agencies,

notably the Department of Scientific and Industrial Research, were torn apart and, in effect, 'privatised'. A high, international regard for New Zealand researchers and their organisations was no bulwark against the headlong implementation of a monetarist ideology which lumped science with all other services of the state which had to return quick 'outcomes' or go under.

### Limitations of the media

Interpreters like Richard Dawkins demonstrate how science is an integral part of the cultural landscape<sup>3</sup>. But, as far as editors and other 'gatekeepers' in the popular media are concerned, science is not part of cultural, or even economic and political reporting; it is simply something which is covered by their science reporters.

The long-awaited Innovation Statement of the Australian government did generate coverage from general political reporters, economics and business writers, but this appeared to be a fresh discovery from agenda-setting writers and commentators who might have been expected to have recognised the importance of research and development to the long-term competitiveness of Australian industry and services. This reflected the confined nature of personal contacts and limited influence the scientific community (organised and individual) have within politics and the non-specialist media. Scientists were unable adequately to communicate their case and concerns for the support of basic research where and when it mattered most.

We have some talented people staffing the science round in Australian news rooms, but, when the chips are down science does not rate highly in the journalistic pecking order. The environment round is more influential, being treated as a running story, political and full of conflict. Witness the debasement of the term 'ecology', after it had been captured from scientifically respectable biology, converted into a belief system and attached to a political crusade.

To my knowledge over three decades of involvement with the media, no science reporter has ever risen to editorship of a newspaper or head of a broadcasting organisation in the English-speaking world, certainly not in Australia. When science gets a rubbishing in the media there is nobody to go to other than the science reporter when the fault mostly lies elsewhere (with editors and sub-editors). When science coverage suffers a significant cut in a newspaper, or is threatened even on the ABC, what have scientists and their organisations done or said?

The media are now highly dependent on the fruits of research for collecting and disseminating news and entertainment. Where would they be without electronics and communications technology? But the media seem curiously unwilling to demonstrate this to their readers, listeners and viewers through the content of their publications and broadcasts. In supporting this, editors seem, perhaps unwittingly, to be reflecting the views of the great bulk of the population who will happily buy and apply the fruits of research but don't acknowledge their debt. They may claim they have no need to know how 'the system works when science and technology are served up on a plate and made so user-friendly.

Fixing it when it goes wrong is someone else's prob-

lem. An awareness, an appreciation, an understanding even, of science is seen as irrelevant and hard work. (Learning to operate a personal computer or surfing the Internet is not a training in science.)

Scientists and their institutions, then, have become much too focused on coverage in the media as measures of their communicating with the public and of their public 'accountability'. And when dealing with the mainstream media they have been overdependent on channelling stories through dedicated science journalists - of whom there are few (compared with the small army of 'corporate' public relations staff trying to attract their attention).

Counts of numbers of stories on science in the media and of how many people believe the Sun goes round the Earth, as conducted by government, are too simplistic and give no measure of the impact of science coverage on perceptions and understanding in the general community.

### Independent critique of science needed

Nowadays, science is almost entirely an institutional and corporate activity and its presentation to the public has been mediated through, in effect controlled by, public relations imperatives of employers. These are seldom driven exclusively by science (university public affairs departments, for instance, are responsible first to the administration and also have to serve faculties other than the science-based).

On the national, indeed the international, front there has been a piecemeal approach to the presentation of science to the public through the media, driven by a sense of unrelated 'spot' stories.

The political agenda of influencing grant-giving is not far away, too, and science reporters are too easily seen by scientists, by institutions, by professional groups and by their editors - as agents of a scientific lobby

The neatly predigested and skilfully distributed 'press release' works well (measured by column centimetres and air time gained) but the *processes* of science are not covered. A researcher in this institution and his or her project might get wide coverage in the media today; next week it is someone else's turn. Over a period, an institution with a high strike rate in the media call feel satisfied that *its* name has been well publicised, but as far as a broad field of science is concerned, there is seldom any continuity of coverage, let alone of understanding.

The institutional promotion of science and the current style of its reporting appear interdependent, being reinforced by the type of prizes offered for science reporters which are dominated by awards for 'spot' stories, which may have been simple rehashes of handouts. There is no encouragement for sustained coverage or truly independent investigation, interpretation and critique of science.

This gives added point to Professor Peter Cullen's complaint, from within science itself, that there is little discrimination about the quality of environmental research used to back the claims and counter claims of opposing groups in the highly politicised arena of environmental policy.

"Geoffrey Leeper (ANZAAS Congress, Perth, 1947) argued that failing to criticise flawed work does science a disservice. Referees, editors, research managers and researchers do have an obligation to maintain and

improve the quality of environmental research done in Australia. And yet a cursory glance at many of the Environmental Impact Statements produced and accepted each year suggests that the spirit of scientific criticism is dead, or that the agency staff responsible for accepting such documents are incompetent or dishonest ...

“Bad research is worthless and will not lead to useful outcomes. Even worse, people might stop looking for better ways because they know a project is already under way. The challenges for the funders of research, research managers and for researchers is to recognise and foster excellence that will lead to new knowledge and hopefully some benefit to the community.”

### What to do?

I have lost count of the number of conferences I have attended and consultations in which I have participated when scientists have concluded that ‘communication is a problem’ and, after asking ‘What can we do?’ and agreeing to ‘do something’, their resolve has evaporated.

Yet there is a large array of activities from which individuals and groups can select according to interests and capacities. I first presented some strategic proposals 12 years ago<sup>16</sup>. Several of the schemes outlined then have been put into practice but much more remains to be done. Following is a more recent menu, still only a start and far from comprehensive. All of the items are entirely practical and would be quick to implement.

### Schemes

**Media Fellowships:** This scheme gives practising scientists the opportunity of spending a few months working alongside a specialist science reporter inside a media organisation. Such schemes have proved exceptionally popular in the UK and USA where they are well established. Fellows learn about practical communication and, during their work experience, are thrown in at the deep end by reporting and broadcasting over their own names, under the pressure of deadlines. Most surprise themselves by performing well and return to talk of demystification of the media with colleagues. The scheme requires financial support for administration and salary supplements for those Fellows who have to take unpaid leave.

**Science Writers in Residence:** Working in the reverse direction, universities and research institutions can invite established science writers and broadcasters to experience the scientific process at first hand over six months to a year. The value of this scheme, well proven in the UK and USA, emulates the writers and scholars in residence schemes common in the humanities.

Academics and researchers benefit from the critical insights, in seminars, courses and writings, of independent observers in their midst. The writers and broadcasters relish the opportunity for absorbing a field of science in depth and away from the pressure of regular deadlines. Invariably, long-term relationships are established and the writers emerge with material for substantial contributions in articles, books or programs.

**Chair of Public Understanding of Science:** It is timely for an Australian university to learn from the successful experience of the UK’s two Professorships of Public Un-

derstanding of Science and adapt them to our circumstances and needs. The chair would give focus, depth, intellectual standing and a role model for the practice, study and development of communication by scientists in the nation.

The two UK chairs differ in scope and neither necessarily provides a complete model for Australia. Dr John Durant’s appointment at the University of London, for example, is jointly held with his senior post at the Science Museum of London. He has made a speciality, with Dr Jon Miller of Chicago, of studying the levels of ‘scientific literacy’ in many nations.

The recent appointment at the University of Oxford of biologist and writer, Dr Richard Dawkins is an example of backing a star name. A prolific and best-selling author of science books, Dawkins was personally targeted by an American benefactor who has given him the freedom to extend his promulgation of science without the burden of teaching and administrative commitments.

**National prize for science communication to reward long-term contributions:** There needs to be one high-level award for professional journalists which is not confined to spot stories or a particular discipline.

### Personal involvement

Go for the big picture! Identify how your research fits into the major questions of science. Whenever talking out your work, relate it to the wider realms of science and human affairs.

Values of long-term, basic research: Identify and expound these, with illustrations, never assuming them to be self-evident. Dispel the impression that you are motivated primarily by the search for public funding or the (false) promise of quick financial returns.

Become self-aware about science and confront the opposition to science with confidence. Articulate the ideals and values of science and contrast them with contrary tendencies in society.

Investigate the (often hidden) opposition from counter-science and assertively argue why their proponents are wrong. Do not be left behind by default or on the defensive.

### Cooperation

Combine forces across the spectrum of research, application and scholarly endeavour. Work in tandem with technologists and engineers persuading them of a common purpose. Embrace the humanities and social sciences, too, in the cause of promoting excellence. There is much more in common between all intellectual fields than differences (The recent formation of a forum of the four Australian Academies - Science, Technological Science and Engineering, Social Science and Humanities - is a worthy start which should be carried through to institutional, departmental and individual levels.)

### Education

Contextual and historical studies of science and issues about science should be made an integral part of all courses (even at the expense of some science content).

Training in critical thinking and communications skills of writing and speaking should be provided for postgraduates and staff to develop the disciplines of clear expres-

sion and debating skills, including practice for participating in the media. Young scientists must become well informed about science in general *and* its opponents and become confident enough to engage with sceptical peer groups. Older scientists need to catch up, too.

School mentors: Organise a program of mentors, who will regularly visit schools and bring students to laboratories. Involve honours and graduate students as role models in this educative process.

### Professional organisations

Provide *active* support for generalists and communicators. Encourage colleagues to relate findings across all fields of science. Release them from administrative chores to give them time for developing their ideas and instituting outreach programs. Allow them to flourish as characters without penalty to their careers. Reward the best with promotions and prizes.

Recruit informed spokespeople to be seen as part of the debate at every opportunity not only in the media but also in the wider community. Actively offer yourself to speak at schools, churches, service clubs, business conferences. Don't wait to be asked.

### Media

Learn who are the gatekeepers and persuade them to take science more seriously. The ABC only began science programs in 1964 as a result of such lobbying by the Academy of Science. Now, there is no group of professional scientists lobbying in support of science in the media. Don't expect an occasional letter to an editor will have much effect. If you keep silence until a crisis arises you will appear reactive and ineffectual.

Make science a part of popular culture: Get to know the writers and producers of film, TV series and drama. Earn their respect by feeding them with well-prepared story lines and characters from science. There is a wealth of ideas available but they are unrecognised by the non-scientific community. Being untapped by popular culture, scientists are prone to being lampooned as oddballs or stereotyped as suspicious or dangerous.

The personal approach is best: Journalists cherish personal contacts. Supplement institutional public relations channels with your own informal contacts. Don't rely solely on media releases.

Congratulate reporters and their editors on good reporting but protest at cuts to coverage and point out, constructively, whenever reporting is inaccurate or inadequate. Contribute, yourself, to the general feature pages of the press: Writing over your own name requires practice and persistence. Don't leave it for others or depute it to intermediaries.

There is much which can be done!

### References

1. The Future Eaters - An Ecological History of the Australasian Lands and People, Tim Flannery, Australian Museum (Reed Books, 1994)
2. Searching for the Snowy - An Environmental History, George Seddon (Allen & Unwin, 1994)
3. River Out of Eden - A Darwinian View of Life, Richard Dawkins, University of Oxford (Weidenfeld and Nicholson, 1995)
4. The Wisdom of Science - Its Relevance to Culture and Religion, Robert Hanbury Brown, formerly of the University of Sydney (Cambridge, 1986)
5. Science and Religion, (based on the New College lectures, University of NSW, September 1995) John Polkinghorne, Queen's College, Cambridge (Cambridge, in press)
6. Feelings, Charles Birch, formerly of the University of Sydney (University of NSW Press, 1995)
7. The Mind of God - Science and the Search for Ultimate Meaning, Paul Davies, University of Adelaide (Simon and Schuster, 1992)
8. Skeptoon - An Illustrated Look at Some New Age Beliefs, Harry Edwards (Harry Edwards Publications, 3 Nullaburra Rd, Newport, NSW 2106, 1994)
9. Telling Lies for God - Reason versus Creationism, Ian Plimer, University of Melbourne (Random House, 1994)
10. Higher Superstition - The Academic Left and its Quarrels with Science, Paul Gross, University of Virginia, and Norman Levitt, Rutgers University (Johns Hopkins, 1994)
11. Understanding the Present - Science and the Soul of Modern Man, Brian Appleyard (Picador, 2nd ed, 1993)
12. Facing the Future - The Case for Science, Michael Allaby (Bloomsbury, 1995)
13. From Faust to Strangelove - Representations of the Scientist in Western Literature, Rosslyn Haynes, University of NSW (Johns Hopkins, 1994)
14. Selling Science - How the Press Covers Science and Technology, Dorothy Nelkin, New York University (W.H. Freeman, revised ed, 1995)
15. Science and Anti-Science, Gerald Holton, Harvard University (Harvard, 1993)
16. A National Program for the Public Understanding of Science, Peter Pockley, ANZAAS Congress, Perth, 18 May 1983 ■

# Become a Badge Wearing Skeptic

See full details on page 67

## COMMENT

# Creationist Misquotation Shock!

Barry Williams

While it's always pleasing to find one's words quoted in another publication, **John Stear**, Secretary of the Gold Coast Skeptics, might not be flattered that his letter in our last issue, "Religious Timidity", on whether the Skeptics should take a position on religion, has been widely quoted in *Creation Prayer News*, published by the oxymoronically styled Creation Science Foundation, of Brisbane. And it was quoted at length, without the courtesy of asking our permission, may I add.

If you have never been subjected to a copy of this worthy journal, then you should be thankful for small mercies. Suffice it to say that if the Walkley Awards Committee ever decides to institute a category for Turgid Sanctimonious Drivel, then we will be overjoyed to forget our previous differences with this publication and nominate the editors of *Prayer News* for the inaugural accolade.

Titled "Even an atheist can see it!" and written by Dr Carl Wieland, Managing Director of the CSF, the article begins with a lie - "Sometimes what atheists write in their own journals is what Christians need to hear." John may or may not be an atheist, that is his own affair and of no concern to *the Skeptic*, but *the Skeptic* is not an atheist journal, as was clearly pointed out in my reply to John's letter. If John Stear is an atheist and if our publication of his letter makes this an atheist journal, then by application of Dr Wieland's own logic, we are also a creationist journal, because we have published letters from Dr Wieland in the past (a facility that his publication steadfastly denies its critics). The mere thought is enough to make the flesh creep.

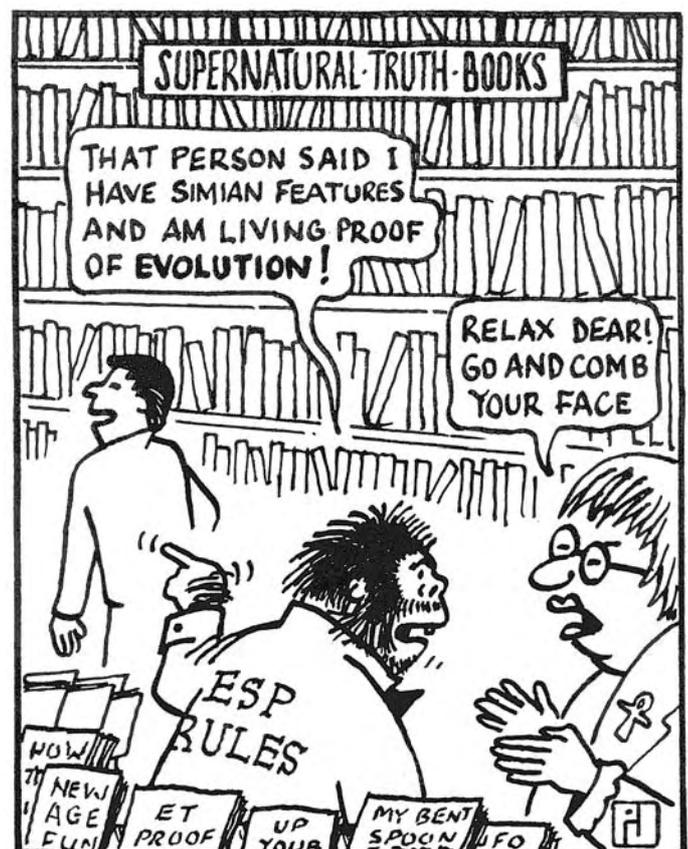
I was not a little tickled to see that my response to John was described by Dr Wieland as "very long and waffly". This is no doubt a tribute to the fact that I used several words of more than one syllable, an almost insuperable barrier to anyone of a creationist bent. I was moved, however, to search out something that immediately sprang to mind on reading this slight to my literary capabilities and there it was; *Matthew, 7:3* "Why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye". Say what you will about the Bible as a science textbook, it remains an unparalleled source for the apposite quotation.

Curiously, the article wasn't really an attack on the Skeptics, but consisted of a characteristically restrained diatribe against those of Dr Wieland's fellow Christians who are knowledgeable enough to recognise his childish dogma of creation 'science' for the load of vacuous tripe that it is.

It did nominate Australian Skeptics as a leader in the fight against creationist teaching, a label we are proud to acknowledge but, in the usual way of this publication,

Wieland then went on to claim that we "for tactical reasons have chosen to avoid 'front-on' attacks on Christianity, hoping to enlist the support of 'liberal' Christians." I suppose that for someone who believes he gets his ideas directly from God, the concept of reading the minds of mere mortals is a doddle. But his ESP faculties are not as good as he imagines, because Australian Skeptics has made no such 'tactical' (or even strategic) decision to avoid attacks on religions for whatever reasons might inflame his fantasies. We simply avoid embroiling ourselves in issues that are not amenable to resolution by scientifically valid tests. Given the fatuity of his regular pronouncements of the thoughts of his deity, one would be tempted to suppose that Dr Wieland's messages from that source are equally flawed, but it is not for us to say.

It doesn't seem to have occurred to Dr Wieland that we do not oppose his outfit because of their *religious* beliefs. We oppose them because creation 'science', (probably not the silliest religious belief on this planet, albeit well towards that end of the spectrum) makes the risible claim to be science. We leave the exposure of the fatuity of their religious dogma to their fellow Christians, who doubtless are embarrassed to be seen in their company.



## INVESTIGATION

# Yellow Pages - Yellow Psychics?

Harry Edwards

## Introduction

Curiosity prompted me to look in the Sydney telephone directory's Yellow Pages to see how many listings there were under the heading "Clairvoyant." There were over fifty businesses and individuals ranging from hot line "live" psychics (are there any other kind?!) to tarot readers. All the advertisers, by virtue of the heading under which they advertised, were in fact, claiming to possess extraordinary powers of one kind or another.

It occurred to me, that if one earns one's bread and butter plying a specific trade or profession, then if called upon to produce some evidence that they have expertise in or are qualified in their calling, with the prospects of winning a considerable sum of money, there should be no reticence whatsoever. With over \$650,000\* as an incentive for any person who can prove the truth of a paranormal claim by submitting to a mutually agreed upon test conducted by James "the Amazing" Randi, I could not imagine anyone possessing genuine psychic powers hesitating for a moment before taking up the challenge.

There was one way to find out. Among the fifty or so, some advertised under a telephone number only, some ran two advertisements, and others such as the Australian Psychic's Association, Simon Turnbull and Shabnam Ramzan were, to all intents and purposes, a single source, consequently a preliminary letter (see box) was sent only to thirty of the advertisers.

## The responses.

The first cab off the rank was Josephine of Seven Hills, who left a message on the Skeptics answering machine. Despite the undeniable fact that the lady advertises under the heading of "clairvoyant", she denied having claimed such powers but did possess those of "natural healing". She added that she didn't make much money and resented the letter. I responded that "natural healing" was also considered to be paranormal and therefore she would be eligible to take up the challenge. Further, in view of her penurious circumstances, I was at a loss to understand why she should resent the offer rather than welcome it.

The challenge letter sent to Maureen Fitzpatrick of Bondi Beach, whose large advertisement proclaims that she is an "Established Clairvoyant", was returned unopened and marked insufficient address, despite the address on the envelope being exactly the same as that listed in the White Pages. I readdressed the letter to her last known office in Pitt St. Sydney, there has been no reply. (Ms Fitzpatrick incidentally, was mentioned in my "Lucky Numbers" exposé in 1989. (*the Skeptic* Vol 9 No 1).

John Clarke, proprietor of the Australian Astrological Centre, rang to say that he had been conducting Astrology

courses for over twenty years and evinced an interest in the challenge. In a letter to him, he was asked to state specifically what he claimed to be able to do, to enable a test protocol to be designed. The request was declined, but a further enquiry from Mr Clarke about the test details elicited the following response.

Mr Clarke claims to be a millionaire (though not through astrology); and revealed that he conducts a three year diploma course in astrology. He assumed that I know nothing about astrology. When again informed that he would be required to state specifically what he claimed to be able to do, we struck an impasse. Apparently I was mistaken in believing that astrologers claimed to make predictions and pronouncements, deduce character assessments or prepare "blueprints" (horoscopes) of one's life.

When taxed, Mr Clarke gave a brief outline of what he could deduce from a place and date of birth which virtually contradicted what he said originally. Using my place and date of birth he told me that I was "destructive!" In view of the facts, this seems to be rather antithetical. At school I was always top of the class in art; my favourite toy was a Meccano construction kit, and almost my entire adult life was devoted professionally to the design and construction of buildings. In my late teens however, perhaps my stint as an intelligence agent could be construed as 'destructive', but then at the time, so could have tens of millions of others engaged in fighting a war.

He also referred to my article "Quack Attack" (*the Skeptic* Vol 8. No 4) in which I exposed two astrologers - as "disgusting." I leave it to readers to decide whether it is more disgusting to expose fraud or to perpetrate it. Finally Mr Clarke said he would erect my horoscope (free of charge) and read it to me over the phone in about two weeks. When asked why he couldn't let me have it in writing he said it involved too many hours of work. Rather odd I thought in view of the fact that it has to be written out first to enable him to read it over the phone. Closer to the truth I would suggest, is that without the written evidence I would have to rely on a fallible memory to do an analysis.

Further, as Mr Clarke is aware of my age, origin, background and activities, he has the advantage of prior knowledge to aid him or influence any assessment. The horoscope reading over the phone never materialised, but at my invitation, Mr Clarke came to my house and we spent three interesting and productive hours discussing what my stars had to say about me. The conversation was recorded, and can be read in an accompanying article - "The Astrologer and I."

Mrs Winifred Crause of Sutherland, previously investigated in 1989 (*the Skeptic* Vol 9, No 1, p30) replied with the age old cop-out "For those who believe no proof is

necessary, and for those who do not believe no proof is possible." I responded with, "People once believed the world to be flat and that the sun revolved around the Earth, those who did not believe provided evidence to the contrary. Why are you so reticent to substantiate your claim to be clairvoyant?"

The Sydney *Sunday Telegraph*<sup>1</sup> ran a story based on my submission to them, with particular reference to Bridget Pluis. An interview followed with Ray Warren on Radio 2KY, and Barry Williams was interviewed by Brian Wiltshire on 2GB.

One month later, in the absence of any further responses, the following was sent to all those who did not reply to the challenge letter.

Dear Sir/Madam,

Further to our \$650,000 challenge for you to substantiate your claim in the Sydney Telephone Directory's Yellow Pages to be clairvoyant, psychic or to possess other extraordinary powers.

In the absence of a response we are left to assume that you are either unable or unwilling to do so.

As you may have a legitimate reason for not wishing to win a small fortune by undergoing a simple test, in fairness, and prior to making a public announcement of our findings, we now give you the opportunity to make known your reasons or excuses.

This little dig prompted some reaction.

Victor Voets, rang to say that he was a numerologist, not a clairvoyant (despite advertising under that heading), and that he has already proven scientifically the truth of numerology. He claimed to have had a prediction in a newspaper prior to the event which turned out to be correct. When asked what it was he replied, "I predicted that John Howard would win the election!" (The cheque's in the post Mr Voets, but don't hold your breath!)

Seven weeks later in response to my second letter, the Australian Skeptic's recycled envelope, was received containing a batch of clippings and promotional material. If one takes the material at face value, then Mr Voets must be one of the most outstanding psychics of the century. Among the claims made were, that Victor Voets is Australia's leading and internationally respected astrologer, numerologist, palmist, columnist, tarot reader, psychic consultant, writer, teacher, seminar presenter, healer and multilingual TV and radio personality. (Aren't they all?!) A president and former president of this that and the other, his achievements are legend. According to the promotional material his "formidable powers of intellect and long years of accumulated knowledge are available to you..." for fees ranging from \$33 to \$255.

Such munificent self-praise overawed me, and temporarily blinded by the radiance of this metaphysical marvel's aura, I was more than a little apprehensive about pitting my wits against such a revered icon and hesitated before responding with the following:

Dear Mr Voets,  
Congratulations on your praiseworthy commitment to

the environment through the use of recycled envelopes. Your CV and promotional material was most impressive and, if not taken *cum grano salis*, would lead one to believe that you are outstanding among your genre.

However, Skeptics do not consider self-promotion and anecdotal evidence from credulous clientele to be evidence of the veracity of paranormal claims.

With the talents attributed to you, winning our challenge offer of the (now \$700,000)\* prize for evidence of say, your prescience, under test conditions, should not cause you any angst.

May I presume to hear further? (*Needless to say - I didn't!*)

Simon Turnbull still loves me despite "Operation Termite", (*the Skeptic* Vol 14, No 4.) and asked for James Randi's address and the details of the challenge. The proprietor of the Australian Psychic's Association has plans for a TV special featuring various paranormal claims, the winnings will go to charity. (The Discredited Clairvoyants Support Agency?)

Graham Dudley wrote from Byron Bay, NSW, that he would like to take up the challenge by using psychometry to scientifically prove the existence of a previously unknown archaeological site "up the Hawkesbury River."

Jo Arblaster, a journalist with the Sydney *Northern Herald* enquired about the test on behalf of a "psychic" friend. (Nothing further has been heard).

A response from Jeanne Chantell, who advertises in the Yellow pages as the "Jeannie Chantell Spiritual Development College", came via her solicitors, who threatened defamation proceedings should we publish any statement which adversely affects their client's business, and seeking assurances that no defamatory matter will be published regarding her. As we have not, nor do we intend, defaming Ms Chantell, no reply to the solicitor's letter was deemed necessary. Accordingly, in the absence of any specific information, reasons or excuses, Ms Chantell will be included among those summed up in the conclusion at the end of this article. I can't help wondering how any of these people could prove in a court of law that they possess paranormal powers when they won't even try for three quarters of a million dollars.

A brief response from The Argyle Oracle acknowledged my two letters and said "the offer is being given due consideration." (Months later it is still being considered!)

There was a long reply from Edgar Winter (who also advertises under Astrology - Tarot - Clairvoyance - Numerology and Palmistry). The main points raised are reiterated hereunder. My comments in a letter to him are in italics.

Dear Mr Winter,

Thank you for taking the time to reply to our challenge. Herewith answers to your questions.

EW. I question the authenticity of your aim to be the "scientific investigation of pseudoscientific and paranormal claims" and query your organisation's claim to credibility.

*Established in 1980, our principal aim is as stated. A quarterly journal, regularly published since inception, chronicles our investigations and findings. We are able to call upon members of every scientific discipline, trade, profession and calling to evaluate our findings.*

EW. I am not aware of any other legitimate research or scientific body offering money as an enticement. *The Royal Swedish Academy of Sciences, Royal Caroline Medico-Chirurgical Institute, the Nobel Foundation and The Australian Skeptics Science and Education Foundation.*

EW. You offer no explanation of what a “simple test” entails.

*It should be obvious that there can be no standard test, each must be designed specifically to suit the claim made. A test of psychokinesis for instance, would be different from that of a dowser, and a palmist from that of a clairvoyant.*

EW. Any credible scientific body would not utilise such a crude method as seeking at random people in the Yellow Pages.

*It is an unfortunate fact of life, that there is a universal reticence by those claiming extraordinary powers or unusual abilities to substantiate their claims when asked to do so. As a consequence, we are obliged to seek whatever avenues offer the best opportunity to pursue our aims.*

EW. Has there yet been discovered any proven and fair means to testing this skill?  
Yes.

EW. Are you aware of my business background and credentials (I have been managing successfully a business utilising these abilities for over ten years operating in the centre of the business district)? If not, what credible method, other than the Yellow Pages, are you using to judge myself and others as suitable candidates.

*So did Bond, Skase and O’Connell. Managing a successful business is no indication of its probity. (Under no circumstances should this be taken to imply any impropriety by you.) We are aware of course that you advertise inter alia, as an astrologer, tarot reader, clairvoyant, numerologist and palmist and, in your letter, you claim to be utilising these abilities. However, we are not aware of any evidence to support your claims and are offering you a small fortune to do so. We are not a judgmental organisation.*

EW. Harassment - public denouncement - veiled threat - underhand etc:

*Harassment? Oh that someone would harass me with such an offer simply to demonstrate what I do for a living! In the absence of a test, our comments in your*

*case would be confined simply to “Mr Winter declined to be tested.” The public will be left to speculate and draw their own conclusions.*

EW Have you a full understanding of the meaning of psychic abilities and its part in a larger philosophy and approach to life?

*Yes, I am conversant with most belief systems and have engaged professionally in astrology, numerology, palmistry, faith healing and clairvoyance.*

EW Your organisation’s methods and its desire to impose traditional Western thought upon those who practise or believe in abilities which derive from an Eastern holistic science is astonishingly backward and ungenerous. For that matter, can you first prove that your judgments or even original intent are free of bias. *We have no desire to impose anything on anybody. We have open minds and seek only the evidence in support of extraordinary claims, The public evaluates our findings and comes to its own conclusions.*

Finally Mr Winter, I refer to your opening paragraph in which you say: “I feel that I do not need to have my business substantiated as I am fortunate in often receiving feedback from clients and frequently my services are recommended to them and I believe that this is more than enough evidence to substantiate my claim to helping people.”

Nowhere in your advertisements do you claim to be “helping people”, you allege only that you can “inspire” them and this through pseudoscience and unproven belief systems. Surely giving a small fortune to charity, should you win it, would help an enormous number of people and substantiate this claim.

There has been no further response.

Mr E.J.Winter, incidently, was one of the astrologer/numerologists who offered to sell me a package deal for \$60 back in 1989, following my exposure of an astrology/numerology get-rich-quick scheme. (*the Skeptic* Vol 9, No 1.)

### Follow-up

The *Sunday Telegraph* story generated some interest and the outcome is reported here.

Following the submission of a copy of my article “Is This a Case of Artful Pretence” (*the Skeptic* Vol 16, No 1) to the *Sydney Sunday Telegraph*, a story appeared in the February 25 edition entitled “\$550,000\* to hear the voice of the dead.” It was accurate reporting in so far as all the statements attributed to me were correct, nothing was out of context, and there were no misquotes, all due no doubt to the fact that they were taken directly from my article. Bridget Pluis had evidently been contacted, and in response to the Skeptics’ offer of US\$500,000 to prove her claim to be able to communicate with the spirits of the dead said, “I have nothing to prove. I don’t want their money - money

doesn't buy happiness. I'm very happy in my job. It's a democratic country. They have their beliefs, I have mine. We should all be free to follow our beliefs."

While I concur with the latter statements, and would tend to agree that money doesn't buy happiness (although it helps!), if money is of such little importance to Ms Pluis, why does she charge people to attend her performances (\$4000 for two hours as reported in *the Skeptic* Vol 16, No. 1.) and promote her books instead of giving them free? Further, think of the happiness Ms Pluis could bring to so many deserving people by winning over half a million dollars which she could then give to charity.

Following the *Sunday Telegraph* story, I had a call from the producer of Channel Nine's "Today", asking if I would like to be interviewed in connection with the story. I said that I would be delighted, only to have the interview put on hold as they were unable to contact Bridget Pluis whom they also wanted to appear.

The cat had been set among the pigeons. First a phone call from a Miss Hill who, after telling me that she was on my side against all the fake psychics, proceeded to describe her own psychic abilities. She was, to use her own words "a little psychic." I'm not sure whether this was meant in the sense of being vertically disadvantaged or a "little (bit)", being a quantification of her psychic capacity. However, she went on to say that her 14 year old daughter was a "great psychic" and that when she was 18 she would be a "telekinetic!" Impressed, I gave her our address, and said we would be delighted to test both her and her daughter once they stated specifically what paranormal feats they could perform. Miss Hill continued in a very serious, mysterious and know-all voice, "I can tell you something about your wife." Curious, I asked what? "She's deceased" came the reply. "That's news to me" I said, "she was alive and well when I took her shopping this morning." A long pause followed, and then..... "Oh!" So much for Miss Hill's prescience!

The conversation ended, I pondered for a while on what Miss "little" Psychic had said, and concluded that it was an attempt to impress me with her psychic powers. She had probably assumed from the story in the *Sunday Telegraph* that I was a widower and one of those who had attended Bridget Pluis' meeting in the hope that I would get a message from my late wife. Disappointed, I was now deriding the clairvoyant.

The second call was from Joyce, a senior citizen, who wanted to know why I picked on Bridget who, in her view, was a very nice woman whose sole purpose in life was to help others. I pointed out that this was not true, thirty others had also been "picked" on, and like Bridget, I felt that without any substantive evidence to the contrary, they were engaging in money making deception and had something to answer for. Joyce told me that she was a spiritual healer, but when offered the chance to be tested she declined. Then followed a long account of her travels and psychic experiences, so long in fact that I left the phone off the hook, went and made a cup of coffee, and came back to hear her still rambling on oblivious of the fact that no one was listening!

A third call from a gentleman who had recently been ripped off by a numerologist to the tune of \$300, decided

to become an "official" skeptic after reading the article in the *Sunday Telegraph*, and wanted to subscribe to our journal. He told me that the numerologist had advised him to change his name to attract love and money - to Rupert or Kerry?!

Among those who were sent the challenge letter was Paul Fenton-Smith, the director of the Academy of Psychic Sciences, located at Lane Cove, Sydney. Despite the expertise one would associate with his position, he too, declined to accept.

Mr Smith came to my attention through a letter in the August 27, 1995 edition of the Sydney *Sunday Telegraph*, in which he advocated the licensing of psychics to weed out the charlatans in the industry.

I wrote to Mr Smith expressing a similar interest, suggesting cooperation could be to our mutual advantage. There was no reply.

I wrote again on April 8, 1996. Again there was no response. Perhaps Mr Smith has reconsidered his proposition realising that he too may have difficulty in obtaining a licence?!

### Summary.

From the foregoing, it seems that most of those claiming extraordinary powers are not only astounded that their claims should in any way be doubted, but are quite astonished and indeed incensed, to think that there are actually those who would like to see some evidence. When asked, none of the claimants were able to state exactly what they claimed to be able to do and, to paraphrase an old *cliché*, were unwilling to put their mouth where our money is.

Is it any wonder we are sceptical?

\* The variation in the figures quoted are due to the additional money being pledged to the 2000 Club by skeptical groups world wide.

The total now stands at over US\$750,000.

## BLATANT PLUG

### INVESTIGATOR MAGAZINE

**Discussions, News and Debate about religion, the  
supernatural and the paranormal.**

**Recent sample copy \$3**

**Two copies \$5**

**Five samples \$10**

**Annual subscription (6 issues) \$15**

**PO Box 3243  
Port Adelaide 5015**

## INVESTIGATION

## The Astrologer and I

Harry Edwards

To get things into chronological perspective, I would first recommend the reading of the article "Yellow Pages", in particular, reference No 3, Astrologer John Clarke.

Despite our initial "friendly altercation", John turned out to be a likable pom in his mid to late sixties. He was undoubtedly dedicated to his art, thorough in his research and convinced of the truth of astrology. He gave as his reason for not preparing a natal chart that it was old hat - today, astrologers go through their findings step by step with questions and answers. I found this difficult to accept in view of the fact that so many astrologers advertise offering to erect or draw up one's horoscope. Although John insisted I told him nothing about myself, as the meeting progressed, it became apparent why he, and others for that matter, would favour a question and answer procedure. We both recorded the interview on tape, and this article is an abstract of our conversation. Throughout, there were constant references to the planets, houses and aspects etc: most of which I have omitted to conserve space.

John's approach was to use what he calls 'rectification', whereby the years in one's life (in my case 1-69) are tabulated alongside the planetary aspects for each year. The client is then asked to recall the significant events in their lives in an attempt to reconcile those events with the aspects. The shortcomings of the system as I saw them, were to what degree was an event to be considered significant, and the amount of juggling required on either side of the alleged time to make it relevant. It was an exercise in retrospection with some chance of success; contrary to what most people have come to expect from astrology - a peek into the future.

Our astrologer started by saying that he would ask me questions about things which will show up in so strongly in the chart for which there must be a reaction for them. My comments are in italics immediately following John's observations.

JC When you were 21 years old there was a very important change in your life. It changed your life very dramatically. I am going to put it in terms of growth of your own individuality. That would have been a very difficult time for you... difficulties which were very hard for you to overcome... looking back on it, a period of time when of things were cut out from underneath you. This could apply one or two years either side."

*The 'accuracy' of the chart has now been broadened to cover a period of four years from 19 to 23. In part it was correct. I was a young man of 21 when I came to Australia, my accent would betray that fact. My life did change, but dramatically may not be an appropriate ad-*

*verb. It was not a difficult time in any respect, (unless one took offence at being called a pommy bastard in jest), I experienced no difficulty whatsoever in adjusting to my new environment, and certainly never felt that things were cut from underneath me. Obviously this was a big event in my life and although I told John about my coming to Australia I made a point of emphasising that there were none of the difficulties he had mentioned. I also pointed out on the chart what he had not seen - that Uranus and Mercury indicated travel.*

JC "Well if you hadn't said to me that this is travel I would have said that it means that saying goodbye to people or leaving people because of the emotional wringing out, letting go of something, or trying to bring something together... but all that is saying if you say no that's not it, then this one here (Uranus) would say travel... was it a nice experience for you?"

*It was.*

JC "You can see there's a really difficult one here, this is always a very emotional conflict process, when you were 42, and it's quite a serious one. (John then got mixed up with ages and years, referring to 1942 and 1949) This one here says there is a lot of decision making but it's also saying a loss of relationships, and an undermining of the ego in some way... why did you decide to leave England?" (I told him that the decision to emigrate was made in 1943 during a period of depressing winter weather, and that there was no loss of relationships as my entire family also emigrated.) John then queried my birth time which I knew to be 2am, saying that only one in a hundred new the exact time they were born.) "How do you know?" John asked. "My mother told me, she was there at the time!"

Then followed a discussion on what exactly is the time of birth - conception, the cutting of the umbilical cord, the first breath or cry? John admitting astrologers can't agree, thus negating any pretence of accuracy when referring to 4 min of time on a chart being the equivalent of one year of a person's life.

JC "Let's see what else we've got (pointing at the chart). That one there for when you were eight years old. No that one's even stronger - two years old." *I've got a good memory but that's really stretching it. I can remember a lot of things from my younger days but at age two is really asking a lot.* "All right then, can I just ask you a question - brothers and sisters?" *One brother, three years younger than me. Why didn't the chart show them? Furthermore, my brother didn't show up on the chart where he should have been, but an adjustment soon fixed that!*

JC “What I want to do is to pick out for you some really deep meaningful processes which you are going to be able to say ‘yes’ or ‘no’ to. We are going to start off by looking at mother and father. When you look at father and mother you’ve got the Sun in Scorpio and the Moon in Saturn that means that they are in signs next to each other and there is a semi-square aspect between the two, that is going to indicate that while you were very young you in some way saw your mother and father to be in conflict. (*Haven’t we all at one time or another witnessed our parents arguing?*) There is a very lacking closeness - a feeling of lacking in harmony - when a child is born they want to feel that mother and father loves them and the depth to which this goes is remarkable, and in your life there is quite a few difficulties here, there is a lack of closeness to both parents at a sensory level, it doesn’t mean they didn’t love you, it means you didn’t get the sensory touching, caring, stroking, all those sorts of things you would like to, there is with both parents a build up of resentment, we’re not talking about any age - you can think of this as being very young... there is a lack of trust. Let me explain what a lack of trust is.” (John explains the need for a child to be praised and receive appropriate attention and then goes into some detail praising my intellectual ability!)

*The similarity here with past life regression therapy is obvious. I challenge anyone to recall anything from the first five years of their life with any accuracy. This means that you have to accept what you are being told by the astrologer or the hypnotherapist as the case may be. In my case, the only event of significance in that period was being badly scolded after pulling a kettle of boiling water off the stove onto myself, I only know this, not because I remember it, but because my mother had told me that’s what happened when I was three years old! This event incidentally didn’t show on the chart. Regarding the lack of closeness and trust, I could not relate to anything of this nature. My parents gave me all the love and attention parents could give to their child, and the sacrifices they made during difficult times on my behalf qualify them for martyrdom. Resentment? Rubbish!*

JC “In your chart there is a really strong intellectual influence, a learning process, (explains various aspects) all these influences - what that is saying is that you have this really good mind, the ability to put things together - the end result is that you would like to create a philosophy, a concept by which you would like to live your life - its academic - it may even be religious - there was a restriction in your early life. Discipline - we’ll come back to that later.” *Flattery will get you everywhere! With the exception of a religious bent, to a certain extent part of this observation may be close although there has to my mind never been any restriction imposed upon me. Apart from the Editor-in-Chief that is!*

JC “With one parent there is an undermining of your individuality, in fact I’m going to say with both parents.” Referring to the planets again, “this is a cutting off of your emotions which is quite difficult in your life - of all the

things in your life you should be a deeply emotional person - you are a very sensitive person - any problems not resolved with your parents and there are a lot of problems there show up in later life.” *Hands up anyone who hasn’t had a problem with their parents at some time during their lives!* John then went on to praise my mental processes again. “This indicates that you are very emotional, you have this strong need to express - things tend to fall to pieces when you think you have everything together - this is when you were a child - you have this great mind but it cannot make up for the (lack of?) strength...” (some distortion and then my tape ran out!) *Again we have this question of degree, how relative is the strength of my emotions compared to others? As for things falling apart, like most adults I’ve had my ups and downs, but there is nothing in my childhood I can remember to which this observation would relate. Therein of course lies the catch. It’s a case of your memory versus the astrologer’s persuasive assertions.*

Later, looking back over my life, I made a list of what I considered to be significant or memorable events, they included, wartime experiences; my first love; two years in communist Czechoslovakia; marriage, divorce, children and grandchildren; the heartfelt loss of both my parents; the near loss of my eldest son with a heart attack; watching my young brother physically deteriorating with Parkinson’s disease; thrown off a horse; extensive travel experiences; two narrow escapes from death, one on a motorcycle the other in a gas explosion; hospitalisation with first, second and third degree burns; an operation; having root therapy without anaesthetic; a near arrest by Burmese railway police; revolutions in Greece and the Philippines; shipwrecked; mugged in Panama City; a trek through the Golden Triangle; a six year legal battle; my first time on water skis; learning to snow ski (carried off on a stretcher!); a maiden voyage from Sydney to Hobart in a home-built concrete yacht weathering four force 8 storms; seventy rejections from book publishers, and the most treasured of all - the day I came back from vacation and Barry Williams said that he’d missed me! None of the above was or could be specifically determined accurately from the astrologer’s chart.

I asked John for a copy of his tape to finish this analysis but it has not been forthcoming.

### Conclusion.

Given the parameters, vague generalisations and *post facto* validation, I can understand why the uncritical would probably accept that John’s method of rectification was accurate. But of what value is it as a guide to the future? The astrologer could not tell me by looking at the aspects, precisely or specifically, what was the event, nor to within several years when it did or would take place.

Like Nostradamus’ quatrains, the system is wide open to interpretation. Given the number of events great or small that occur in a persons life, it’s not very difficult to make some of them fit. ■

## COMMENT

# Postmodernism And History (Pt I)

Mark Newbrook

Comments on *The Killing Of History*  
Keith Windschuttle, Macleay ; Sydney, 1994

## Introduction

This article started life as a straightforward review of the above-mentioned book; but it has, I think, become (in the writing) something more interesting. The need to provide considerable background for readers who might not be very close to the issues involved, and the general importance of these issues for scholarship and human learning on a broad front, have conspired to swell the paper into a rather larger and more weighty assessment of these matters - albeit still centrally mediated through discussion of the particular work in question.

The book is by an experienced and respected academic historian of an unashamedly traditionalist persuasion. It constitutes a strongly worded and persuasively argued defence of the established principles, practices and viewpoints of the discipline, as it existed prior to the partial or total 'hijacking' (as KW sees it) of the relevant university departments, in the late 1980s and after, by postmodernists/deconstructionists of one sort or another. In what follows I shall use the more general terms *postmodernist/-m* when speaking of KW's targets, but the slightly more closely defined terms *deconstructionist/-m*, referring to the most central message of this newer tradition rather than to its relationship with recent intellectual history, would often be equally appropriate; another set of general terms which can be used is *poststructuralist/-m*.

KW obviously has a passionate love for his discipline and for the strong and fruitful traditions of practice (and of theory, in a general sense of this term) in which he himself was trained (see for instance his comments on pp 248ff). He supports the established view of history as a determinedly empirical domain (though not perhaps a strictly scientific one; see below), the study of which, as another scholar once said, furnishes the best possible liberal education. His admiration for traditionalist history and his ensuing distress at what he not unreasonably takes to be its near-destruction by influential postmodernist commentators serve to provide strong motivation for his at times quite vigorous and bluntly-worded fight-back. However, KW is far from uncritical of his tradition, nor is he blindly hostile to those who would suggest major revisions of perspective; and the main thrust of his argument, in my view, stands strong as a spirited defence of traditional practices against newer ideas which, while often interesting and useful as correctives to the more naively atheoretical and one-sided formulations of the established framework, are in no way as decisive or far-

reaching as is claimed by some of their advocates. This can be said despite the various shortcomings which I think can be identified in his book, some of which I discuss in my notes towards the end of this article. I commence with the general intellectual background and context to KW's work.

## Postmodernist history

Over the last few decades, postmodernist historians have developed a new (and often intolerant) orthodoxy on matters of goals, theory and interpretation, taking their inspiration from French philosophers such as Derrida (some of whom have been actively promoting their ideas since the 1960s) and from theorists of literary criticism working under the influence of these philosophers. They focus upon accounts of historical events (both 'plain stories' and explanatory accounts) as texts, whether these be created by participants in the events described or by later commentators, regarding these texts as informative primarily about their authors and their cultures rather than providing anything resembling 'truth' about the events themselves. In fact, at least in respect of explanation, and in many cases even in respect of the actual course of events, these scholars of the newer kind typically deny the possibility of 'objective' or even of partially 'objective' knowledge of historical events, and treat texts in this area in the same way that they treat openly fictional texts such as novels, as constituting merely different sources' views of situations and processes which are *in principle* incapable of having unbiased descriptions or analyses ascribed to them. So-called scientific or historical advancement is therefore really a matter of *invention* rather than *discovery* (this point is often made explicitly by postmodernist theoreticians and commentators).

This view is, naturally, not the only possible view even of the nature of literary studies; traditional accounts of literature would suggest that it is, in fact, possible to go beyond the standpoint of particular authors or critics and to make useful judgements on various fronts, some of them maybe even 'objective', about the aesthetic and other qualities of the works themselves and about what they show. There has therefore been, quite understandably, considerable resistance to these developments in the world of academic literary criticism and literature studies itself. But the effect of such an approach, as will be appreciated, could be - and increasingly is - even more damaging (if it be deemed misguided or seriously overstated) in a discipline such as history. If accepted, it would obviously destroy the basis of any claim that traditionalist historians might seek to make with respect to the 'scientific' status

of their subject (even in the 'weak' sense of the term *scientific*; history is generally regarded as *not* scientific in the stronger, experimental sense, in that historical events are unrepeatable and hence irreplicable).

Indeed, as might be gathered from the above, this re-analysis of the nature of history is, in fact, only part of a larger process of re-analysis of the nature of human learning (outside literature studies) more generally. Postmodernists in other disciplines have applied their approach to domains of all kinds, including, in the humanities, logic and other branches of analytical philosophy and the various so-called social sciences, including - very predictably - many areas involving non-literary language studies, such as linguistics. Indeed, postmodernists typically hold that every account that might be given of any phenomenon whatsoever is so inherently theory laden (in a much stronger and stricter sense than has hitherto been admitted even by the most careful scholars) that the goal of being 'objective' is not merely very difficult to achieve but is in fact utterly impossible - that any statement whatsoever is inevitably trapped within a particular theory and reflects the biases underlying that theory.

No account of anything (presented as, eg, a systematic set of such statements) can possibly be judged as any more valid or 'true' than any other, since comparison can be made only by selecting in advance some standards of judgement and these will inevitably be themselves theory-specific. It will be appreciated that this viewpoint goes well beyond that of more mainstream thinkers like Popper in challenging the legitimacy/ status of science (and of other intellectual pursuits). Indeed, many postmodernists seem to be very little impressed even by the extent to which following certain philosophical and scientific paradigms rather than others has led to what certainly looks very much like the systematic (and demonstrable) expansion of human knowledge and understanding of the universe. The gains of the last few centuries are not taken as indicating that these approaches are any more fruitful than the traditional views of the world developed by, eg, 'indigenous' peoples. It should be stressed that (careful) modern traditionalist scholars do not dispute the interest and cultural value of such belief systems - but the postmodernists clearly seek to claim for these systems equal status with the findings of subsequent scholarship (or even superior status - see below).

In some disciplines, such as linguistics, debates on this front have been in progress (under earlier names) for many decades (for discipline-specific reasons which I shall not examine here); and scholars in these fields are well used to challenges to the scientific (etc) status of their analyses and more generally to discussion of these issues. In others, however, the much more recent rise of postmodernism has been something of a trauma; and history is certainly in this group. So too are the natural sciences, which one might have thought least vulnerable to attacks of this kind. The recently published book by Gross & Levitt represented a vigorous defence of scientific theory and practice, on a broad front, against postmodernist criticisms and the newer approaches to science advocated by postmodernist thinkers. KW's book offers something similar for history.

### Postmodernist weakness

It must be pointed out that the postmodernist position, once brought under attack from traditionalists, often appears very much weaker, intellectually, than one would expect from the amount of 'noise' made by its advocates. This applies to history as well as to science. The suggestions made with respect to innovations in the disciplines involved are often vague in the extreme and/or display limited acquaintance with the subject (there are too many literature scholars trying to exert major influence in other disciplines in which they are amateurs). The argumentation from agreed or proposed 'facts' to analyses or other conclusions is also frequently shoddy. KW identifies several cases of this last failing, often involving apparently ludicrous or otherwise overblown accounts of events or of their causation. For instance, Carter (cited on pp 94ff) advances ridiculous interpretations both of the process of discovery of Australia by Europeans and of the theoretical underpinnings to these explorers' views of the nature of exploration and the possible features of newly discovered lands (and also, eg, of their views on the relationship between settlement and exploration). See below for more on Carter.

Indeed, the very acceptance and use of 'facts' by postmodernists in the first place appears seriously self-contradictory. On their account, there are supposed to be no 'facts' (as opposed to theories and theory-laden analyses) which one could take as a firm basis for argumentation. However, postmodernists are in fact - obviously - obliged to accept *some* (lower-order) 'facts' (e.g., that author X wrote text Y, lived from year A to year B, etc) in order to proceed at all. More generally: if postmodernism is correct in its essential message, any more specific claims made by postmodernists and in particular any suggestion that postmodernism actually represents an advance on previous viewpoints (as opposed to being merely the result of the latest irrational Kuhnian paradigm shift; see below) must be just as utterly unjustifiable as the claims of traditionalists/'modernists' - or of the adherents of any other viewpoint - to the effect that *theirs* is an improvement upon those which preceded it. Critical readers of Marxist tracts will find this very familiar, and it is perhaps no accident that many postmodernists are also Marxists of one kind or another, or at least adopt similar approaches and standpoints; Foucault is one such writer.

Some postmodernists who are close followers of Kuhn, such as Foucault, are aware of points such as this last and accept that on their theory their own accounts are subject to the same subjectivity as those of traditionalists; but even they cannot avoid the objection that they must accept many lower-order facts (unless they reject **all** evidence of the world outside discourse).

### Selective facts

Furthermore, postmodernists' selection of the 'facts' which they do accept, or upon which they place more reliance, often reveals a further agenda, which is very often in play but is much more typically left covert than made explicit: the desire to rewrite history from the viewpoint of minorities and other groups who have traditionally suffered unfair discrimination and whose accounts of historical events

involving them have generally not been heard or have been distorted. These groups' accounts of the world are, indeed, seen (as it seems) as somehow more accurate than those arrived at by 'western' science and philosophy - even though a preference for any viewpoint over any other appears to contradict the core of the postmodernist message. The inconsistency here is at times rather blatant. Many of these scholars also appear to regard such groups - despite the absence of concrete evidence and in some cases the presence of evidence to the contrary - as morally superior. For instance, Amerindian societies are often portrayed as highly environmentally aware, despite their lack of detailed scientific information on the relevant issues and some evidence to the contrary; and/or as highly altruistic/philanthropic, or at least no less humane than contemporary 'western' societies (as KW points out in Chapter 2, this has been said even of the Mexican Aztecs with their tradition of mass human sacrifice). Such judgements are perhaps inevitable, given the professed objections of postmodernists to the evaluation of one culture in terms of the moral standpoints of another - though, as might readily be imagined on the basis of earlier remarks, this does not discourage by any means all such scholars from inconsistently damning 'colonialists' and, still more unfairly, 'westerners' more generally. This tendency too can readily be seen as illustrating a hidden agenda.

#### **New Age correctness**

In some more extreme cases, views of this kind have led to the open advocacy of analyses and even of 'plain story' accounts of large-scale events which appear so unlikely to be useful (or true, if one believes in truth) that their adoption in certain university departments is likely to serve largely to bring the universities in question into disrepute. One set of outstanding historical examples of this is provided by novel accounts of Old and New World history (current mainly in the USA) founded in 'Afrocentrism'. Equivalents in science include accounts of Australian geology based on Aboriginal myths and presented as at least equally valid with the findings of 'western' geologists, and the systematic teaching, in various universities around the world, of 'New Age' beliefs founded in the traditional medicine (etc) of 'indigenous' peoples.

In the worst scenarios (mercifully things do not always reach this pitch), disputing or even debating the validity of such ideas (or of the postmodernist background to them) is virtually taboo. This is one genuine example of the baleful effects of what has been called *political correctness*; and it represents an extreme (but by no means rare) version of the general tendency among postmodernists, 'New Age' thinkers and 'trendy' academics in various disciplines to reject almost out of hand accounts of phenomena or of events, however carefully these may have been developed and justified, if they are located within a theoretical 'paradigm' other than that espoused by the critic (or even couched in the language of such a 'paradigm'). The Chomskyan 'school' of linguistics, to take but one example, is notorious for this; so are various 'schools' of anthropology.

It must be admitted, of course, that traditionalist

scholarship has made many errors, and that *some* of them *may* be structural in character - hence scarcely avoidable unless the whole framework is swept away, perhaps by one of the semi-irrational 'paradigm shifts' popularised by the philosopher Kuhn and so beloved thereafter of intellectual revolutionaries of all kinds (popular 'New Age' organs such as *Nexus* often express their hope and support for such a shift). There have indeed been very many cases of bias and discrimination in the selection of research goals, in the interpretation of background phenomena, in the conduct of research and in the analysis of findings. Historians and scientists are to a degree (to a degree only, despite the postmodernists) creatures of their times. For instance, in a colonial situation, themselves belonging to the dominant group, they could scarcely avoid all taint of the bias and selectivity of focus inherent in such a situation.

However, many of these errors appear relatively *ad hoc* in character and thus capable of being remedied without wholesale abandonment of the paradigms in question (which have, after all, typically been developed carefully over long periods and have met many challenges before). The vision of academic science or history attacked by postmodernists is often something of a 'straw man' with exaggerated weaknesses rather than science or history as it has in fact been practised. Where the practitioners of these disciplines have erred in these ways, especially collectively and systematically, we can readily admit to a degree of blame and a responsibility to improve. But one of the outstanding features of the western academic tradition - in analytical philosophy, perhaps especially in science and certainly in the less theory-laden discipline of history - has been its practice (largely unapplauded or even denied by postmodernists) of self criticism, extending where necessary down to rather fundamental issues of principle. This is particularly obvious where philosophical issues are involved or where theoreticians in other disciplines are philosophically aware.

This latter state of affairs is actually more usual than postmodernists generally like to admit. Many of the abstract points involving the philosophy of science which are raised against scientific practice and theory are quite familiar to many scientists and historians (though not to all, as must be admitted); and those of these points which appear at least partly valid are often already incorporated or allowed for in careful work under the traditional paradigm. Despite the claims of postmodernists - and the outbursts of *Nexus* and the like - the tradition has proven itself, over and over, more than ready to take on new concepts and explanations - however outrageous and counter to 'common sense' they might seem - where the evidence that they should be adopted has accumulated sufficiently to pass the test of Ockham's Razor. Any remaining dogmatism is, of course, to be condemned, and 'New Age' and other novel theories should receive as much critical attention as they appear to merit, not ridicule; but where the established views do meet the challenge it is surely unjustifiable to abandon them for inadequate reasons.

#### **Primacy of evidence**

Perhaps the only point on which academic science - and

history - *cannot* yield is their own basic *raison d'être*, the primacy of evidence and argumentation. If even these are challenged (as most postmodernists at least pretend to do), the argument can be carried on, if at all, only on a philosophical level, and even there appears unlikely to be decisive. In that event, one could perhaps forgive philosophically aware scientists and historians for forging ahead with their concrete problems, keeping only half an eye on any developments which might take place on a more abstract level but in the meantime continuing to stand by policies and approaches which have, after all, served them very well in the past. As noted, these methods are, indeed, extremely readily defended in terms of their pragmatic success in leading to what (*pace* the postmodernists) looks very much like the systematic expansion of human knowledge (which is surely not a negligible defence!).

### Hostility

Nevertheless, works such as KW's have met for the most part with rather hostile reviews from within academic history. Considering the generally high standard of argumentation (etc) of the book, this reaction suggests that in this particular discipline the postmodernist position is indeed becoming dominant. Perusal of subject descriptions and staff profiles in many academic history departments would appear to confirm this view of the state of affairs (some history departments, indeed, are even more one-sided in this respect than literature departments). This is unlike the situation in science, where most serious researchers do not seem to be much affected in their own work by postmodernist ideas. They are, however, sometimes dismayed by the popularity of such ideas with undergraduates and with those who plan undergraduate curricula, in which the learning of science itself often seems to be overshadowed by postmodernist-inspired subjects dealing with 'science and society' or with vague and one-sided varieties of environmentalism. Given this, and the very wide scope and importance which postmodernists claim for their ideas, it is possible that the state of history now represents a position towards which science may be heading in its turn. It is thus important for natural scientists too to pay attention to these issues as they are currently being debated in history (as in other humanities subjects and social sciences).

### Summary

All this said by way of background, it is appropriate to provide a brief summary of the contents of KW's book. It commences with a preface and an introductory background chapter (pp 7-40). Next follow five chapters (2-6) on particular issues in respect of which postmodernists have dramatically re-interpreted series of historical events and/or decried traditional analyses as biased and the like. These series of events are: the discovery and conquest of Mexico by the Spaniards in the early 16th Century; the Mutiny on the *Bounty*, the explorations of Cook and associated events in the Pacific in the mid-late 18th Century; the European discovery and settlement/ occupation of Australia in the late 18th and early 19th Centuries; the development of asylums, prisons and similar institutions in modern times; and

the post-Cold-War period (the 1990s to date). After examining how postmodernist interpretations of these varied sets of events fare in comparison with the products of traditionalist scholarship, KW concludes with two summary chapters, one on history as a social science, the other on the postmodernist notion of history as literature and alternative, traditionalist views of the relationship between these last two areas of intellectual activity.

It should be noted that - despite the association of postmodernist thought with certain brands of socialism and the like - KW does not display any particular political bias in his treatment of postmodernists. For instance, he is no less hard on Fukuyama's post-Cold-War 'End of History' viewpoint (Chapter 6) than on overtly left-wing anticolonial analyses of early modern times such as those of Denning (Chapter 3) and Carter (Chapter 4) or theories of a Marxist type such as those of Foucault (Chapter 5). Naturally, left-wing ideas are in a majority amongst his opponents; but where he does criticise left-wing thought (eg, that of Foucault) the criticism is careful and could not (I think) reasonably be accused of undue bias, even by those who would deem it, in the final analysis, unjustified and would uphold Foucault's position.

I turn now to a number of more specific points about KW's approach in attacking the increasing postmodernist domination of academic history.

### Philosophy of science

In places (eg, pp 187ff) KW gets to grips with some very central and basic issues in the philosophy of science relating to postmodernist claims about the illegitimacy (or at least the non-objectivity) of scientific practice and theorising; and he argues cogently (though see the objections listed below, notably those covered in notes 1) and 5)) that these claims are at the very least somewhat exaggerated. In the process he offers even-handed and not unsympathetic critiques of philosophers of science such as Popper whose work underlies much postmodernist thought. In places, eg, pp 191f, a more explicit 'teasing-out' of the *degree* to which Popper's view of science (as inherently theory-laden) holds water might have been in order, given that it is quite possible to admit that all or almost all observations are theory-laden if this point involves a *vague* theory, without conceding *either* the stronger versions of this claim espoused by postmodernists *or*, eg, the very strong force attributed by postmodernists to Hume's criticisms of the inductive method (which form part of the background to Popper; they are discussed briefly by KW on p 191). He also notes (p 193) the observation of the philosopher Lakatos (on whom see also note 4) below) that the classical Popperian test of falsification is not as straightforward as it might initially appear (because any one apparent falsification of a theory might be explicable in specific terms having little or nothing to do with the main thrust of the theory; therefore it is often sensible to wait until a body of apparent falsifications has accumulated before assessing the real consequences for the theory). As will be appreciated, Lakatos is in some respects (though by no means in all) more moderate than some other philosophers of this bent; and his point here is certainly a tell-

ing one. Leading scholars of various persuasions (notably Chomsky) have endorsed the point (sometimes partly for their own convenience, it must be stated); but it is perhaps a pity that postmodernists as such have not in general paid more attention to such observations - and indeed to Lakatos more generally - than they have (this may have happened because Lakatos' work, despite sharing many ideas and standpoints with their own, is more eclectic, not to say more judicious, than they like, and contains strong criticisms of Kuhn and other leading figures in the background to postmodernism).

### Ridiculous consequences

In these parts of his text, KW also exposes some apparently ridiculous (but almost inevitable) consequences of taking the postmodernist message to its 'logical conclusion' (as opposed to regarding it as a salutary corrective to traditional naivety and the like). For instance, he discusses (p 196) Feyerabend's view that science should have no privileged position (over traditional 'indigenous' magic, etc) in the education process in respect of the teaching of different views about the universe (importantly, a parallel is drawn with guarantees of religious freedom). If such a position were eventually to find favour (which, incredibly, is in fact a real prospect in some jurisdictions), the consequences for science (and society) would obviously be absolutely disastrous. In such a situation, groups such as creationists would no longer have to attempt to portray their belief systems and methods as scientific in order to compete with mainstream science in the curriculum. Any belief system whatever, of any type, would be perceived as equally valid and worthy of curriculum time.

KW also rehearses (pp 199ff) Stove's strong criticisms of this philosophical side of the postmodernists' paradigm. In this section there is a special focus on the incoherence of their tendency to conflate points from the descriptive history and sociology of a given discipline (dealing with how things *are* done in that discipline), on the one hand, and points from the prescriptive philosophy of that discipline (dealing with how things, in a commentator's view, *ought to be* done), on the other. Another point made by Stove and repeated here (pp 209ff) involves the arguably underhand (or simply insufficiently thought-through) practice, adopted by many postmodernists (including even Lakatos), of using everyday language importing mainstream attitudes to scientific discovery while attempting to distance themselves from its philosophical implications by means of quotation marks (as in '*show*' for *show*, of a purported scientific discovery).

This set of arguments (pp 187ff) and the similar but more concrete arguments presented elsewhere in the book generally hold up very well and make telling points against the excesses of postmodernism. This is not to dispute the validity of some cited postmodernist reports tending to show that real scientific practice and theorising is often 'unduly' (a postmodernist would, of course, eschew such judgements) influenced by 'irrelevant' factors other than those normally stated by scientists to be instrumental in their decision-making. While to a degree *ad hominem*, the criticisms implied by these reports are apparently fair, or

at least arguable, as far as they go, and certainly require the urgent attention of those who wish to uphold the traditionalist approach to scientific enquiry. And KW (in this section and elsewhere) does appear to accept the earlier and milder postmodernist view that the scientific enterprise involves an ongoing process of the development of ideas, rather than any kind of arrival at a final 'true' theory about some aspect of the universe. However, he is, of course, determined to assert, against his opponents, the near certainty of many of the major better-established contemporary scientific beliefs (see note 1) below), and, further, the *cumulative* and *rational* character of change in scientific belief systems (involving the building up of ideas and the growth of new theories out of old) as opposed to the vision of dramatic Kuhnian paradigm shifts (often irrational or at least held to be) which the postmodernist viewpoint prefers to emphasise.

### Reinterpretation

Another very strong (and, I think, valid) theme of the book is KW's attack on the tendency of postmodernist scholars to re-interpret the belief systems of non-European/pre-20th-Century peoples (and their assessments and accounts of particular events) in a selective manner, often apparently favouring versions which emphasise rather than diminish the supposed differences of interpretation (which the commentators posit) between the rival accounts of the events offered by European authors at the time and - according to these commentators - by the non-European participants. In some cases - sometimes because of the lack of contemporary written accounts authored by the non-European side - these latter interpretations are highly dubious and second-hand, sometimes indeed being based (as it seems) on near-contemporary European misinterpretations rather than on genuinely local perceptions (if indeed these latter were available).

Where suitable evidence of local perceptions and analyses *is* forthcoming, this kind of (semi-deliberate?) error can sometimes be quite clearly exposed, as for instance in the cases of the debates over Aztec interpretations of the arrival of the Spaniards in 1519 and after (Chapter 2) and Dening's treatment of native Hawaiian interpretations of Cook's two landings in the islands in 1778-79 (pp 72ff). Indeed, there are many cases (including these) where some traditionalist (or partly traditionalist) scholars have been more thorough and even-handed than their determinedly postmodernist rivals in seeking out and carefully interpreting such local accounts as may be available, treating them on their own terms, or in trying to tease local perspectives out of second-hand but contemporary European accounts. The same is true of many traditionalist students of the settlement of Australia, who (*pace* Carter) have regularly consulted convict diaries and other literature in as unbiased a manner as possible (pp 111ff) and, more recently, have tried to incorporate Aboriginal perspectives also (pp 114ff). Postmodernist writers have (naturally enough) seldom drawn attention to these treatments; they have, in fact, more typically accused traditionalists of blatant and highly damaging bias in their selection of (usually colonial) accounts of such events for emphasis and endorsement (though their

own practice with respect to selection of sources, as we saw, is often just as biased, if not more so).

At times, as KW points out, even the 'plain story' account presented by postmodernists appears indisputably incorrect. I have already mentioned the at times ludicrous conclusions of Carter on other events of the colonial period (see above). The postmodernist literature is replete with dubious analyses of such episodes, frequently slanted just so as to emphasise (or exaggerate) the (undoubtedly real) relevance and importance of cultural differences and the proportions of the ensuing differences of interpretation of the episodes by the various groups involved. Even where the 'plain story' accounts themselves might appear uncontroversially true, or at least have not (it seems) been seriously disputed (as for instance with the difficulties of Amerindians in even perceiving European ships, for instance those of Magellan in Tierra del Fuego), one cannot assume that the analyses of such (admittedly dramatic) 'facts' offered by postmodernist historians are necessarily the most plausible analyses available.

KW might indeed have gone further into this set of issues, for instance by rehearsing the objections of the linguist-cum-political-theorist Sampson to the notion that technologically 'backward' peoples' thought patterns in fact display different conceptions, not only of historical events and situations and scientific issues but even of the basic rules of logic. Sampson argues (e.g., in *Schools Of Linguistics*, 1980) that this is not at all the case and indeed that one has to *assume* the uniformity of basic logical principles in interpreting the language and thought of an unfamiliar culture (and could conclude that the group in question really did work with radically different logical principles, if ever, only as a last resort and after very careful examination of their ideas). Some much-vaunted specific instances which supposedly suggest otherwise - notably the presence in some oriental thought-systems of what is fashionably called *fuzzy logic* - turn out, on close inspection, to be much less striking than has been suggested and, in fact, not to be damaging to traditional notions on this front as long as the latter are applied with due care and respect for differences of detail (as already stated, this pattern is not uncommon in debates of this kind, with many claims to the effect that such-and-such a difference of thought pattern is fundamental and requires a paradigm shift proving to be very considerably exaggerated, not to say overblown).

A further point made by KW (most overtly on p 95) is that postmodernist critics of traditional history tend to treat earlier scholars of vastly different backgrounds (who might themselves be 'deadly rivals') as displaying essentially the same (supposedly misguided) approach to the discipline and even to some quite specific issues. From a postmodernist perspective, it appears, traditionalists of all hues err in the same general way and thus form an amalgamated 'opposition'. This is not necessarily surprising or even (entirely) unscholarly, but it carries with it the danger of 'fudging' rather/very diverse traditionalist viewpoints into one undifferentiated viewpoint which corresponds with no particular scholar's beliefs (there is, of course, an equivalent risk for those operating in the

opposite direction, which KW and I have both tried to minimise). To give an example: in the specific case (outlined on pp 94ff) in respect of which KW makes this point, the postmodernist characterisation of the various traditionalist viewpoints is Carter's description of various traditionalist histories of Australia as excessively 'linear/narrative' in character, and indeed as unduly inclined to treat past events and situations as part of an (inevitable?) progression towards the 20th Century state of affairs rather than as valid *per se* or indeed as endpoints in themselves (as contemporary commentators in turn would of course have been tempted to see them). This criticism is not necessarily entirely unreasonable, though perhaps it exaggerates the degree to which such an interpretation can really be read into most works of this kind. It does however seem to obscure differences between these various viewpoints which might appear rather more fundamental in character. It is also itself somewhat one-sided in its apparent denial - repeated more explicitly on p 177 and there defended, but still, I think, more contentious than KW allows - that a contemporary situation can represent part of an ongoing progress towards a future state of affairs (not necessarily inevitable; this is partly a philosophical issue), or that a *post hoc* statement to this effect might be a valid (partial) analysis from a later standpoint despite not having been at all apparent at the time (because future events are not available for examination and can only be speculated upon).

To return to Carter: his somewhat dogmatic criticism illustrates, in fact, the common (not universal, it must be admitted) postmodernist trait of not seeking to 'take on board' the 'better' elements of traditionalist thought but instead rejecting most if not all of its insights - despite the fact that it arises out of such a long and wide-reaching tradition of research and theorising, a tradition which postmodernism seems grossly to undervalue and at times to malign as biased and even discriminatory. As noted, the more careful traditionalists (at least) do seem to make more of an effort to incorporate postmodernist insights (where these are not already allowed for in their existing practices).

Carter's treatment also reveals an associated tendency (not at all uncommon in postmodernist writing, and repeatedly instantiated throughout KW's book) to assert the validity of novel analyses (often controversial or even outrageous) without anything resembling adequate justification (see above on the frequency of postmodernists' errors with respect to fact, and on their exaggerated accusations of bias on the part of traditionalist historians in respect of the use of sources). It also illustrates a tendency to see *prima facie* implausible parallelisms (or to exaggerate the degree of parallelism) between practices and theories in widely separated disciplines which would in most cases (probably) be disavowed by practitioners and theoreticians and which are often (once again) not substantiated by more careful examination.

A few criticisms of Keith Windschuttle's work suggest themselves and these will be covered in Part II of this article in the next issue of *the Skeptic*. ■

# Bad Writing Contest

## Winners Announced

Denis Dutton

**The following article, which adds to the understanding of the topic covered by Mark Newbrook in the previous item, is reprinted, with permission, from *Philosophy and Literature*, a scholarly journal from the Johns Hopkins University Press, which is soon to mark its twentieth anniversary. The Editor is Denis Dutton, University of Canterbury, New Zealand, the Coeditor is Patrick Henry, Whitman College, Washington. Denis Dutton is past President and current Media Spokesbeing of the New Zealand Skeptics.**

We are pleased to announce winners of the second Bad Writing Contest, sponsored by the journal *Philosophy and Literature* and its internet discussion group, PHIL-LIT.

The challenge of the Bad Writing Contest is to come up with the ugliest, most stylistically awful single sentence-or string of no more than three sentences-found in a published scholarly book or article.

Ordinary journalism, fiction, etc is not allowed, nor is translation from other languages into English. Entries must be non-ironic, from actual serious academic journals or books - parodies cannot be admitted in a field where unintentional self-parody is so rampant.

Note that much of the writing we would consider "bad" is not necessarily incompetent. Graduate students and young scholars please pay attention: many of the writers represented have worked years to attain their styles and they have been rewarded with publication in books and journal articles. In fact, if they weren't published, we wouldn't have them for our contest. That these passages constitute bad writing is merely our opinion; it is arguable that anyone wanting to pursue an academic career should assiduously imitate such styles as are represented here. These are your role models.

First prize goes to David Spurrett of the University of Natal in South Africa. He found this marvellous sentence-yes, it's but one sentence-in Roy Bhaskar's *Plato etc: The Problems of Philosophy and Their Resolution* (Verso, 1994):

"Indeed dialectical critical realism may be seen under the aspect of Foucauldian strategic reversal of the unholy trinity of Parmenidean/Platonic/Aristotelean provenance; of the Cartesian-Lockean-Humean-Kantian paradigm, of foundationalisms (in practice, fideistic foundationalisms) and irrationalisms (in practice, capricious exercises of the will-to-power or some other ideologically and/or psycho-somatically buried source) new and old alike; of the primordial failing of western philosophy, ontological monovalence, and its close ally, the epistemic fallacy with its ontic dual; of the analytic

problematic laid down by Plato, which Hegel served only to replicate in his actualist monovalent analytic reinstatement in transfigurative reconciling dialectical connection, while in his hubristic claims for absolute idealism he inaugurated the Comtean, Kierkegaardian and Nietzschean eclipses of reason, replicating the fundamentals of positivism through its transmutation route to the superidealism of a Baudrillard."

It's a splendid bit of prose and I'm certain many of us will now attempt to read it aloud without taking a breath. The jacket blurb, incidentally, informs us that this is the author's "most accessible book to date."

Second Prize is won by Jennifer Harris of the University of Toronto. She found a grand sentence in an essay by Stephen T. Tyman called "Ricoeur and the Problem of Evil," in *The Philosophy of Paul Ricoeur*, edited, it says, by Lewis Edwin Hahn (Open Court, 1995):

"With the last gasp of Romanticism, the quelling of its florid uprising against the vapid formalism of one strain of the Enlightenment, the dimming of its yearning for the imagined grandeur of the archaic, and the dashing of its too sanguine hopes for a revitalized, fulfilled humanity, the horror of its more lasting, more Gothic legacy has settled in, distributed and diffused enough, to be sure, that lugubriousness is recognizable only as languor, or as a certain sardonic laconicism disguising itself in a new sanctification of the destructive instincts, a new genius for displacing cultural reifications in the interminable shell game of the analysis of the human psyche, where nothing remains sacred."

Speaking of shell games, see if you can figure out the subject of that sentence.

Third prize was such a problem that we decided to award more than one. Exactly what the prizes will be is uncertain (the first three prizes were to be books), but something nice will be found. (Perhaps: third prize, an old copy of *Glyph*; fourth prize two old copies of *Glyph*.)

Jack Kolb of UCLA found this sentence in Paul Fry's *A Defense of Poetry* (Stanford University Press, 1995). Together with the previous winners, it proves that 1995 was a vintage year for bad prose. Fry writes:

"It is the moment of non-construction, disclosing the absention of actuality from the concept in part through its invitation to emphasize, in reading, the helplessness - rather than the will to power of its fall into conceptuality."

## FORUM

## More Postmodernism

Incidentally, Kolb is reviewing Fry's book for *Philosophy and Literature*, and he generally respects it.

Arthur J. Weitzman of Northeastern University has noted for us two helpful sentences from *The Johns Hopkins Guide to Literary Theory and Criticism*, edited by Michael Groden and Martin Kreiswirth (JHUP, 1994). It is from Donald E. Pease's entry on Harold Bloom:

"Previous exercises in influence study depended upon a topographical model of reallocatable poetic images, distributed more or less equally within 'canonical' poems, each part of which expressively totalized the entelechy of the entire tradition. But Bloom now understood this cognitive map of interchangeable organic wholes to be criticism's repression of poetry's will to overcome time's anteriority."

William Dolphin of San Francisco State University located this elegant sentence in John Guillory's *Cultural Capital: The Problem of Literary Canon Formation* (University of Chicago Press, 1993):

"A politics presuming the ontological indifference of all minority social identities as defining oppressed or dominated groups, a politics in which differences are sublimated in the constitution of a minority identity (the identity politics which is increasingly being questioned within feminism itself) can recover the differences between social identities only on the basis of common and therefore commensurable experiences of marginalization, which experiences in turn yield a political practice that consists largely of affirming the identities specific to those experiences."

Finally, the Canadian David Savory found this lucid sentence in the essay by Robyn Wiegman and Linda Zwinger, in "Tonya's Bad Boot," an essay in *Women on Ice*, edited by Cynthia Baughman (Routledge, 1995):

"Punctuated by what became ubiquitous sound bites—Tonya dashing after the tow truck, Nancy sailing the ice with one leg reaching for heaven—this melodrama parsed the transgressive hybridity of un-narrativized representative bodies back into recognizable heterovisual codes."

Thanks to all the entrants. The next round of the Bad Writing Contest, prizes to be announced, is now open with a deadline of September 30, 1996. There is an endless ocean of pretentious, turgid academic prose being added to daily, and we'll continue to celebrate it. Details of the new contest will appear on the internet discussion group PHIL-LIT.

**Editor's Note:**

While checking this delicious story, the Spell Check program on the official Skeptics PowerMac showed distinct signs of succumbing to Gibberish Overload Syndrome. It would appear that Postmodernists are determined to not only overturn English literature, but also the English language, to the benefit of neither. ■

Something very disturbing has arisen with regard to the teaching of history that should certainly be of concern to sceptics. I attended a panel discussion during Writers' Week at the recent Adelaide Festival of the Arts, at which Keith Windschuttle, the Australian historian, was defending his recent book *The Killing of History*.

I do not profess to understand all the "subtleties" of Structural Analysis or Post-Modernism, but the gist of the argument was that the baneful effect of Western culture on non-Western societies has been such that we must abandon the historical method and the techniques of modern historiography in favour of a narrative that is "culture neutral" for both sides, ie for the winners and the losers. This is a simplification of the argument, but as neither of the other two panellists, the historian Humphrey McQueen, and Stephen Muecke, Professor of Social Science (or some such pseudo subject) at UTS, addressed the subject directly, I am unable to say whether the Post-Modernist position is tenable. Humphrey McQueen in fact argued that history had already been destroyed by other disciplines, political, statistical, etc, while Stephen Muecke was almost totally incomprehensible as well as being inaudible (I pity the students who have to listen to him). Consequently, I expect to be attacked savagely for what I say here, but as it will be written in Post-Modernist, I won't understand a word!

Apparently one of the principal Structuralist texts comes from an admittedly obscure Chinese biological nomenclature which reduces our scientifically based phyla, orders, families, etc to a number of casually named, apparently random and simplistic animal groupings, none of which unfortunately I can remember. This is being used to show that it is largely arrogance that assumes that Western "science" is inherently superior to, in this case, Chinese "science". In other words, our zoological groupings are just as arbitrary as theirs.

The problem with this is that the Chinese nomenclature is a complete fabrication having been invented by Jorge Luis Borges for one of his novels. Professor Muecke denied that this was a seminal text and that it was known to be a fiction, but was frankly unconvincing about it. If the Structuralists do support this kind of dotty logic the baneful consequences are for Western culture rather than for its influence.

Of far more serious concern is the illustration Mr Windschuttle gave of some modern New Zealand historical writing (I cannot remember whether the quotation was from the historian herself or from a critic of the historian but it matters little in this context).

The story of a visit by a European ship to New Zealand in the early 19th century derives from the oral tradition of the Maoris who witnessed it as being a visit by strange white-skinned people in large boats who brought gifts, spoke a strange language, fraternized intimately with the

women, used strange looking firesticks to make a loud noise, etc. and then sailed away. The Western story comes from the semi-literate journal kept by one of the sailors. "We arrived, met some strange, painted, dark-skinned people who spoke a funny language, we made love to their women, left them some gifts, etc". Because native peoples have, or had, no access to the panoply of historical gathering techniques and tools that existed in the West even then, it is cultural imperialism of the worst kind to impose our Western cultural imperatives on to this sort of incident. (It is presumably for this reason that Aboriginal dreaming never mentions the ice age!)

In other words, there is no cause and effect, there are no consequences of this event because the Maoris never saw any at the time. Those which obtain now, even though the modern Maori is fully aware of the consequences of these visits and is using modern, Western legal methods to seek redress, or even those which existed then (read James Cook or George Vancouver on the cargo cult!) are a product of Western values and Western logic and culture and are at best suspect. At worst they represent cultural imperialism with all its concomitant evils.

The extension of this is that it is now just as valid, in fact it may be more valid for the reasons stated above, to accept that an Aboriginal dream time story of the creation of the world is true as it is to accept our scientific, evolutionary model. "There is no truth, only 'sublimated' power relations 'encoded' in various 'texts'" (quoted by George Will of the *Washington Post* and reprinted in the *Australian Financial Review* 3/6/96).

All this is further evidence, if evidence was needed, of the bloody minded anti-science mentality that drove, to our great good fortune, Professor Paul Davies from England to our shores. More support for the Gross/Levitt thesis in *The Academic Left and its Quarrels with Science* (as reviewed in *the Skeptic* Vol. 15 No. 3 by James Gerrard and Martin Bridgstock). Maybe this also explains the several articles by Richard Bucchorn in recent editions of *the Skeptic* that, *The Life of Brian* notwithstanding, argued that nothing the West has contributed to the Aboriginal people can ameliorate the treatment they have endured at the hands of the European invaders. I am tempted to say that the only options we have are either to abandon our veneer of Western civilisation and live in humpies on the edge of the Simpson Desert or allow the Aborigines to revert to their great and good lifestyle and practice a form of apartheid by which we can both develop separately in our own ways; but I know the question to this answer already!

If this is the way of the future; if history can teach us nothing because of its "Eurocentricness"; if Western science is solely responsible for the mess in which we find ourselves and must be abandoned in favour of the "Millennium" type of existence which the West destroyed so thoughtlessly, instead of allowing science to find the solutions to the problems it may have caused, perhaps we will have real cause to ponder George Santayana's famous maxim: "Those who forget the past will be condemned to relive it".

**Roderick Shire**  
Neutral Bay NSW

## LETTER

### Martian Postscript

On Friday August 9, the *Herald Sun* published my article *Rocks on their Heads* which dealt with the implication of the discovery of primitive life on Mars to the creationists. The letter was sent to me via the *Herald Sun* and contained the article with the following paragraph highlighted: "For some years I have told my students that fossil life on Mars would be discovered before my death, so I guess my time is up." Hopefully, such a letter showing the ugly face of creationism, is from the lower spectrum of the followers of the creationist cult, however, the cult seems to have many such followers.

Such letters are common and all have certain characteristics. There are spelling errors, bad language, incorrect citation of "facts" and anonymity. Such fearless followers of fundamentalism are so committed to their cause that they do not put their names to their opinions. Diversity of public opinion is the basis of a free society but such a reaction to the results of the most exciting discovery this century shows the hatred and bitterness of creationists who actually call themselves Christians.

There is a very determined push by creationist leaders to have demonstrable fraud taught on an equal time basis with science and anything in the way of this push is bulldozed by them. It is interesting that the leaders of the creationist cult in Australia neither condone nor criticise such activities. Does the creationist cult actually support such followers? Do the creationist leaders actually encourage such followers to do their dirty work?

I have argued in my exposure of creationist's (*Telling Lies for God*, Random House 1994) that the followers of creationism are insecure and are somewhat psychologically-disturbed figures who need certainty. In the Foreword of my book, Archbishop Peter Hollingworth argued that creationism denigrates Christianity and is promoted and followed by the scientifically- and theologically-illiterate. This letter shows the Archbishop is correct.

**Ian Plimer**

## PSEUDOSCIENCE

## Chinese Pyramids

Dr Anthony G Wheeler

Colonel Maurice Sheahan, the Far Eastern Director of Trans-World Airways, told the Shanghai correspondent of United Press that from the air he had seen a 1000 foot high pyramid in a remote valley in northwest China. This pyramid was estimated to be twice the height of the tallest pyramid in Egypt, and near a second smaller pyramid and hundreds of small burial mounds. This was reported in 1947<sup>1</sup>.

Sheahan's sighting of a huge pyramid was investigated by Bruce Cathie, and his conclusions reported in 1992 (in an article with a 1983 copyright date)<sup>2</sup>. Bruce enquired of the Embassy of the People's Republic of China in New Zealand, and received the reply that the pyramids are tombs of past Emperors that have not been excavated scientifically.

Bruce Cathie found at least sixteen pyramids on an US Air Force survey map produced from satellite photographs. Plus a photograph taken from a US Army DC3 in 1947. (Filip Coppens<sup>5</sup> credits this photograph to Colonel Maurice Sheahan, though why the Far Eastern Director of Trans-World Airways should be flying in a US Army DC3 is not clear to me.)

The Chinese embassy apparently denied the existence of these pyramids in telephone conversations to Bruce Cathie, though a letter from their embassy in New Zealand clearly acknowledged the pyramids as burial tombs of past Emperors that had not been excavated. This inconsistency became "The Chinese Government did not want the western world to know too much about these gigantic structures until their scientists had completed their own investigations"<sup>2</sup>. Fair enough.

Maybe there wasn't anything much to know about them, further than that already stated by the Chinese embassy? Maybe the Chinese scientists weren't investigating these gigantic structures? These questions did not occur to Bruce Cathie. Instead he was led to ponder: "Possibly they [the Chinese] had already discovered the mathematical relationships that I had<sup>2</sup>." It seems that Bruce had discovered that 16944 is related to "the harmonics of mass", and that this value is built into "the geometric structure of the Great Pyramid of Egypt".

Not only has Bruce Cathie made this information, that 16944 is the harmonics of mass, available to the Chinese in his correspondence with them, but now he's published it in a commercial magazine available to anyone. Doesn't it occur to Bruce that just maybe the governments of the world had a pretty good reason for keeping '16944' a secret? Talk about loose lips...!

The Chinese pyramids were, to Bruce Cathie, much more important than "the casing of the bones of some obscure Emperor" (sic)<sup>2</sup>. (I bet he wouldn't have said

that to the Emperor before the latter died!)

Bruce Cathie is impressed by the fact that every time he has asked one of the many people he knows "if they had heard of a pyramid, possibly 1200 feet high, in China" they will "shake their head in bewilderment"<sup>2</sup>. Bruce even admits that that was his own reaction when he first heard of it. So it was Bruce Cathie that started the shaking of the head in bewilderment, and the response has spread by morphic resonance (as explained by Rupert Sheldrake)? How else do we account for everyone responding the same way?

We then get an account of how Bruce Cathie met George Hunt Williamson, who had an account of a 1912 trip by the trader Fred Meyer Schroder telling how he had been shown the pyramids by this monk. No, the monk had said, they weren't ordinary burial mounds, though they may well contain the bones of Emperors. The pyramids are over 5000 years old because the earliest local books are that old, and they describe the pyramids.

Now Bruce Cathie is not to be distracted: it isn't the pyramids themselves that are important but their positions relative to the Egyptian pyramids. From their latitudes and longitudes, and the great circle distance of 3849.5333 minutes of an arc between one of them and one of the Egyptian pyramids, Bruce has again come up with "the 16944 harmonic"<sup>2</sup> (the distance in minutes of an arc or nautical miles, converted to degrees, squared, and squared again, then divide by 1, using his "Texas 59 calculator").

Hang on - this is crazy! If Bruce Cathie had been educated in a Francophile nation he might have learnt their decimal system of angles where a right angle contains 100 degrees. This would have given not 64.1588° but 57.7. and a mass harmonic of not 16944435 but 11117244. Makes a difference, eh?

This is if you happen to use a base-1 numbering system. 16944 in octal (base-8) is 41060, and in hexadecimal (base-16) is 4230. Which to choose? The most basic and fundamental numbering system is of course binary (base-2) which gives us 100001000110000.

Which funnily enough should have given Bruce Cathie a pretty good clue that his '16944' is pretty close to the real harmonic of mass. Close, but not quite there. (I should know! After all I work for the government!) Try 2 to the power of 14 Bruce! 4000 in hexadecimal, 40000 in octal, and guess what in binary? Try a different calculator Bruce.

To get back to the pyramids, Bruce reckons that they are used to "communicate interdimensionally, or through millions of miles of space"<sup>2</sup> with distant sites on account of "each group as a whole has within it all the harmonic combinations necessary to resonate in unison with the unified fields". See? Simple.

Bruce has already disclosed that two Russian guys, an electronics specialist and a construction engineer, have already published a theory of a massive world grid system. From this theory Bruce predicts the existence of another pyramid near the eastern border of Sinkiang in China. And guess what, just by chance, a US Air Force pilot in trouble saw a "gigantic white pyramid" <sup>2</sup>. Is it in the correct position? Who knows? Bruce is hoping that someone can tell him. To finish with Bruce assures us that "I am sure there would be many surprises." Well - I'm surprised already.

The story now turns to Egyptian hieroglyphs found in Australia. Paul White relates the discoveries of "modern Grid researchers, like Bruce Cathie" <sup>3</sup> to "the local Power Places" he had learnt of from his Aboriginal teachers. Together we have an unfolding of "the 'secret knowledge'". "So, following a synchronistic trail, we began to explore the Grid locally, looking for missing links." And guess what they found "at Grid Point 44 (so-called)"? Non-aboriginal hieroglyphs "carbon-dated at forty thousand years". (How can you carbon-date carvings in a rock wall?) Now this links up with stone circles and standing stones "that litter the Australian countryside, as much as England and Europe." Now bring in "the legendary appearance of sky beings", "contemporary UFO reports" and "stories of instantaneous travel".

Most of this article is a breathless description of a wall of Egyptian hieroglyphs in a 'crypt' roofed with large boulders near Gosford in NSW. It was all very secret and psychic. "If it was a hoax, it was very impressive anyway" <sup>3</sup>. "David entertained the notion that the site could be a 'time tunnel' to Peru or wherever." I wonder how many readers, like me, wished that Paul and David had tried out this 'time tunnel' to 'wherever' for themselves! And we finish with "Only time will tell..."

"These carvings [Egyptian hieroglyphs] could not possibly be a hoax, as no one today could understand the peculiarities of the ancient Egyptian language of those times" <sup>4</sup>. I love that sentence; it is one of my very favourites of all time. If the writing is alleged to be so old that no one can understand it, then it must be genuine! Such logic - I bet this guy was a real treat to have in your class when he was at school.

Raymond Johnson gives us a marvellous translation, in modern English, of these Egyptian hieroglyphs <sup>4</sup>. Quite a tale of endeavour against misfortune it is too.

Filip Coppens <sup>5</sup> starts with the 1947 sighting of the Chinese pyramid. But Filip contributes a historical account of the building of these pyramids. A review of recent 'researchers' leads to speculation, but no answers.

Bruce Cathie repeated his 1992 (or was it 1983?) article word for word in 1995, with the same spelling errors, but with the addition of photographs "in living colour" <sup>6</sup>.

The next issue of *Exposure* contained "more pictures and the man who found the evidence and revealed it to the world tells his story!" <sup>7</sup>. Hartwig Hausdorf starts with the 1947 discovery and travellers tales before describing the pyramids for us. Apparently they have flattened tops like "the Meso-American ones". Hartwig speculates that they may have had temples on their tops. "The former 'classic' country of pyramids, ancient Egypt, must now hand over

this title to China!" As for the builders, Hartwig uses local mythology as a basis for concluding aliens or gods from outer space. (Now that's a surprise!) And if you want more you can buy a set of six full colour enlargements of photographs of the Chinese pyramids for only \$30.00. Where is my cheque book?

Paul White translates "Amazing HIEROGLYPHS" in the Hunter Valley that "still struggle for recognition" for a dramatic "tale of early Egyptian explorers, injured and stranded, in ancient Australia" <sup>8</sup>. Quite a tale of endeavour against misfortune it is too (it's a re-translation of "ageing Egyptologist, Raymond Johnson's effort described earlier <sup>4</sup>); I can't wait for the 'Bush Tucker Man' to do a whole series on it!

Now I hope I have been fair to the authors of these various articles. I appreciate that it cannot be easy to re-write history virtually single handed, in the face of government secrecy and historians' reluctance to incorporate new knowledge. And I thank Julie Byron for bringing all this material to my attention.

On the other hand, I cannot recall many examples of governments succeeding in keeping a secret. Can you? And I cannot recall any historian who would not be only to delighted to make his name famous and his fortune in royalties by re-writing history.

So what are we left with? Maybe, just maybe, the Chinese pyramids are just very large burial chambers, the same as the Egyptian pyramids, the English barrows, and countless other structures around the world? Just like the Chinese themselves suggested? And the Australian hieroglyphs just may be a hoax? (Or a Year 10 project in active history?)

There are many possibilities: alien visitors, gods from the heavens, ancient arcane knowledge, world-travelling wise ancients, and burial chambers and doodling/hoaxes. This is where science is most useful: sorting through the possibilities to identify the more probable.

Sure anything is possible. But which is most probable?

## References

- 1 "Giant pyramid sighted in ancient Chinese valley", *Sydney Morning Herald*. 29 March 1947.
- 2 "The pyramids of China", Bruce Cathie, *Nexus*, Oct-Nov 1992, pp 31-34,66.
- 3 "In search of ancient secrets". Paul White, *Nexus*. April-May 1994. pp 16- 20.
- 4 "Re: Egyptian hieroglyphs in Australia", Raymond Johnson, *Nexus*, June July 1994.
- 5 "China's great pyramids controversy", Filip Coppens, *Nexus*, Oct-Nov 1995, pp 39-42.
- 6 "No more denials!!! Pyramids of China revealed in living colour", Bruce L. Cathie, *Exposure*, Oct-Nov 1995. vol 2, no 4, pp 41-47.
- 7 "More of the forbidden zones of China!", Hartwig Hausdorf, *Exposure*, Dec Jan 1995-6, vol 2, no 5, pp 3740.
- 8 "The OZ-Egyptian enigma!", Paul White, *Exposure*, Feb-March 1996, vol 2, no 6. pp 20-26. ■

## REVIEW

## Odyssey of an Heretic

James Gerrand

**Margaret Mead and the Heretic - The Making And Unmaking Of An Anthropological Myth, Derek Freeman.** Penguin Books 1996. 379pp. pbk \$17.95

Anthropologist Mead published the myth - free love flourished and jealousy and adolescent turmoil were unknown in Samoan society - in 1928 in her famous best-seller *Coming of Age in Samoa*. The making of the myth began through Mead becoming a young student convert to the fervent belief of her professor, Franz Boas, that behaviour was all based on nurture, a product of the environment in which one was reared, and not due to nature, to any influence of heredity. Thus she was ready to accept, in collecting evidence for her one year's study project, "the study of heredity and environment in relation to adolescence" in Samoa in 1925-6, a series of fibs. These teasing lies were related, as an adolescent prank, by young Samoan girls claiming that they lived in a sexually promiscuous paradise.

The unmaking of the myth took Freeman, Emeritus Professor of Anthropology at the Australian National University, considerably longer. He spent six years working in Samoa and thoroughly investigated Mead's researches before formally refuting Mead's conclusions in *Margaret Mead and Samoa* published 1983 by Harvard University Press. The final nail in the coffin of Mead's opus was driven in by Mead's foremost Samoan friend when she, at age 86 but still mentally alert and active, confirmed to the Secretary for Samoan Affairs of the Government of American Samoa that Mead "failed to realise that we were just joking" when "we said we were out at nights with boys".

Freeman's account is an excellent depiction of how not to, and how, to go about scientific research in non-experimental sciences such as anthropology. As one of the Samoan women involved as a young girl in the scam later stated "Scientists should take care over the explanations people give them. They should first check and make sure that what they are being told is true, and not just a joke."

In particular a scientist needs, when following a particular hypothesis, to pay particular note of any evidence that appears to be contrary. A hypothesis can only become accepted if there is no significant contrary evidence.

Freeman is meticulous in presenting his case. In his Part 1 "The emergence of Cultural Determinism", he recounts how biological determinism, nature, developed after Darwin through Galton who concluded that all aspects of human character were a result of natural selection, were from heredity. Thus all the differences between "savage" and "civilised" races could be explained by the innate character of different races. From this belief came the doctrine of eugenics, "to unite in marriage those who possessed the

finest and most suitable natures, mental, moral and physical". However other distinguished Darwinians such as Huxley and Lanchester, disputed such evolutionary claims. By the beginning of the 20th century, the question of nature versus nurture had become a major scientific issue. In the USA Boas became a leader in focusing attention on cultural processes, completely independent of biological determinism. This Boasian view was helped in the 1920s by the new movement of behaviourism with its emphasis on overt behaviour developed by operant conditioning.

In October 1924 Boas decided there was a need for a scientific investigation of hereditary and environmental conditions. He found in the 23-year-old Margaret Mead the person to carry it out.

Freeman devotes Part 2 to Mead's Samoan research. He mentions two significant weaknesses. She had not the time to learn the Samoan language nor the inclination to live in a Samoan household - instead she lived with a white family. From 25 girls, of age 14 to 20, Mead drew her principal informants. In four months her researches were almost completed. The publication of Mead's *Coming of Age in Samoa* by Mead in 1928 marked the coming of age of contemporary anthropology with its conclusions regarded as eternal verities.

Part 3 is Freeman's refutation of the myth. In 156 pages he is painstaking in his detailed examination of the previous historical accounts of the Samoans; the importance of rank in the Samoan culture with their titular and talking chiefs (Mead was denied entry to the chiefly meetings as not belonging); the cooperation and competition in the culture (the latter at times lethal); aggressive behaviour and warfare; religion including how protestant Christianity readily took over the pagan beliefs, particularly that of an Old Testament Jehovah; punishment to ensure unquestioning obedience; Samoan character of underlying deep feelings; sexual mores and behaviour with particular emphasis on the value of virginity, including the virgin-testing ceremony at weddings by a ceremonial defloration in public; adolescent behaviour with high rates of delinquency in both females and males; the Samoan ethos of exceptional punctilio and grit.

All the above conclusions, based on detailed evidence, are the opposite to those of Mead. Freeman's explanation for Mead's myth is that Mead's writings had the explicit aim of confuting biological explanations of human behaviour. This approach is of course fundamentally at variance with the methods of science.

Freeman's conclusion is "that the time is now conspicuously due ... for a synthesis ... in the study of human be-

Continued p 58...

## REVIEW

# Metaphysical Distortion of Physics

Colin Keay

**The Unconscious Quantum: Metaphysics in Modern Physics and Cosmology.** Victor J Stenger  
Prometheus 1995. 322 pp. US\$39. ISBN 1-57392-022-3

At last the metaphysical fog which for decades has clouded our understanding of quantum effects in physics is being lifted, and about time too. It has taken time for physicists to understand the implications of forcing anthropocentric concepts on the micro-world of elementary particles. Not only has the former misguided approach given rise to paradoxes galore but it has also encouraged the wacky linking of physics with mysticism.

It took great minds like Dirac and Feynmann to realise that the direction of time in the macroworld might have little meaning for an elementary particle. Accepting that, and acknowledging the inherent quantization of time and space, leads to a vastly improved understanding of physical processes. All this is explained with admirable clarity by Victor Stenger, Professor of Astronomy at the University of Hawaii, in his book *The Unconscious Quantum*.

I wish that Stenger's book had been available when I was a student struggling to understand quantum mechanics. I would not have wasted precious time over fruitless ponderings on the Copenhagen Interpretation and the collapse of the wave-function, the paradox of Schrodinger's Cat, dubious explanations of the two-slit experiment including the utterly ridiculous parallel universes theory, or the equally ridiculous assertion that a tree falling in a forest makes no sound unless there is someone there to hear it! Instead, I would have concentrated my efforts into mastering the mathematics of the theory and applying it to the real world where quantum mechanics performs superbly, giving us semiconductors and lasers which have totally revolutionised our lives from medicine to communications to law enforcement. Besides its practical benefits, it must be remembered that quantum mechanics is the most precise theory in the whole arsenal of physics, yielding agreement with experiment to better than one part in ten thousand million.

Victor Stenger earned his laurels as a skeptic by successfully defending his earlier book, *Physics and Psychics*, in three legal actions brought by Uri Geller. In his latest book Stenger develops his attack on the metaphysical mish-mash clogging the shelves of respectable booksellers. Piffle like *The Tao of Physics* by Fritjof Capra, *The Dancing Wu Li Masters* by Gary Zukav, Deepak Chopra's *Quantum Healing: Exploring the Frontiers of Mind/body Medicine and Ageless Body*, *Timeless Mind: the Quantum Alternative to Growing Old*, and countless others are thoroughly demolished by Stenger who removes from their maunderings all trace of support from serious physics.

It should not be thought that Stenger's *The Unconscious Quantum* introduces concepts in physics that are too deep to be understood by a reasonably intelligent reader. On the contrary, many people will painlessly gain a better understanding of the micro-world through reading this book. Stenger avoids any reliance on mathematics in presenting his arguments, but for those who can benefit he includes many simple calculations inside boxes where they can be skipped without detracting from the flow of ideas.

Coming back to the nature of time, which is the critical factor in Stenger's argument against mysticism in physics, we need to realise that the flow of time is set by macroscopic events rather than at the level of elementary particle interactions. Cause and effect are indistinguishable at that level and the paradoxes which we perceive from our human viewpoint simply vanish. Along with them go notions of holism (universal interconnectedness), implying superluminal (faster-than-light) communication in violation of Einstein's amply verified theory of relativity. Without holism the rationale for the metaphysical books I have mentioned simply vanishes.

At this point it occurs to me that there may be some similarity between time and mass. Mach argued that inertia (mass) is a property of matter dependent upon the presence of the remainder of the universe. Could time be of the same ilk? Thermodynamic irreversibility sets a direction for time, yet this applies only to macroscopic systems, like an egg being broken. This means nothing to the elementary particles within each atom of the egg, which retain their identity regardless. Time has meaning for the egg, not for its elementary components except insofar as they are part of a time-dependent ensemble. I'm getting in a bit deep here, which just goes to show how Vic Stenger's splendid book stimulates the mind without any need for the mystical mumbo-jumbo of metaphysics.

*The Unconscious Quantum* is highly recommended for anyone who desires closer insights into the nature of physics and the universe. Talking of the universe, Stenger presents an interesting discussion on what he calls 'cosmythology' as exemplified by Frank Tipler's *The Physics of Immortality: Modern Cosmology and the Resurrection of the Dead*. Stenger demolishes arguments for a creator and deals in a clever way with the so-called 'anthropic principle' (the apparently delicate balance between various physical constants) which gives rise to a universe in which life is possible. He presents a 'dial your own universe' computer program which delivers the result of any combination of physical parameters you care to choose.

All this and more is to be found in *The Unconscious*

**Continued next page...**

## VIDEO REVIEW

## Bending the Facts

Tim Mendham

**Mindbender Dir: Ken Russell**

Oh dear. What to make of this.

Here we have a potted biography of Uri Geller, the “mindbender” of the title, directed by that once *enfant terrible* of the British film industry, Ken Russell. Yes, he who shocked the world with orgiastic nuns in *The Devils*, orgiastic lunatics in *The Music Lovers*, and orgiastic Oliver Reed in *Women in Love*. And this film? Not an orgiastic one amongst them. How the mighty have fallen!

The film follows Uri’s career from an infant spoon bender and mind reader, abused by both father and teachers alike, to young male model via the Israeli army to would-be live entertainer. Poor Uri’s not doing very well in the latter field until the timely appearance of both the entrepreneurial Shippy Strang and visiting academic Joe Hartman (or is it Hartmann - the film can’t make up its mind) and his lovely wife.

Uri joins the academic in his laboratory in California, but gets kidnapped by some nasty military intelligence sorts (in a luxury limousine painted in desert camouflage) who want to use his powers to defeat the enemy. And what powers they are! He can put broken rings back together, make swings go by themselves, levitate objects and kill rabbits.

Naturally, Uri, being a good peace-loving lad, turns the powers back on the military (and an unpleasant TV host to boot) and escapes to the arms of Shippy’s lovely sister while the academic and his wife hoof it to the jungles of Central America to study hallucinogenic mushrooms or some such.

There’s a coda, for some reason set during the 2000 Olympic Games - complete with boxing kangaroo - in which a kaftan-dressed Uri and a willing TV audience of kiddies disarm the entire world’s military weapons, and in particular some missiles launched by a nasty Oriental type sitting in a chair with smoke-breathing dragons (! - I kid you not). Great stuff, what?!

Of course, it’s all rubbish. It’s supposed to be a true story, but there are so many caveats that you don’t know where to start. The title *Mindbender* is subtitled “Inspired by Uri Geller’s life story”. So that’s one step down from the heights of verisimilitude for a start.

Then there’s the further statement “The following events are true and are interpreted through the artistic eye of Ken Russell”. Alarm bells start going off everywhere. So it’s “inspired” and “interpreted”.

Finally, there’s the statement at the very end that “This film is a dramatization based on certain true events. Some of the names have been changed and some of the events and character have been fictionalized for dramatic purposes.”

Well, that settles it. It’s a load of old cobblers.

*Stanford* Research Institute, where Geller was tested (sort of) becomes *Stanton* Research Institute. I can’t find reference to a Joe Hartman (of whatever spelling) anywhere. As for being kidnapped by the military ... well, that was probably one of those events “fictionalized for dramatic purposes”.

From a production point of view, the film is truly awful. It feels like nothing more than one of those cheap (very cheap) American films set in high school where bimbettes and jocks fight it out for sexual pleasures, only without the sex. The acting is terrible. The cast seems to be made up largely of dropouts from the Tel Aviv Amateur Dramatic Society for Young Hopefuls. The locations are whatever happened to be handy, with the phoniest looking casino and military establishments you’ve ever seen.

There are some strange Russellian scenes at the start, staccato excerpts from his childhood, which feature exploding kites and exploding crabs. These are totally out of keeping with the rest of the film, which drifts away into a kind of mediocre Boys Own Parapsychologist adventure yarn.

And what Terence Stamp, late of drag queen fame in *Priscilla*, is doing playing the academic is anyone’s guess. He must be as hard-up as Russell.

Overall, not recommended for the student of parapsychology, and even less recommended for the student of films. Neither Uri’s stunts in the film or the film itself are worth the entrance fee. However, someone should investigate the academic’s lovely wife - she can play a two-handed Chopin piano piece with one hand on the keys and the other wrapped around a glass of brandy. Now that’s clever!

PS: There’s a little bit of the real Geller during the end credits of the video version - I don’t think this film was ever released on the big screen. Geller does one of his tired old “if we all think hard together we can fix these watches” routines, putting his hand up on the screen so that you can feel his vibes. He does say that it might not work for everyone. I think he was being modest. This film doesn’t work for anyone! ■

**...Physics from previous page**

Quantum which is wonderful value for money in a book-marketing world where new-age junk dominates the shelves of every shop. I bought my copy at the recent Skeptics Convention in Buffalo, New York, where Vic Stenger kindly autographed the flyleaf for me. This book is available from Ray Dahlitz, whose advertisement appears inside the back cover of this issue, and believe me, you’ll find it well worth reading. ■

## METAPHYSICS

# A Critique of the Soul

Kirk Straughen

### Introduction

*"I am positive I have a soul; nor can all the books with which materialists have pestered the world ever convince me of the contrary"*. Laurence Stern (1713 - 1768).

The above sentiments of the English novelist and clergyman Laurence Stern are probably shared by many people. However, feelings of certainty do not necessarily indicate that a belief is true.

This article is an attempt to discover the truth concerning the existence of the soul, and by truth I do not mean 'Ultimate Truth', which some believe is the province of religion. By truth I mean that which can be regarded as a reasonable probability based on concrete evidence.

### What Are Souls?

The uncritical view of common sense distinguishes the 'mind' or 'soul' from the body. The mind is vaguely regarded as something intangible, the body as something tangible which changes and occupies space. Now this separation of mind/soul and body has been, in one form or another, a fundamental principle in the world view of many cultures.

This conclusion is based upon anthropological research, which has revealed that in almost every society there appears to be a belief that individuals do not cease to exist at the death of their bodies, but that they have some continuity in immaterial form.

Generally speaking, a soul for most primitive people is not necessarily considered as totally immaterial, for it is sometimes associated with the breath of a person. Frequently this element is described in terms suggesting not complete insubstantiality, but a finer type of materiality, a kind of invisible counterpart of the body, vague and formless, like some unseen fluid. On its well-being that of the body is believed to depend. If it is abstracted from the body then sickness follows, and if it is not restored the body dies.

In more advanced societies similar ideas prevail. For example, Aristotle (384-322 BCE) means by soul the principle in living things by which they are animated, active, and alive. The-soul or life principle is thus linked up with organic existence, and is an integral element in the body. It is not, as in Plato, a separate element, different in kind from the body it temporarily inhabits. Though Aristotle suggests that the soul is itself immaterial.

According to Plato (c 427-347 BCE) matter in itself is formless, a sort of chaos, perhaps empty space. On it are stamped copies of forms or ideas which are changeless and eternally perfect; among them there is, to be sure, the form or idea of motion; however the idea of motion does not move.

To account for generation, change and motion, Plato introduces the idea of the soul, which, according to him, is the true cause of change as it alone not only moves and imparts motion, but is self-moved; this power of self-motion constitutes indeed the definition of a soul. For Plato the whole cosmos is animated by the soul-force with God being the ultimate and supremely perfect soul that sustains the creation.

Western civilization's ideas concerning the mind/ soul hail chiefly from the French philosopher Rene Descartes (1596-1650 CE). Descartes thought that the universe had two basic constituents, or 'substances', body and mind. The defining characteristic of body, or matter, is extension, or the possession of dimensions; while the defining characteristic of mind (or mental substance) is thought, or the activity of thinking.

Now by 'substance' Descartes means that which requires nothing but itself in order to exist. Only matter and mind are substances, and everything in the universe is reducible to one or the other; but matter and mind are not reducible one to the other - each is self-sustaining. Matter has none of the properties of mind, mind none of the properties of matter. The two realms are absolutely different. Strictly speaking, neither mind nor matter is truly self-sustaining, for according to Descartes, God (or the divine substance) is alone self-sustaining in the ultimate sense; the other two substances are substances by virtue of God's power.

It appears that most cultures' conception of the soul takes the form of a single entity within the material body that accounts for its actions, that differentiates the living from the dead, and is sometimes thought of as being the 'real' essence of a person. The term animism has come to be applied to all such concepts of activating principles of whatever sort, presumed to account for or explain the activity of some object or body. In the next section of this article I shall attempt to account for this belief.

### Origins

The first indication we have of our remote predecessors being troubled by spiritual concerns is in the careful disposal of the dead by the Neanderthals, a Middle Palaeolithic people. Probably the earliest examples of such burials are those at the Wadi el Mughara, Palestine. Here the bodies had been laid in trenches cut in the cave floor, with joints of food and flint weapons placed beside them. The Neanderthals usually buried their dead in the attitude of sleep - body gently flexed and lying on one side. In some graves the bodies have been sprinkled with red ochre, generally supposed to represent the life giving properties of blood.

Though sometimes more elaborately furnished, the burials of the Cro-Magnons, the first fully modern humans of the Upper Palaeolithic period (c 40,000 ya), did not greatly differ from those of the Neanderthals. There was, however a greater variety in the positions in which the bodies were placed: occasionally they repeated the sleeping posture of their predecessors, sometimes the bodies were extended full length on their backs, sometimes on their sides with the knees drawn up to the chin.

Archaeologists have concluded that the nature of these burials indicate some form of a belief in a continued existence after death. Food, implements and red ochre are all strong evidence for it. How might this belief have arisen?

Perhaps the soul's existence was inferred from breath. Breath can be seen when it condenses, its heat can be felt. It is drawn into and expelled from the body. The dead cease to breathe, and yet sometimes those who faint or fall into trances seem to cease breathing, but then revive and breath returns. This may have suggested to early humans that there is a component to our being, upon which life depends, a separable thing which leaves and might on occasion return to the body.

Along with breath is the phenomenon of dreams which often plays an important part in the lives of contemporary primitive people, not only in building up a theory of the soul and the spirit world, but in guiding action. In dreams a person can appear to leave their body and visit distant places and, to prehistoric people, the dream experiences may have led them to believe that their inner selves had a separate and independent existence from the physical body.

As well as dream journeys, people can also dream of deceased friends and relatives, and if these dreams were sufficiently vivid and coincidentally prophetic, then this may have further strengthened their belief in the soul. As ideas concerning the soul began to take shape, they may have been applied to other aspects of nature via faulty analogy: if I live and move because I possess a soul, other things that live and move must do so by virtue of souls.

The idea of the soul, once established, probably persisted because of its psychological value. Of all creatures on Earth, only humans have the intelligence to recognize their own existence in time, realize that they cannot live forever, and dread the inevitable end. Much as people would like to live forever, many are willing to relinquish the body if they feel their real inner selves can remain imperishable. The idea of the soul appears to fulfil these hopes, and very few people are willing to question its existence.

The English anthropologist Sir Edward Burnett Tylor (1832-1917) appears to have been correct in stating that animistic beliefs give an explanation of events. In these beliefs in different categories of spirit entities or aspects of human beings, we can see not only an intellectual response as Tylor argued, to two philosophical problems - the nature of dreams and visions, and the difference between life and death; but also a complex response to needs of many kinds, to hopes and fears for oneself and for others by whom one's life is made up.

### Do Souls Exist?

In the previous sections of this article I have given a very

basic definition of the soul, and put forward a hypothesis that may account for the origin of the idea. Now I shall attempt to answer this question: Do human beings possess an animative principle that is the immaterial essence of personality, consciousness, and our mental life in general? For a long time many biologists and philosophers thought it was impossible, in principle, to account for the existence of life on purely biological grounds. They thought that in addition to the biological processes, some other element must be necessary, some immaterial vital force that would lend life to what was otherwise dead and inert matter.

The lively debates between mechanists and vitalists that occurred during the eighteenth, nineteenth, and early twentieth centuries concerning the nature of life have now been resolved. Scientific research has made it possible to account for a multitude of biological phenomena by analyzing them in terms of their chemical and physical components. Nowhere has it been necessary to invoke occult, special vital or psychical forces.

Today it is the brain which appears to be the last stronghold of vitalism for many people; the workings of this organ are referred to an entity known as 'mind'. Neurophysiologists, however, appear to be reasonably confident that all mental phenomena can and will prove wholly explicable in terms of the physico-chemical interactions of brain cells, the presence of certain random elements, plus the uniqueness of every individual pattern of neuronal interconnection, derived from heredity, suffice to account for the totality of our mental life.

The conclusion that mind is a product of natural physiological processes, is a logical interpretation of the available evidence, and does not possess the difficulties inherent in animistic theories. Indeed, let us suppose that the soul is an incorporeal entity; how does it exercise its influences on the body without itself becoming part of the material world and thereby being subject to the laws of nature?

### Summary & Conclusion

The concept of the soul appears to have originated in the Middle Palaeolithic era, possibly as an attempt by early humans to explain the nature of dreams and the difference between life and death. The idea, modified by the passage of time, has persisted down to the present because many people find this belief comforting as it can mitigate the fear of death.

However, with the advent of modern science we have discovered that life is wholly explicable in terms of natural physical processes, and that there is no need to postulate an immaterial vital force in order to account for physiological phenomena. Furthermore, we now know that all forms of life, including human beings, have arisen as a result of evolutionary processes, and it seems unlikely that this natural process could produce a supernatural entity such as the soul.

In conclusion, I think that it is a reasonable probability that we are entirely natural creatures without any supernatural component to our beings.

-

## FORUM

## Religious Freedom in a Secular State

I would like to respond to some points raised by Andrew Parle\* in his response "A Secular State?" (Vol 16, No 2) to my article on "Religious Freedom" (Vol 16, No 1). My basic argument was that if Australia, or any other country, is to be a truly secular state then there should be no official recognition of religious festivals such as Christmas or Sunday and that the Church or other religious bodies should not have any official status within the government over and above what might be given to any other (secular) organisation. This, I argued, is the only way to ensure both freedom of religion, for those who practise religion, and freedom from religion, for those who don't practise it. To give official recognition to a particular religious system and not other religions or non-religions is, at the very least, inequitable and in its most severe expression leads to genocide, of which there are numerous examples.

One of Andrew's complaints is that there are religious political movements in the United States and this is interpreted to mean that they do not have "freedom" of religion. Given that religious or non-religious beliefs are a personal affair, and not within the realm of a legitimate State function, I have no problem with this. If a politician or any other group sees a market for a particular set of ideas, they are bound to tap into it. A problem only occurs if that politician attempts to use the apparatus of the State to forcibly impose their religious views on others. This is what the US Constitution attempts to prevent and also ours to a lesser extent. It is true that there are still blasphemy laws in the US. In fact they are still maintained by Colorado, Louisiana, Maryland, Michigan, Oklahoma, and Rhode Island but their validity is open to testing as to their constitutional legality. Also, I understand that they apply to religion generally, not one specific religion, as is the case here. The blasphemy law in Massachusetts was recently repealed due to the efforts of the American Civil Liberties Union.

Andrew further states that since we have not had the problems associated with enforced religious practices such as the Spanish and numerous other Inquisitions in Europe, pogroms and so on, that there is even less motivation to change the relaxed attitudes he believes Australians have toward religion. But surely, if it is not a problem, as he claims, then what is the harm in having more rigorous enforcement of a separation doctrine?

In fact, I do not believe that allowing the current arrangements to continue is altogether harmless, although we are obviously not talking about the levels of harm traditionally associated with the forced imposition of certain religious beliefs. Nevertheless, whilst forced religious holidays remain official doctrine, there is always the possibility that they can be carried too far. Now, I am not saying that anyone is dragged off to a church and forced to bow before a figure - that has not been done for a long time in

Western countries. But the original religious basis of the days are undeniable. As a thinking person, I can't help thinking why I am not allowed to work on those days - in other words I am forced to think about the religion in question - something I would not normally have devoted any energy to. I am not able to adopt the view of some that this is "just another day off". As a thinking person, I am forced to make some recognition of the religion associated with the day - so, in a way, I am forced to observe. That's why its best not to have any religious holidays at all, apart from the fact they are only appropriate for one sector of the community.

Andrew Parle claims the religious holidays are now considered secularised by many. This may be true, so in that case, why not do as I suggested, abolish them and replace them with general-purpose vacation days that can be used whenever one wants? If there is sufficient demand to have these vacation days at their traditional times, then employers will still make appropriate arrangements and individuals who wish to undertake their normal activities of visiting family and so on will be able to do so as usual. Personally, these days have no meaning to me, I find the times inconvenient and I would rather have the flexibility to take that time off at times that are suitable for me, not when as it is suggested, by virtue of the official religious holiday, that I should be taking time off work to contemplate whatever belief is sought to be recognised on that day. As far as Parle's support of such things as Christmas trees in public places (which I was opposed to) I fail to understand how such an object can be considered anything but religious. It is after all, a *Christmas* tree. In a similar manner, the author claims that a "Christmas Party" is not a religious celebration. This is true in terms of the content of the party, my objection was to its naming. If it truly is a secular party, then it should be named appropriately as an "End of Year Party". I feel no desire to honour an event that I don't believe in by attending a party named in its honour. My objection to Christmas cards was not in the cards *per se*, but in official government agencies distributing them, thus suggesting that the religion the cards represent is the religion endorsed by the government. Once again, it gives the wrong message if Australia is a secular state. As far as private exchange of Christmas cards go, or any other religious activity, I fully support that - religious observance is a private matter, which is my whole point.

Parle also takes exception to my objection to restricted Sunday trading laws but at least concedes they should be looked at, and faults my lack of examples in that case. These laws mean that people who may wish to work on Sunday are not permitted to do so even though they might want to.

Take, for example, Jews who for reasons of Sabbath observance may wish to open their businesses on a Sunday but not Saturday in order to remain competitive with

## FORUM

## Religious Claims

those who trade on Saturdays but not Sundays (assuming both trade 6 days). As it now stands, a Jewish-owned business might only be able to trade 5 days instead of the 6 days permitted to others - a 14% reduction in trading hours just because the religious beliefs of Christians have dictated that Sunday should be a day of rest for both Christians and non-Christians alike. And this is "harmless"? A similar argument could be applied to Muslims and practitioners of other religions who are unable to work on certain days. And this is not even to mention the tremendous economic losses this country suffers due to lack of universal seven day trading.

As regards to the unknown soldier, he most definitely was assumed to be a Christian and lay in state with a crucifix on the coffin. The religious representatives represented the Army chaplaincy as it existed in WWI but non-Christian chaplains who were there were not permitted to say any words, only the Anglican and Catholic ministers. We have then an "unknown" soldier who can hardly be representative of all fallen soldiers. Of course, the fact that this soldier was assumed to have any religion at all is another breach of secularism. It would have been better for representatives of all religions to have said some private words, thus covering all bases.

I would just like to emphasise that I have absolutely no problem with private religious (or non-religious) practice. It is a private matter, but should remain so. It has no business being involved in any governmental affairs. Separation of religion and state is a doctrine that was wisely thought out because history shows that some religious belief systems can be exploited to motivate people into cruel and irrational behaviour.

My interest in writing the article was to minimise the chances of this sort of thing happening and to educate the readership in some of the many ways this influence extends. Skeptics should be especially vigilant of further inroads of religious affairs into the Governmental system.

**Dr David Maddison  
Toorak VIC**

**Editors' Note**

Due to an egregious oversight on behalf of the editorial staff, brought on by overwork and general unworthiness, Dr Andrew Parle was not credited with authorship of the article "A Secular State?" in Vol 16, No 2.

The Editors unreservedly apologise to Dr Parle, a Vice President of Australian Skeptics Inc, for this oversight and wish to state unequivocally that the exclusion of his name from the article did not imply an editorial opinion that Dr Parle is anything other than a warm and wonderful human being, nor that he has an unnatural sexual attraction to small, furry, insectivorous marsupials. Readers who drew any such inferences from his exclusion should be thoroughly ashamed of themselves.

**Moving?  
Please Tell Us!**

In your response to John Stear, (Vol 16, No 2), you set out the rationale on which your policy is based. I can understand the arguments and can see also that it might be expedient to dodge religious matters because many members might be religious as well as sceptical of other paranormal things. Nevertheless I cannot see any difference between the paranormal and the supernatural and so would include religious dogma among the things about which to be sceptical.

You also suggest that many questions raised by religious belief are not amenable to scientific investigation. It is commonly believed that nature and supernature are at different levels and cannot interact to enable a scientist to make any sort of investigation of the supernatural. This is clearly wrong because religious dogma makes many claims of alleged interactions between the two 'worlds'. For instance the revelations in the Bible are interactions between God and the scribes. Creation was a supernatural event which produced the natural world, and you rightly include creationism in your prospectus. Also, there are the miracles which are supposed to have effects on the physical world, there is the soul, out-of-body experiences and even the orderliness and beauty around us. If we study these interactions, these alleged definite effects, of the supernatural on the material world, we find that there seems to be no supernatural influence. In all scientific investigation, in all scientific disciplines and in all scientific literature there has never ever been a supernatural explanation of anything.

**Creation**

If creation is to be believed, our very existence is a result of interaction between God and the natural world. Yet the evidence is that natural processes have brought about all the things that God is purported to have done. There do not seem to be any developments which have anything but a natural explanation.

**Revelations**

The revelations in the Bible, in *Genesis*, are not a stupendous account of things never imagined by man. If God had revealed to the scribes even a small amount of detail about his work of creation, he would have made known things far beyond anything of which man could have dreamed. Their account would have been limited by constraints of vocabulary and understanding, but it would have been correct in terms of logistics, chronology and arrangement of the cosmos. Instead, it is an inaccurate account in the terms of man's knowledge and ignorance of the time. Just to give one example, in *Genesis* it is said that light was created on the first day, three days before the sun, moon and the stars! The revelations can be seen to be a product of man's mind, there was clearly no input from a higher authority.

### The Soul

If there is a soul, it would hardly be isolated in the supernatural world with no connection or ability to interact with the worldly body. If that were so it would have no relevance and nobody would have any basis or evidence for its actuality. There would have to be some sort of communication. Here is a fertile field for charlatanry, but where the communicators seem to be sincere, the more rational explanation must be emotional imbalance, hallucinations and delusion. Ordinary people are not qualified to interpret tricks of the mind. Psychologists can explain these things without resort to the supernatural. In their science they have never shown, or reported on, any supernatural communication.

### Born again

People who claim to have received a message from God to take up a religious life, instance a type of interaction between the worldly and the supernatural. These messages, signs or voices are commonly received at a time of stress when the person is hardly in an objective state and are more likely to be prone to irrational reasoning as psychological science might show.

### Miracle cures

Miracle cures, of cancer, blindness, crippling ailments and chronic diseases are instances of an effect on worldly people by the supernatural. There are instances of unexplained cures, but that does not automatically make them miracles. There might be a supernatural explanation but any number of less sensational but much more believable explanations, such as hypochondria, psychosomatic effects, misdiagnosis, changed environment, dishonesty, self deception or confidence trickery. People have a tendency to choose the sensational reason, it is human nature, it is irrational.

### Pearly Gates

Out-of-body experiences are another example of preference for the sensational. These hallucinatory effects of oxygen starvation of the brain are caused in near drownings and heart stoppages. In such instances the individual is not dead, not brain dead, merely in cardiac arrest at worst and revivable and is revived. It is hardly likely that the soul would abandon the living body to begin its journey to the pearly gates.

### Obligation

So there are alleged interactions between nature and supernature, so we should be able to use worldly methods to detect supernatural effects. The Skeptics are under no obligation to carry out or sponsor investigations but believers are unlikely to do anything, hiding behind their claim that it is not possible.

Just the same, *the Skeptic* doesn't investigate fairies or Father Xmas and why should it risk annoying the kiddies, let alone its religious subscribers.

**Brian B. Marsh**  
**StJames WA**

## SKEPTICISM

# Wasted Years?

Harry Edwards

Having spent as much, if not more, time than most promoting the aims of Australian Skeptics, I was cut to the quick, nay mortified, to read Geoffrey Guilfoyle's article "20 Wasted Years" (Vol 16, No 2. p 24). In his article, Geoffrey concludes, "...CSICOP and Australian Skeptics have achieved little or nothing since inception" and, "...why bother?" To a dedicated sceptic such as myself, this felt like a smack in the kisser with a wet fish. Negative observations such as these do nothing to engender enthusiasm nor encourage us in the pursuit of our aims.

Having made considerable calorific sacrifices to enable him to save the small fortune he recently spent on acquiring a complete set (bar one) of the *Skeptical Inquirer*, Geoffrey then wastes *his* time selecting half-a-dozen quotes from what he calls "depressing reading" to make a point. He argues that, *a principal tenet of sceptical organisations is the dissemination of information to make people aware, and that this has not been achieved.* Geoffrey also appears *inter alia*, to base his conclusions on a perceived *status quo* in the paranormal world over that period of time, and the intransigent beliefs of a few loopy associates.

Within reason, it may be said that we *are* preaching to the converted. However, while it is easy to perceive no change in the public's conception and understanding of paranormal phenomena without an expensive national survey, there is no way to ascertain for sure, whether Australian Skeptics, or any other sceptical organisation for that matter, has influenced public opinion. Several surveys have been reported in *the Skeptic* over the years (Vol 5, No 2., Vol 8, No 2., Vol 8, No 4., Vol 12, Nos 1 & 3. [Sorry Geoffrey, you'll have to buy the back issues!]). However, they deal principally with the extent of belief systems, not the extent to which the participants changed their minds after being made aware of the facts. Without any feedback in this area, it's a bit one eyed to conclude negative results.

In an attempt to counter Geoffrey's pessimism, let's have a brief look at what we, as a sceptical organisation, can claim to have achieved over the years in our efforts to enhance public awareness.

To my knowledge, prior to 1981, there existed no organisation in this country dedicated to encouraging critical thinking, particularly where belief in alleged paranormal events was concerned. The media wallowed in sensational and uncritical reports of UFO sightings, miraculous healings and other 'mysterious' happenings. There was no one to turn to for a second opinion, and even when there was, it was rarely sought. To a certain extent, but nevertheless to a lesser degree, the media still does - but things haven't changed Geoffrey? Good Lord man, are you still listening in on a crystal set? Does your television receiver run on kerosene? Haven't you heard of the internet? Are

newspapers simply a wrapping round your fish and chips?

Over the past decade, many of Australian Skeptics' investigations have been featured in the news and on TV current affairs programmes, our opinions are constantly sought by all sections of the media, and you would have to be a resident of Ulan Bator or Noble Park for the name Australian Skeptics not to strike a chord.

Just a few instances for which we can claim a modicum of success. In 1987, Australian Skeptics exposed Peter Brock's pseudoscientific energy polariser and it was withdrawn from the market. How many potential customers were saved the embarrassment of purchasing a useless gizmo? In 1989, Channel 9's current affairs programme, *60 Minutes*, featured our investigation into water divining. Would this not have raised a few doubts about water diviners' abilities in the minds of the millions who saw it? Would the public be aware that the accredited members of the Australian Psychics Association are accepted as professional psychics without any evidence that they possess such powers, had it not been for Australian Skeptics? And how many potential victims of the psychic tele-hotline services will now think twice about seeking 'psychic' advice since our recent exposé on Channel 9's *A Current Affair* and *Today Tonight*? In July alone, Australian Skeptics were represented on Channel 7's *Today on Saturday*; mentioned twice in the *Sydney Morning Herald's* Column 8; in the July/August issue of the *Skeptical Inquirer*; and in the July 18 issue of *New Scientist*. Barry Williams and I both gave talks at the request of two social organisations, and to these can be added, other radio interviews and newspaper articles around Australia, and our widely read publications detailing numerous investigations into every aspect of the paranormal.

While we are confident that we are getting the message across, to what extent we may never know, but judging by the subscriber renewal rate (87%), and the increase in new subscribers to our journal after each burst of publicity, at least some of the public (closet sceptics, fence-sitters and the just plain curious) are showing an interest in our activities.

The reaction of readers of our journal is such that we have even opened a 'compliments' file. True, such praise may be coming from the 'converted', but it is gratifying nonetheless. Gift subscriptions are on the increase, suggesting that an attempt is being made to tip the scales of ambivalent recipients. Students seek material for projects, and both new and old subscribers keep us busy with requests for back issues. Readership is not confined to local subscribers either. Overseas libraries ensure that our findings reach tens if not hundreds of thousands. Permission was even given some years ago for the magazine to be taped for the blind.

My personal commitment to the aims of Australian Skeptics and the work it which it involves me, is almost a full-time occupation. I consider my efforts a lesser 'waste of time' than being a spectator of TV sports or propping up a bar making excuses for the loss of a football match.

Some credence can be had in Geoffrey's ultimate contention however - that we cannot change the mindset of paranormalists, representatives of the media and secular

dogmatic faiths. On the other hand, of the examples quoted by Geoffrey, one could also argue that the initiators of these belief systems did ultimately meet with success against all odds, at least in terms of numbers. Given support, encouragement and a positive outlook, I believe sceptics could grow likewise, and may eventually achieve their goal.

There is now some three quarters of a million dollars up for grabs for anyone who can prove the truth of any paranormal claim. While sceptics are on safe ground contending they know why there are no takers, perhaps even some of the believers may soon question their gurus. One could also argue, that as people become more aware of how they are being ripped off, fewer are patronising psychics. Perhaps this explains the proliferation of "psychic fairs" where they are touting for business. Furthermore, most now advertise their services as "entertainment" or "guidance only!"

Finally, those rebuffs with which Geoffrey has to contend.

"Science doesn't know everything." True, but specific scientific claims can be substantiated by observation and repeatability, and false conclusions are corrected. Ask the paranormalists if they can provide any credible testable evidence to support just one of their particular beliefs.

"You're closed-minded." How can I be closed-minded when I consider both sides of an argument. Surely you are the one who has the closed-mind by not considering all the evidence.

"They laughed at Columbus." And rightly so. He set out to find the *East Indies* and ended up in the *West Indies*!

Ask a believer in the power of crystals to remove the battery from their wristwatch to see if it still works.

When you are told "For those who believe no proof is necessary, and for those who do not believe no proof is possible." respond with, "Believing in something doesn't necessarily make it true. People once believed the world to be flat and that the sun revolved around the Earth - until those who did not believe provided evidence to the contrary."

Ask why proponents of the paranormal are reluctant to take up the Australian Skeptics' challenge.

If all else fails, stand back, stare them in the eye, gesture and cast a spell. If they say that's ridiculous, ask them why? You will then have them arguing against something akin to their own beliefs!

Maybe now Geoffrey has finished his research he'd like to sell us back his collection of SIs at half price. Better still, go through them again and look for the positive aspects, bearing in mind that it is only by exposing fallacies that we can hope for their extinction.

Then on the other hand, perhaps Geoffrey's lament is really only tongue-in-cheek, or is he part of a psychic conspiracy to undermine the aims of Australian Skeptics? Either way Geoffrey, you'd better button up your aura and polish your chakras - I've got my (third) eye on you! ■

**Skepticon 96**

## FORUM

## Relativity And All That

I was delighted with the response to my provocative article "Relativity and Other Matters" (Vol 16, No 1). In a covering letter to our esteemed editor, I predicted that it would "set the cat among the pigeons". It certainly did (and in the process provided Barry with ample material for a very interesting issue!)

I would like to thank all those who responded to Barry's appeal and took the time and trouble to write in, and especially for the courteous tone of the contributions, which relied in the main on reasoned argument rather than (with one or two minor exceptions) personal attacks.

I was, however, rather amused at some of the cries of outrage and indignation that anyone should question some of the sacred cows of modern scientific wisdom, as if they were indisputable facts, and not simply the current theories - although this was indeed admitted by at least two correspondents ("all scientific theories are provisional"; "there is no way that we can directly confirm the results of our observations as being absolutely correct").

Remember, Einstein himself never accepted quantum theory (still a pillar of modern physics), as incompatible with his own already widely accepted theories ("God does not play dice."; he didn't believe in black holes, either!) - which surely indicates that there must be a flaw somewhere in our present view of the universe.

That said, I must confess that there was very little in the replies that I did not already know, though I feel sure that they have proved extremely interesting and informative to many readers of *the Skeptic*. I was well aware before, I suspect, some of our contributors were even born, that Einstein's brilliantly predictive theories had substantial support from careful observations and experiments. So also to a great extent did Ptolemy's descriptions of the motions of the planets, until Copernicus and Galileo came along. As Prof Ted Honderich of University College, London, puts it in his 1993 book *How Free Are You?* (p 65): "The success of a theory is far from being the same thing as the truth of an interpretation or model of a theory."

I feel, too, that some of you somehow missed the point, or rather, points, and read into my words things that I neither said nor implied.

In the first place, I endeavoured to show that even scientists are not immune from the scrutiny of sceptics, all the time:

a. they do not explain the reasons and evidence for their findings to the man-in-the-street as clearly and convincingly as they allegedly do to their fellow scientists, and also ensure that this evidence is widely disseminated. (For example, lots of otherwise reasonably well educated people still think that the evidence for evolution is little more than the fossil record and a few biological similarities, seeming completely unaware of the latest developments not only in molecular biology and palaeontology, but also in those other fields which support the theory.); and

b. much popular scientific writing implies an unjustifiable certainty that it is dealing with established

facts, overlooking the other fact that much of our modern science rests on a series of assumptions.

The thoughtful and clearly worded nature of many of the replies went some way towards addressing this issue.

Secondly, I tried to highlight the fantastic nature of some modern proposals, most of which were hardly addressed in any detail (with the exception of the curvature of space, which was passionately defended in the main with the usual familiar arguments), leading me to assume that either the writers themselves had some doubts or possibly agreed with me.

Next, I drew attention to the increasing attacks on the 'Big Bang' theory. Again, there was considerable support!

Finally, I stressed that mathematics consists largely of mental or 'ideal' concepts which have no equivalents in the real world. (I made it clear that I was not attacking mathematics as such.)

Surprisingly, if you analyse all the hoo-ha, there was again much support for this view also (eg "mathematical objects have no relation to the real world". "lines and triangles are abstractions, and don't exist in the real world anyway.") - which made most of the detailed mathematical expositions largely irrelevant.

One correspondent admitted in effect that in the real world a Koch curve would indeed be a finite line ("No physical Koch snowflake could be constructed ... It is an idealisation, an abstract shape."). Another very neatly described the Cantorian method as a "thought experiment", where "practical limitations ... do not hold."

Precisely! This is the very point I was making! (And can the mathematicians not see that, even in the thought world, if at any point you stop to measure the area enclosed by a Koch curve, the boundary at that moment in time must be fixed, and therefore finite? - otherwise you could not measure the area. But then, as Kronecker pointed out, logic is not the same as mathematical reasoning ...)

Once again, thanks to all those who contributed to this discussion. Many readers of *the Skeptic* will have had their knowledge considerably expanded as a result - and that, I believe, should be one of the principal aims of this journal.

**Alan Towsey**  
**Tahmoor NSW**

**See you at Skepticon 96**  
**Monash University**  
**Sept 21-22**

## TECHNOLOGY

# Australian Skeptics on the Internet

Greg Keogh

## Introduction

In *the Skeptic* (Vol 15, No 4) I published an article titled 'On the World Wide Web', describing how the Australian Skeptics were in the process of creating an Internet domain. I also covered general topics that would introduce the Internet and the World Wide Web to readers, and I explained how the Internet is a great meeting ground for sceptics from all over the world.

I'm pleased to inform you all that our application for an Internet domain was processed smoothly, and we went 'live' on Thursday the 4th of January 1996. In this article I'll give you an overview of what's been happening since the Australian Skeptics Internet domain went on-line.

If you're confused by any of the computer jargon that I use—including the TLAs (Three Letter Acronyms)—please refer to the glossary at the end of the article, or see my original article.

## The First Days

For several weeks in late 1995 I had been preparing the Australian Skeptics Web pages off-line on my own PC at home. Using the articles, images and advice donated by other committee members, I created a complete working mock-up of how the pages would appear when they were published on the Internet.

After several weeks of playing the game 'Fax-me Fax-you' with our ISP, word came through on January 3 1996 that our Internet domain was ready for use. Later that evening I logged-on via the modem, fired up my file transfer program and uploaded all of the files from my own PC to the server computer that presents our Web pages to the world. After the transfer completed and I disconnected the modem, I sat back alone and stared at the glowing PC screen for a few minutes ... I was overcome with a strange feeling of unease. I felt a bit like someone who had thrown a message in a bottle into a vast ocean. Would anyone find the message? Would a torrent of criticism start pouring in? What would happen? There was little point in worrying so I went to bed.

The next evening I logged-on again and nervously clicked the 'Check Mail' button on my email software—Beep! Beep! Beep!—email came rolling in, and I could see straight away that it was from all over Australia, and some were from the USA and New Zealand. Even more nervously I opened up the email messages, only to find they were all messages of congratulations and encouragement:

*Good to have you on-line...*

*Great pages...*

*Do you want to link Web pages?...*

*What's your surface mail address?...*

Suddenly, the reality of having a Web site struck me like a gong, I felt like the Australian Skeptics had "joined the world". It was an unforgettable and exhilarating moment when I realized that we now had a simple and effective way of keeping in-touch with fellow sceptics anywhere in the world. The most impressive thing about this new form of communication is the way it invisibly crosses international boundaries.

## The First Weeks

Within a few weeks a regular pattern started to appear in the source and content of incoming email to the Skeptics Web site. Many people were saying things like "I didn't know you guys existed. How can I join?" Some people were asking for help on questions that covered a broad variety of sceptical topics. Others were making offers of help like "Do you need some artwork?", or "Can I submit articles for you to publish?"

Another beauty of email is the way it can easily be forwarded to other people, either individually or as a distribution list. As new email arrives, I can quickly determine which email-enabled Skeptics committee member(s) will be most relevant or interested in the message, and I can forward a copy with a few mouse clicks. If need be, I can just as easily send a fax copy of a message via my modem to a committee member who doesn't have email.

## New Subscribers

I can tell you that Barry Williams [our redoubtable editor and NSW president] and Kathy Butler [Victorian president] are just about bursting with joy at the number of new subscriptions that have been arriving via the Internet. At least 28 individual email requests to join the Australian Skeptics have arrived, and Barry informs me that many more have been arriving from people who have used their own PC to print the subscription form directly from the Web page.

With this many new subscribers, the Internet domain has almost paid for itself.

Some of the subscription requests come from parts of Australia that would be difficult—if not impossible—to reach by conventional means. It's pleasing to see many new subscribers coming from regional areas deep in the 'outback'.

A disproportionately large number of new subscriptions have been coming in from Queensland, and as good Skeptical truth-seekers, we want to know why this is so. Why is Queensland such fertile ground for Skeptics? I've asked some of the new subscribers about this, and they have a variety of theories ranging from the neurological effects of the heat and humidity to 19 years of Joh's rule. I would

encourage any Queensland Skeptics who can explain this phenomenon to submit a letter or article to *the Skeptic*.

### Skeptical Questions

A large number of incoming email messages contain Skeptical questions like:

*What do you know about the book "The Celestine Prophecy"...?  
Have you got any anti-astrology information...?  
What do you think of this weird Web page I found...?*

This is where email excels. According to the subject of the question, I can instantly forward the query to appropriately skilled committee members. This frequently spawns independent dialogues about interesting sceptical topics.

If a difficult or obscure question arrives, I simply forward the message to a distribution list of committee members asking if anyone is familiar with the topic. Given the vast sceptical experience distributed throughout the Australian Skeptics committee members, I can be quite sure that at least one person will be able to help out.

An example of one of the more interesting email questions came from Francesco Ciminello at the Università di Padova in Italy. He asked:

*Hello, I am a member of CICAP (the Italian skeptics organizations). Discussing with a psychology student about "alternative" medicines, she claimed that Australian aborigines lived 120-130 years thanks to "natural" medicine. This is the evidence (she said) that natural medicine can be better. She also cited the book "E venne chiamata due cuori" by Marlo Morgan, whose original title I guess should be "And she was called two hearts" or something similar. I told her that, probably, in Australia it is said that ancient Latin people lived 200 years through natural medicine, and she was very upset.*

I passed this message on to Barry Williams who quickly composed a clear and concise response to Francesco on the matter. A day later, Francesco sent a return message to say that he was thrilled by the rapid response from the Australian Skeptics. This simple example shows how the Internet and email can quickly dispel sceptical folklore and misinformation.

If you have Internet access, you can see a summary of the email messages—including the questions—that have arrived at the Australian Skeptics Internet domain at this URL:

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

### International Contacts

Over the last 6 months, email messages to the Australian Skeptics have originated from the USA, England, Scotland, Holland, Italy, Canada (including Quebec), New Zealand and South Africa. Proof of this can be found next to my PC in the form of an ever-rotating mound of phrase books and multilingual dictionaries. It's not always a matter of simply translating languages, sometimes slang can be a confusing and entertaining sideline to exchanging international email.

Only two weeks ago, Paul Bowers in Canada sent us a message saying that he was sceptical that Australians can call each other "bastards" without causing a fist-fight. I sent a return message to clarify the matter and explain how Australians are actually quite tolerant and imaginative creators of good insults (I sent Paul some examples, but for obvious reasons they can't be reproduced in this article).

As well as exchanging email with overseas Skeptical groups, we are starting to arrange exchanges of journals with them. We've already received some copies of the SOCRATES (SOCiety for RATional EnquirieS) journal from Cape Town, and we expect to soon receive our first copy of *Québec Sceptique* from Montreal. If you want to practice your sceptical French, visit these URLs:

<http://www.cam.org/~pforget>  
<http://libertel.montreal.qc.ca/info/Sceptiques/>  
<http://libertel.montreal.qc.ca/info/Sceptiques/internat.htm>

It's interesting to see how the aims of the Quebec Skeptics are very similar to our own Australian aims, and how they also have a substantial prize on offer for proof of the paranormal. Details can be found in their Web pages.

### Current Events

Even after all these months, email messages continue to arrive at the pace of about 10 per week, and we're still averaging about one new subscription inquiry per week.

Three independent new subscription inquiries recently arrived from Tasmania. Using email I put all three of the callers in-touch with each other, hoping to boost activity in the Tasmanian Skeptics (who have been dormant for a while).

Email exchanges are currently flashing around the country on the topics of precognition, lucid dreaming, magnetic hills, dowsing and 'reverse speech'.

Marsh Franklin from Albany WA started the dowsing debate when he asked us about the validity of MFD (Molecular Frequency Discrimination) devices. Marsh found these devices advertised on the Internet at this URL:

<http://www.treasurenet.com>

Yesterday I received a short and anonymous message that invited me to visit a new Web site to find out about 'reverse speech'. I've only had a quick look, so I can't say much about it yet, other than it seems to be a new and weird twist on the tired old sceptical theme of 'backward masking'. There seems to be plenty of fodder here for experienced Skeptics, so please drop in to the following URL and let us know what you think:

<http://www.1999.com/revspeech>

### What's Coming

Sometime over the coming weeks you'll see the Australian Skeptics Web pages assuming a totally new and refreshing look. Many generous people around Australia have been sending me attractive graphics and pointers to their favourite sceptical Web sites. I'm currently collecting all

these donations and combining them with new articles from our committee members to create the new pages.

The traditionally tedious job of manually creating and updating dozens of Web pages has now been made much easier for me since I acquired help in the form of a modern and full-featured software tool that's specifically designed for this purpose.

If you want to see a summary list of what's planned for the new Web pages, have a look at:

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

### Another Call for Content

In my last article I severely pestered readers of *the Skeptic* to send us anything of a sceptical nature that might be useful in our Web pages. I was asking for: newspaper or magazine articles, artwork, anecdotes, copies of interstate branch newsletters, sceptical events and gossip, or just about anything you can think of.

Don't think for a moment that the pestering has stopped. If you have absolutely anything that might be of interest to the Sceptical community, please send it to our Webpage email address:

[contact@skeptics.com.au](mailto:contact@skeptics.com.au)

Non-electronic submissions can be mailed to the Victorian branch of the Australian Skeptics. If you have any questions about what we're after or how you can send it to us, please drag out the Vol 15 No 4 issue of *the Skeptic* and see the last part of my article that starts on page 51.

In my next article, I plan to tell you about some of the crackpots, whackos and weirdos who are out there on the Internet. As good Skeptics, we always knew 'they' were out there, but until the Internet arrived it was difficult to invite 'them' into your own homes.

The Internet—like most new inventions—is a double-edged sword, but rather than worry about it, I suggest you suspend disbelief, seek-out some of these raving nutters on their electronic soap-boxes, and have a laugh. More on this next time.

### Glossary

**TLA** - Three Letter Acronym

One of the most amazing by-products of the computer age.

**ETLA** - Extended TLA

Becoming more popular as pleasing TLA combinations are being used-up.

**ISP** - Internet Service Provider

Typically a company which has its own computers permanently connected to the Internet. By connecting to an ISP with a modem, it acts as your 'gateway' to the Internet.

**MFD** (Molecular Frequency Discrimination)

Not a computer term, but a subject of debate on the Internet related to dowsing.

**URL** - Uniform Resource Locator

An intimidating acronym, but it is nothing more than

an 'Internet Address' for a Web site. For example, the URL of the Australian Skeptics is:

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

Most URLs will look very similar to this one.

**Email** - Electronic Mail

When you get connected to the Internet, you should be assigned an unique and sometimes cryptic address by your ISP which has the format name@place. For example, the Australian Skeptics email address is:

[skeptics@spot.tt.sw.oz.au](mailto:skeptics@spot.tt.sw.oz.au)

Most email addresses will look similar to this one.

---

### ...Heretic from p 46

haviour, a recognition of the radical importance of both the genetic and exogenetic ...”

For what it's worth I report from a practically daily observation of a grandson, that from birth to age 2 his behaviour appeared almost wholly genetic, but now he's 2½, and learning to speak, he learns a lot from his environment.

Freeman's book is a 1996 update of his 1983 Margaret Mead and Samoa, dedicated to David Williamson whose latest play *The Heretic* is based on this scientific controversy.

### An Addendum

Since writing the above I have had the pleasure of seeing in Melbourne David Williamson's play *The Heretic* based on this "making and unmaking" of a myth. It had had a very successful run in Sydney.

It is a witty entertainment of particular value to Skeptics. It presents dramatically a new dimension to the controversy. Freeman in his book relates just the evidence he had gathered through his investigations. Williamson also portrays the difficulties Freeman had in getting his evidence accepted by his anthropologist colleagues and superior - evidence to demolish the icon that was Margaret Mead.

The play entertainingly show Mead's influence, through her book *Coming of Age in Samoa*, of promoting the sexual revolution of the 60s by introducing a scene from *Hair* and casting Mead at one stage as a Marilyn Monroe look-alike. This fantasy has been attacked by some critics but to me it added a sweetener to allow the audience to accept a bitter pill to many - that science means seeking the evidence even at the cost at the time of personal unpopularity.

## Political Matters

'Political cover-up' rather than 'Political timidity' would have been a better heading for my letter (*Letters*, Vol 16, No 2). At least that is what I thought until I came across the political leanings of the Editors at the end of their comment. One Editor admits to being a member of the militant faction of the International Anarcho Monarchist Movement and the other to being a member of the bleeding-heart pacifist wing of the World Domination League.

Members of these groups - I know well - are characterized by the extremism of their ideology, the most important part of which is their supreme faith in the absolute integrity of every dog owner. Their only negation is looking away. They never look sideways or down but constantly upwards and as a result never see the dog shit on the pavement. Thus they repeatedly step in it.

This bothers these political groups little since they are convinced that there is no such thing as dog shit. The general public recognize that their inability to recognize dog shit comes from the essential nature of their political beliefs which determines their incapacity to distinguish between satire and blatant ridicule.

They are therefore welcomed by many sections of society but are left outside on most occasions since they are disabled by helplessness coming from uncontrollable deep-throated guffaws or high-pitched giggles - it depends upon the state of their hormones at the time - which overwhelm them, whenever they are asked to take off their shoes - a prerequisite to entering any home where satire is taken for what it really is - a deadly serious business. In this way they conceal the state of their socks which are full of holes since they have not changed them for fifteen years, a condition confirmed by G Guilfoyle in his comment on "20 Wasted Years" (Vol 16, No 2).

By now readers will have recognized that I do not really believe that the Editors are members of the political movements they claim they belong to. And of course I do not. For

## LETTERS

**Letters about topics of interest to other Skeptics are welcomed.**

**We reserve the right to edit letters for reasons of space or clarity.**

confirmation that they are political animals of an entirely different breed and there is nothing wrong with their hormones, one need only turn to "Psychic Tele-phonies" (Vol 16, No 2). This is the roar of politicians we can trust!

The roar of politicians quite unlike any other? They have revealed their political affiliations and there is no need to ask them any more to come clean on their conventional politics - although they must clean and shine their shoes - for those fifteen years would not have been wasted if one of our Editors were representing us as the choice of the Skeptic Party in the Senate. And there is yet more evidence that our Editors do not believe that they live in the best of all possible worlds!

The editorial comment on my letter states "Scepticism and extremism would appear... to be mutually exclusive philosophies", indicating a resolute, astute, political mind if ever there were one - there can be no doubt. The comment further maintains "it would not be in our interests to take a partisan political stand" and "members of all political parties might be encouraged to show a little more scepticism about their own partisan policies" surely a substantial platform on which to base the policies of The Skeptic Party!

Thinking about Scepticism as a political philosophy concentrates the mind wonderfully. It has concentrated the minds of our Editors to the point that they own up to knowing what "partisan policies" are. Let us hear more! What are they and how might "a little more scepticism" be applied to them? Surely a "little more" would not fall beyond the aims of Australian Skeptics as printed on the back page of *the Skeptic*. Let us have less timidity and more roaring!

I support Democracy as the form of government about which I have the least scepticism. My leanings towards Green and Democrat politics are for

the same reason. I believe that through them there is some hope that scientific Darwinism will be more readily understood and appreciated within our culture. The slogan "Keep the bastards honest" could well be the slogan of the Skeptics.

**Neil Burry  
Adelaide SA**

**PS** I admit I had to summon up all my Sceptical strength to type that word. On the third occasion it was easier and did me a power of good - exactly as the editorial comment on "partisan philosophies" said it would.

### The Editors reply:

We have always said that we are not prepared to sell our integrity for a mess of pottage (whatever that means), however, recent revelations about parliamentary superannuation may convince us to change our minds. That's a hell of a lot of pottage!

## Drug Addiction

I do not know whether *the Skeptic* is the proper forum for asking the questions I pose in this letter, but as your charming (and multi-talented) editor, Mr Barry Williams\*, so eloquently put it in Vol 16, No 2 of the magazine, where else can you challenge conventional orthodoxy and receive a reasonable and comprehensible reply in less than 750 pages? Perhaps I should put in some pseudo scientific theorising, but attributable to someone else so I am not accused of being a closet spoon bender!

My concern is recreational substances or, as it is sometimes known, self medication, that is heroin addiction. I have always been an advocate of the commonsense medical approach to the problem rather than criminal prosecution for possession and use. The British method of providing addicts with their daily requirements on prescription, while by no means perfect, or even a total solution to the problem, at least attempts to leave the problem in the correct, ie medical, hands. Recently, however, I discovered, from the unlikely source of a *Geoffrey Robertson Hypothetical*, that some

British experts wish to take heroin off the prohibited list in order to use it as a replacement for morphine in the palliative care of the terminally ill, particularly cancer patients. This particular individual had even more radical ideas on its withdrawal from use and its effect on the body.

Every time I make suggestions like this I am dismissed as not being an expert and completely out of touch with the real world of drug addiction, as depicted in the popular press and on television! Could somebody out there, therefore, please answer the following questions?

1. If heroin is so dangerous, why was it the drug of choice in Australia for obstetric use until 1953?

2. Does the real danger in heroin arise from dirty needles (I make no comment on the recent habit of smoking the stuff which it seems to me would have a totally different pharmacological effect) or from the rubbish, ie baking powder, with which it is 'cut' rather than from the drug itself?

3. What *is* the pathology of the drug and what *is* its pharmacological effect?

4. Is it true that the withdrawal symptoms, far from driving sufferers to suicide, are really no more than like a dose of the flu?

5. How would anybody who has not experienced them know anyway?

6. Is it true that injecting the drug in its *pure* form daily leaves you perfectly capable of carrying out a normal day's work, even surgery, and much more so than alcoholism or even a fight with the wife?

I believe that these are neither trivial nor non-sceptical questions and I would seriously like to know the answers without resorting to the medical textbooks.

**Roderick Shire  
Cremorne Point NSW**

It seems to us that this question falls well within the parameters of the sort of thing that should be canvassed in *the Skeptic*.

Among the many professions followed by our subscribers are included medical practitioners and researchers covering a wide selection of specialities, along with toxicologists and drug evaluators, who should be able to answer your particular questions. It has long seemed to us that one of the main problems associated with some drug

abuse relates specifically to its illegality, rather than to any pharmacological effects. What do our readers say?

\* In our constant endeavours to enlighten the readership, we have been conducting research into the proposition "Flattery will get you nowhere". All the evidence to hand suggests this is a fallacious proposition. Your statement seems to confirm this suggestion. Thank you. **BW**

## Creationist Misrepresentation

I have discovered a creationist gem (that is, if any particular piece of creationist material can be isolated as a "gem"). It's from a book entitled *It's a Young World After All: Exciting Evidences for Recent Creation*, Paul D Ackerman, Baker Books, Grand Rapids, Michigan, 1986.

The preceding paragraph to that quoted below suggests "problems" (quotes mine) with the uranium-lead method of dating because "there is only a few thousand years' worth of helium in the atmosphere" (p80).

The most significant statement is: "Also, large numbers of radioactive-dating discrepancies and anomalies can be cited to indicate that unknown factors and faulty assumptions may be at work. In 1968 scientists applied radiometric dating to some rocks that were *known* (italics his) to be less than 170 years old. They knew this because the rocks had been formed by a volcanic eruption in 1800 on the island of Hualalai in Hawaii. The radioactive ages determined for these 170-year-old rocks ranged from 160 million to 3 billion years. Obviously something is wrong with this method" (p81).

The reference given for this is John G Funkhouser and John J Naughton, "Radiogenic Helium and Argon in Ultramafic Inclusions from Hawaii", *Journal for* (sic) *Geophysical Research* 73, No 14 (15 July 1968): 4601-4607.

The creation-????? comments open

up some imaginative possibilities as I see (with Roland Seidel, [Vol 16, No 2,] I have trouble putting the word science with that *other* word).

1. That the rocks buried in the volcano were spontaneously created separately from the surrounding rocks in the volcano in 1800.

2. The created world would have been around 6 thousand years old in 1800, so the rocks *could* be 6,000 years old. This is more likely since on page 102 we are reliably informed that "[Adam and Eve] are also seen as inhabiting a mature world that is finished and waiting for them". Presumably volcanos and all.

3. The volcano was formed in 1800 to allow the rocks the volcano ejected to have the same age as the volcano. [Historical research of the period will no doubt uncover evidence of this cataclysmic event].

4. The rocks and the volcano *are* the same age and the author was mistaken about the date of creation which was, in fact, in 1800 - as deduced from the age of the rocks.

The WA State Library quickly located for me a copy of the cited paper. Not surprisingly, I found quite a different approach. These allegedly inept scientists were careful enough to give complete technical details of their samples; the method of preparation for testing; the test methods used; the limits of accuracy of the test methods; the results obtained; admitted that the ages obtained were abnormally high; suggested reasons, consistent with known geophysical process, just why the measured ages were high; provided thirty-six references from scientific publications of similar investigations and finally had the temerity to suggest that "The analysis of relatively deep-seated, high temperature magmatic gases trapped in mineral crystals offers a unique opportunity to learn more about the specific process involved in the earth's formation" (p4606). Their confidence in their methods was such that they chose to expose their testing methods and results in quite some detail to the scientific community. *And nowhere do they express any doubts whatsoever about the method.*

Furthermore, *nowhere* in the paper did the authors state that they believed the rocks to be only 170 years old. However, the creationist author on the

## Creationist 'Thinking'

other hand said : "... the rocks were known to be less than 170 years old..." as quoted above. He said this despite the fact that there was no such acknowledgement in the *JGR*. The creationist author attributed something to the authors which they did not, and probably would not, acknowledge. Despite the creationist author's claims, the only thing that could be reasonably inferred from the paper is that the rocks came out of the volcano 170 years previously.

Our creationist author cannot bring himself to share the general outlook of the authors of the paper with his readers. In fact the only contact the creationist book has with the paper is where the figures 160 million and 3 billion are quoted (actually 3.4 billion) - and these are not the Helium ages given in Table 1 of the paper but the Potassium-Argon ages given in Table 2. The creationist author, in the context, talks about uranium-lead decay and further elaborates in a footnote on the alleged helium "deficiency" in relation to the decay of the speed of light and uranium lead decay!

It is also just possible that in the 18 years between publication of the paper in the *Journal of Geophysical Research* in 1968 and the publication of the creationist book in 1986 there has been further research (- and my copy is the 10th printing, September 1994!). This is "truth" creationist-style!

As a committed Christian, I can't believe that God would want us to think like that or is so capricious as to change the order of nature in such a manner as to produce such misleading results. No science could ever work under those circumstances. Creationist "truth" such as this brings the Christian church into disrepute and should be opposed by thinking Christians.

**Eric McAndrew  
Craigie WA**

Dennis Sparrow has written that (i) he does not "think the case for evolution is very good", and (ii) he considers that "some aspects of creation thinking have some merit". (Vol 16, No 2, p63) Unfortunately he did not elaborate on either point.

It would be interesting to hear what he finds meritorious in creationist thinking. Having sat thru quite a few creation lectures in my high school science classes, my overwhelming impression is of a mixture of naivety, wishful thinking and ignorance. (Each year, the creationists are invited to talk to a year 12 science class. They have about one hour to do more or less whatever they like. There are a couple of reasons for these invitations. First, the issue is very important and there is more than one side to it. Second, it is surely maturing for the students to see that adults can have very strong disagreements and still behave politely to one another).

Consider the following example of creationist wishful thinking.

The source of the Sun's energy has long interested scientists. A couple of centuries ago the most favoured explanation was that the Sun was a mass of burning coal. With the invention of the spectroscope it was discovered that the Sun was composed mainly of hydrogen gas. The coal hypothesis had to be abandoned. It was the wrong colour to be conventionally burning hydrogen and there were other problems.

The shrinking-Sun model was soon developed. This proposed that the Sun was collapsing inwardly under its own gravity. Heat energy was obtained from the conversion of potential energy. This explanation was suggested primarily by the law of conservation of energy, which had only just been developed. This development did not please many geologists and biologists of the day.

After the accidental discovery of radioactivity by Becquerel in 1896, other mechanisms could be suggested. In 1939 Hans Bethe detailed a sequence of nuclear reactions as the way

the Sun generates its energy. Bethe's nuclear fusion theory is now widely accepted, although there is still, so far as I am aware, a problem with the predicted and observed neutrino emissions.

This rather minor problem is enough for some creationists. The British/Canadian creationist Ian Taylor (see pp 322-325) comes out for the collapsing Sun model. Why? It means that the Earth must be much younger than the scientifically accepted age of about 4.5 billion years. If the Sun is shrinking, then in the past it must have been larger. The orbit of Mercury imposes an upper limit on the original size of the Sun, which emerges as quite young. So young in fact that it can be made to fit the particular chronology which the most vociferous of today's creationists favour. This is an Earth less than 10000 years old.

Influenced by Lyell, Darwin and others, 19th century geologists and biologists were coming to see the Earth as extremely old. The condensing Sun hypothesis posed a significant problem for them. The discovery of radioactivity allowed the development of an absolute time scale and greatly increased the age of the Earth. Today biology and geology are in harmony, and a young Earth is out of the question. It would cause even more problems now than it did in Darwin's day.

This argument over the origin of the Sun's energy is not the only example of creationists wishing something to be true because it fits their system of belief. Ian Plimer's book *Telling Lies for God* contains some classics - the "decaying" speed of light is a beautiful example. However it is a fairly sophisticated example of creationist thinking. For the most part, their arguments are less intricate, and in general make for depressing reading. They are simply so childish. As Stephen Jay Gould has said, they have contributed nothing to the intellectual debate in recent times. There appears to be no aspect of their thinking which has real merit.

On point (i), perhaps Dennis Sparrow's problem stems from an expectation that scientific theories are established in a black and white fashion, that their Truth is overpowering and leaps out to touch you. It is not an

uncommon belief, but the reality is different.

The belief that scientists go about proving theories is quite common. It is also wrong. About 15 years ago a reporter on one of the ABC's science and technology programs (later cancelled and moved to another channel) mentioned that John Dalton had "proved" that matter was composed of atoms. Dalton (1766-1844) had no direct evidence at all for the atomic theory when he proposed it. He was developing an ancient Greek idea which had been revived by people such as Newton and Boyle. Today few if any scientists doubt that atoms exist, but no single experiment can "prove" they exist. Their existence is just overwhelmingly probable. Scientists routinely deal with probabilities.

It was not until 1851 that confirmation was finally found that the Earth rotates on its axis. The evidence came from Foucault's (1819-1868) pendulum experiment. Yet the rotation of the Earth on its axis had been accepted for many years. It was the best way a mass of separate observations could be understood. It had already come to be regarded as a "fact", because it was the most probable explanation. "By 1727 - the year of Newton's death - any scientist who refused to believe in a heliocentric solar system would have been considered a crackpot". (Morris, p 9)

The ionic theory was proposed by Svante Arrhenius (1859-1927) in his PhD thesis. It was so badly received initially that for a time he was in danger of not being granted a doctorate. Many influential scientists who reviewed the thesis thought the notion of ions was a flight of fancy. The ionic theory has since thrived because it explains so many observations. This is a feature of all successful theories, and it certainly applies to evolution.

Is this why Dennis Sparrow thinks the case for evolution is not very good? It does not stand up and shout of its own accord? It would be interesting to find out. Perhaps some examples from the fossil record do not produce a knockout in the first seconds of round 1. However, collectively the evidence is so strong that there is surely no need for round 2.

As for whether he can hold views (i) and (ii) and still be a sceptic, the

answers may be (a) yes and (b) more information is required. It must be remembered that scepticism is not a creed, but a stance, a position, an inclination, a preferred and sensible way of looking at the world. Yes, it is quite possible to be sceptical about evolution, but unless you are proposing nihilism, it must be accepted as a more than reasonable bet. Could Dennis Sparrow please elaborate on point (ii).

What light has he found in the dismal drek of contemporary creationist thought?

**Roger Scott  
Petrie QLD**

#### References:

Morris, Richard, (1983), *Dismantling the Universe*, Simon and Schuster: New York.  
Taylor, Ian T., (1987), *In the Minds of Men*, TFE Publishing: Toronto, Canada.

## Creationists go to Pot

Responding to Dennis Sparrow Vol 16, No 2 . Firstly, before he accepts creationists literature or statements as factual, he must remember to question and resource the material supplied by such groups or people. Over the years I have had many exchanges with creationists. The material supplied was geared to mislead. Using library books quoted by such groups, I found their quotes to be out of context, incorrect or the pages given to be inaccurate. I took great delight in presenting the material back to my creationist correspondents. They ignored my efforts - you see, it would require giving up their 'faith' - its that simple.

Now we come to the nuts and bolts of the situation - it all comes to the first eleven chapters of Genesis. Are they factual? Yes or No? Creationist literature rests upon Genesis. Now if creationists Genesis is truly accurate, creationists would be frenzied dope smoking Christians. Why? Read on.

The use of marijuana- a herb, is condoned never condemned by Holy Scripture which rebukes and proves those who oppose its use, to be liars.

Let the Bible speak for itself.

God said "Let the earth bring forth grass, the herb yielding seed.." Gen. 1:11, adding "I (God) have given you every herb bearing seed, which is upon the face of the earth, ..to you it shall be as (food) meat" Gen 1:29. "...and you (mankind) shall eat the herb of the fields" Gen 3:18.

Such laws have never been rescinded! Are creationists game to ignore such divine guidance? Would the excess use of such herbs explain their strong adherence to dogma? It's the creationists' right, Holy rite to consume all herbs including- marijuana. Maybe they have something? Next can we expect creationists to ask that Legalization of Marijuana, inspired directly from god, be fortified by law?

Now some of you out there may claim I have misquoted the Bible. That is untrue! Using my concordance we find in the Greek dictionary "herb" numbered 6212, which translates in present day language as "unused root ... grass, herb". Creationist can't be picky, either Genesis is to be taken literally or it is not.

There may be Christians subscribing to *the Skeptic* who disagree with my literal interpretation of Genesis. For them, let's look at other literal beliefs. The virgin birth of Jesus.

Matt 1:23 "Behold a virgin shall be with child", using my concordance - Greek section. Virgin is numbered 3933: Parthenos "a maiden, by implication an unmarried daughter: virgin" (presumed).

Isaiah 7:14 "Behold a virgin shall conceive.." using the Hebrew section of the concordance Virgin is numbered 5959: Almah: "a lass, damsel, maid (or) virgin". I wish to state strongly that in each case virgin is assumed, as the female is not married and therefore in their times presumed a virgin. Virginity is given as the last meaning in each case. Since it's good enough for creationists to except and demand we bow our heads to their god, using the final meanings of words it must be good enough for them to accept that marijuana use is inspired by their god who demands they consume it as food.

Far from being tongue in cheek, it is a truly literal reading of Genesis, and as factual as seven day creation etc. I rest my case. Amen.

**Ron Bernardi  
Boolarra VIC**

## Conspiracies

Okay, okay, I confess, I have failed in my duty as a sceptic by wondering whether something is true, and I haven't kept up with my reading about conspiracies. I am a humble bush reader, and I stop reading when I know my leg is being pulled.

That is why, in reply to Ben Frayle, (Vol 16, No 2 p51), I have not mentioned some of the really wild conspiracy theories he lists. If I wanted to read or hear that sort of stuff, I could go to church. Or I could read the UFO magazines.

What I would like to get into holts about is whether political events just happen or whether they are planned. Mr. Henderson, in his reply (Vol 16, No 1) to the two examples I posed, deftly avoided the question in both cases by misrepresenting the time sequence. Jimmy Carter was being promoted by *Time Magazine* before he became the endorsed Democratic Party candidate for the presidency of the USA, not just afterwards. The pseudoscientific teaching of "ecology" in the schools began before it became a "mass movement" (ie before the late teenage demonstrators started ranting about it), not afterwards. To me, these things indicate that someone selected Jimmy Carter as a stooge and that someone planned to have the rising generation believe a lot of nonsense about man's effect on his environment.

I should add that I have no proof that politicians of whom I do approve have not done deals with sinister forces also - it looked as if Dick Nixon might have reneged on some such deal, by the way he was harassed into resignation. I also have no information about whether some environmentalist concerns might not be real causes for alarm: what I could see, even when I was fifteen, was that what was being taught to me and others as science was blatantly unscientific political propaganda, with a very obvious authoritarian, if not totalitarian agenda behind it.

The environmentalists, like the boy who cried wolf, could easily do real harm by causing real dangers to be lost among the noise generated by their false claims.

The really wild conspiracy theories could easily be noise or decoys created to cover real political conspiracies. (This, of course, is a conspiracy theory in itself, and not an original one.)

My trouble, with which I hoped *the Skeptic* could help me, is that I lack the facilities or the professional training in research to analyse conspiracy theories such as the Carroll Quigley one and the Lyndon LaRouche drug conspiracy argument. I am not asking for money: I am asking for someone to do the work and let me know the results, just as *the Skeptic* has run tests on water divining, and pointed out internal contradictions in psychic arguments, for example. I am not asking to be laughed at: I can get that any time. If I am being stupid, I would like someone to explain in words of one syllable how I am being stupid. You do that all the time for people who consult fortune-tellers, not, admittedly, that it helps very many of them.

When I was at university and used to argue with the earnest Communists there, I found that they were full of puerile explanations of this or that as a capitalist conspiracy (ignoring economic realities) but very scornful of any suggestion that Karl Marx had been commissioned to write his boring tract by some ill-intentioned group, or that American financiers had helped to kickoff the Russian Revolution. At the same time, these Marxists knew more facts than I did about such things as the situation in Iran at that time, the Arab-Israeli conflict, and the politics of Latin America. Knowledge of facts and an ability to examine arguments critically and unemotionally do not seem to go together.

If someone at *the Skeptic* would like to clear the air for me on these subjects, well and good: if not, I shall have to go on learning by participating in political life in my own small way. One of my friends was accused the other day, in a LaRouche-influenced publication here in Queensland, of being one of the secret rulers of Australia, so who knows? I may be getting there.

**Paul Rackemann  
Rockhampton QLD**

## Phone(y) Dates

I read with interest the expose of the tele-psychic rort (Vol 16, No 2). I have recently become worried about one particular tele-dating service that offers "Meet thousands of women", possibly at \$5.00 per minute. The implications are astonishing. If we take the claims seriously, "thousands" must mean at least 2,000 and they also claim to have "60 live \*women on line now".

Assuming 2000 women with 60 'on line' at any given time then we have  $2000/60=34$  (ish) different shifts. If you plan to meet your "thousands of women" you would have to ring 34 consecutive shifts in a row (making no allowance for days off etc), and allow at least 5 minutes for chatting up (assuming you are a particularly suave chatter-up), thereby incurring a bill of  $(60 \times 5 \times 34)5$  or \$51,000, plus 34 times 5 hours of your life. If you really wanted to meet women that badly, you would be better of starting your own tele-psychic line (why not a tele-skeptics line?).

**Gary Dalrymple  
Bexley North NSW**

\* We wonder how much they charge to meet dead women? Ed

## Earth's Speed

Concerning the comments in Vol 16 No 2 about the slowing down of the Earth, I would just like to add that just as the Earth is slowing by about 14 microseconds per year due to the effect of tidal drag caused by the moon and other effects, there is also a countervailing effect which has caused a reduction of this rate.

Dr Benjamin Chao at NASA's Goddard Space Flight Center has determined that man has redistributed enough mass on the surface of the Earth, some 10 trillion tonnes in the last 40 years, to have caused the period of rotation of the Earth to have sped up by about 0.2 microseconds. This mass is mainly in the form of water in artificial reservoirs and is equivalent to about 2.5 cm depth off

the Earth's oceans. Most of the redistribution of water has been from the Equator to the North. This water has moved closer to the rotational axis of the Earth causing it to speed up because the moment of inertia of the Earth is decreased, requiring an increase in angular velocity due to conservation of angular momentum. This is akin to how spinning ice-skaters speed up if they retract their arms.

Also, this water has been redistributed asymmetrically, mainly into the Eastern hemisphere, and this has caused the North Pole to shift about 60 cm toward 130 degrees West. Of course, this speeding-up effect is considerably smaller than the slow down effects and it poses no danger to people or the environment. The change is well within natural variations anyway, but I suspect this won't stop some people claiming this as a major environmental catastrophe.

(Dr) David Maddison  
Toorak VIC

## Mystery of Identity Solved

We now know you're not psychic. You even admit you're not "bloody psychic". Why not? What's wrong with you? ...so why didn't you ask your mate Brigitte to make contact with me? *She'd probably only tell you that I'm all right and with your grandmother.*

Of course you don't have any subscribers in Nyngan! They're mostly bible-bashing, wowsing whingers in there. They even persecute anyone who reads a horoscope. If you had spent your \$30,000 carrot on scientific research you might have worked out that Nyngan is in the same shire as Girilambone, though with our enormous population there are probably so many subscribers to *the Skeptic* here that you still wouldn't have worked out which one of them it was. By a process of oblique (or just plain "bleak") thought you could have reasoned that I could have been seen in Nyngan on the very day that the said letter was posted. Coincidentally, it could also have been the same day that

Ronald Biggs was seen in Brazil. (He lives there.) Also, by a process of "circular reasoning" I could have made a "round trip" and been home again that night. Go on, blame it on me, it's all my fault but as previously explained I may make mistakes, Darling, but I am never wrong.

Finally, let us pray for forgiveness, and contriteness and be sorry that I gave the editor and his psychiatrists such a headache in wondering who the hell I was/am/cuddabeen\* but apparently you all swallowed enough of Roche's medication to get you back in a normal orbit. (Except for the Ed. He's still not right.)

As an afterthought, may I enquire whether *the Skeptic* would consider donating some of their pecuniary interests or could con some of their filthy rich suburban scientific subscribers (you've got far more money than I have) into donating money to research eradication of cats, rabbits, foxes, cane toads or even carp. The situation out here is serious ... poor fellah, my country.

B. Barrett-Lennard (alias Lennie)  
Girilambone NSW  
\*and where the hell I was/ am/  
cuddabeen

Well, we are delighted to have cleared up that little mystery. It was extremely foolish of us not to have realised someone whose name starts with Barrett would naturally be called Lennie. Especially Harry, whose favourite poet is Elizabeth Lennie Browning. Ed

## Koch and Bull

The elegant formulae adorning recent issues of our illustrious intelligencer have dispelled a prejudice which I have entertained heretofore, to wit: that mathematics was a subject suitable only for the sons of tradesmen.

However, as I am a mathematical imbecile, I wonder if someone could please lighten my darkness on the deep and drifting matter of Koch Snowflakes.

From the illustration given in Vol 16, No 2 it appears that each time the sides are divided into three equal parts,

the area of the figure increases - albeit, perhaps, with a decreasing rate of increase. If so, could somebody please explain why, when the process is repeated indefinitely, and the perimeter becomes (in an ideal case) infinitely long, the area is not also infinite?

Finally, could a person of quality in your office kindly oblige me with confirmation or denial of the rumour - circulating below stairs and in the sly-grog shops of the Goulburn Valley - that Sir Jim R Wallaby has, on the strength of his *tour de force* on alphabetical discrimination, been elevated to the style and title of Lord Wallaby of Bounder.

I remain, dear Sir,

yr most humble and obedt servt

(The Dishon.) Nigel Sinnott  
Alexandra VIC

Someone might, Nigel, but it isn't likely to be one of the editors.

As for Sir Jim, he has been conducting some serious in-depth research into the conspiracy magazines that flourish in the northern home of the banana. His doctors assure us he should be well enough to contribute the results to the next issue. Ed

## Chaos

Response to Hans Weiler's article: "Does Lipton's Chaos Work?"

Hans Weiler, being a true sceptic, decided to verify the chaos produced by the equation which I presented in an article in this journal (Vol 16 no 1). Weiler disputed the fact that the sequences diverge after a few iterates when the initial conditions of 0.6 and 0.600001 are used.

The misunderstanding here, I believe, is the concept of divergence. By Weiler's definition of divergence the sequences do not diverge until  $x(20)=0.4242$  and  $x(20)=-0.2155$  (rounding to 4 decimal places.)

However if one considers the fact that the difference in initial conditions is just  $0.0017 \times 10^{-3}$ % the percentage difference between the two series af-

ter each of the first five iterates is

$0.0086 \times 10^{-3}\%$

$0.0032 \times 10^{-3}\%$

$0.0215 \times 10^{-3}\%$

$0.0238 \times 10^{-2}\%$

$0.2307 \times 10^{-3}\%$

thus after five iterates the error percentage has blown out by more than a factor of 100.

**Justin Lipton**  
**Monash University VIC**

## Taiwan Reply

As a sceptic living in Taiwan, I was interested to read Harry Edwards' report, "Taiwan Skeptics," in (Vol 16, No 2, pp 31 and 56). The part about "sexual vampirism," however, needs to be greeted with some scepticism.

I've had trouble deciding which presented more of a problem, the confusing language used in that section of the report or the fact that nothing was ever defined clearly. For instance, what are "borderline hagiographies" in the context of this subject? Perhaps someone can enlighten me also about the phrase "possible but less than most likely scenario". As to the expression "sexual vampirism," a visit to the library was needed to learn that it was coined by a Western writer about 45 years ago. He used the term to describe his initial interpretation of love making practices that were touted in a couple of old Chinese texts. Although he withdrew the term from a later edition of a book he wrote on the subject, the term manages to surface now and then. For a brief discussion of this point, see either Schafer 1961 or Twitchett 1963.

In short, there really is no such belief. Supposing there were, there is simply no way for anyone to prove it was 5000 years old, as Edwards says. At the outside, the love-making texts are only about 2500 years old. For background on this point, see the Taiwan Encyclopedia Britannica entries under "Taoism." For a detailed review of the love-making practices, see Maspero 1981, Kohn 1993, or Schipper 1993. In only *one* ancient text is age apparently mentioned, and

it's as a range, eg, from 14-18, not simply "14" as Edwards unaccountably asserts; see Maspero 1981. I say "apparently" because translating from one language to another is difficult enough without bringing in very old texts; for problems associated with such translating, see Welch 1966. Moreover, there are contradictions in some of these texts, as in the case of a warning against having sex with someone too young (reported in Welch and Seidel 1979).

Once we strip away the provocative term, though, we are back to an age-old practice that seems to know no boundaries of nation or culture: some older men and women get a kick out of having sex with (much) younger men and women - and I guess vice versa! The American movie *Grumpy Old Men* illustrates this phenomenon amusingly without any need to invoke a fancy term. No doubt there are a few old geezers in Taiwan who wish to show off by quoting some Chinese "classic" while still claiming to have great powers in bed. Such lively old men to the contrary notwithstanding, there is no reason we have to believe everything someone tells us. Speaking of a similar kind of story, Eberhard (1967) warns us that "even though some Chinese tell this [kind of] story, we can by no means be sure that retelling [it] expresses their own sexual attitudes" (Eberhard 197, p. 8).

Then there's the matter of the libraries in Taiwan being "a mess". The several I've been to are paragons of order, and no one is required to read or even speak Chinese to use them. The one at Qinghua (Chinghua) University, for example, has an entire library devoted to the arts and humanities with an impressive collection of journals and books in English and other foreign languages, as well as in Chinese. Virtually everything a researcher needs to get started is here; those in doubt should check the lists of works cited and consulted: all items came from three separate libraries in three separate cities.

In sum, the expression "sexual vampirism" has no real explanatory power. Perhaps more harm is done by trumpeting this so-called "ancient belief", since some people may try to use it to excuse their irresponsible acts

of trying to have sex with those under the age of informed consent (which is 18 here in Taiwan). The date and the age reported are wrong, the language of the article is confusing, and the assertion about libraries here being a mess is totally unfounded. This section of Edwards' report makes it clear that skeptics need to regard rather sceptically claims made by skeptics themselves.

**Monty Vierra**  
**Taiwan ROC**

### Works Cited

- Eberhard, Wolfram (1967) *Guilt and Sin in Traditional China*: U of Cal Press. p 8.  
Encyclopedia Britannica (1979) "Taoism," in the Macropedia, Vol.17. pp 1039-44.  
Kohn, Livia (1993) *The Taoist Experience*. State University of NY Press. pp 153-7.  
Maspero, Henri (1981) *Taoism and Chinese Religion*. Translated by Frank A Kierman Jr. U of Mass Press. pp 517-54.  
Schafer, Edward H (1961) *Review of Sexual Life in Ancient China* by RH van Gulik, in *Journal of the American Oriental Society*, Vol 81 No 4. p 452-5  
Schipper, Kristofer (1993) *The Taoist Body*. Translated by Karen Duval. U of Calif Press. pp 144-155  
Twitchett, D C (1963) *Review of RH van Gulik: Sexual Life in Ancient China...*, in *Bulletin of Oriental Studies*, Vol 26, pp 212-13.  
Welch, Holmes (1966) *Taoism, the Parting of the way*. Beacon Press. pp 1-17; 92-5; 104-23; 131-3; & 179 82.  
Welch, Holmes and Seidel, Anna (1979) *Facets of Taoism* (Essays in Chinese Religions). Yale Univ. Press. p 210.  
**Other Works Consulted**  
Chang Chiung-fan (1995) "Sexual Culture in Ancient China," in *Sinorama*, June 1995, pp 74-81. (Translated by Robert Taylor; parallel texts, Chinese and English)  
Pregadio, Fabrizio (1995) *Review of Taoist Meditation...* In *Journal of Chinese Religions*, No 23, pp 217-20.  
Robinet, Isabelle (1993) *Review of Art of the Bedchamber...* In *Journal of Chinese Religions*, No 21, pp 201-4 and 214. (In French)  
Robinet, Isabelle (1995) *Review of The Taoist Experience...* In *Journal of Chinese Religions*, No 23, pp 192-7.

The report Taiwan Skeptics referred to by Monty Vierra was a condensed version of a report received from the Taiwan Skeptics. They have been made aware of Mr Vierra's remarks.

**HE**

## Therapeutic Touch

As critics of pseudoscience, you may be familiar with an alternative nursing 'healing modality' called Therapeutic Touch (TT). Not long ago, only a few were critical of this practice. Now many across the country have begun to speak out. I would like to invite your members to join a new group dedicated to confronting this nonsense in nursing.

Some people are concerned about TT's religious and even cultish aspects. They fear that it is a way to persuade people to accept a metaphysical viewpoint through the guise of a medical intervention. Alas, it does appear that TT is being promoted principally to have people tacitly accept the premises of an occult religion known as Theosophy.

My own particular concerns, however, lie more in the scientific area. TT is being pushed as a scientifically validated nursing intervention—and it is not. The research has been frightful, yet it is used repeatedly by TT's proponents to dupe the public (and sometimes even the government) into believing that the practice has a sound scientific basis.

It is not a coincidence that nursing has been the field where this practice has been insinuated into medicine. Nurses are trusted health professionals. And nursing does not have established watchdog groups, like physicians and dentists each have in their Councils of Scientific Affairs. So TT, like a virus, has taken hold in a vulnerable population. It is one of the most insidious quackeries yet encountered.

When health professionals contacted us about some scientific misconduct in a TT study at a university in Alabama, we jumped the chance to expose the wrongdoing. That activity is proceeding. But in gathering with others from around the country on this matter, we all discovered the scope of the problem and resolved to do more about confronting TT on a scientific and philosophical basis.

TT has its own trade group, Nurse Healers and Professional Associates Cooperative, which boasts over 1,200 members actively out promoting this quackery. Until now, there has been no countervailing force for truth and scientific integrity. So those of us who gathered recently in Alabama - nurses, doctors, medical ethicists, etc - decided to form the National Therapeutic Touch Study Group (NTTSG).

Right now, we're just getting NTTSG off the ground. Our first project, exposing the scientific misconduct in Alabama, is already under way and the funding for that has been provided by concerned health professionals there. Several other projects have begun, as well.

Our immediate need is not funding, and this is not a fund-raising letter. Rather, we need to establish a network of people concerned with the unscientific practice of TT. We need people to join us, keep us informed of anything they may hear about TT, are willing to speak out, and are able to lend us advice and counsel from time to time. In return, we plan on keeping everyone posted on what is going on and give national and local news organizations a resource for scientific scepticism about TT.

So, I am writing to invite any of your interested members to join the NTTSG. Please drop me a line and let me know if you're interested and/or able to help. Thanks for your time. I hope to hear from you soon.

My very best regards,

**Linda Rosa, R.N.**

**Corresponding Secretary  
National Therapeutic Touch Study Group  
PO Box 7117  
Loveland, CO 80537 USA  
(970) 669-7194**

**Got Your  
Skeptics  
Badge Yet?**

**See p 67**

## Melbourne's Light Show

I know true skeptics never tire of listening to a good UFO story. So, like it or not - I would like to relate mine.

The encounter (of the first kind) occurred from the magnificent window views of Melbourne's Sheraton Towers hotel at Southgate. The occasion was our ninth wedding anniversary and the only thing I felt sceptical about was the possibility of any other encounter (preferably of the third kind) with both daughters (aged 3yrs & 9 months) asleep in our king size bed. Oh well - it gave me a great opportunity to look at the night sky.

The view of Melbourne across the Yarra is delightful and the silence from 19 floors up produces a peace you do not usually equate with cities at street level during the day. The March evening was very clear and a few moments star gazing soon produced an interesting phenomenon. Three small faint lights were observed moving in formation over the Melbourne skyline.

At first I thought they must be an aeroplane's aviation lights but their Vic (V) formation changed several times as one of the rear light would move to take over the lead position. They appeared to be at a great altitude and covered large distances very quickly, so they were obviously moving at high velocity. Over the next ten minutes, I watched as several formations of these lights sped over Melbourne's sky. I searched my mind for possible options but felt they must be some form of craft. At this stage, my wife joined me (one breast somewhat lighter, thanks to the 9 month old) and I pointed out the light show. She replied, without much interest, they were birds - and she was right.

I had fallen for the impression that small, faint lights in the night sky have to be far away. I had forgotten that what looks like a small, faintly illuminated object may well be a - small, faintly illuminated object. This also explains the phenomena of great speed. A small object travelling a relatively low speed can be perceived to

be travelling at a far greater velocity if your impression is that the object is further away or at a greater altitude. The illusion fooled me.

The birds in this case were seagulls (or similar birds) feasting on the large numbers of insects that are attracted to the spotlights and other light sources on many of Melbourne's towers. As they returned towards the bay (in this case), the ambient light of the city (especially the orange glow of Flinders Street Railway terminal) is reflected off their light plumage. The effect is that of a coloured spot of light (or spots flying in formation) moving at high speed though the night sky. With so many large suburban shopping complexes dotting our sprawling cities, I would not be surprised if others fell for the same illusion as I did.

Could the Narre Warren UFOs have been birds reflecting suburban lights or the early morning sun. Then again - they may well have been more of those incompetent aliens described in the last issue of *the Skeptic*.

**Anthony Burke**  
Ringwood, VIC

## Massage sandals

Now and then I hear about massage sandals - ones that have little bumps so that as you walk your feet are 'massaged'.

Such sandals are supposed to be good for you, and my chemist swears by them. He says the sandals improve the circulation. I told him I thought that was the heart's job, but he didn't seem interested. He said he's worn a pair for years, and they've helped him. I asked "In what way?" and he replied "My feet don't ache any more". "My feet don't ache now", I told him, but he said "Try a pair on". So I did. It was a painful affair. It was like walking on a path of small, hard stones. I was told that was normal, and I'd soon get used to them. It seemed to me another case of "If it hurts it's good for you". I told him I'd get back to him. The idea of improving ones health by just walking around appeals, but I really can't see it. But then I'm not a paediatrician. Sorry, podiatrist. Does anyone know if wearing painful sandals is good for you? Or is it just more clap-trap. Would you please let me know? Thank you.

**Mark Avery.**  
Forest Lodge NSW

## Astrohistory

Since astrology charts, as used today, were set the sun has changed its position a full thirty degrees. It now appears one constellation west of where it was 2,000 years ago.

How well have those cultures, who contributed to astronomy as we know it, known that this was happening? Did the astronomers of 2,000 years ago appreciate that the Babylonians (another 2,000 years before) saw the sun one constellation east? If not, when did they cotton on to the fact that the sun wasn't staying put? How did they justify their 'science'? Did Nostradamus and John Dee ever go out for a look at the sky? Are any sceptics of the past two millennia on record as protesting that something was amiss?

Under the entry for 'Zodiac', the Macquarie calmly states "...each division...because of the precession of the equinoxes, now containing the constellation west of the one from which it took its name."

When tonight I look up at Scorpio, am I therefore looking in the bit of sky called Libra?

**Andi Stevenson**  
(Confused Sagittarius-or  
Capricorn-after-all)  
Moulamein NSW

## Become a Badge-Wearing Skeptic

As promised in recent issues, we have scoured the world for the very best designers to create an image that the discerning Skeptic will be proud to display on his/her chest. We realise that our subscribers will not be content to be typecast by a single symbol, so we now offer you the choice of two tasteful badges. Being a discriminating Skeptic, we know that you will almost certainly choose to have one for formal wear and one for casual wear

(we leave the choice of which is which to your good taste).

Each badge has a central pin, fastened with a butterfly clip.

**Price each \$5.50**

or

**One of each \$10.00**

(incl P&P)

**From: Australian Skeptics Inc**

**PO Box A2324**

**Sydney South 2000**

(13mm long)

(18mm x 18mm)

# About our Authors

**Roland Seidel**, President-elect of Vic Skeptics, is a computer professional and an amateur poet and song writer, two topics about which the editorial team is singularly unqualified to comment.

Roland is responsible for putting together the ambitious programme at the 1996 Convention and is to be congratulated for all his efforts. We have no doubt it will be a glittering success.

As to his literary skills, we thought it best to let readers make up their own minds and we hereunder present an example for your delectation. (Who said that science and the arts don't mix?)

## Paleo Anthology

Louis Leakey  
Bone he seeky  
Diggy hole in ground  
Soon he thinky  
Missing Linky  
Never will be found

Mary Leakey  
Very cheeky  
Dig up plenty more  
Findy boney  
On her owny  
Olduvai-o Gorge

Richard Leakey  
Bravely speaky  
Friend of Elephaant  
Diggy mania  
Lake Turkan-ia  
Missing Linky aren't

Goodness gracious  
How audacious  
Everything they touch  
Give our brainy  
Plenty strainy  
Thank you very much

**Dr Steve Bassar**, medical practitioner, world traveller and VP of Vic Skeptics is one of our resident experts on alternative medicine. What he doesn't know about homeopathy is not worth knowing (come to think of it, what he does know about it is probably not worth knowing either).

**Kathy Butler**, retiring President of Vic Skeptics (ie she is retiring as President, she's not shy and retiring by any means) is a geneticist and a bloody bonzer sheila (Aust idiom lives!).

**Denis Dutton** is Chief Spokesbeing for the New Zealand Skeptics. His views on Postmodernist jargon are well known, but his views on Rugby and sheep can only be guessed at.

**Harry Edwards**, gentleman, scholar, scourge of psychics everywhere, is Secretary of NSW Skeptics, Editor-in-Ordinary and Chief Investigator of *the Skeptic*. As a hobby he shouts at (but not for) the Editor-in-Chief.

**James Gerrand**, founding Secretary of Australian Skeptics and Life Member, is a retired aviation engineer. In retirement, he gets to read the books we would all like to read if we had time.

**Dr Richard Gordon**, medical practitioner, NSW Committee member and Medical Advisor by Appointment to the Editor-in-Chief, is not a piss artist, articles in this issue notwithstanding.

**Peter Johnson**, our resident cartoonist, became the grandfather of a girl on the same day as the E-i-C became the grandfather of a boy. Congrats Peter and who said there was nothing in synchronicity?

**Dr Colin Keay**, Grand Panjandrum of the Hunter Skeptics, has recently been awarded a D.Sc from an overseas University for his work on founding the new science of Geophysical Electro-phonics. Congrats Colin.

**Greg Keogh**, Vic Skeptic and Webmaster of the Skeptics Webpage is a computer pro (as if you couldn't tell).

**Allan Lang** has something to do with the SA Skeptics. They're such a secretive lot that the rest of us don't know who does what.

**Tim Mendham** is a former Editor of *the Skeptic* and is a NSW Committee member. A film buff, he knows what is meant by such terms as 'production values', 'genre' and 'oeuvre' but he isn't letting on.

**Dr Mark Newbrook**, Vic Skeptic, is a linguist at Monash university. We will entertain no suggestions that he is cunning because we are not that sort of magazine.

**Prof Ian Plimer** tells us he is studying psychology to add to his impressive geological qualifications. He says he wants to study the rocks in creationists heads.

**Dr Peter Pockley** is one of Australia's most prominent and experienced science communicators. He is also a good bloke, which just goes to show.

**Roland Seidel** (see left hand column)

**Kirk Straughen** is a Queensland clerical officer, with an interest in soulful topics.

**Dr Tony Wheeler** is a rum fellow from Mackay who teaches science. As a resident of the northern part of Queensland, he is right in the home territory of the Conspiracy Press, and he doesn't believe a word, as his article attests.

**Barry Williams** writes this column and is often pilloried for it by his associate Mr Edwards. Undeterred, he grits his tooth and soldiers on, secure in the knowledge that he always gets the last word.