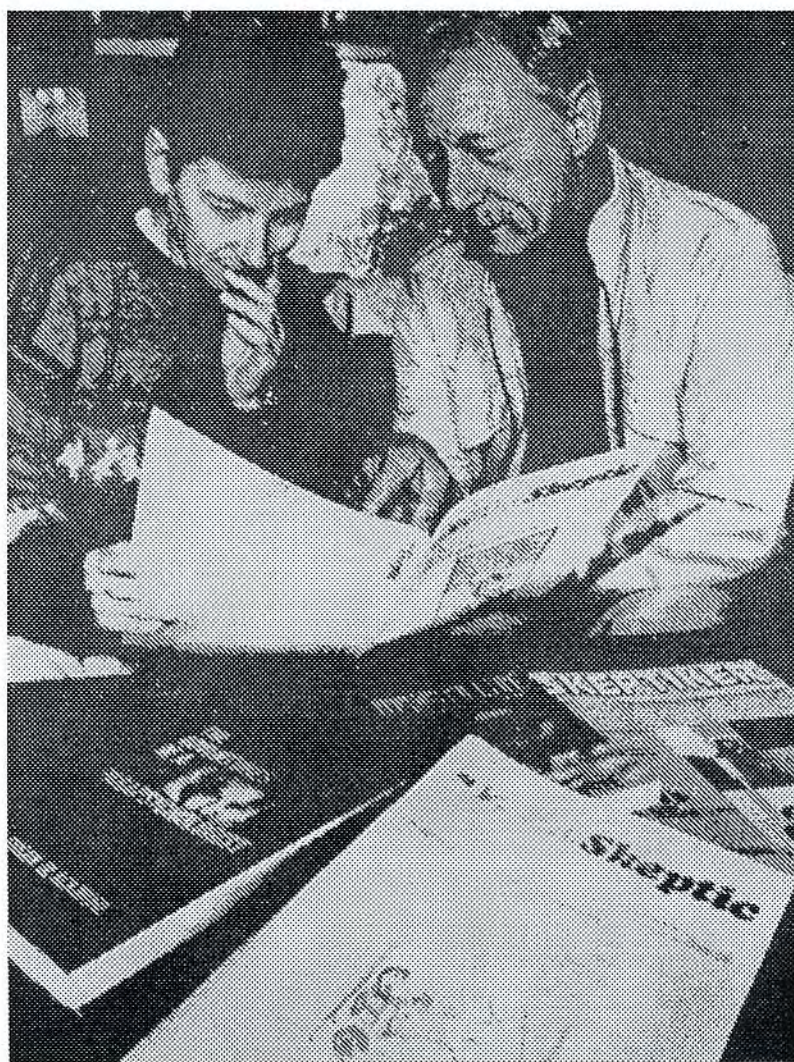


 **the Skeptic**

Volume 15, No 3

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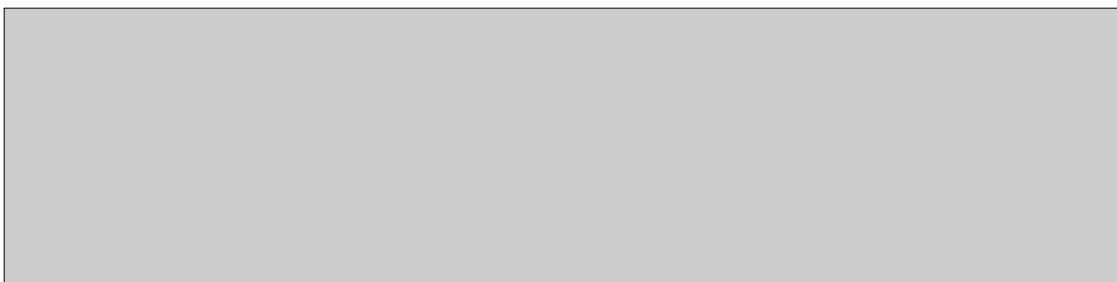
a journal of fact and opinion



**Thinking critically
Seeking the evidence
Challenging the claims**

CONTENTS

4	Notices
5	News and Views
7	Convention Report
16	Is There Life Out There
19	Fraud in Physical Science
22	Chiropractic: Then and Now
25	Hierarchies of Organisation Within Cults
27	Bent Spoon
28	Cults and Crime
33	The Strange Mind of Dr Kuznetsov
35	Nietzsche Marketing
36	Rendezvous With a UFOlogist
38	Vu Deja
39	Fabulous Flavia Flops
40	Millennium Forecasters & Prophets
41	Am I a Skeptic?
42	Review: Anti-science in the Academy
44	Review: The Day of Reckoning
46	The Creationist's Quote Book
47	Forum: Cannibalism
50	Forum: Aboriginal Religion
51	Forum: Theology and the CSF
54	Forum: But is it Education?
55	Forum: The Sanctity of Morality
56	WA Branch Notes
57	Forum: Asteroids and Aliens
59	Denise's Diary
60	Letters
66	I Want to Know
68	On the Net
69	About Our Authors



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All correspondence to:
 Australian Skeptics Inc
 PO Box A2324
 Sydney South NSW 2000 Australia
Tel: (02) 417 2071
Fax: (02) 417 7930
e-mail: skeptics@spot.tt.sw.oz.au

State Branches

New South Wales:

As above

NSW, Hunter Region

c/- Prof Colin Keay
 Dept of Physics
 University of Newcastle NSW 2308

Victoria:

GPO Box 1555P
 Melbourne VIC 3001
 Tel: (03) 9850 2816
 Fax: (03) 9841 0581

ACT:

PO Box 555
 Civic Square ACT 2608

Queensland:

GPO Box 2180
 Brisbane QLD 4001

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

**Editors: Barry Williams
 Harry Edwards**

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VIC NOTES

Skeptics as Near as Your Phone

Australian Skeptics are now providing information to the public via Infocall, the new 190 dial-up information service that will eventually replace the 0055 service.

We need to publicise the numbers and we would like readers to make copies of the insert in this issue of *the Skeptic* and distribute them to libraries, schools, friends, hotels etc.

The numbers can be rung from anywhere in Australia.

Thanks. We'll let you know how it goes.

Thanks

A message from the President of Australian Skeptics (Vic), Kathy Butler.

After several years at the helm of Australian Skeptics (Vic), Adam Joseph, has retired from the committee. Under his presidency, the subscribers' base grew and the public profile of the Vic Skeptics was much enhanced.

Adam still has a keen interest in critical thinking and the Victorian Skeptics wish him all the very best in his future projects in scepticism.

To which the Editors of *the Skeptic* would like to add our thanks to Adam for all his good work over the years.

T Shirts

The Victorian Skeptics have T Shirts (as worn at the National Convention) for sale.

The shirt features a stylised brain showing the areas involved with belief in various paranormal activities (we believe it is not anatomically correct) and the caption "Use it or Lose it" and "Australian Skeptics".

**Sizes: XL, XXL and
 Child Size 2**

Cost \$18.00 (incl p&p)

**Available from:
 GPO Box 1555P
 Melbourne VIC 3001**

SA NOTES

South Australian subscribers will receive a copy of the *Southern Skeptic* included with this issue.

Editor, Alan Lang, has come to an arrangement with the editors of *the Skeptic* to distribute copies of this interesting journal with each mailing of *the Skeptic*.

**Cover: "There's another typo!"
 Susan Blackmore and Harry
 Edwards in conference.
 (Photo courtesy *The Manly Daily*)**

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

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News and views

An article in the Brisbane *Sunday Mail* of 30 July, and carried in a shorter version in the Sydney *Sunday Telegraph* and the Melbourne *Herald Sun* of the same date, gave a good deal of prominence to the bequest by the late **Stanley Whalley** to Australian Skeptics Inc. In the article it was stated that Mr Whalley left his money to the Skeptics "to fight religious education in schools". Mr Whalley's will stipulated no such condition, stating that the bequest was for "the general purposes of the said corporation".

It is not one of the Aims (or purposes) of Australian Skeptics Inc to fight religious education in schools. From conversations we have had with friends of Mr Whalley, however, we are aware that he regarded creation 'science' as a dangerous perversion and we will continue to oppose the attempts to have religious fundamentalism of this, or any other kind, accepted as science.

* * *

In a rather pathetic footnote to the story above, the following week the *Sunday Mail* published a peevish letter from **Dr Carl Wieland**, Managing Director of the Creation Science Foundation. He seemed more than a little put out that, while the news of our bequest had received front page headlines, the findings of the CSF's self-appointed committee of inquiry into their own integrity could only accomplish media attention in paid advertisements.

It is an article of faith among faddish religious sects that there is a media conspiracy that prevents their TRUTH from being disseminated. If Dr Wieland knew a little more about the popular press, he would know that exercises in self-justification are not very newsworthy, (and may even be under some Biblical proscription, for all we can tell).

The only time crank sects can guarantee any sort of coverage is when their leading lights are caught in sexual dalliance or if they commit some other outrage upon their flock (like poisoning several hundred of them).*

3193! What is it about the number 3193? I mean, it isn't an exact multiple of 666 or anything like that. So why would it be that, of the three subscribers who live in the Melbourne suburb of Beaumaris 3193, two have failed to include their postcode on their subscription form?

Of course, every now and again, someone leaves the postcode off their form, which causes only minor pains in the neck for the busy executive who maintains our subscription list. But to have two-thirds of the subscribers in one suburb doing it speaks of plots, conspiracies and dark goings-on. Beaumaris? I have no idea where it is, nor what it is like. Is it 'inner industrial' or 'outer leafy'? Is it perhaps a hotbed of nonconformism? Is there some rabidly anarchistic culture being fostered in this innocuously named suburb, its residents determined not to bow the knee before any manifestation of state authority?

I mean, one would expect this sort of behaviour from the denizens of Black Rock, which shares that postcode. Black Rock! The very name resonates with mystery - the sort of place one would expect Spencer Tracy to have a bad day in. But no, the two subscribers who reside therein have scrupulously included their postal numerology. It is those from the more charmingly titled Beaumaris (the very name conjures notions of Gallic insouciance) that throw down the gauntlet in defiance of authority. Will we ever know?

I guess it will remain one of those little mysteries that makes being a Skeptic so interesting.

* * *

One of the things that plagues every magazine publisher from time to time is the copy that escapes the scrutiny of the printer and is dispatched with a number of pages missing. It happens to *the Skeptic* occasionally and we are always ready to dispatch a new copy to the subscriber who has been short-changed.

But **John Winckle**, a longtime subscriber from the Gold Coast, is

wondering just what he has done to offend us. He had pages missing from both of the issues he received this year.

The odds against that must be in the same league as those against a 'scientist' from the Creation Science Foundation receiving the Nobel Prize for physics, but we can offer no explanation to John. Perhaps he has been dabbling in occult practices?

* * *

Lindsay Ellison, a Sydney barrister and Skeptic who likes to keep an eye on such things, has drawn to our attention to the proposed NSW Casino Control Regulations, specifically those concerned with advertising. Among the proscriptions included are the approval for publication any casino advertising that:

exploits the superstitious; or
is of a kind that might reasonably be regarded as false, misleading or deceptive.

We would like to know why it is OK to exploit the superstitious in normal life (see the ads for assorted New Age nostrums in any newspaper or magazine), but not OK to exploit them in casino advertising?

* * *

Living our everyday lives, we get the impression that most people are fairly normal, with a nice leavening of cranks, just to make a Skeptic's life interesting. If our only connection with the outside world was the, rapidly becoming ubiquitous, Internet, we might be left with an entirely different impression - on the net, the cranks run free.

I subscribe to a 'monitored list' called *Skeptic*, which belongs to a physicist at an American university. Most of the postings to this list are in the expected realm of serious enquiry, but occasionally a subscriber cross-posts stuff from other lists.

Of these, the ones from the UFO believers are probably the most amazing. Among these people, the existence of aliens living in vast underground caverns in the Western USA, are not matters for discussion,

they are indisputable facts.

The arguments, often extremely acrimonious ones, are between those who **know** the US government is in league with the aliens and those who **know** that there are different alien races fighting for control of our planet. Some of the stuff goes into extraordinary detail in making their claims (like the basement of which department store in Salt Lake City is the entrance to one of the cavern complexes).

Recently I have been in correspondence with a range of other individuals who have a firm conviction that the Great Pyramid (one of my obsessions, as readers will know) was not built by the Egyptians.

But the holders of this view are not monolithic in their ideas as to just who did build it. You have the 'alien ET' stream, the 'ancient, vanished civilization' faction, not to mention the 'I don't know who the Hell did build it, I just know the Egyptians didn't' wing.

All seem to be privy to the works of assorted von danikenesque writers, and have no familiarity with any of the standard works on the subject, making some of the most extraordinary claims that are not borne out by any scholarly work. All are impervious to any sort of reasoned argument.

Then we have the ones who are trying to show that there really are some 'real' astrologers, who are genuine scientists, if only the 'scientific establishment' would let them prove it. Not surprisingly, the postings from this latter group is among the most fatuous and long-winded stuff on the net.

I have been in correspondence for the past several weeks with an Australian expatriate woman living in the US and apparently a professional astrologer. Despite every effort I have made to get her to make an explicit statement, or to define just one of her terms, she has managed to avoid every such temptation. She is, however, convinced that Pluto is having some very nasty effects indeed on me. So much so, that I look askance at every dog I pass.

The net is really a great deal of fun, if you have the time. But it is a bit like a drug and you can easily get hooked and spend hours reading and responding. So, be warned before you hook up. *

Editor, Harry Edwards reports on a recent newspaper story:

London (September 9th. 1994)

Theory on Death Experience

"Near-death experiences were probably due to the brain being starved of oxygen rather than a glimpse into the afterlife", German researchers said yesterday.

Dr Thomas Lempert and a team at Berlin's Rudolf Virchow University Clinic induced fainting for up to 22 seconds in 42 healthy young volunteers by hyperventilation.

"Most subjects described the emotional experience of syncope (fainting) as pleasant, detached and peaceful, making them unwilling to return," the researchers reported in a letter to the *Lancet* medical journal.

Some compared it to drug and meditation experiences, with one commenting: "I thought that if I had to die at this very moment, I would willingly agree."

Now read my article in *the Skeptic* (1992) Vol 12, No 1, p 49.

* * *

John Crowley of Forestville wants to know if witches use spell checkers?

* * *

And then there was the dyslectic sinner who sold his soul to Santa.

* * *

We note references in the media of late to calls by some psychics for the government to regulate their profession "to deter charlatans from ripping off the public". After Harry's sting on them, last year, they are certainly in need of something

Because Skeptics are people noted for the quality of the milk of human kindness that flows in their veins, we will be delighted to volunteer our services to any enquiry that is called prior to this legislation being drafted.

We will also make strong representations that, should a "Psychic's Registration Board" be set up, serious consideration should be given to appointing Mr Henry Cecil Edwards, of Newport NSW, as chairman of that board. NSW Skeptics are invited to lobby their MPs to that effect. *

Apropos the bequest, news of it has caused a number of strange requests from the public at large.

First off the blocks was a phone call from a young man who wanted us to give him the money so he could ensure World Peace. A noble ambition, but his first action would be "re-forestation of the Sahara Desert" to be followed by "destruction of all nuclear weapons". We advised that the cost of those proposals might well outstrip our resources, and when he revealed that he was "the man on the white horse" as mentioned in *Revelations*, we rang off. (Is there a man on a white horse mentioned in *Revelations*?)

Then on June 17, we took a call from a woman in Darwin, who claimed she suffered from severe headaches whenever a major tectonic cataclysm was due. Not only that, but she could tell approximately where and when it would happen. Her first prediction was for an earthquake "7.9 to 8.5 on the Richter Scale", located in the Indonesia/Philippines area "within 48-56 hours".

When that didn't eventuate, she called again around August 15, claiming an even bigger catastrophe "somewhere" within seven days.

We suspect she will keep ringing every time she gets a migraine, hoping one will match a quake, and then claim we owe her.

One we did like came from an American scientist on the Internet. He said he would like to scientifically test the proposition "Money can't buy you happiness". He claimed he had spent his life doing the control studies and was now ready to conduct a test of the proposition.

* * *

The Australian College of Nursing is conducting a seminar in Canberra during September, at which all the speakers will be promoting 'alternative' methods of healing.

This concerns us greatly and we would be delighted to hear from any of our subscribers in that profession as to what, if any, such practices are being encouraged in Australia's hospitals.

And if anyone attends the conference, would they please write us a report. ■

1995 Convention Report

Roland Seidel

**1995 National Public Convention
Old Arts Theatre, Melbourne University
Saturday-Sunday-Monday, June 10-11-12**

This is a summary of the 1995 convention. Some talks are presented in detail because they are unlikely to appear elsewhere, and some talks are only briefly summarised. These latter appear as separate articles in this issue.

The new Victorian President, Kathy Butler, opened with an observation on scepticism in general and Skepticism in particular. How do you get into Skepticism? For many it comes with a rush after a long period of unconvincing suspicion and you experience the evangelical phase where scepticism becomes Skepticism. Your friends move away from you because you energetically attack interesting ideas, and you feel driven to **do** something like challenging creationism or astrology. This takes too much energy to sustain and you mellow (mature?) to such a degree that your friends begin to move back, although they often begin sentences with "Kathy won't like this but..." If things work out right you can manage to live in the world of delusion without overly despairing at people's woolly thinking and yet succeeding in encouraging critical thinking.

In my own case I can identify one particular trauma that tipped the scales but it was the sort of trauma that commonly swings people strongly towards religion or mysticism. Why do some people go one way and some the other? Endless philosophical questions present themselves but it is worth noting that Skepticism is one choice among many. It is no guarantee of unbroken rationalism and no proof against delusion. This theme emerged many times in the conference, for instance:

Fraud in Science

Tony Klein is head of Physics at Melbourne University and led a discussion on Fraud in Science, assisted by Steve Bassier and Roland Seidel. The anecdotes were interesting but the question of why it happens was much the focus of the session. Tony's paper appears in this issue.

Roland observed that deception (accidental or malicious) is most likely on the fringes of Science where new ground is being broken. The Piltdown case was possible in young archaeology but couldn't happen now. Plenty of false things happen in Medicine, Theories of Everything abound in Cosmology, False Memory happened in psychology. (Afterwards, he was set upon by a band of indignant psychologists when he suggested that Psychology hadn't yet made it as a Science.)

The problem for Science is that you can't reject an idea just because it sounds far fetched. Prior to the Wright brothers the emphatic position of many respected scientists was that heavier-than-air flight was impossible - the laws of physics simply would not allow it. Superconductivity is a wacky idea but it works, Cold Fusion is a wacky idea and it doesn't work. How do you tell?

The Scientific method is some protection: repeatability,

objectivity, peer review. But repeatability sometimes involves repeating the same mistakes or delusions, Quantum Physics questions objectivity to some degree and the peer-review process can be sidestepped if you are a member of an Academy that produces a Journal. We keep striving for certainty, having to be content with approximations.

John Darsee.

Steve Bassier treated us to the story of John Darsee from the late 1970s and early 1980s. Darsee graduated from Harvard Medical School, produced dozens of papers and abstracts and his career was characterised by high recommendations from colleagues and superiors. He was too good to be true but survived exposure by co-workers and an independent investigative committee. He was eventually found to be fabricating his data. No one knows why.

Cyril Burt.

Burt argued that intelligence was 75% genetic and supported it with comparative studies of identical twins. After his death, his sister instigated a biography and evidence that he may have manipulated his data emerged. Correlation coefficients remained identical despite changes in sample size and the passage of years (very improbable), coauthors were untraceable and may have been invented. As the editor of a journal Burt could get his papers through unreviewed. Fraud was not proven but is suspected.

Linus Pauling.

An extraordinary man, winning the Nobel Chemistry Prize in 1954 (nature of chemical bond) and the Nobel Peace Prize 1962 (anti-war activity).

In the late 60s he was taken with the ideas of Erwin Stone, a chemist advocating Vitamin C, and began recommending daily mega doses. Apparently, earlier in our evolution we lost the capacity to synthesise Vitamin C and now we all have a genetic disease. He supported Orthomolecular medicine (cells must have the right concentrations of right molecules) and would not be swayed from the conviction that Vitamin C was the key to curing things from colds to cancer.

He rejected contrary evidence and accused others of fabricating it despite the best controls. His papers were rejected by most journals except those of which he was a committee member. He distanced himself from the scientific community and even had a falling out with a co-workers who claimed that Pauling was being less than unbiased in his treatment of data. Pauling received industry awards but we note that Roche doubled their production of Vitamin C in the 70s and the price rose by 300%. Pauling's wife died from stomach cancer in spite of his advice; but Pauling lived to 92.

Elias Subtee.

This man, who claimed to be related to some Royal family, actually stole papers and published them in obscure journals. He survived for many years until a Japanese journal exposed unequivocal plagiarism.

Piltdown.

Roland Seidel now began with the story of Piltdown; probably the most durable outright fraud. *Eoanthropus Dawsonii* was presented to the Geological Society on December 18th 1912 by Charles Dawson, solicitor, anthropologist, and Sir Arthur Smith Woodward, a strong figure in geology and anthropology. They had eight cranial fragments and half a jaw from a gravel pit on Barkham Manor in the County of Piltdown. It was to be a controversial find for over forty years, but the fraud hypothesis was not seriously entertained until the end.

They argued about the reconstruction. Sir Arthur Keith, head of the Royal College of Surgeons insisted on a less apelike reconstruction without the suggested canine tooth and was persuasive until Teilhard de Chardin, Jesuit Priest and anthropologist, found just such a tooth.

They argued about the age of the pieces. Gravel pits are the result of water movement and may be re-deposited. The matrix and animals fragments offered ages from Pliocene to Lower Pleistocene (10,000,000 years difference).

They argued about whether the jaw belonged to the cranial fragments and whether the stone chips (eoliths) were tools or natural. A piece of bone fashioned at one end was found, but no-one could figure out how it was fashioned or what it was used for. It looked most like a cricket bat.

Eventually, as real finds emerged in Africa, China, Europe and the Middle East, Piltdown came to look less and less consistent. With new dating techniques suspicion was further fuelled. In 1953 a full scale investigation began and in 1955 Piltdown was formally rejected. The scientific community was shocked, but more relieved that the matter has been resolved.

Frank Spencer (Piltdown: A Scientific Forgery, and The Piltdown Papers) offers as explanation that Anthropology at the turn of the century was a new Science with little substance and hungry for answers. Java man was one skull cap and one femur, Neanderthal remnants were plentiful. Each of these enjoyed a short time as possible ancestor but were rejected. Were eoliths tools? The Europeans thought

so and the Americans thought not. In the mid 1800s they realised that there had been an ice age and in 1870 that four ice ages could be identified. They were confident we evolved from apes but the details remained frustratingly obscure. Into this hunger strode our protagonist with a sumptuous feast. Who did it?

Cases have been put implicating Dawson, Chardin, Keith, Woodward and others but there is no hard evidence. It is all suspicion and conjecture, recollections of bubbling bowls of iodine or iron sulphate, careers that profited. Spencer argues that it was Keith who wanted to establish his view that brain development preceded tooth development but other opinions obtain.

Michel & Francoise Gauquelin

Parapsychology has plenty of room for delusion. Susan

Blackmore showed later in the conference how very difficult it is to avoid and how very skilled she is at doing so. Gauquelin approached the question of Astrology by collecting the birth information of thousands of people. He showed that any old horoscope will do, by sending the same horoscope to anyone who asked, 90% finding it

very true, most confirmed by family and friends. In fact it was the horoscope of a French mass murderer. He showed that there was no correlation of sun sign with personality, lifestyle or occupation and no planetary correlation with personality or lifestyle.

He spent years analysing masses of data more and more deeply until he found a correlation with distinguished performance in sport and the position of Mars at birth (the 'Mars effect') and similar correlations for a few other planets. There were several attempts at refuting the idea including embarrassing episodes that looked as if the refuters were not above reproach in their interpretation.

The Mars Effect remained a thorn in the paw of scepticism until an independent French Committee, in cooperation with the Gauquelins, set up a replication and found no correlation. Gauquelin challenged the results, arguing that some of the included sportspeople were not eminent champions and that some other champions should have been included. Needless to say, these changes



Seen at the Convention, an unnamed couple beginning their life together in an appropriate setting.

(Photo: Mark Plummer)

produced significant results. The question became one of who was eminent. He could not accept that this represented post-hoc manipulation of the data. He committed suicide in May 1991 leaving instructions that his data be destroyed.

J.B. Rhine

The ESP cards man. Rhine did some great work in refining the terminology of parapsychology but also engaged in post-hoc data manipulation. He published data showing a significant result and later acknowledged that he had excluded lots of low scores on the grounds that subjects had failed purposefully to spite him, and secondly, that the low scores proved there was something there just as much as the high ones so it would be unfair to mix them.

Sir Arthur Conan Doyle

Doyle began life as a doctor who made substantial contributions to research. He switched to writing Sherlock Holmes stories about an extraordinary man with an extraordinary capacity to draw extraordinarily accurate conclusions from ordinary evidence. He spent the rest of his life advocating belief in fairies and seances even producing fake photos.

Cosmology

Imanuel Velikovski, a psychiatrist, (Worlds in Collision) had

this idea that Venus used to be beyond Mars but some disturbance caused it to change orbit, squabble with Mars, approach Earth washing us in its comet tail and settling where it is now. He used interpretations of mythology (7 plagues of Egypt, Mars God of War etc) in support. Not convincing.

Tom Van Flandern (Dark Matter, Missing Planets & New Comets) has a remarkable alternative description of matter, energy, force and cosmology that does away with the ugliness in modern Physics: dark matter, limiting speed of light, quantum vs classical dilemma, gravitons, the inequity of scale. His theory does explain an observation that the gravity signal from the sun precedes its light signal, where current astronomy cannot, and his modification of the old aether idea does explain attractive force where I find Classical Physics unsatisfactory. Tom is apparently a bit of a maverick but definitely not a crank and, as far as I can tell, may be right. Only time will tell. He has an excellent

chapter on the value of Extraordinary Hypotheses to Science and is exemplary in the exposition and advocacy of his own. If only the other characters in this tale could be so objective about themselves.

Wilderness inspired

Jim Brown (At the Light Barrier) has a remarkable alternative description of matter, energy, force and cosmology that is not the least bit convincing. It has Base, Energy, Intelligence, Matter, and complex details that make no sense until you reread the first chapter. He refined this theory while digging a dam on his Alice Springs property; several weeks on a bulldozer. Clearly his brain did a very satisfactory job of entertaining him in his isolation.

Jeremy Griffith (Beyond the Human Condition) has a

n o t
extraordinary,
not convincing
but seductive
idea on the
answer to all
our problems.
In a nutshell,
two million
years ago
when we
e v o l v e d
consciousness,
we got stuck
with the awful
burden of
awareness. We
now reflect on
what we knew
and did and the
e n o r m o u s
paradoxes that
this entailed
brought us to a
condition of
'upset' that has
caused all our
problems. His
cure for this is
to become



Two Crocks among the Docs!

L to R Dr Richard Gordon, Barry Williams, Harry Edwards, Dr Susan Blackmore, Dr Colin Groves

(Photo: Mark Plummer)

aware of the history and nature of this. That's it. He conceived of the idea during six weeks of isolation in Tasmania searching for the Tasmanian Tiger.

He found that young minds are much more accepting of the idea (surprise, surprise) and entices students at prestigious schools to join his group. He wouldn't have gotten anywhere except for the fact that one of his early recruits is **Tim McCartney-Snape**, the Australian mountain climber who conquered Everest alone without oxygen in 1990. (A picture of Tim holding Jeremy's flag aloft on top of Everest opens the book.) Tim is engaged by schools to speak about his achievements and includes a compelling advertisement for the Foundation for Humanity's Adulthood. Jeremy points out that Jesus predicted that a man such as he would come along and "son would be set against father and daughter against mother".

Scottish Astronomy

I apologise for the facetiousness here but I couldn't resist the collective heading.

Charles Piazzi Smyth was Astronomer Royal for Scotland for some time and became interested in the Pyramids. He concluded that they were built using British measurements, thus proving that they were built by the lost tribe of Israel who later became the British. This sewed up a nagging philosophical dilemma that beset the British, namely that, since they were the dominant world power, they should be identified as God's chosen people, but their religious texts gave this accolade to the Jews.

Vincent Reddish was Astronomer Royal for Scotland in the late 1980s. He recently sent the Australian Skeptics his book *The D-Force* which he offered as proof of divining or dowsing. He found that he could measure, with bent wires held in the hands, a dowsing force from linear structures such as pipes, underground and overhead cables and roads. Aluminium seemed to cancel or shield the force; a pipe under an overhead cable produced interference fringes; a hysteresis effect could be observed when the pipe was removed. It is riddled with theoretical problems and does not address the question of delusion.

Crop Circles. On a recent gee-whizz TV program on crop circles an early interview with a Scottish Astronomer was shown. He observed that there were many theories but argued that the hoax theory had to be rejected. Should one be sceptical about drawing conclusions about Scottish Astronomers?

Placebo Effect:

Dr. Grahame Coleman is Head of the School of Psychology at Latrobe University where work has recently been done on the placebo effect.

The term Placebo literally means *I shall please* and was coined in the 13th or 14th century to describe professional mourners who sang vespers for strangers. It gradually accumulated negative connotations and shifted to mean a servile flatterer or sycophant. It now means a harmless treatment given when no treatment is possible and the patient wants a treatment. A late 50s definition: "any effect attributable to a pill or procedure but not to its pharmaceutical properties." It was extended to include the psychological domain. Definitions have remained difficult.

Grahame then showed us what profitable work has been done in the quest to understand this odd response. Classical conditioning seems to be a major part of the effect. He showed variations of the Pavlovian experiments where even preparing an animal for an experiment was enough to elicit the response, where saccharin substituted successfully for morphine as an analgesic in rats and wherein Nicholas Vedouris, one of Grahame's research students, identified the relative significance of Conditioning and Expectation. In a pain experiment subjects were either told that a cream was an effective analgesic or that it was not (expectation). In two episodes, subjects were either given the same pain stimulus or a reduced one (conditioning). Of the four groups thus produced, even those with no expectation of analgesia but an experience of some relief reported less pain in subsequent normal episodes. Expectancy does affect the outcome but previous history is much stronger.

Conditioning, of course works both ways. One bad episode is enough to seriously compromise the efficacy of a treatment, even an active drug, or even the confidence

invested in the medical system itself.

Grahame told us of an unplanned human experiment with an 11 year-old girl with a bad case of Lupus, an immune-system condition. Her mother, encouraged by research showing effective placebo response in rats with lupus, asked that it be tried with her daughter to minimise the bad side effects of her drug therapy. They discussed what substances would be seen as tolerable but potent and came up with cod-liver oil and strong rose perfume. After three months of normal treatment, for the rest of the year only one month in three had an active treatment. The improvement was dramatic with a much improved quality of life. This is only one case but the results are encouraging for minimising side-effects in some drug therapies. He later observed that the effect fades with time (Extinction) unless real boosters are given now and again and that the strongest reinforcement comes when the boosters are random.

So, what is the mechanism? Endogenous opiates theory: endorphins and the like, natural analgesics, that were discovered when someone suggested that the attractiveness of heroin may be because it mimics an internal chemical for which we have receptors. Conditioned immunosuppression? Work on stress, white blood cells and things like acupuncture suggest there is a mechanism but it is not clearly understood yet.

There are about forty theories of placebo. The psychoanalytic ones haven't much currency, largely because they are untestable. Expectance and Conditioning are the most likely candidates and Expectancy is probably a form of conditioning.

Well, I was very impressed. I had heard about the work on Placebo and how we have to drop the negatives and regard it as a real human response that can be used effectively. But it also has strong messages for the alternative health debate. Conditions where self-reporting is a large component of diagnosis (pain, PMS) are very susceptible to placebo effects. It is no surprise that it is in these areas that 'alternative' health systems find success. Surely it is incumbent upon any medico, alternative or not, to objectively consider the question, "is this treatment active independent of any placebo effect?" Remember penicillin and colds in the fifties?

Adventures of A Parapsychologist.

Dr. Susan Blackmore is Senior Lecturer in Psychology at the University of West England, Bristol, where she teaches a course on the psychology of consciousness. In this session she took us on the magical mystery tour of her life as a parapsychologist from the peace, love and Psychological Research Society at Oxford, through using her students and children as experimental subjects, to the difficulties that attend being on the councils of both Parapsychological and Sceptical organisations at once.

Parapsychology concerns itself with the more ineffable of human experiences and Susan has managed to be quite comprehensive in her pursuit of these. We would say that she is as "game as Ned Kelly" and I reflected at one point that if I were her body I would consider packing up and leaving. We were all impressed, though, by the way she used these experiences, by the vigour and honesty with which she pursued alternatives in research, by her extraordinary capacity to formulate tests and by the cogency of the conclusions she drew.

Here are some snippets. For the detail of the stories you are encouraged to read her book *Adventures of A Parapsychologist*

The OBE (out of body experience).

Oxford University, a late night party, music and a variety of intoxicants; she began to experience going down a tunnel of trees. A friend asked "where are you" and she found herself on the ceiling looking down.

They pursued the experience and she found she had the silver cord connecting to her body, could travel around outside, saw lots of extraordinary places, got bigger and bigger expanding to become one with the universe, ineffable things happened, something thought "I've got to go back inside the body and look out through the eyes" and she achieved that normal fiction. She later checked

the gutters on the roofs and found them not as she had 'seen' them, but the profundity of the experience and the incapacity of Science to even address these questions emphasised the gulf between her experience of Physiology and of Parapsychology.

She resolved to show that Science was limited and perhaps wrong but, unlike most who reach this position, she understood and was committed to the tools of Science: objective testing and repeatability. She has a permanent OBE experiment set up at home. On a wall she has a small object, a random number and a word (regularly changed) that anyone on an OBE is encouraged to observe.

Early Research

She outlined the history of Parapsychology: classical theories of astral travel, many of the scientists who took it seriously including Rhine's excellent work in defining terms (telepathy, clairvoyance, precognition and psychokinesis as all of psi) and establishing clear tests for them with his famous five cards. Susan by this time had formulated a theory that memory is not in brain but in the field 'out there'. If this is the case, ESP and memory should have similar qualities, in particular, that similar confusions should obtain in identifying pictures and that those with

good memory should have good ESP as well. With weekly classes of 100 students she had plenty of subjects and the first experiment showed significant results!

Carl Sargent observed that she had neglected the Stacking Effect (population preferences - most of us will choose the Star, prefer Red, pick 7, etc. so in a sender-receiver experiment where the sender is free to choose the picture, it is no surprise that scores better than chance appear) and when re-tested without sender-choice the effect vanished.

This seemed to be characteristic of a lot her work: elation at possibly having found something paranormal followed by illumination of a quite normal mechanism. Further, she doesn't see them as failures because each tells us something about how the brain works. Her stamina in the face of so many negative findings is commendable but even more so



Roland Seidel, Kathy Butler (Madam Pres) and Steve Roberts, having just heard that dinner will be delayed by a further 20 minutes. (Photo: Roland Seidel)

against the accusations that she is a 'psi-suppressor' (the shy-psi explanation of why scientists cannot reproduce confirming experiments). Someone even did a meta-analysis of her results looking for evidence of psi arguing that she was hiding it.

In response to the question "why go on" Susan said that she wants to understand conscious and the self but equally, that these matters

must be resolved because, if they are true, they will radically change the way we see the world; much of what we now know will be 'wrong'. It is academically interesting to find out why people believe and practically useful to test whether there is danger in accepting astrology; do they make decisions on random advice and does it matter? All these things can be tested and it is better that they are tested by people trained in experimental design.

Children

Ernesto Spinelli suggested that psi is natural but is suppressed in the concrete operational stage so young children should exhibit stronger effects. A correlation with age was indeed found - until sender-choice was removed.

Of course the stacking effect would be stronger in children because stereotypes are stronger. She sat her first baby in front of a computer that randomly showed a cute

face and played a cute jingle. It looked as if the baby was influencing the random number generator (noise based, true random) until the difference between the computer hot and cold was eliminated. Twin studies showed striking results until sender-choice was removed.

Ganzfeld.

A recent hot topic in parapsychology, a sender looks at one of four stimuli while a receiver is in another room, sensory deprived (white-noise, white-vision) and freely talking. Correlations are looked for in the stimulus and the record and in the receivers later selection of one of the four stimuli.

Carl Sargent was getting good results at Cambridge and Susan was unable to duplicate them. Out of frustration she went to Cambridge to observe and, after five sessions with stunning hits, her mixture of enthusiasm and suspicion demanded that she consider the fraud hypothesis. She found irregularities in the very complicated randomisation procedure sufficient to support the hypothesis and the resulting exchange of letters in journals was as heated as it was unwelcome.

Psychics

Chris Robinson ('predicted' IRA bombs) identifies things in boxes by dreams. Susan set up twelve boxes with all sorts of double-blind and referee controls. Chris provided 87 pages of dream transcript, was confident about identifying 7 objects and encouraged to guess the rest. The two correct was not significant out of 12 or 7.

Realisations

Many of us share with Susan the conclusion that these questions are secondary in importance. The really interesting ones relate to the nature of the self, of consciousness, to the relation between experience and brain function.

In contrast, she made an observation that I haven't heard anywhere before and yet seems so obvious now. Spiritual experience may have nothing to do with the paranormal. Well! How amazing. My cat could have thought of that. And yet the terms are used almost synonymously in the press, identically in the New Age community and I cringe equally at the mention of either. She is suggesting that the terms need to be separated. Experiences where the illusion of 'doing' and 'being' change and where consciousness is paradoxically enhanced by the dissolution of 'self' are certainly spiritual. What she has learnt is that if you really want to understand some of these mysteries, don't go looking for the paranormal.

A final neat suggestion Susan made is that illusion is the price we pay for a clever perception system (visual illusions are the result of the brain making sense of what is presented). So, psychical experience is the price we pay for having a clever system that can extract meaning, in other words, for having a mind that can do science!

The Dinner

Into each life a little rain must fall. I'd like to rewind and run the dinner again because it ruined two very good songs and the most universally useful talk of the whole conference. Not to put too fine a point on it, the service was lousy.

Dr. Dale Chant is a Computer Programmer who has studied Ancient Greek and a dozen other extinct languages. As a classics scholar he learnt rhetoric, sophistry and scepticism (that's how the Greeks spell it) pretty much as they were taught in the old days. Dr Chant's paper will appear in the next issue.

Firstly, it gives you every tool you will ever need in the struggle against irrationalism. A Skeptic without this knowledge is unarmed and impotent, wandering aimlessly among the rubble of bad ideas hoping to straighten the odd stone. It doesn't matter what the subject is, a bad argument is obvious and the means of challenging it are also obvious.

Secondly, you realise that, amidst all the Knew Wage clatter about ancient wisdom and exotic cultural traditions, you have been living deep within the daily consequences of a tradition just as rich, as densely populated with strong archetypal characters, as deeply meaningful and instructive, as spiritual and as evocative as any other. It is less exotic because it percolates through our ordinary life. Perhaps if classical studies were still taught at schools the traditions of other cultures would have less of a paranormal appearance.

Are We Alone?

Paul Davies is Professor of Natural Philosophy at the University of Adelaide. He was a remarkably cheerful chap, given the ordeal of the previous night's dinner, and began by establishing his sceptical credentials with a story of UFO busting over Stonehenge and a great Uri Geller story. He described our Uri as baffling but mercurial and offered him a clever device to test his powers with. A tungsten rod (it snaps, not bends) in a glass tube laced with a rare isotope of argon with a known half life (there is only one supplier, in Switzerland), UV inks dabbed on the surface of the tube. Paul gave to Uri for him to bend anywhere, any time. Uri said, "I don't accept challenges."

Paul gave us a history of SETI (the Search for Extraterrestrial Intelligence) illuminating some interesting difficulties: funding, of course, which is now private; motive, why would we want to look; and a theory, how likely is life and what factors affect that likelihood?

With a sample of only one known sentient species (us), we have insufficient information to answer questions like Is life unique to Earth? Is intelligence unique? Is Maths, Science and Technology unique? Speculation has established a few fundamentals, though, for which there is encouraging evidence.

1 Principle of Uniformity. The Laws of Nature are the same everywhere.

2 Principle of Plenitude. Whatever is possible will happen.

3 Principle of mediocrity. (The Copernican principle) the earth is not special. (Copernicus' idea that the Earth revolved around the Sun gave us the word Revolutionary).

Then there are theories on the evolution of life (Primordial soup, Comets, Self-Organisation, anaerobic subterranean bacteria, splashes from Mars) that affect how likely life is elsewhere. It is encouraging to note that life began on Earth almost as soon as it could.

Then the question of how intelligence evolved. Paul argues that SETI is anti-Darwinian in that random molecular shuffling is not goal oriented and is not likely to hit on intelligence. We are a freak, intelligence is a freak

and ETI unlikely. But, he observes, there is a definite trend towards high encephalisation quotient? [I'm not sure I agree. Isn't intelligence selected for like any other advantage? Perhaps teleology is in the eye of the beholder.]

UFOs seem most unlikely because it is much too expensive in time and energy to send payloads into space. Signals are much cheaper. So we listen for signals, periodically, on the premise that life is abundant, that is does head towards intelligence and technology, that it will last long enough before blowing itself up (we've lasted a couple of centuries now - how are the others going?).

Very few religions have a place for ETI (except the Ba'Hai). It is a particular tricky question for Christianity since God became incarnate as a human being. Is Jesus the saviour of ETIs? Did the nativity happen elsewhere? Indeed, Paul seems to have inspired the new discipline of Exotheology among clerics. Professor Davies has a paper on the same topic in this issue.

Alternative Therapies

Dr. Ray Lowenthal is director of Medical Oncology at Royal Hobart Hospital and Honorary Clinical Professor in the School of Medicine at the University of Tasmania.

Cancer is scary (commonly a death sentence) and not yet well understood by the public at large. There are many misconceptions: it is one disease (it actually includes over a hundred diseases); bad state of mind brings it on (no evidence despite tests); it has to do with immune deficiency (kernel of truth for ~2%); it is a modern western disease (ancients and animals and third world people all get it); there is always pain (not necessarily); it is rapidly fatal (not necessarily).

People misunderstand medical terms such as '5-year survival is 50%' and statistical terms such as 'average'. They say "I was given 6 months to live but have been meditating for a year!". The doctor says that nothing **should** be done and the patient reports "They said nothing **could** be done."

Anti-science thinking constructs conspiracies where the medical and pharmaceutical professions suppress 'natural' cures. This is fed by the reasonable claim that science doesn't know everything and the unreasonable claim that it is 'only one way of knowing', no better than any other. In fact medicine does not ignore natural cures but depends on them and studies them. The drug Taxon from the pacific Yew tree was not found by naturalists but by medicine.

So, when someone gets cancer they may frequent bookstores and health-food stores, try the carrot juice that

fixed Aunt Hazel (usually exaggerated stories). None of the available books are by cancer specialists - except Ray's *Cancer: What to Do About It*. Some of the things they may try are: change of diet (vegetarians do have a lower rate of cancer but it may be lifestyle - eating vegetables is not a cure and the sudden change may shock your body); the Girton juice diet cure for TB (you need his patented juice machine); the Pritikin no fat diet for heart disease (not proven); the 10-day grape cure; high vitamin diet (Vitamin B17 is a patented name, not a vitamin at all); caffeine enemas; magic mushrooms (Chinese); Royal jelly; Ginseng - most are based on the pure/natural idea.

The theory behind most of these ideas is badly flawed. Shark cartilage: sharks don't get cancer - not true, but irrelevant; cartilage inhibits new blood vessels thereby preventing tumour growth - why ingest it? why sharks when there are better examples? Vitamin C prevents scurvy so

just take lots: more is not better, the Mayo clinic data on survival of colon cancer patients showed no difference between vitamin C and placebo. Often the ideas are promulgated by business interests.

It is a misconception that Natural means harmless. Strychnine, arsenic and tobacco are natural. There is a herb that causes hepatitis, Chinese herbs have caused bone marrow failure and anaemia, Comfrey (pushed as a cure) is actually carcinogenic, Royal Jelly caused a fatal allergy in an asthma

sufferer, slimming herbs can cause kidney failure, Ginseng causes high blood pressure. 'Harmless' usually means 'untested' in this arena.

Solutions A&B (a sort of vaccine from the Bahamas) actually contained the HIV virus. The Livingstone Wheeler Clinic in America push a vaccine against a germ that no-one else can find. When the University of Pennsylvania found no difference between the Clinic's patients and others they claimed they gave a better quality of life. This also tested false.

Psychological treatments are popular (thinking correctly, wishing, meditating) but bring with them the guilt that you haven't been doing it hard enough if you fail to improve. Studies of breast cancer have found no difference between groups of different attitude. Ray told of a Grandmother pushed to meditate for long periods whose life was diminished by not spending time with her grandchildren.

In summary, common points of concern here are that:



Dr Steve Bassor performs chiropractic manipulation on the lectern
(Photo: Roland Seidel)

it is claimed that natural means nontoxic;
evidence is never published scientifically;
promoters often benefit;
the rationale behind the cure is usually unproven.

Chiropractic

Dr. Steve Bassler took the stand again to deliver a careful history of Chiropractic and show that the pivotal idea of the discipline (that 95% of disease is caused by subluxations - displacements - of the vertebrae) is unproven. There were a number of Chiropractors in the audience and things became quite heated for a while. Someone produced an old (8 years ago) document implicating the Skeptics in some subterfuge, people spoke passionately for both sides. However, under the careful and considerate management of Steve and James Gerand, the session ended on a very positive note with the prospect of fruitful collaboration between Chiropractors and the Skeptics. Dr Bassler's paper is in this issue.

Scientific Illiteracy and the CSF

Ian Plimer was called away at the last minute to go to England to accept the 1994 Best Scientific Paper so **Steve Roberts** stepped in, donned Ian's field jacket and took up his geologist's hammer. It was a most amusing talk, showing some of the diverse and wonderful contributions made by creationists to modern scientific knowledge.

Steve began by showing pictures of Ian studying geology at various locations, looking for Noah's Ark, and contributing to the ecology of Germany. Ian had conducted a survey of 300 Melbourne University Students, from which Steve had hoped to identify the creationists and study their literacy in science. Unfortunately 7 out of the 10 responses showing a creationist bias were inconsistently filled out.

Videos of various creationist responses to *Telling Lies for God* betrayed chronic dagginess in presentation and content. Steve compared Ian's list of attributes of pseudoscience (page 8) with the practices and organisation of the Creation Science Foundation, which had recently appointed a committee to examine itself. We all received a copy of this list and the CSF committee's report (published as a paid advertisement in the Australian).

Andrew Snelling, one of the 'big guns', seems to have two personas. His recent effort on radioactive decay, although complex in appearance, contained only a brief critical section, devoid of the necessary data. It is the first time that A.A. Snelling the creationist has acknowledged, criticised and rewritten the work of A.A. Snelling the geologist in writing. We also saw a video of him doing the same thing in 1992, squirming noticeably.

The CSF once enthusiastically espoused and published the idea that radioactive decay might somehow be reset (presumably by divine intervention since science knows of no mechanism for this), until they realised that this could only make the rocks even older than science claims them to be! They offered as disproof of evolution that a pile of mixed Scrabble letters showed no meaningful words (Steve promptly found GAS and SEX - divine messages on the primordial formation and propagation of life itself?)

Then came an examination of the CSF's attempt to prove the Bible correct through numerology. Take the text in Genesis (in Hebrew) play gematria (numbers for letters) and you get all these fabulous patterns: triangle numbers,

hexagonal numbers, perfect numbers... Unfortunately 666 was prominent; the author should have kept on reading his Bible, as far as Revelation 13:18.

Dmitrii A. Kuznetsov, a Russian creationist on whom the CSF pinned a number of hopes, turned out to have forged scientific references on a grand scale. A paper by Steve Roberts on Kuznetsov is in this issue.

Steve broke up his talk with frequent advertisements for book and video sales. He reasoned that, if the Moscow CSF can sell 6,500 books to a similar-sized audience, we need some training in sales technique. Finally, the Creation Science Foundation and particularly their professional geologist, Dr. Andrew Snelling, were once again warmly invited to debate their peculiar brand of science with Australian Skeptics, in any venue at any time; the Skeptics will cover expenses.

Economic Rationalism

I'm a mathematician and know a lot about numbers, but money simply does not behave the way numbers do. I don't even pretend to understand economics so I won't try to summarise the session; that task awaits a more articulate hand than mine. Nonetheless, I did come away with a clearer understanding of the debate about Economic Rationalism.

Senator Sid Spindler is well known as a foundation member of the Australian Democrats and **Des Moore** has decades of experience in the Commonwealth Treasury at senior levels. Both spoke clearly and were convincing. At question time there were passionate advocates of both sides of the debate (I mean, *really* passionate!)

It seems to me that Sid was arguing that we must focus on the individual while keeping an eye on the economy and that Des was saying that we must focus on the economy while keeping an eye on the individual. I don't think there was dispute about the premises and claims of Economic Rationalism, but I do think there was dispute about the relative importance of that and what may be called Social Rationalism. One sacrifices the individual for the group and the other, the group for the individual. Paradoxically, both are essential.

As a small, and possibly mischievous, postscript. I heard, on Phillip Adams' program, a piece on 17th century Astrology by Ann Geneva (historian). Ann made it clear that the 17th century mind was very different from today's: Astrology was taught at Universities and was regarded as a thorough Theory of Everything, no government decision was made without consulting an Astrologer and when things didn't work out as predicted there were a few standard excuses like insufficient data. Just like economics today?

Near-Death Experience

Susan Blackmore was, by now, a well known character at the convention and we all looked forward her second talk. It followed her recent book *Dying To Live*, a clever title but a bit of a fizzer really. It should have been called *The Best Book on Consciousness* - or if you're a marketer, the *Light Insight* perhaps. I strongly encourage you to read the book - I've read a number of dreary philosophical things on consciousness and this book exceeds them all: clear, digestible and practical! This short summary skips much too much.

What's it going to be like to die? Every religion has a picture but only recently has Science addressed the question. With medicine dragging people back from closer and closer to the edge we are getting a clearer picture and it looks like there is no edge.

People describe ringing noises, dark tunnels with a distant light that grows warm and golden as they move towards it with acceptance and joy, they have OBEs (out of body experience - on the ceiling looking down). Fewer people go further to experience beautiful unearthly colours, things more real than real, saturation, feeling or seeing a presence, having a life-review, expanding to fill the universe and be everything all at once. Fewer still reach a barrier and have to make a choice and those that decide to come back can be uncommonly changed: less materialistic, a 'better' person.

Raymond Moody collected lots of stories in a 70s book *Life after Life*. Kenneth Ring, in a 1980 book, found in his sample of NDEs 60% had Positive feelings, 30% Body Separation, 23% Entered dark, 16% Saw light and 10% went into the light. This suggests an unfolding experience awaiting us, the earlier parts being, of course, the most frequently reported by survivors.

There are two reasonable theories: The Afterlife theory and the Dying Brain theory. Unfortunately the consistency of the reports supports both. How do they fare in the evidence available for some of the specifics?

The Tunnel can be simple or complex, is reported in old cultures, the light tends to be golden. It is not a real tunnel, despite the pictures in the tabloids. It occurs in lots of other circumstances: binocular pressure, drugs, CO₂, fever, migraine so it has no special place in death. Disinhibition of neurons (allows random firing) in the visual cortex has been shown to produce precisely such effects. The greater concentration of cones in the centre of the visual field means that disinhibition must produce tunnel effects and the greater number of yellow cones suggests that the light is likely to be golden. The afterlife theory has no explanation of these details.

With regard to the OBE, most religious traditions have an idea of a soul or spirit and most people believe in life after death. Either something leaves or it doesn't and if it does leave it should be measurable. In 1910 they started weighing people as they were dying. The weight of the soul started off at one ounce and got less and less as the accuracy of the scales improved. None of the astral travel experiments have shown anything yet.

Consider the questions "Where am I?" (behind the eyes,

the whole body, in the throat, the heart, more in the fingers if you are blind) "What keeps me here?" and "What would make me think I was somewhere else?" Clearly sensory input is the key. Without it your brain is going to make something up from memory and imagination. Normally your brain tells you that you are behind the eyes looking out. If that doesn't work, it will do what it does in dreams and make up a story with you in it and whatever sensory input it can get. These are commonly birds-eye view.

The feeling of 'realness' is addressable by this emerging model as well. Visual illusions show how good the brain is at constructing detail and meaning from very little raw information. Again, when external stimuli are less available your brain can fill in the gaps without diminishing apparent reality. When the senses fail altogether our reality comes entirely from internally generated stuff.

The coherent picture emerging is something like this:

close to death, stress management systems kick in releasing lots of endorphins (euphoria), provoking disinhibition by lowering the seizure threshold (tunnels, visions, noises, life review). Loss of sensory information increases the proportion of internally generated detail in your reality and disinhibition produces saturated perceptions (greener than green, realer than real, OBE). More theoretical are the ideas about self and time. These are seen as related constructions in the brain that can dissolve without affecting consciousness producing a full-blown mystical experience; ineffable, profound and well worth experiencing - apparently.



Three Crow Eaters !. At least they got to eat.
SA contingent L to R Michelle Foster, Ron Evans and Peter Woolcock

The Dying Brain hypothesis is much better at explaining NDEs than the Afterlife hypothesis - but you are still at liberty to choose the Afterlife model because it can't be proved wrong.

Cults in Operation.

Dr. Ed Ogden is a Forensic Physician with the Victorian Police Force who has recently completed an MA on "Satanic Cults: Ritual Crime Allegations and the False Memory Syndrome". Ed Ogden's paper is in this issue.

Dr. Sarah Hamilton-Byrne was taken from her mother as a baby and brought up in Anne Hamilton-Byrne's Family. I think we were not sure what to expect from Sarah; she was extraordinary by dint of her background, but what does eighteen years in a repressive, isolationist cult do to you? She wasn't sure what to expect from us either but, in the end, she stole the show, as they say. Sarah Hamilton-Byrne's paper is in this issue. ■

CONVENTION PAPERS

Is There Life Out There?

Paul Davies

Last February the giant radio telescope at Parkes (NSW) was turned towards a nearby star. The scientists steering the dish eagerly scanned the output from their equipment. The signal they were hoping for was unlike all the others routinely studied by radio astronomers around the world. The Parkes scientists were searching for something much more exciting and much more daring: a message from an alien civilization.

For five months an international team of astronomers scrutinized hundreds of Southern Hemisphere stars for signs of intelligent life. The Australian study was the opening phase of Project Phoenix, a privately funded research programme forming part of what is known SETI, the Search for Extraterrestrial Intelligence. Project Phoenix is run by the SETI Institute, based in California and dedicated to using radio telescopes to detect alien civilizations.

The problem of whether or not mankind is alone in the universe is one of the great outstanding questions of science. The subject has immense implications for human society, because in a sense the search for extraterrestrial life is also a search for ourselves; who we are and what our place is in the universe. There is no doubt that the discovery of an alien civilization would have an impact on our lives and our beliefs at least as profound as the work of Copernicus and Darwin.

In fact, the implications of the existence of extraterrestrial life has been the subject of lively debate among philosophers for thousands of years. The ancient Greek, Democritus taught that the entire universe was made up of identical atoms. He realised that if atoms can come together on Earth to form living organisms, then the same sorts of combinations of atoms could arise on other worlds.

Democritus' reasoning is known as the principle of uniformity of nature: the same laws apply throughout the cosmos. Most modern scientists would agree with this principle. However, just because something is possible doesn't make it inevitable, or even likely. Proponents of SETI need to make a second assumption, known as the principle of mediocrity, or the Copernican principle. Ever since Copernicus showed that the Earth is not located at the centre of the universe, it has been a safe bet that our planet is in no way special. As far as we can tell, it is a typical planet round a typical star in a typical galaxy. So why shouldn't the presence of life on our planet also be typical?

Unfortunately, the issue cannot be settled by philosophical argument alone. Hard facts are necessary. The problem is that we have very little idea of the physical processes that lead to the origin of life. Darwin envisaged a warm pond somewhere, rich in organic chemicals. Over time this chemical "soup" would contain an increasingly rich mixture of substances. Perhaps, after millions of years the chemicals would become so complex that self-

replicating microorganisms spontaneously appear.

Although such a scenario remains a favourite with biologists, nobody knows how efficient the complexifying chemical processes would be. Because even the simplest living organisms are nevertheless incredibly complicated, it may be that the probability of a chemical soup accidentally producing, say, a molecule of DNA is infinitesimal. If so, then life on Earth is a freak, bizarre chemical accident extremely unlikely to have occurred anywhere else in the universe.

On the other hand, biochemists have discovered that certain chemical mixtures can undergo what are known as self-organizing transitions - sudden jumps to states of much greater organizational complexity - entirely spontaneously. Under the right circumstances, self organization can greatly accelerate the formation of complex molecules, through a series of linked, mutually-reinforcing cycles of reactions. With the help of such self-organization it could be that life will form rather rapidly, given the right physical conditions. If so, we might expect life to arise on most Earthlike planets in the universe.

In the present state of knowledge these two points of view remain equally plausible. One piece of evidence, however, supports the latter opinion. Our planet is about 4.5 billion years old, but for at least half a billion years it was incessantly pounded by huge asteroids. The bombardment was so fierce it would have thoroughly sterilized the surface. Yet fossil microorganisms dating back at least 3.6 billion years have been found. It seems as if life got started on Earth almost as soon as conditions permitted, suggesting that the necessary processes are rather rapid.

Taking the optimistic view that life has arisen on many planets, what are the chances that it will evolve towards intelligence and technological civilization? Here again, opinions differ sharply. Most biologists insist that there is no direction to evolution: it is "blind". They maintain that intelligence is just one of many accidental features that has arisen on earth - like facial hair or toenails. It is not preordained: there is no "force" that drives organisms towards greater complexity or more advanced patterns of behaviour. The fact that there are intelligent beings on Earth who have developed advanced technology is, claim biologists, just a pure fluke.

According to the conventional wisdom, then, even if life does exist on other worlds, it is extremely unlikely to follow the same path of evolution as life on earth. There would then be no reason to expect intelligent aliens to be sending us radio signals. But is this reasoning correct? SETI enthusiasts point out that intelligence has good survival value so it is likely to be selected for if it arises. They cite the fact that birds and dolphins are also fairly intelligent, suggesting it is a characteristic that is not so rare after all.

Moreover, the fossil record shows that once intelligence had arisen in the primate, the growth in brain size began to accelerate, indicating a definite trend toward more advanced mental ability.

While the biologists argue, SETI scientists believe it is at least worth a try to see if any alien beings are attempting to contact us. They pin their hopes on the use of radio telescopes, because these instruments are able to detect very faint signals from enormous distances. A dish the size of that at Arecibo in Puerto Rico would be capable of receiving a beamed signal from a similar instrument on the far side of the galaxy, tens of thousands of light years away. Many billions of stars lie within his range. Some enthusiasts imagine that there exists a "galactic club" of communicating alien civilizations, a sort of cosmic information superhighway, that welcomes new members. It is then up to mankind to "log in" to the nearest "node" of this superhighway in order to join the club.

Of course, alien beings may have chosen an entirely different technology to communicate with each other. For example, powerful laser pulses of very short duration might be more efficient. However, if the aliens are seriously hoping that we will join the galactic club, they will presumably make it as easy as possible for us to detect their signals. They might guess that we would begin by using radio telescopes and set up some sort of long-term radio beacon to attract our attention. Even more exciting would be if a nearby alien community has deduced our existence and is deliberately beaming a message directly at us.

However, even if there are alien radio signals sweeping past Earth, a formidable obstacle remains in the way of their detection. Not only have we no idea where in the sky their signals might be coming from, we must choose which of many millions of different radio channels to tune into. How can we tell which frequency the aliens are using?

In 1959 Guiseppe Cocconi and Philip Morrison proposed an ingenious solution to the latter problem. When radio astronomers scan the heavens, one of the most conspicuous radio sources they detect are clouds of cold hydrogen gas. These emit radio waves with a characteristic frequency of 1420 MHz. Cocconi and Morrison suggested that this ubiquitous radio background provides a natural frequency for communication between civilisations.

Inspired by this suggestion, the American astronomer Frank Drake used the Greenbank radio telescope in West Virginia to "listen in" to nearby stars. Nothing unusual was found, but Drake's pioneering work served to focus attention on the fact that it was indeed feasible for humans to detect alien radio messages with existing technology, if only we adopt sensible strategy.

Since these first faltering steps at SETI were taken three decades ago, the technology has advanced enormously. The SETI Institute has developed a microchip capable of analysing 28 million 1 Hz wide radio channels simultaneously, in a range from 1200 to 3000 MHz, dramatically reducing the chances of our picking the right star, but tuning into the wrong frequency. The new system was used extensively for the first time for Project Phoenix, and worked perfectly.

The Parkes telescope spent several minutes at time pointing at each star selected from a long list of likely-looking target stars. Special software was used to pick out signs of artificiality from the radio clutter. For example,

regular pulses and narrow-band continuous signals could trigger an alert, as could frequencies that slowly shift due to the Doppler effect, as might be expected from a transmitter located on a planet in orbit round star. When signals that seemed artificial were detected, as happened fairly often, a smaller dish located 200 km away was used to verify whether the signal came from space or was man-made. Radar, television and radio signals from Earth all serve to complicate the search for alien messages, and the Phoenix system is designed to eliminate false alarms as rapidly as possible.

In spite of the efforts of the Phoenix team, no unambiguous alien signals were detected in the six months of the survey. Needless to say, this doesn't prove there are no aliens. It is important to realize that the absence of evidence is not the same as the evidence of absence. Even with its sophisticated technology, Project Phoenix must still be regarded as a needle-in-a-haystack search. The chance of succeeding in the first run were always very slim. But the project will resume as soon a funding permits. After all, if we don't seek, we shall never find. In the words of Frank Drake "Our needle in the haystack is elusive but many of us feel that searching for it is one the greatest quests our species can undertake."

SETI usually focuses on the possibility of life similar to that on Earth - based on carbon, oxygen, nitrogen and liquid water - and seeks Earth-like planets orbiting long-lived stable stars like the sun. Giant, unstable or dwarf stars are ruled out, as are double stars systems. At present, we cannot directly detect any planets around any other stars they are too dim - but astronomers expect that many solar-type stars among the one hundred billion in our galaxy will have at least one planet like Earth.

If life is inevitable under the right conditions and if intelligence and technology follow automatically after some billions of years, then an estimate can be made for the number of planets in our galaxy that possess advanced technological communities at this time. By far the least well-known parameter in this estimate is the longevity of a typical community. If alien civilizations tend to wipe themselves out after a few decades of technology, then it is likely that mankind is currently the only such community in the galaxy. On the other hand, if civilizations last for tens of million of years, there will be may millions of alien communities out there, quite possibly in radio communication with each other.

Because the distances between the stars are so vast, it will take a long time for a radio message travelling at the speed of light, to reach Earth from an alien civilization, and for our rely to get back. The probability of another civilization within 100 light years is very small, so a delay of several centuries may be inevitable. However, the same "tyranny of distance" that slows two-way conversation also makes it highly unlikely that aliens will travel between the stars. It is too expensive in time and resources to send spacecraft on such long voyages: better to explore the universe by information exchange with other communities. For this reason, fears that communicating with aliens might invite invasion are unfounded.

Our galaxy is but one of hundreds of billions, so even if there were just a handful of advanced civilizations per galaxy, there would still be vastly many in the universe as a whole. However, the distances to other galaxies are so vast that even light can take billions of years to reach us. It

therefore seems improbable that intergalactic communication has been established.

Why the aliens will be far advanced.

Many science fiction stories depict alien civilizations as similar in level of development to our own - perhaps a few hundred years ahead. However, this possibility is extremely unlikely. It took nearly four billion years for life on our planet to develop to the point of civilization, during which time countless evolutionary accidents occurred. It is exceedingly improbable that life on another planet would reach the same stage as us, give or take a few centuries, after billions of years.

It follows that if life got started on another planet at the same time as it did on Earth, then the alien life forms will either be far more or far less advanced than us today. If they are far less advanced then they will not be sending out radio signals. Therefore, if we do detect a radio message, it will probably be from a community millions of years or more ahead of us.

Moreover, the solar system is probably only one third as old as the universe. There were stars and planets that were ancient billions of years before the Earth even formed. This raises the prospect of alien civilizations that are older than our planet. The level of scientific and intellectual achievement of such civilizations cannot even be guessed.

Life on Mars

Mars offers the best hope of finding life elsewhere in the solar system. However, it is not an especially hospitable planet. The temperature rarely gets above freezing, the

atmosphere is extremely thin and there is no liquid water. Nevertheless, some Earth bacteria might be able to survive there. Moreover, there is good evidence that conditions were less hostile in the past. Satellite photographs show the distinctive patterns of dried up river beds, so liquid water probably existed in abundance millions of years ago, when the atmosphere was denser.

In the 1970s NASA space probes landed on Mars, and as expected they revealed a barren terrain devoid of any plants or animals. The spacecraft also tested the surface soil for signs of microbial life of the sort found on Earth. No positive identification was made. Later this decade the search will resume when a new generation of Mars lander craft conducts more sophisticated investigations.

Even if life did not form on Mars, it is just possible that life reached there from Earth. From time to time our planet is struck by comets and asteroids with sufficient force to splash rocks into space. Given long enough - perhaps millions of years - some of this ejected material will find its way to Mars. If rocks containing viable spores reach the surface of Mars, there is a distinct possibility that the transported microbes will emerge to colonize the red planet.

Scientists are now convinced that rocks from other planets have reached Earth by a similar means, and in recent years evidence has strengthened that certain meteorites found in Antarctica and elsewhere came from Mars. It is therefore looking increasingly likely that material has been exchanged between the planets, as a result of cosmic bombardment, since the dawn of the solar system. Putting two and two together suggests that Earthlife may have reached Mars or vice versa



CONVENTION PAPERS

Fraud In Physical Science

Tony Klein

Many years ago, before the fall of the Evil Empire, a colleague from behind the Iron Curtain told me that doing research in Science is like chasing a black cat in a dark room. Philosophy, he said, is like chasing a nonexistent black cat in a dark room. And Marxist economics, he added, is like chasing a nonexistent black cat in a dark room and shouting ... "I've got it, I've got it!"

I was reminded of all this by the cold fusion fiasco, back in 1989. The question is not why there were so many people chasing this particular black cat, which was fairly quickly found to be nonexistent, but why there were so many seemingly respectable scientists shouting "I've got it, I've got it!" without properly verifying, in their own laboratories, what was, after all, such an overwhelmingly improbable result.

I say overwhelmingly improbable because we know that from ordinary chemistry to extraordinary nuclear fusion there is a gap of about five orders of magnitude to be bridged between the size of atoms and the size of nuclei and a gap of the same magnitude between the energy scales involved. Nevertheless, cold fusion was extremely newsworthy. Why?

Newsworthy ought to mean the same as having high information content and, to be strict about it, information content is inversely related to the probability of an occurrence: thus, the more improbable, the more newsworthy. (Mathematically speaking, the information content is proportional to the negative of the logarithm of the probability). So, cold fusion, having such a terribly low probability, must be very high on information content and hence be very newsworthy.

Whoa! There must be a fallacy here somewhere... "Elvis is alive and well and living in Cuba"; "World War II Bomber Found On the Moon." etc. If it is known not to be true why should it remain newsworthy? (I failed to get this point across to any of the media people who kept ringing me regularly at the height of the cold fusion furore.)

Why, then, the many false claims? The original claims may have been just plain mistakes. They can happen to anyone and they do, even in science, with monotonous regularity. No great harm is done, there may be slight embarrassment, but reputations survive intact (unless stubborn refusal sets in, leading ultimately to unreason, levitation, Tarot cards etc.). The point is that the truth will eventually out, and that is something that we must stress, over and over again, to our friends, neighbours and non-sceptics generally. There is, we hope, in science if not elsewhere, such a thing as Truth with a capital T.

But what about the erroneous claims which corroborate the original mistake? One may call it the bandwagon effect, but naming it is not the same as explaining it. The lure of instant 'fame', one's name in the papers etc, surely cannot be all there is to it, but don't underestimate the subtle

pressure of the media, and, for that matter, of society in general, ever on our tails to lay golden eggs. ("How come such a famous institution as Your University has not yet been able to produce cold fusion? Where is all that research money we gave you?")

The only sensible explanation seems to be wishful thinking. All this is very well documented in the history of science; almost all of us (if we are old enough) can recall cases of wishful thinking producing erroneous results or mistaken theories, each with its own peculiar history and degree of notoriety. Very seldom, however, do they reach quite the level of hysteria that characterised the cold fusion story.

One instance that did, is the famous case of N-rays. The year was 1903. The previous eight years had seen the discovery x-rays, cathode rays, alpha, beta and gamma rays; it seemed that there were no end of rays! Then, a distinguished Professor of Physics and Member of the French Academy, Rene Blondlot, announced the discovery of a new type of ray which he called N-rays, (after the University of Nancy). Supposedly emitted by x-ray sources, N-rays could penetrate many centimetres of matter and made themselves apparent by increasing the brightness of sparks jumping between pointed wires. They also made fluorescent screens glow, just like x-rays, with which they were sometimes mixed and confused. However, N-rays had all sorts of other bizarre properties: they could be shielded by iron but not by copper; they could be stored ceramics, such as in bricks; they could bent by metal prisms, and so on. Furthermore, Blondlot even had photographs to prove it!

Next, it was found that N-rays were emitted by all kinds of things, including the human nervous system... so you can start to get suspicious! Nevertheless, all over France, Germany and even England, scientists were falling over themselves in confirming Blondlot's results: over 300 papers by 100 scientists were published between 1903 and 1906. Blondlot wrote a prize-winning book on his researches - it was translated into English in 1905 and there is even a copy in the Australian National Library!

All along, however, many serious players had trouble in reproducing Blondlot's results. In particular, a noted experimental physicist from Princeton, RW Wood, crossed the Atlantic specially to visit Blondlot's laboratory. He was greeted cordially and shown various experiments, but, in all honesty, he couldn't see any of the supposed brightening of sparks or screens. What to do? Well, when Blondlot tried to demonstrate the bending of N-rays, Wood, the cunning old fox, took advantage of the darkened laboratory and swiped the aluminium prism from the middle of the apparatus! Blondlot continued to enthuse about the supposedly shifted spot of light, and Wood said nothing! Upon returning to the USA he wrote a devastating article,

exploding the N-ray myth as a giant hoax or a very bad case of self-deception.

The moral of the story is that all human observers, however well trained, have a strong tendency to see what they expect to see. But what about the photographs? Well, Blondlot had a very helpful and obliging lab assistant who never failed to produce whatever was asked of him! To be kind, perhaps others had confused things with x-rays which definitely exist - unlike N-rays. Anyway, after RW Wood's denunciation, everyone dropped the subject with alacrity - everyone, that is, except the French, whose national pride was somehow involved. As for poor old Blondlot, who was so very keen to make a significant discovery, he was treated with great kindness and lived to a ripe old age, never wholly convinced of his error.

Another famous case, even more closely analogous to cold fusion, is that of Polywater. This was a strange, anomalous form of water, produced by condensing water vapour in fine quartz or even glass capillaries. It was reported to have a density of 1.4, a boiling point of several hundred degrees C and a viscosity similar to that of grease.

Originally discovered by an obscure Russian chemist in the early 1960s, it was espoused by the very distinguished Russian academician Boris Deryagin. With the aid of some helpful assistants who, presumably, did the all the experiments for him, Deryagin somehow convinced himself of the reality of this strange substance and managed to infect British scientists with the idea in 1968. They thought that the anomalous water was something like HgO_4 - a polymer - hence the name polywater. Polywater crossed the Atlantic around 1969; its supposed infrared spectrum was published by a respected American chemist and an incredible bandwagon started rolling. Publication in the *New York Times* and other similar non-scientific journals added great momentum to the story and pretty soon hundreds of papers and reports were being published on polywater.

One bizarre aspect of the polywater story was the claim that it may in fact be the stable form of water and all the ordinary stuff that surrounds us may turn into polywater if 'seeded' by a microscopic sample that may escape from the laboratory. (That turns out to have been the plot of *Cat's Cradle*, a Science Fiction story by Kurt Vonnegut, published in 1963). Another bizarre idea was that the water present in living cells may actually be polywater, a claim espoused by at least one Australian food chemist. ("Scientists' New Answer to Mystery Polywater" *Sydney Morning Herald*, June 1970). By that time, however, the bubble was well on the way to being burst: ("Polywater? There's no Such Thing, Says CSIRO Man" *Sydney Morning Herald*, July 1970).

To cut a long story short, polywater turned out to be a giant furphy, all of its strange properties being attributable to impurities: in some cases silica dissolved from the capillary tubes, in other cases perspiration from chemists' fingers. Read all about it in a very entertaining book by a noted authority on water. (Polywater by Felix Franks, MIT Press, 1981).

(By the way, an interesting postscript about the credibility of Academician Deryagin: in the 1980s he announced the synthesis of diamond in table-top apparatus! Everyone said "Oh yeah? More Russian polywater?" Well this time, astonishingly, he was right: One can make thin films of diamond in a microwave plasma, and people are

now doing it all over the world. We have one of the leading experts in the field in the University of Melbourne).

The rise and fall of interest in polywater, documented in Franks's book, is very similar indeed to that of Cold Fusion, except for the time-scale: E-mail and the FAX machine speeded up communications by such a large factor that, while polywater lasted for several years, cold fusion, at its height, lasted only a few months (although some people thought - some chemists perhaps still think? - that there may be some interesting electrochemistry left in what was supposed to have been cold fusion).

Other aspects are also closely parallel: an initial mistaken observation. (In the case of cold fusion it seems to have been a hydrogen explosion). A strong wish to believe in the strange results. A very obscure initial publication. An almost immediate "Me too..." from several laboratories - clearly fraudulent. Feverish efforts in very many laboratories to try and replicate the experiment (I confess that in my department too, we had palladium electrodes in heavy water, surrounded by shielding and neutron detectors, in a basement lab, against my better judgement based on theoretical arguments...). Then there were too-clever-by-half theories, purporting to explain things; phony claims; premature patent applications and then... silence. Cold Fusion died a fairly sudden death in the serious scientific community - it was left to cranks, electrochemists and cartoonists.

Of course, to be honest, I am rather sorry that this particular cat is nonexistent. It would have made a wonderfully bright table-top neutron source, at the very least, and possibly a good, clean energy source. (No, we don't need cheap energy, we need clean energy).

I am, however, very glad that, to the best of my knowledge, no Australian researchers were caught shouting "I've got it, I've got it!" At least not to my knowledge, although keen supporters of cold fusion still turn up from time to time. I heard one of them only last year, giving Australian physicists a serve for being so backward as to not be working on cold fusion - the hope for the future. .

Mind you, that doesn't mean that Australian physics has not had its share of false discoveries: around 1970 there was the noted Sydney physicist who thought he discovered fractionally charged particles in a cloud chamber experiment. Since fractionally charged quarks had recently been theorised, this discovery caused a sensation when it was announced at a conference in Budapest.

It didn't last long: a perfectly reasonable explanation for faint tracks in cloud chambers was put forward to explain the evidence and other serious attempts to find fractionally charged particles ('free quarks') never did find any. (We know today that quarks are always confined in pairs or triplets, inside other particles). However, the Sydney Professor was so convinced of having been robbed of a monumental discovery, that he became completely unhinged after his short-lived fame and took up levitation, Tarot cards and the like. In fact, The Australian Skeptics short-listed his Tarot card experiments for the Bent Spoon Award for 1989

Another quite well known instance of self-deception in Australian Physics was the case of the 'tachyons' discovered in Adelaide, by a young physicist who didn't know any better, together with an old one who should have!

Tachyons are particles which travel faster than the speed of light and are not supposed to exist, according to Einstein.

However, some mathematical fiddling with the theory of relativity does allow a theoretical possibility for the existence of such particles but they would have very peculiar properties indeed. Anyway, the Adelaide team, after causing a medium-sized splash in the journal *Nature*, eventually found a silly instrumental error. After that, the Adelaide tachyon paper was actually retracted, unlike the Sydney quark one! No great harm was done to anyone's reputation but some wags were heard to comment that ... "a tachyon is a particle ahead of its time".

There are countless other anecdotes about hoaxes, frauds or instances of self-deception (particularly in other fields of science), but I hope that one can draw the distinctions between honest mistakes and self-deception by scientists on the one hand and the crooks and charlatans of pseudoscience such as von Daniken and Uri Geller, who appear to have existed for a million years.

So, what conclusions can one draw from all these anecdotes? As usual, there are more questions than answers. One very important and complex question is: what is the effect of fraud on the scientific enterprise?

My answer is, that in the long term, the effect is precisely nil! Let me explain. Science is a complex self-adaptive system like human learning in individuals; like biological evolution; like the immune system in vertebrates and, perhaps, like computers generating strategies for games. All such systems are self-correcting or self-healing. Wrong ideas are eliminated; wrong facts are forgotten or actively 'un-learned'; mal-adaptive behaviour leads to extinction; wrong strategies are eliminated. So, false science whether the result of fraud or of honest mistake, will disappear in the long run. The trouble is that the time-scale is not defined - the run could be very long indeed. After all, some medieval superstitions, mal-adaptive though they are, survive to this day.

In science, while minor error may persist for quite a while, important things such as new discoveries can be accepted or rejected quickly. The replication of High Temperature Superconductivity and the failure to replicate Cold Fusion were both quite quick. An important lesson in this is that deliberate fraud is usually discovered quite quickly. Thus, in my opinion, fraudulent science is a very high risk operation compared, for example, with financial fraud.

As a scientist, you'd be mad to even contemplate fraud although, paradoxically, if you are not worried about your scientific credibility, in other words if you are a charlatan or a pseudoscientist, you may get away with it for quite a while, especially if your publicity is good.

For while the scientists are the generators and perhaps the arbiters of scientific truth in our society, the gatekeepers of truth are often the publicists and the journalists. They can do a great deal of damage if they fail in their task because the publicity that is associated with falsehood detracts greatly from the impact of true science. On the contrary, false science can easily lead to antisience. Thus, I think that the wilful purveying of falsehood and antisience should be made a criminal offence!

Charlatans and quacks, in common with the perpetrators of scientific fraud, are guilty of what I would liken to well-poisoning - the misleading, polluting or derailment of impressionable minds: The betraying of truth - to echo the title of an influential book on the subject. Written by two journalists from the *New York Times*, William Broad and

Nicholas Wade, *Betrayers of the Truth* (Simon and Schuster, 1982) concentrates on case studies of various crooks, (mainly in the biomedical area!), who tried to profit from fraudulent activities.

Some important issues are well exposed in this book, including some of the thorniest ones upon which I have not touched so far. For example, why do people engage in fraud? Put very simply, it is a conflict between the dual goals that most scientists have. The advancement of science on the one hand and the advancement of self, on the other. However, given the very high risk of exposure, the very high probability of comeuppance that scientific fraud has, I tend to think that it is more a question of psychopathology than of morality that is involved. It's more of a case of mad than of bad!

Falsehood is of no practical value - it doesn't work. If levitation worked we wouldn't need cranes! Nevertheless, new falsehoods are invented daily! Why? This, to me, is one of the most interesting questions: why do false doctrines arise and why do they persist?

A grand old charlatan of the 16th Century, a Swiss quack by the marvellous name of Theophrastus Bombastus Paracelsus von Hohenheim - Paracelsus for short - who may be regarded as the last of the alchemists, (or the first of the chemists because, in fact, he carried out a great deal of systematic experimentation) is on record as having said that "Humanity wants to be deceived!" This means that there will always be a lucrative market for soothsayers, astrologers and other such charlatans: people need their form of quackery for reassurance.

Perhaps even more to the point is George Bernard Shaw who, in one of his plays, I think, says that: "What people want is not truth but certainty!" Thus, while we scientists struggle to reach better and better approximations to the truth, we may be beaten to the draw by false prophets who offer certainty. Nevertheless, we must have faith: truth will out in the long run!



CONVENTION PAPERS

Chiropractic: Then and Now

Stephen Basser

Introduction

Today I will review the history of chiropractic, and examine, as it approaches its one hundred year birthday, its scientific status.

To avoid any potential confusion and misunderstanding I thought it would be helpful to start with some conclusions. What I **am** saying today is that many of the claims of chiropractic are, at present, unscientific or, more accurately, scientifically unproven. What I am **not** saying today is that all of orthodox medicine is scientifically proven. Those who wish to read that message into this paper are advised to stop reading now to save disappointment, and to preserve their prejudice!

The Early History Of Chiropractic

Chiropractic was founded by Daniel David Palmer in September 1895 in Davenport, Iowa. Palmer was born in Ontario, Canada in 1845, and at the age of 20 travelled with his brother to the USA. In 1887 he moved to Iowa and opened a magnetic healing practice (practitioners of magnetic healing believed they belonged to a select group of persons whose personal magnetism was so great it gave them the power to cure disease).

Palmer performed the first chiropractic adjustment in September 1895, on Harvey Lillard, a janitor working in the building where Palmer practised. Lillard had been deaf for 17 years, claiming he became so suddenly when something gave way in his back whilst stooped in a cramped position. Palmer examined Lillard, and found an out of place vertebra in his spine. After applying pressure that moved the vertebra back into place Lillard's hearing returned.

Palmer believed he had succeeded in one of his life's quests - to find the secret of disease - why one person falls ill whilst his/her neighbour does not. He confided his discovery to a friend - Reverend Samuel Weed, who suggested the name chiropractic, from the Greek for 'done by hand'.

Palmer had no medical training and was unaware that the nerves of hearing are entirely within the skull. He believed he had restored the man's hearing by relieving pressure on a spinal nerve affecting hearing. Palmer proposed the principal of the spinal subluxation, and established chiropractic based upon it. He believed that the body requires an unobstructed flow through the nervous system of an ethereal substance called Innate Intelligence. Vertebral subluxations - minor dislocations of the spinal column - were believed to interfere with the flow of Innate, and caused an alteration in nervous 'tone'.

By depriving areas of the body of Innate, subluxations produced disease, and Palmer claimed that 95% of all diseases were caused by subluxated vertebrae. Treatment involved identifying these subluxations and manually

restoring the vertebrae to their normal alignment, thus releasing the Innate, allowing the body's natural healing powers to cure the patient.

From its inception chiropractic was defended as a science. For chiropractors, though, scientific knowledge was not acquired by experimental control of variables in a carefully designed study. Instead they examined and treated patients, and argued, as many still do today, that the results of their clinical treatments constituted scientific proof.

Palmer's son Barlett Joshua, or BJ, had bought out his father's burgeoning chiropractic business after a bitter falling out, and assumed control of the financial and educational affairs - proclaiming 'Our school is on a business, not a professional basis, we manufacture chiropractors.' BJ was not an advocate of systematic science:

There has been a long history within chiropractic of anti-intellectualism and again this was heavily influenced by B J Palmer. "We can't give you brains, but we can give you a diploma."

Ian D Coulter, 1990

Throughout the 19th century supporters of 'natural theology' held to the view that science ennobled man because it demonstrated the magnificence of God. Chiropractors envisioned man as a microcosm of the universe, with the Innate Intelligence a manifestation of a larger Universal Intelligence, controlling everything. Chiropractic, as a new scientific law enabling healing of the sick, was an important contribution to revealing the goodness of God. By comparison, the emerging scientific medicine was regarded as 'atheistic materialism'.

Chiropractic was described by its supporters as 'the only truly scientific method of healing' because it balanced the spiritual and the material. Chiropractors believed their science was superior to medicine clinically and morally, and attempted to appeal to those who were concerned about the growth of science and the perceived decline in spiritual values.

A Period Of Change

During the early years of the 20th century, in many states of the USA, legislation was introduced mandating basic scientific training. In response Chiropractic colleges taught sufficient science to pass the basic tests, whilst continuing to stress the importance of the earlier teachings. A good example of this is the response to the germ theory of disease. Chiropractic initially taught that bacteria were unrelated to disease. In response to the science legislation some bacteriology was introduced into chiropractic education, but chiropractors were taught that bacteria were not causally related to disease. It was vertebral subluxations that

‘caused’ disease by making a person susceptible to bacterial infection.

This was an important period during which chiropractic tried to retain sufficient distance from scientific medicine to be seen as a distinct alternative, whilst absorbing enough of the teachings of science and medicine to retain credibility.

Initially these attempts were unsuccessful, and chiropractic entered a period of decline. Even as recently as the 1960s many schools in the USA were using textbooks that had not been updated for decades.

Beginning in the 1970s the tide began to turn, and interestingly it was a growing scepticism about medicine and science that helped things along.

Scientific medicine was accused of being ‘reductionist’, and of having ignored the more ‘human’ aspects of health care. Chiropractic joined this chorus of criticism, and an alliance was formed between chiropractic and the growing ‘holistic’ health movement. In some quarters chiropractic even dusted off its spiritual emphasis, having once again found a receptive audience.

The ‘Chiropractic Wars’

The dramatic improvements in chiropractic education lowered the barriers between it and orthodox science, conferring greater academic credibility.

The result was, and is, an increasingly bitter debate over the content and character of chiropractic. Principally the debate is about whether chiropractors are limited practitioners like dentists or podiatrists, primary care practitioners who incorporate some of medicine's tools and knowledge, or primary care practitioners who reject ‘orthodox’ medicine

Those who cling to the original concepts of Palmer believe that to accept the assumptions of orthodox science is to destroy crucial elements of chiropractic's identity, whilst those who see chiropractors as valid limited practitioners believe that accepting orthodox science will help establish the efficacy of chiropractic and confer upon it legitimacy.

The following are brief examples of writings from the opposing sides of this debate. Obviously I have been selective due to the limited space available, but I believe these quotes accurately reflect the nature of the difference in approach between the two sides. All quotes are from chiropractic journals and I am happy to provide full references to interested persons.

‘...the chiropractic profession as a whole spends more on competing with each other in the yellow pages than it does in supporting research.’

Robert D Mootz, 1990

‘Chiropractic would not exist today had B J Palmer waited for scientific validation.’

Larry L Webster, 1994

The case for preventative chiropractic is based upon *a priori* reasoning. Although such reasoning may be logical, ie internally consistent, it bears no proven relationship to reality’

Jennifer Jamison, 1991

It has been found for example, that by “blocking” the nervous system, measles can be prevented.’

John F Hart, 1992

‘Some members of our profession would like us to believe that medicine is our greatest enemy. I think it is becoming obvious that arrogant ignorance within our own profession is really what is holding us back.’

A Christiansen, 1987

‘It has been studied that both healers’ hands and magnets could accelerate the kinetic activity of enzymes in a subject.’

Peter L Lind, 1992

‘Patient satisfaction is a worthy clinical goal, in and of itself, so long as it is not mistaken for experimentally demonstrated effectiveness... Astrologers have been satisfying their customers for millennia, but this hardly supports any scientific claims about the accuracy of their predictions nor the wisdom of their advice.’

Joseph C Keating, 1993

‘...chiropractic is good for anyone and everyone who has a scientifically demonstrable subluxation, regardless of medical diagnosis or lack thereof.’

John F Hart, 1992

But Does It Work?

The debate within chiropractic is interesting, but as this is a sceptics conference it's about time we asked: ‘what about the evidence?’

Over the years there have been a number of scientific reviews that have included an assessment of the evidence for and against chiropractic, and the most recent comprehensive review was a report prepared for the Ontario Ministry of Health, by Pran Manga and Associates (The Ontario Report). This review was, in my opinion, methodologically sound, but flawed in its conclusion.

The authors of the Ontario Report conducted a detailed literature review, and found that the first randomised control trial (RCT) of spinal manipulation in the management of low back pain (LBP) was published in 1974. The first controlled trial of chiropractic (not a RCT) was published in 1986, and the authors of this study commented at the time that:

‘...any efficacy of chiropractic therapy can only be inferred from the studies of manipulative therapy for the treatment of LBP which have been performed utilising medical, osteopathic or physiotherapy trained practitioners of manipulation.’

G N Waagen et al, 1986

The Ontario Report authors, in reviewing the pre and post 1986 research, identified a definite trend in favour of spinal manipulation as a valid treatment in low back pain:

‘These results corroborate the value of spinal manipulation...The results demonstrated a consistent (and strong) trend favouring...spinal manipulative treatment...support is consistent for the use of spinal manipulation.’

Thus, prior to 1986 spinal manipulation had been shown to be effective in LBP trials that did not include chiropractic management. Once trials began to use chiropractic these

also demonstrated that spinal manipulation was effective. The logical conclusion to reach, I would have thought, was that spinal manipulation is an effective form of management for some cases of low back pain, but the conclusion the Ontario Report came to was more specific: 'In the bulk of the methodologically sound clinical studies spinal manipulation applied by chiropractors is shown to be more effective than many alternative treatments for LBP.'

Given that another major review - the so-called RAND Report - had concluded that, 'no well-conducted randomised controlled trials have been done comparing different techniques of manipulation for patients with low back pain', I cannot understand, or agree with, the conclusion reached by the authors of the Ontario Report.

I believe that the evidence supporting spinal manipulation as a valid treatment for low back pain is strong, though I accept that there is still some debate about its relative efficacy in chronic pain states. As far as specific chiropractic manipulation is concerned, my assessment of the available evidence leads me to concur with the view that:

'...no single uniquely chiropractic method of healing can yet be considered scientifically validated... Despite the many satisfied patients, despite nearly a century of apparently useful and successful clinical practice and despite the many testimonials of remarkable recoveries and cures, the chiropractic art remains scientifically unevaluated for the most part, and therefore, necessarily unproven. No strong claims for the adjustive arts are justified at this time.'

J C Keating & D T Hansen, 1992

Conclusion - Where To From Here?

In light of the evidence how, then, should we 'deal' with chiropractic, and chiropractors?

Firstly, as a scientist and a health professional I believe that we must accept the evidence that does exist. Chiropractic manipulation is, on the basis of existing evidence, a valid management option for lower back pain, and has no more or no less evidence to support its use than other treatments, such as physiotherapy.

Secondly, as there is insufficient evidence at present to support the claim that chiropractic is useful, either in a primary or complementary role, in the management of 'visceral conditions' (Eg, asthma, headache, gastric ulcer), its use in such cases should be discouraged until supportive evidence is available. None of the major reviews of chiropractic have concluded that chiropractic is useful in these conditions.

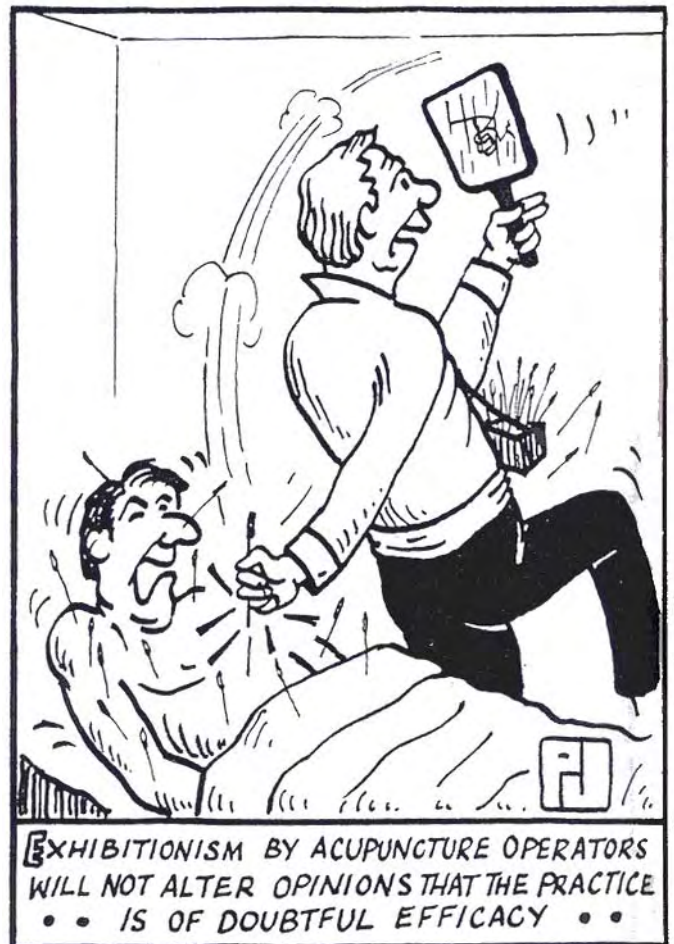
Thirdly, as there is insufficient evidence at present to support the claim that patients may benefit from preventative or 'maintenance' adjustments, their use should be limited to a research setting.

Fourthly, the clinical and academic chiropractors who are fighting the battle for more research into chiropractic deserve our full support. Perhaps chiropractic does have something unique to offer? Perhaps it can help in some 'visceral' conditions? Perhaps patients can benefit from preventative adjustments? Only sound scientific research will allow us to answer these questions.

Finally, and most importantly, we must try to create a spirit of cooperative dialogue between chiropractic and 'orthodox' medicine, and seek to break down the 'us vs them' barriers that have been built up over many years by those on both sides who cannot accept that they just might be wrong.

Postscript.

This paper is slightly different from the one delivered at the conference. The changes were made to improve readability, and did not involve a significant alteration in basic content. Two additional reviews that I received after the conference one English, and the other American - came to a similar conclusion to the one reached by this paper. That is, spinal manipulation is an effective treatment for back pain, but no form or type of manipulation has been shown to be more effective than any other. ■



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CONVENTION PAPER

Hierarchies of Organisation Within Cults

A Commentary On The 'Family' Sect Of Anne Hamilton-Byrne

Sarah Hamilton-Byrne

My name is Sarah Hamilton-Byrne. I grew up in a cult called 'The Family', a small group set up in the mid-to-late 1960s in the Dandenongs and led by Anne Hamilton-Byrne. I was adopted as a baby into that group and lived in it for eighteen years until 1987 when, in a much publicised raid, police rescued us from the house in Eildon in which we grew up and brought us into the outside world.

I have recently published a book called *Unseen, Unheard, Unknown*. It is the story of my day-to day life and existence in that group - the story of a life of physical, emotional and social deprivation, of a life of many hurts and abuses, a life lived largely shut away from the outside world, a life of monotonous and dreary religious routine punctuated mainly by punishment and fear.

Unlike many of the sufferers of so-called 'satanic abuse' there is little doubt that the abuses and events that I and my brothers and sisters outline actually did happen. Many of the things we describe are independently verifiable. One example of this is the condition known as 'psychosocial short stature' that two of the children had. This is a condition where children who are physically or emotionally harassed to a large degree fail to produce growth hormone and thus simply do not grow. At the time of the raid, Cassandra, my youngest sister, was 12 years old but under 120 cm and weighed under 20 kg. She looked like a four or five year old. She was 12 cm shorter than the third percentile on growth charts. Once released from the cult and the poor environment in which we lived she grew 11 cm in the first year and both her and the other brother's growth hormone measurements returned to normal. This is just one example.

That aside, I do not really wish to talk specifically to you about my experiences inside the cult, although of course I would be delighted to answer questions about that and I hope that some of you at least will read my book.

I'm not exactly sure why I've been asked to talk to you today, but I guess I interpret the invitation in part as a chance to talk a little from my experience and perhaps answer some of the questions you might have about the sociocultural background of the cult I grew up in.

When I heard that I was invited to talk at the Skeptics Conference I wondered to myself what it was that you people would want to hear from someone like me. Could I contribute to your understanding of this subject? I certainly did not want to be the nominal freak placed at the end of the third afternoon for a bit of light relief, although I could hope that my subject matter would be, by definition, a little juicier than some of the talks we have had thus far.

You are a bunch of mostly professional people. Many of you would think of yourselves as academics - intelligent, thinking, questioning and above all sceptical people. Doubtless you could not conceive of being 'sucked in' to

an organisation like the Family, of blindly obeying a Master whom you looked upon as divine, of sacrificing your family commitments, your social life, your wealth, your independence, and even eventually your sense of morality and conscience to another person or even to a group. Yet it was precisely people such as you that constituted the bulk of the cult. Professionals - doctors, lawyers, social workers, psychiatrists, nurses - constituted the majority of the recruits of the cult. Professor Raynor Johnson, Master of Queen's College in the late 1960s and a respected academic, was one of Anne's earliest and most influential recruits, and it was largely his cohort of friends and acquaintances that formed the nexus of the cult in the early days.

Without these people Anne Hamilton-Byrne would never have become what she is today. Apart from her influence on other people she is now very wealthy - the police at one stage reckoned she was worth about \$150 million. It was their names or, more importantly, the letters that went after their names - that gave her the credibility and social power she needed, which in turn gave her the means to keep those she already had and recruit more and similar people into the cult.

At one stage the cult owned and operated a psychiatric hospital called Newhaven which was used both as a recruiting ground for new members - psychiatric patients who were members of the public - and as a place for intensive hallucinogenic manipulation of current cult members, a process Anne called 'going-through'. This was obligatory for all members, including you young people. Under the auspices of psychiatrists who were members of the cult, Anne administered LSD (which at one stage Dr John Mackay and Dr Howard Whitacker, cult psychiatrists, got free from Sandoz a Swiss drug company) to cult members who she had committed there. Clearly this was psychiatric abuse of the worst kind - certainly enough to rival Chelmsford - and members of the Newhaven Support Group have many stories to tell of abuse they suffered there.

Not only that but the 'Aunties' and 'Uncles' who abused us were nurses and teachers. For two weeks out of every four they were no doubt kind and caring professionals - for the other half of the month they administered the brutal and sadistic regime in which we lived. They dealt out vicious beatings - in one of these one of my brothers fractured his skull and became an epileptic secondary to this; they starved us, giving out punishments of up to three days at a time of missing meals. This was taken to such an extreme in some cases that one of the younger girls used to go into hypoglycaemic comas. They fed us sedatives and drugs - such inappropriate medications as major tranquillisers and anti-convulsants, without question. They seemed to feel no pity or compassion for us at all, but

justified all these excesses of abuse as discipline ordered by their Master who was above questioning. They completely surrendered their own moral responsibility to their guru.

It is one of the great quandaries of human nature of how and why people can surrender their own set of principles and moral values to a higher or authoritarian structure such as a cult, army or regime and in the name of that structure commit atrocious acts from which ordinarily they and most other people would recoil in horror. The atrocities of war happen largely because of this very human trait and if we could understand more about this we could gain some insight into how such historical tragedies as Nazi Germany were promulgated or maybe into how we ourselves might get sucked into doing things that we would normally find alien and repulsive to our mores and values in the name of an authoritarian power.

Surrender lies at the heart of the traditional guru/disciple relationship and is in varying degrees a part of any authoritarian structure. The process of surrender to authority is often preceded by a period of suffering, as in the army recruit in boot camp, and a systematic breakdown of normal defences against stress and means of adapting. The reward of surrender is a profound sense of connection with something that gives their lives meaning - with a new sense of identity and allegiance to something greater than their demonstrably weak selves. Such a conversion experience often brings tremendous release and intense emotion, as it involves letting go of one's old identity and taking on a new one. The past is automatically then reinterpreted in the light of whatever value system and world view one has converted to. People then use these powerful feelings of connectedness and belonging to validate their new beliefs, and of course to validate their new guru or spiritual teacher. The guru promises that surrendering to them will bring something wonderful, and it has, hence they must be what they claim they are, be that enlightened or omniscient or whatever. The power of the conversion experience lies in that psychological shift from confusion to certainty.

A cult, like many other social systems, is a hierarchical organisation, and that too is part of how power is maintained and people retained within the group. The Family has an established hierarchy that they are told is analogous to that of Christ's early Church, with simple messages for the masses, special lessons for the initiated and dark secrets reserved for the inner core of disciples. The majority of members are actually ignorant of a lot of Anne's illegal works, although they still manage to turn a blind eye to her ostentatious displays of wealth and donate one third of their income to her, ostensibly for charities and 'orphanages in India'.

Many cults follow a strict hierarchy with the guru at the top of the pyramid, followed by an inner circle who often become surrogate leaders in the guru's absence, then an administrative hierarchy (in the Family's case this was only the inner core) and so on. Everyone on the hierarchy gets their feelings of power and specialness from where they are positioned. Even those on the lowest rung can feel superior to those who aren't members - for after all according to the teachings of Anne initiation guaranteed enlightenment in this incarnation, whilst normal people had to take many thousands more lives to achieve this.

The hierarchy of the Family can be seen as basically

comprising three groups. In a paper I gave jointly with Antoinette Sampson and Edward Ogden at the Australian and New Zealand Association of Psychiatrists, Psychologists and Lawyers conference in 1988, we dwelt a little on these subdivisions.

We felt that there was an outer group of what we called innocent disciples, who believed in the myths of the cult but really had little or nothing to do with Anne herself, other than at their initiation. Their lives were controlled by other members who were higher up the hierarchy. They were often socially low-functioning vulnerable, unhappy people who badly wanted to belong to something and joined the group for the support they perceived it offered.

Another crucial thing that they gained by joining a cult was certainty. Religion's unique psychological strength and appeal revolve around guaranteeing certainty, by providing the answers and solutions. Thus the content matters little - the surety of the world view is made more important than the actual specifics. Anyone in a position to question Anne's authority was told that their intellect was a handicap to their spiritual enlightenment, causing unhealthy doubts. Contradictions were seen simply as demonstrations of the ignorance and uncleanness of mind of less spiritual beings.

People are particularly vulnerable to charismatic leaders during times of crisis or life change. Most often those who enter into this kind of authoritarian group are having problems bringing meaning, human connectedness and good feelings into their lives, all of which become instantly available upon joining. What they also gain is a sense of power, usually greater than any they had previously experienced.

Religious certainty also brings forth a peacefulness within the person through giving meaning, purpose and a shared and cohesive community of fellow believers. There is no longer any internal or familial conflict about the 'how to's' of life because the guru has laid down the law.

The second group we called at the time the 'brainwashed' - though after Ed's talk today I would hesitate to use that term too loosely! The LSD sessions known as clearings were crucial in both initially getting these people involved and then as a means of exerting further control and initiating further self-doubt.

These people, at least emotionally, know no other world than that of their sect. They have cut all ties with their former friends and family and re-labelled their previous existence and friends as, at the very least, misguided, and often even as evil. All their present friends, family and many of their professional contacts are in the Family. Added to this, they know that those who leave are condemned as traitors, cursed (as I have been), accused publicly of ludicrous misdeeds and threatened with Anne's divine wrath unleashed directly at them or at their loved ones still within the sect. They live in a culture where myths abound about Anne's powers and the terrifying consequences of her wrath - where she literally has control of life and death. It is on her say so that people have children, get together, separate, give up their children. And it is sometimes on her say so that people take their lives. One of my sisters came into the cult when Anne told her mother that she was unfit to keep the baby and that she would be taking it. When the girl protested and said that she would kill herself if her baby were taken, Anne said: "Go right ahead, go and kill yourself" So she did. Many rumours abound of how people

who have been out of favour with Anne have mysteriously disappeared. Indeed the police investigated - unsuccessfully several suspicious deaths of cult members, who had died, been certified by a cult member who was a doctor, their remains cremated the next day, their wills changed just before their death donating large amounts of money to Anne, or one of her *de facto* companies. There are also many stories of how people have got cancer because of not being good enough disciples, or how they mysteriously fell ill just after rebelling against an edict, or after what the cult called 'thinking wrongly', a heinous but unspecified crime.

Anne herself took her cursing routine pretty seriously. She absolutely believed in her own powers - it was not just an act. When the police raided her houses in the Dandenongs in 1987 they were very excited to discover lots of little bits of white paper under ice blocks in the freezer. Thinking it was LSD they defrosted it only to discover it was just ordinary paper with names written on it - the offending person's name and then "Freeze in hell" written beside it. One of the Family's more bizarre religious variations (they also did the sign of the Cross backwards) was that hell was actually cold instead of the more usual hot place, so putting someone in the freezer meant that they were consigned to hell. I've also seen her put pins into wax images in the belief this would cause illness in the part so impaled. I guess I can attribute any bizarre aches or pains that I might experience to her image of me now!

For a cult member even to doubt an order from Anne and dare to voice that to anyone is to risk persecution by everyone they know. Everyone informs on each other up the hierarchy - nothing remains secret even between friends and yet people are encouraged to confide in each other their fears and blocks to enlightenment, all of which inevitably gets relayed to Anne. Vicious rumours start to circulate, which are repeated and believed no matter how improbable they seem, they are ostracised and publicly condemned, often put into Coventry, threatened both verbally and physically and likened to Judas Iscariot.

The third group in the hierarchy within the Family we called the 'evil ones'. By evil we meant people who quest for power over others, who are characterized by the subjugation of life and liveliness in others, and who have no insight into the enormity of their wrongdoing. M. Scott Peck in his book *People of the Lie* describes this as a distinct personality disorder which "can be recognized by the number and complexity of their lies".

The snobbery and elitism seen among some members of the sect support this hypothesis. Safely ensconced in this elite group they feel above the laws that govern lesser mortals and not bound by the limitations of common morality. These are the people that helped establish the sect for Anne - they targeted patients and friends, they stole children for her, administered drugs, falsified documents, perjured themselves and generally carried out her dirty work. They even rationalised their actions and position within the sect by claiming to be direct reincarnations of Christ's apostles working towards some great unseen spiritual goal. Their legacy is a farrago of lies and they have successfully managed to evade and baffle authorities for years.

To conclude, I contend that science and religion will always be uneasy bedfellows because they are almost

mutually exclusive. Religion offers certainty, science raises questions. Religion has glib answers and challenges and questions are actively discouraged - in fact often seen as proof of non-spirituality or lack of faith - heresy. From a rational point of view one cannot conclude there is a God; one has to take a 'leap of faith' which is highly irrational to believe in a religious answer to the questions of life. From then on, one is in a different frame of reference to that of science and rationalism and never the twain can meet. But - radical thought perhaps to some in this audience - perhaps a religious paradigm has as much relevance as a scientific or logical one. By surrendering to a guru one accepts a higher authority who will supply the answers and banish doubt. Science can destroy myth but it cannot create personal meaning or values, it certainly cannot banish doubt, it cannot assuage fear of the unknown, of chaos and of death. It cannot offer peace through certitude. Faith is the only coin which brings certainty and its payoff of powerfully good feelings. I think until science can offer certain answers to the great questions of life, so called intelligent people will still accept irrational and even bizarre religious views over the cold facts of life.

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Bent Spoon Award for 1995

The Australian Skeptics annual award of the Bent Spoon for the "proponent of the most pernicious piece of paranormal or pseudoscientific piffle" for 1995 went to prominent mountaineer, **Tim McCartney-Snape**.

After a great deal of discussion, during which the Awards Panel considered the competing claims of much of the popular weekly print media (for the uncritical dissemination of paranormal tripe), the Creation Science Foundation (for investigating itself and finding itself not guilty), the Minister for Aboriginal Affairs (for the Hindmarsh Bridge decision - discussed elsewhere), were left with Mr Jeremy Griffith and Mr McCartney-Snape.

Both are associated with the Foundation for the Adulthood of Mankind, Griffith who founded it and McCartney-Snape who uses his fame to promote it. This foundation, the subject of a recent story on *Four Corners* (ABCTV), bears all the hallmarks of a cult.

The panel concluded that Griffith was just another guru, who sells his dubious philosophies to a receptive audience, and is not in any objective way distinguishable from many other gurus of a similar ilk.

It was decided that, as a prominent public figure, Mr McCartney-Snape owed the public more of a duty to behave responsibly in the promotion of such ideas and so, narrowly, decided that he would be the recipient of the 1995 Bent Spoon Award.

CONVENTION PAPER

Cults and Crime:**One Forensic Practitioner's View****Ed Ogden**

Two men were stranded on a desert island. After exploring the island they concluded that the meticulous layout of the plants and the pathways could only be the work of a gardener. Each morning there were slight changes, yet the gardener was never sighted. They concluded the gardener must work at night. Night after night they lay in wait. Nothing was seen or heard. "There is no gardener. There must be another explanation we have not thought of yet", concluded the first man.

"No He must be invisible. We don't know how to see him. If only we knew the way", retorted the second "How is that different from no gardener at all?" asked the first.

I have often been asked, why a medical practitioner who happens to be a criminologist, should take an interest in cults? Firstly, I am concerned that the preoccupation with certain urban myths and fears of subversion, may divert attention from those people who have genuinely suffered at the hands of cults. Secondly, I am concerned that the hysterical reaction to some allegations may lead to false accusation and a modern day version of medieval witch hunting.

My interest began as a direct result of my interaction with the 'children' of the Anne Hamilton-Byrne's group, "The Family". Meeting these extraordinary young people, hearing their stories, and meeting adult members of the group, started me thinking about cults. My work brought me into contact with people who alleged they had suffered 'ritual abuse' at the hands of Satanic Cults, and I met people who told me stories of other religious and psychological cults. These people left so many unanswered questions in my mind, that I began to look at the whole phenomenon of 'cults' with the academic discipline of a criminologist. What allegations were being made? By whom? Why?

I found a collection of stories varying across the spectrum from reality to fantasy. On the one hand I heard the Hamilton-Byrne story with all its verifiable facts. On the other hand I heard terrifying allegations of satanic crime, with not a fact to be found.

What do such things have in common? What part of these allegations are true? Are cults generally to be feared?

I do not pretend to have the definitive answers, for there can never be a complete analysis of such intensely controversial, contemporary topics whose proponents and detractors speak with equal confidence. I want to share some thoughts with you.

The Cult Allegations

Some cults are alleged to commit appalling crimes as part of their ceremonies. These allegations are not trivial. They include *inter alia*: sexual atrocities; the sacrifice of animals and humans; cannibalism and vampirism; the use of women

to breed children for sacrifice or abuse; child pornography; child and adult prostitution; bestiality; drug distribution; and an international trade in babies and children, just to name a few examples.

Yet no cases of this sort have been substantiated in the courts. Proponents of the great cult conspiracy argue that the system is so corrupt, that cult members are involved at all levels from police through the judiciary to government. Is the explanation really so complex, or are the allegations simply not true?

"This is the great controversy and crucial question in these cases. Some of what victims of ritualistic abuse allege is physically impossible (victim cut up and put back together, severe injuries with no scars); some is possible but improbable (human sacrifice, cannibalism, vampirism); some is possible and probable (child pornography, clever manipulation of victims); and some is corroborated (medical evidence of vaginal or anal trauma, offender confessions)."¹

Some of the cult stories represent a more sinister phenomenon that closely parallels the attacks on witchcraft in the middle ages. What is urgently needed is a careful, rational and unprejudiced look at the allegations. An attempt must be made to separate fact and fantasy.

What is a Cult?

My definition of a cult is a group of people who fervently share a particular belief system. A better definition is such a challenge that Wallis refers to the idea of cults as that "elusive and slippery concept".^{2,3} West says that attempts to define the concept are "just silly".⁴ Most serious commentators have persisted in their attempt to find a working definition to attempt a meaningful debate. Markham, for example, defines a cult as "any group with an elitist cause and view of itself that in order to promote its cause either consciously or unconsciously abuses individual rights and freedoms."⁵ This definition has the benefit of including non-religious groups with a shared philosophy, such as extremist anarchist groups.⁶

The benefits of membership

Cults can be very beneficial for their members. In separate studies, Galanter observed that joining the Divine Light Mission led to a reduction in neurotic distress symptoms correlated with the degree to which the person felt affiliated with the group⁷, and that recruits developed a high degree of social cohesiveness following induction into the Unification Church (the 'Moonies').⁸

From earliest times humankind has struggled to understand life, the universe and the reasons for being, to comprehend the incomprehensible, to make sense of questions like "Why do I exist?" or "What does it mean?". These are the ultimate questions addressed by all religions.

The very presence of such concepts in a philosophical system has been used as the test for a religion.^{9 10} Freud's pupil, Carl Jung found spiritual interest such an integral part of normal psychological life that "for reasons of psychic hygiene, it would be better not to forget these original and universal ideas; and wherever they have disappeared . . . we should reconstruct them as quickly as we can . . ." ¹¹

As all good sceptics know, the human mind quite capable of holding onto illogical ideas in spite of evidence to the contrary. One of my favourite examples is the saga of Mrs Keech and her failed prophecies.

A small religious cult believed that Mrs Keech was a prophet receiving messages from another planet. She predicted a Doomsday on which the world would perish with earthquakes and floods. Only her true followers were to be rescued by a spaceship which was to arrive on the eve of the cataclysm. The followers sold their homes, gave away their money and waited on the appointed night on a mountain-side for the flying saucer to arrive. Mrs Keech generously allowed independent observers to witness the great event.¹² When the spaceship failed to materialise Mrs Keech announced that it was through the devotion of the faithful that calamity had been averted.

Instead of rejecting Mrs Keech and leaving in anger, the events served to deepen the conviction of the faithful. Winn¹³ argues that if they had not been able to accept this rationalisation they would have had to face the reality of their foolishness and the psychological consequences of feeling duped. However, this implies a firm double standard about the inherent 'truth' or 'believability' of certain concepts.

Any cult has the potential for both good, and evil. Things can go wrong in any group that allows an improper or unbridled concentration of power. In most groups in society, the normal checks and balances of human interaction are sufficient to avoid undesirable consequences. But not always, as Sarah (Hamilton-Byrne) can attest.

Mind control - an anti-subversive mythology

"Nobody joins a cult. They just postpone the decision to leave."¹⁴

Many self-styled survivors of 'cult abuse' report that they have suffered some degree of unfair or exaggerated influence that has been exerted by the cult. They say that their mind has somehow been under the cult's control, not their own.

There are several advantages for the ex-member in claiming mind-control as the explanation for their involvement in activities that are otherwise uncharacteristic of them. "Anyone can commit an act such as joining an unpopular group and afterwards claim "I was programmed to do so". . . [and] one can dismiss anything that any sociologist, psychiatrist, theologian or clergyman says that is positive about this person or group of persons . . ." ¹⁵

The irrational, obsessive fear of cults, shared by many in the community, may in part be due to ex-cult-members using the 'brainwashing' myth to explain their otherwise inexplicable flirtation with an unorthodox group.

"In a nutshell, cultphobia may be the stress reaction of the individuals who feel their way of life is under attack by the very presence of another social category of people. Cultphobes appear to be individuals who rigidly adhere to a way of life, a set of values, beliefs and/or aspirations

which are no longer viable . . . They perceive the threat to what they consider the status quo and feel helpless at times to deal with the challenge."¹⁶

The mind control myth

The deliberate use of altered mental states to influence the thinking and/or allegiance of others was widely discussed in western society in the mid-1950s as a direct result of the war in Korea. A combination of physical torture, weakening of normal social structures, personal affiliations and friendships, constant propaganda, humiliation, public confessions, and occasional offers of rewards had allegedly been used to create a weakened physical condition and absence of psychological resolve in prisoners of war. In this state of near collapse individuals became so insecure that any behaviour that provided some relief and comfort was possible. Some victims were even noted to develop a 'love' of their tormentors for providing such relief. This process became known as 'brainwashing'.

Brainwashing is no more than a recognition that we are all vulnerable to be influenced by others, especially when our normal defences are weakened by illness, fatigue, torture or drugs. ¹⁷

Brainwashing, as described, is a coercive process: the subject knows from the outset that he or she is powerless at the hands of an enemy. There is a clear demarcation between prisoner and jailer. The 'prisoner' experiences a minimum of choice and is faced with abusive treatment, torture, and possible death. The conscious endorsement of irreconcilable ideas becomes essential for survival. The only alternative is unacceptable deterioration of self.

Mind-control is a system of influences deliberately applied to disrupt or modify an individual's identity (beliefs, behaviour, thinking, emotions, allegiances) in a subversive or deceitful manner. It is supposed to be a phenomenon closely related to brainwashing but distinguished from it by the lack of obvious coercion - the 'enemy' is undisclosed - and an unsuspecting victim has his or her mind altered without consent.

Mind-control is a fantasy of the Cold War, when military 'thinkers' dreamed of finding psychological and pharmacological tools with which to defeat and subvert the enemy. The anticult movement would have us believe that this technology was successfully, covertly perfected. They assert that mind-control can be used to disrupt and then replace personality without the consent or cooperation of the individual.¹⁸ The new personality that is said to emerge owes more to conformity and obedience to the authority of the trainer than to personal growth and self realisation.

In this imaginary world, there can be no room for questioning the underlying philosophy. The doctrine is no longer a guide to reality: the doctrine becomes the reality. The most effective teaching materials in such a setting are said to be those that are "unverifiable and unevaluable"¹⁹ "The doctrine becomes the master program for all thoughts, feelings, and actions. Since it is the TRUTH, perfect and absolute, any flaw in it is viewed as only a reflection of the believer's own imperfection."²⁰ This imagined power of certain groups to program the personality and beliefs of adherents leads to a fear of subversion by groups with alien ideology but possessing this mind boggling power.²¹

The fear of this form of activity is common among the anti-cult community: in reality most scholars who have

studied the allegations agree that mind control (as defined above) does not exist.

“A person can no more wash another’s brain with coercion or conversation than he can make him bleed with a cutting remark. If there is no such thing as brainwashing, what does the metaphor stand for? It stands for the most universal of human experiences and events, namely, one person influencing another. However, we do not call all types of personal or psychological influence brainwashing. We reserve the term for influence of which we do not approve.”²²

The False Memory Syndrome

Another presentation of these phenomena has been the newly emerged ‘Cult of Recovered Memory’. (I will restrict my discussion here to recovered memories of Satanic Crimes.)

The Satanic network is said to be such an immensely powerful conspiracy that it renders the criminal justice system corrupt and impotent. Such allegations are mostly made by people seeking assistance for a variety of personal problems who reveal a background of sadistic abuse only after they have developed a trusting relationship with a therapist. The involvement of professional therapists gives an impression of scientific validity that is totally unfounded. False memories are presented as facts. Professionals who question the memories are regarded with suspicion, even branded as collaborators in the great satanic conspiracy, an professionals who champion these beliefs are regarded as heroic figures.^{23 24}

The great difficulty evaluating these stories is that the therapist is chosen because he or she is perceived to “believe in the existence of the cult first” before therapy begins, but the “therapy is critical in discovering what comes out”.²⁵

The person making ‘Satanic’ allegations may sample several therapists to find one who is receptive. While this may be a valid selection by the client, it places pressure on the therapist to ‘believe’. If the therapist perceives the material as inherently unbelievable, even as psychotic delusion, then the diagnosis changes from a post-traumatic syndrome to psychosis, maybe schizophrenia. There is a real risk that the patient will leave therapy. If the therapist has previously participated in seminars or training courses that themselves fashion therapeutic perceptions²⁶ or is ideologically committed to the ethos “the survivor always has a right to be believed”, then questioning the reality of these disclosures is almost a heresy. “The consequences of disclosure of [satanic] allegations in the local professional and lay community have been remarkably similar, in the USA, UK and Europe. Initially the police and social services are unprepared for the horror and scale of the problem which they begin to unfold. Rapidly professional divide into two camps: the believers and the disbelievers. Outside expertise tends to be sought late, and after several cases have already been assessed and divisions between professionals have begun to occur.”²⁷

Seminars and professional journals can become a potent source of bias for therapists. Such meetings sometimes offer participants a list of ‘indicators’ of satanic abuse under specific headings.²⁸ Collecting evidence under headings and assuming causative links - has long been a source of error in sociology.²⁹ The therapist is crucially able to influence not only the nature, extent, but perhaps even the content of the allegations that are made. “People with

dissociative disorders frequently do not know where they learned information. They may know the information but they have no idea of the context where they acquired [it]. Later when they access the information they may confabulate the context from which it comes.”³⁰

Encyclopedic data collection is not solely done by therapists. Throughout the literature there is a torrent of material from law enforcement officers who are widely quoted as authoritative sources. Current or retired police are often seen as authorities. It assumed that because of their profession they are unlikely to be promulgating material that is not inherently true: by this logic, any default the utterance of a police officer is valid. Kahaner, himself an ex-detective writes: “I discovered a small clique of police officers - ‘cult cops’ or ‘ghost-busters’ . . . - who have specialised in this field. To their surprise they find themselves overwhelmed with requests to analyse outside cases and lecture other law enforcement agencies. The need for this information is growing so quickly that the investigation of occult crime is now being taught in police academies . . .”³¹

There is also a network of ‘survivors’ that encourages the exchange of information and ready made definitions.

“Ritual abuse . . . is an organised form of severe sexual, emotional and spiritual abuse often involving numerous perpetrators and numerous victims. Due to the severity of the abuse, these experiences are almost always blocked out from the survivors memory leaving no recollection of the abuse. Recently, an unknown number of individuals have uncovered traumatic memories of ritual abuse and now talk about it among one another and in therapeutic settings.... Ninety-seven per cent (97%) of the survivors ... did not *always* remember the ritual abuse.” [my emphasis]³²

At first glance the reports of Satanic crimes seem incredible

“We have reached a level of information which contains so much that is unbelievable to the ordinary consciousness of our society that it threatens the credibility of ourselves and the society itself whether or not that body of material can eventually be proven to be true.”³³

The historical evidence shows an enduring fascination with the ideas of cannibalism and orgiastic rituals, but there is no evidence to suggest such rituals have been part of any religious rituals.

Many of us question the credibility of allegations only made by a group with unusual psychiatric symptoms and not associated with verifiable independent evidence. Proponents assert that such bizarre experiences must necessarily produce a characteristic psychiatric disturbance.^{34 35} But critics, like me, suggest that the allegations may be the result of, not the cause of the psychiatric disturbance.

Working with such difficult patients is understandably complicated, time consuming and personally draining. The problems they bring to therapy are complex and the patients have typically undergone years of therapy.³⁶ Not surprisingly, therapists look to each other for support and create an important social network and information exchange. Apart from providing the necessary personal supports, this networking also provides the conduit for the propagation of mythical material. This network is of central importance: not only does it shape the allegations. It may even be the whole of the allegations. The social anthropologist, Sheryl Mulhern has suggested that “The network that links [the police, the therapists, the survivors,

the concerned parents' organisations, the clergy] together is sufficient to completely explain the creation, elaboration and spread of the satanic-cult rumour. I believe that they are the phenomenon."³⁷

Not many therapists have the time or inclination to explore more thoroughly the veracity of what they believe to be true.

All but one of the alleged survivors of Satanic Cults that I have interviewed had been diagnosed as having Multiple Personality Disorder. Not one came up with a single verified allegation. Many of the allegations that were potentially verifiable (eg severe assaults and mutilations) could not be authenticated because permission for examination was denied. In those cases where examination was possible, no stigmata of violence were evident. Several people showed me what they considered to be scars and graphic evidence of injury which I was unable to see.

Most of the published work is descriptive and reports the patients' stories in an uncritical way. At the Fourth International Conference on Multiple Personality and Dissociative States, Kaye and Klein presented a paper on the recognition of Satanic Ritual Abuse in which they not only described some inherently unbelievable material but also confessed their willingness to accept this material uncritically. "In the face of the enormity of what we have learned, we have elected to focus upon our clients. To help them to deal with their pain, see what they need to see, hear what they need to hear, feel what they need to feel, and learn what the need to learn. This is the scope of our present interventions."³⁸

At the same conference another therapist discussed "satanic cult symbols, cues, cult death contracts and the inter-marriages in the elite groups to form a high level of blood purity."³⁹

A third enjoined her colleagues to study the occult literature because "Successful mental health care is often extremely dependent upon the therapists' specific knowledge of witchcraft, satanism and the occult . . . as well as the techniques of cult indoctrination and trance induction."⁴⁰

Each of these therapists clearly described a network for exchanging information between therapists and seeking confirmation of this material from their patients. If these crimes are as frequent and widespread as the allegations claim, they ought to be verifiable. The FBI conclusion is a position of open scepticism:

"Any professional evaluating victim's allegations of ritualistic abuse cannot ignore the lack of physical evidence (no bodies or physical evidence left by violent murders), the difficulty in successfully committing a large-scale conspiracy crime (the more people involved in any crime conspiracy, the harder it is to get away with it), and human nature (intra-group conflicts resulting in individual self-serving disclosures are likely to occur in any group involved in organised kidnapping, baby breeding and human sacrifice)..."⁴¹ The reality is that in spite of hundreds, maybe thousands of allegations all over the world, not one shred of tangible evidence exists to support the notion of a trans-generational, multi-national satanic conspiracy.

Kahaner begins his book on Satanic crime saying:

"This book began as an investigation of the growing phenomenon of Satanism in America. It was to be a study of Satanists, their beliefs and practices. As I interviewed more and more people living in this bizarre and mysterious

world, however, what I found led me in a different direction. I found a hidden society, much larger and more disquieting than the world of Satanism alone, a place few people know exists . . . it is the underworld of occult crime..."⁴²

But all the accusations made in his book remain unproven. One of Kahaner's informants (Detective Sandi Gallant) stated:

"Occult crime may be the most difficult area of police work today. You won't find simple cases with obvious suspects. You find bits and pieces, evidence that goes nowhere, testimony that is always suspect and crimes so bizarre and disgusting that even most police officers don't want to believe it exists."⁴³ Detective Gallant missed the point: the disbelief of her colleagues is based on the lack of confirmatory evidence, not upon unwillingness to be persuaded. State begins his book *Children for the Devil*⁴⁴ with a chapter entitled *A conspiracy of toddlers?* implying that because allegations are made by children they are inherently true. In that chapter he quotes the following case:

"Maya . . . described in great detail a satanic ritual in which her heart was exchanged for that of an animal. She told of her new heart being that of Satan. From the time of the ritual she perceived a large black mass pulsating on her chest and she felt permanently defiled, deformed and evil. It is obvious that some parts of this event are not literally true, for Maya is alive, she has no visible chest incision, and there is no mass on her chest."⁴⁵ and goes on to offer the profound observation that

"The prevalence of these self-evidently impossible allegations has been a major stumbling block to the acceptance of ritual abuse as a reality throughout the world."⁴⁶ It seems extraordinary that the other major possibility is not self-evident to such authors - perhaps these allegations are just not true. The ideology of assuming that Satanism is inherently true is reminiscent of the parable of The Emperor's New Clothes in which the faithful were unable to acknowledge the emperor's nakedness. "Many of the individuals claiming to be ritual abuse survivors are in their forties. If they were abused as young children it was in the 1950s. Assuming a network of roughly constant size and activity, satanic cult victims would number in the millions. Even if Satanists sacrificed 10,000 (rather than the more commonly cited 50,000 children per year), the time period covered by current survivors' claims would have produced 400,000 victims, a total rivalling the 517,347 war-related deaths from World War II, Korea and Vietnam combined. Yet, not a single casualty of the satanic cult network has been discovered."⁴⁷

Urban Legends - Professional Myths

Professionals, whether police officers or therapists, who accept the allegations of ritual abuse at the hands of Satanic cults are accepting an urban myth. The current preoccupation with alleged Satanism is a modern allegory of witch-finding. It presupposes a contemporary subversive network that is unseen: an underlying evil within our society, not the spiritual evil of medieval heresy, but a palpable, secular evil of violence, sexual depravity and murder. This evil alternative to orthodoxy was described by Cohn as

"another society, small and clandestine . . . addicted to practices which were felt to be . . . antihuman"⁴⁸ The Satanic Order is the creation of thousands of years of mythology. Its rich history does not make it true.

Allegations are not evidence.

Many groups in society can be, or have been accused of confusing the gullible, duping the naive, ruining peoples lives, dishonestly coercing them to part with their money or possessions, but it cannot be argued that such behaviour is inherently criminal, even if the allegations are true. In a modern secular society unusual beliefs can and should be tolerated and given the same protection and respect that is due the orthodoxies. Begelman questions our ability to draw a clear distinction between cults and orthodoxy when he asks "Do criteria exist for distinguishing cults from major religions which after all once began as cults with hopes of graduation? Any reluctance to blur the distinction may spring from the conviction that 'good guys' ought to be let of the hook for ritual abuse traditions some centuries old. The continuing problem of the sexual abuse of children by clergymen in the major religions is very much a living reality. One can of course separate institutional abuse and individual aberration but not when in house attempt to sweep the abuse under the carpet by maintaining secrecy and transferring offenders out of districts becomes policy. Then the problem transcends one of aberrated singletons and becomes institutionally, if not doctrinally based . . . better to regard no system as having a monopoly on abuses."⁴⁹

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Advances in Research into Creationism - Part 94

The Strange Mind of Dr Kuznetsov

Steve Roberts

Spare a thought for the decline in fortunes of the Creation Science Foundation at the start of this decade. All their favourite pieces of 1980s creationist "evidence" - Paluxy River footprints, decay in the speed of light, and so on - were falling over in the face of universal ridicule.

Overzealous fans, still insisting on the genuineness of these curious ideas, were making things so complicated. One of the CSF's directors was moonlighting by publishing valid, scientifically acceptable geology (from the CSF's address!) while at the same time preaching that all rocks were very young. Another one had a civilised debate with the Skeptics and had published an article congratulating a Barry Williams for his "scrupulously fair chairing", and has ever since continued to refuse to debate because of one individual's (not representing Australian Skeptics) earlier tactics. This led to a hilarious two-hour programme on ABC radio, but that's another story.

Were these Jekyll-and-Hyde characters going to be all there was left? Like King Canute, they were trying to hold back a tide - a tide of science that is washing away all false claims, leaving in this case a set of religious beliefs that science cannot touch. Was their God abandoning them? or would there be a sign? Perhaps some gift, some token of divine guidance, would fall like manna from Heaven!

Meanwhile, among the dark turmoils of Andropov's and Gorbachev's Russia, a promising young toxicologist, Dr Dmitrii A. Kuznetsov, was forming his own curious theory of inherited characteristics which did not require evolution. In 1985, after reading the writings of Dr Henry Morris, doyenne of the American creationist movement and believer in angelic battles on the Moon, he began to believe that the fundamentalist Judaic concepts of a Divine Creation and hence a young Earth happened to match enough of his own strange scientific beliefs. A wonderful relationship ensued, in which Kuznetsov received undisclosed amounts of sponsorship money from several creationist organisations, to pay for his own spare-time research in his own laboratory.

The CSF were ecstatic when they "outed" their new recruit. Never mind the well-known state of Russian science - here at last was somebody new and important that they could show off. Kuznetsov even had, not one, but three earned doctorates - the CSF couldn't resist saying "earned", thus accidentally highlighting the frequency of bogus doctorates among creationists. (If you want a nice-looking one suitable for hanging - doctorate that is - send the Skeptics A\$50 and your name and postal address). The creationists probably like the better appearance, quality parchment and colour printing of the bogus degrees - I got a real one once and it came on a computer printout.

The CSF immediately promoted Kuznetsov to a "Top Russian Scientist" and made plans for an extensive, expensive tour of Australia. Frantic publicity was whipped

up among the faithful before the tour - after all, they were being asked to pay for it, and it was stated up front that a surplus of money was unlikely. Despite this, Kuznetsov's wife accompanied him on the tour - I have no doubt that she is very nice, but was this an appropriate use of the faithful's money? And since so few people would believe that another proper scientist had espoused creationism, his CV was published. This looked fairly impressive, especially the bit about his being on the editorial boards of three journals in different fields - *International Journal of Neuroscience*, *Ecology Research*, and the *Journal of Applied Biochemistry and Biophysics*.

This brings us up to early 1991, with the great tour pending. But already the insidious forces of evil had been at work. Not machinations by the Skeptics - we hadn't heard of the guy and we don't need to machinate - no, these forces of evil were in Kuznetsov's own mind. What was going on in there? A long time before the CSF picked him up and lionised him, and at about the same time that his "crucially important" research was going on, Kuznetsov began to tell lies for his God.

One of the Skeptics, familiar with the *IJN*, pointed out the creationists' exploitation of this journal's reputation to its editor, Dr Sidney Weinstein. Weinstein replied that he knew Dr Kuznetsov to be a highly respected neurotoxicologist who had the right to preach his religion, even if the beliefs involved were "unfortunate" and "fatuous". The CSF's misappropriation of the good name of the *IJN* was inappropriate, and the editor hoped that "the effort of the creation 'science' people to proselytise by implying authorisation of a scientific journal is challenged by scientists' awareness of its devious intent."

The titles of the other two journals referred to fields beyond the ken of our intrepid academic colleague, but as will be seen, this was not the real reason for his failure to find the editors of these journals. Computerised technology now makes all journals in all subjects available to everybody.

But I digress. Kuznetsov's tour went ahead, according to the CSF with "great impact". But as with so many CSF pronouncements, the greatness of this particular impact was highly subjective. In fact, there was extensive Press and TV apathy to this wondrous event, most of all in Brisbane. The CSF began to publish their fears of a media conspiracy, accidentally giving a neat summary of how the Australian media can still think critically enough to recognise a nonevent when they see one.

People attending the actual Kuznetsov lectures objected to their questions having to be written down and being sorted through before being put to the speaker; and to many difficult questions being abandoned on the grounds of Kuznetsov's poor command of English, or poor grasp of subjects such as geology. The only thorough write-up of

any lecture appeared to come from the science writer at the Melbourne Age, himself no friend of creationism.

As curious people tried to look up the work of the great man in academic libraries, post-tour mutterings about Kuznetsov's genuineness arose, and the CSF must have smelt a pretty strong rat, but now it was too late to stop. Criticism from various quarters mounted; one student publication published a major attack on Kuznetsov's credibility, qualifications and reputation. The CSF, in their usual devious way, selected "just one" of the three journals edited by Kuznetsov and rushed to defend it in glowing terms. Poor Dr Weinstein would have again been grateful to have his prestigious journal singled out for praise from this most dubious and ironic of sources.

Why did they pick "just one" of those three journals to verify? It's quite simple. The other two simply don't exist - except in the fertile mind of Dr Dmitrii A. Kuznetsov.

Nevertheless, since 1990 Kuznetsov has been trotted out by the creationists at every opportunity, to the exclusion of almost all other creation-believing scientists (possibly because there aren't any). In May 1994 he and his own branch of the CSF were still going strong in Moscow, at a conference at which 400 delegates bought 6,500 books.

The brazenness of this recent Moscow appearance is astounding, since two months beforehand, Kuznetsov would have known that somebody had formally blown the whistle on his deceit. After much painstaking searching, using up academic time that could have been spent doing something else for the greater good of humanity, Dr Dan Larhammar of Uppsala University published in *IJN* (1994, vol.77, pp.199-201) a thorough denunciation of Kuznetsov's earlier paper in the same journal (1989, vol.49, pp.43-59). This earlier paper had been remarkable as being the only report in an established scientific journal that has claimed molecular data as evidence against evolution in modern times.

Larhammar complained that not only was Kuznetsov's experimental technique "extraordinary and obscure", but also none of the key references that were cited for it could actually be found. A referenced article by Kuznetsov's editorial colleague Prof. Holger Hyden, in *Scandinavian Archives of Molecular Pathology*, was unfamiliar to Hyden himself - and the journal didn't exist either. Many other quoted journals turned out to be entirely imaginary. Larhammar concluded that Kuznetsov had ignored key facts and presented "superficially demonstrated results", with no data presented to support some of his conclusions, and that his critique of evolution consequently had no scientific basis.

With extreme reluctance, faced with criticism that had mounted to formally published papers in academia, the CSF dissociated themselves from Kuznetsov in May 1995 - thus, of course, confirming the unerring wisdom of the Scriptures². A curious and unnecessary clause in their dissociation allows the CSF to pick him up again after any exoneration - a bit like the opposite of an 'escape' clause. This is very cute; after lying to the scientific community like that, with no possible excuse, the probability of Kuznetsov's being exonerated by anyone but the CSF would be about 10^{-n} , where n would be exceedingly large.

Ironically, the CSF's dissociation from Dr Kuznetsov was primarily concerned not with science but with "certain financial matters". It looks very much as if Kuznetsov's

sins have related to money³ as well as bad science⁴. For the CSF it must be like a return to those old times when they irretrievably lost \$92,356 of their supporters' donations by using it to speculate on gold futures (in direct contravention to the CSF's Articles of Association). No details of this new financial impropriety have been released, but I do sincerely hope that this time, any monies fraudulently lost can be recovered from the offending parties.

But wait! There's more!! The embarrassment goes further. A certain Professor Plimer wrote a book entitled *Telling Lies for God*, criticising the CSF and some of its active individuals. Their reaction was to form a committee of mates, get them to investigate a very limited set of the CSF's activities and publish the resulting exoneration in a paid advertisement in the Australian. (This resulted in general public amusement and a rush on sales of the book, requiring it to go into a fifth printing, but that is yet another story).

The committee was supposed to be formed of six men who each have "significant public reputations and/or positions, quite independently of CSF" but its only member who was not a minister of an evangelical church was its chairman, Clarrie Briese, retired corruption-fighting Chief Magistrate of NSW. And here's Clarrie, six months before the committee was formed, in a leaflet begging for funds for the CSF - "The worst form of corruption is corruption of the Word of God - all the rest flows from it. I have experienced great blessing resulting from CSF ministry..."

Among the very limited materials that were fed to this committee was a list of CSF speakers over the last few years, with full resumes. Very prominent on this list, with probably the best-looking resume, would have been Dr Dmitrii A Kuznetsov. The committee cannot have looked into the CSF's affairs very deeply; an analogy with the cultivation of mushrooms comes to mind.

Such was the extent of the scientific evidence against evolution, and such was the honesty and devotion to truth of the latest recruit for the Creation Science Foundation. I wonder who's next.

Notes:

1 John 6:31 "Our fathers did eat manna in the desert; as it is written, He gave them bread from heaven to eat." ...

John 6:49 "Your fathers did eat manna in the wilderness, and are dead".

2. Mark 13:22 "For false Christs and false prophets shall rise, and shall shew signs and wonders, to seduce, if it were possible, even the elect".

3. Exodus 20:15 "Thou shalt not steal."

4. Exodus 20:16 "Thou shalt not bear false witness against thy neighbour." ■

Whereupon thou moveth from
thine domicile, pray leteth Us
know thy new address!

Barry 30:8

PHILOSOPHICAL MUSINGS

Nietzsche Marketing

Sir Jim R Wallaby

I attended a philosophers' convention the other week (you know the sort of thing, a lot of people sitting round gazing at each other's navels) and it suddenly occurred to me that I had no famous philosophical proposition to my credit. After all, everyone knows about Plato, who invented the atomic bomb and had a planet and a dog named after him. Or that Belgian couple, Rene and Des Cartes, with their *Cogito ergo sum* (something to do with arithmetic, I believe), who invented a whole school of philosophy, the 'Carthorsians'.

So why not propose the 'Wallaby Theory of Universal Knowledge'? I asked myself. I would have liked to have followed the Cartes' lead and given it a Latin tag, but, as I have no Latvian ancestors, I don't speak the lingo at all. However, in the interests of brevity, I made my mind blank (no difficult task, our egregious editor-in-Chief assures me) and allowed some Higher Power to direct my fingers. As a consequence, I now have great pleasure in dubbing my new theory 'fludnetropy'.

That was only the start of course - it's all very well inventing a philosophical theory (anyone can do that) but you have to explain what it means - that's the hard bit.

Feeling in need of a bit of professional help, I rang young William Grey at the University of Queensland. Now William is a nice enough sort of lad, but, like all professional philosophers, he does tend to ramble on a bit. He filled my ear with 'metaphysics', 'teleology', 'numismatics' and all the sort of words experts use to hide the fact they haven't the faintest idea of what they are talking about, so I hung up on him - for all I know he is still waffling down the phone.

No, I thought to myself (Of course I thought it to myself. Who else could I have thought it to? Tim Mendham? Arch-Duke Franz Ferdinand of the Austro-Hungarian Empire? This is the sort of trouble you get into, associating with philosophers, you just can't say simple things any more - you must start analysing them, and who knows where it will all end?), if you want to get a job done, you'll just have to do it yourself. So here it is.

Fludnetropy. A Theory of Universal Knowledge, by Sir Jim R Wallaby (Bt) 1995.

Fludnetropy holds that everything can be explained by mystical forces or influences, after the event.

Sounds simple, doesn't it? That's the mark of a truly profound philosophical theory - after someone proposes it, everyone else says "Why didn't I think of that?"

But, as Skeptics, you won't take my word for it, you'll want to see my evidence (or so our esteemed Editor says - he rabbits on about evidence so much, you'd think he'd been taking lessons the Director of Public Prosecutions).

Right then, let's start with Nostradamus - as you know,

anyone can apply Nostradamus' famous predictions to events after they have happened.

So let us begin with one of his, hitherto, more obscure predictions:

Sur le pont d'Avignon.

Until now, no-one knew what this meant. Clearly it has nothing to do with the rise of Hitler, the Antichrist or nuclear Holocaust (as do all his other predictions), but it must mean something.

Apply fludnetropic principles and it acquires a clarity the crystal mongers of Waterford or Bohemia would sell a grandmother to achieve.

Sur le - obviously a misprint - the word should be surly.

pont - a clear reference to the Pope (or pontiff).

d'Avignon - Pop 93,240: a city in south eastern France, on the Rhone: seat of the Papacy 1309-77.

Now, if you were Pope, wouldn't you be a little testy (surly) if you had to live in smelly, noisy, polluted Rome, when you could be living in nice, leafy, semi-rural Avignon? Of course you would. (I have no idea why the Pope moved from Avignon to Rome. He probably had some philosopher advising him.)

Not convinced? Well try this one from the annals of astrology.

Saturn is residing in the fifth house as Aquarius is ascending the Cardinal quadrature, with Mars dancing a midheaven pas de deux with Venus in a trinal correspondence.

Meaningless to the lay reader, or even to the pre-1988 expert reader, no doubt. But apply fludnetropy and the whole thing becomes glaringly obvious:

The Soviet Union will collapse into chaos.

I could, of course, go on at length to show just how universal my theory is, applying it to numerology, chickenentrailology, Taro readings (a method of divination peculiar to Pacific Island nations, I understand), or economic journalism, but I think I have revealed enough to convince even the most ardently sceptical among our readers.

So there you have it in a nutshell - the theory of fludnetropy:

If you want to explain anything by using mystical forces, it's best to wait until after it has happened.

Which leaves me with only one small favour to ask of William Grey, or any other professional philosopher who reads this story.

Now that I have established myself as one of the leading philosophers of the 20th century, how do I go about making some money out of it? ■

INVESTIGATION

Rendezvous With a UFOlogist

John Happs

It was with great interest that I read a collection of articles about UFO's and related phenomena, written by Stephanie Pegler, Ben Dobbin, Carmelo Amalfi and Peter Pockley. These were collectively published in the *West Australian* on the 26th December 1994 and they offered an interesting and what I considered to be a fairly balanced view on UFO speculation, under the general heading:

UFO's - Fact or Fiction?

One Article covered the viewpoints of true believers, such as Simon Harvey-Wilson, the WA representative of the Mutual UFO Network, a US- based organisation that actively researches reported UFO sightings, whilst a contrasting report provided a more sceptical stance adopted by the well known astronomer, Carl Sagan. Other articles looked at 'related' topics such as the Search for Extraterrestrial Intelligence (SETI), comets and asteroids. As a sceptic, my position is that of accepting the almost statistical inevitability of life having evolved on planets other than Earth. What I have difficulty in accepting is the likelihood of visits from aliens in flying saucers or any other space vehicle which would have to cover enormous interstellar distances in a relatively short time. I am sceptical not only because of the technological problems inherent in such travel but also because what is usually offered as anecdotal evidence for alien visitations is about as convincing as the anecdotal evidence for the Loch Ness monster. Despite the sheer volume of eyewitness accounts the evidence, if we can call it evidence, appears to me to be underwhelming to say the least.

My fleeting interest in this area was bolstered somewhat when, a few days after the articles were first published, I received a telephone call from Stephanie Pegler, from the *West Australian*. She excitedly told me about reports of UFO's actually being "called in" by an avid UFOlogist known as Danny. I immediately conjured up visions of my uncle rattling a jar of corn on race days to persuade his prize homing pigeons to zero in on their loft rather than sit out the rest of the afternoon on the neighbour's roof top. I was prepared to rattle anything to come face to face (or whatever) with a homing alien.

Stephanie indicated that a number of people, including two UFO investigators, Stephanie (with camera and tape recorder) and myself as an invited sceptic, with an interest in astronomy, might be able to meet with Danny.

The format for the evening would involve the group being taken to a UFO rendezvous site, the exact location to be nominated by the occupants of a passing UFO and relayed to Danny by telepathy. Now here was a potential double bonus - I could become the first sceptic to witness an alien visit following a demonstration of action -telepathy.

After providing more of this titillating information, Stephanie finally asked the question I was eagerly awaiting: "Are you interested?"

I could hardly wait!

We met in the city, at 8.30 pm on a warm, still and perfectly clear evening. Ideal atmospheric conditions for skywatching with little haze in the sky to create mirages. It seemed like the ideal kind of evening for witnessing extraterrestrial spacecraft although, had the evening been wet, with thunder, lightning and the sound of wind in the trees, it would have seemed like the ideal kind of evening for witnessing terrestrial ghosts.

Danny brought along two of his friends and he was obviously more than happy to have a sceptic along, as well as other UFOlogists and someone from the media. We chatted amicably for a few minutes and the impression that I gained of Danny was that of a regular, everyday guy who firmly believed that he could communicate with, and indeed had met with, the occupants of a number of visiting spacecraft.

I asked Danny about his telepathic powers. He explained this ability to communicate telepathically with aliens in terms of specific genes inherited from his Grandmother who was well known for her psychic powers. Danny, it turned out, was a regular communicator with visitors from outer space and he assured me that it was certain he would make contact that very evening. He was confident that we would actually witness a close encounter.

My interest was beginning to blossom, and I was already starting to compose the headlines in the next issue of the *West Australian*:

Skeptic abducted and converted

I quickly composed myself and thought of a worse, alternative headline:

Skeptic taken for a ride

With a contingent of six passengers in my vehicle, we waited for Danny to make mental contact with passing extraterrestrials so they could point the way towards our rendezvous point. It was arranged that we would follow his vehicle, once he had been given the extraterrestrial nod. A few minutes passed by and then we were off - cameras and tape-recorders at the ready. I really started to concentrate on the task in hand - following Danny. The last thing I wanted to do now was lose both Danny and the story of a lifetime.

Our start was somewhat erratic, with no clear direction

indicated from above. We followed Danny in tight formation, driving in various directions before finally settling down to a course which took us due north for about 30 minutes. The meandering was over and we all felt that something remarkable was about to take place. The tension increased as we continued north and my UFOlogist passengers looked as if they were ready for anything.

Danny left the freeway, indicating well before the turn-off, suggesting that his telepathic contacts were most definite about where they wanted to meet with him. We followed him into a new residential area where Danny slowed his vehicle to a crawl. I had never heard of aliens in the suburbs before but this could be a first.

When Danny finally stopped, we found ourselves in an elevated position in the Northern Suburbs, overlooking the city of Perth. This was not my preconceived idea of a UFO rendezvous point, but then I wouldn't know about its geographical suitability would I, never actually having been invited to meet with aliens before.

There were a number of street lamps around but not enough background lighting to prevent a clear view of the night sky and stars down to 3rd or 4th magnitude. A UFO would have to be very distant to escape our eyes on a night such as this.

When Danny hopped out of his vehicle, he was clearly excited. Running back to us, he asked if we had seen the 'UFO' which had been following us up the Mitchell Freeway. We hadn't but, no matter, Danny exclaimed that it was now hovering high in the sky behind us and clearly visible. The last time my car emptied so quickly was when our 4-year old daughter threw up during a drive up to Geraldton.

Excitedly, we jumped out of the car as Danny pointed towards the north east, where a clear reddish-orange orb certainly was stationary and emitting a bright glow of light.

Danny seemed pleased about the 'UFO' and his two friends were positively ecstatic. They were all adamant that they hadn't noticed such a hovering light in that position in the night sky before and, after all, Danny had evidently been communicating with the occupants of this particular UFO during his drive up the Mitchell Freeway and he seemed confident about this particular sighting.

At this point my enthusiasm waned and I felt compelled to ask Danny if he knew where the planet Mars was positioned in the night sky. He indicated that he didn't know its whereabouts. I said that I happened to know that the 'UFO' we were observing was in fact Mars and that it would appear to move towards those areas of the night sky now occupied by the constellations of Gemini and Taurus. I traced out the approximate path the planet would appear to follow during the next few hours.

Although I don't know of any sceptic who believes in the predictive claims made by clairvoyants, I was confident in my predictions that the planet Mars would appear to move westward as the evening progressed and that it would disappear over the western horizon early the next morning. I boldly made my predictions and the invited UFOlogists agreed. Danny and his friends remained noncommittal.

Undaunted by our initial lack of belief, Danny said we were close to the site where he witnessed his first 'UFO' visit and, with diminished optimism, we agreed to follow him. Parking in a nearby cul-de-sac, Danny announced that here we would see a number of rapidly moving 'UFO's

and we certainly didn't have long to wait. A number of objects moved swiftly from the west coast towards the city lights, one of them appearing to hover for a while with another turning on what were obviously powerful lights. They were certainly FO's but hardly UFO's.

Danny and his friends became quite animated about these new observations until our guest UFOlogists, Mike and Simon, pointed out that we were observing aircraft making their approaches to Perth International and Domestic Airports.

Danny asked about their stationary appearance since fixed-wing aircraft can't hover. It clearly hadn't occurred to him that such aircraft flying towards an observer would not only display their landing lights but would also appear to be stationary for some time.

I still can't understand why life forms, with the technology to bridge such astronomical gaps, at incredible speeds, would have the same green and red navigation lighting that is so familiar to us and so frequently reported in UFO sightings worldwide.

When it became evident that we were about to spend the evening observing a stream of passing aircraft of Earth-origin, the two UFOlogists and I agreed that there were other, more productive things, we could be doing at home. In fact I remembered that I was scheduled to attend a seance at midnight. It was at this point that we agreed to call it a night.

On our way back to the city we reflected on the problems which might be eliminated if 'UFO' observers knew just a little basic astronomy and could even extract from their local newspaper the rising and setting data for any visible planets.

If we are being visited by life forms from other worlds, the obvious difficulties involved in sifting through and eliminating nonsense sightings, such as the ones we witnessed that evening, will continue to make the task virtually insurmountable.

Did Danny and his friends really believe they were seeing spacecraft from other planets or does their response reflect the viewpoint of Carl Sagan?

"We sometimes pretend something is true not because there's evidence for it but because we want it to be true."

Perhaps he was fully aware that his sightings were those of planets and aircraft yet hoped that others wouldn't know this.

What a pity Danny missed the only real highlight of the evening - the brilliant trail of an incoming meteor as it appeared to move through the Southern Cross in an easterly direction. This happened at exactly the time he was trying to arrange our next group visit - to an actual UFO landing site. At this stage, I could hardly contain my indifference.

Danny should have been awarded bonus points for sheer persistence:

"Perhaps, with your scientific contacts, you could have some soil samples analysed for radiation scorch marks or the presence of Element 115."

I think not Danny - I think not. ■

SPECULATION

Vu Deja

Jake Rolley

Vu Deja - the feeling that nothing like this has ever happened to you before.

Having read a recent article titled 'Necromancing in the Dark' by Harry Edwards (*the Skeptic* Vol. 15 No 2) about the clairvoyant Bridget, and further reading 'A psychic's response' (*Letters*) in the same issue by Josef Holman, my lateral thinking mind got to wondering. If Josef is blessed with psychic ability then why did he not send his response before 'Heartless' Harry wrote the offending article? If Bridget is psychic why does she require people to send her letters when, by the very nature of her ability, she should be able to pre-cognizantly identify those who need her help and respond on the basis that she already knew?

This only fed my appetite for more laterality, I who am willing to believe that flying can be achieved by throwing myself at the ground and missing! So, let us imagine that there are enough of these psychics, mystics, mediums, new-agers around to gather in one place and form a city of their own (funny that they haven't already thought of this!). My recommended location would be San Francisco as they would obviously be able to evacuate at least one week before any earthquake because, regardless of lack of scientific evidence, they would predict its arrival!

So what would a life cycle of a psychic be in the city of psychics? Well, assuming your parents allowed you to be born (because they know exactly when you will/won't be conceived!) your life will proceed as follows.

Your parents will arrive at the hospital a few minutes before the birth with the correct male/female clothing (without the aid of ultrasound). Doctors and nurses will be pre-rostered in accordance with the predetermined workload. The hospital will contain patients who are about to receive an ailment! Some wards will contain those who are about to die and who are placed in order of 'exit' from this life to save shuffling difficulties. Friends have long since sent letters of congratulations, in fact, they did before your conception.

You now launch into childhood, nothing you do surprises your parents, they are always prepared. You are sent to school where your teachers are mediums who tap into the wisdom of past lives of dead but wise people. Technology has developed electronic ouija boards from which you can access an aura encyclopaedia which tells you all that was, is and is to come.

You know the results of all exams before you start school and the results of all of your friends exams, in fact, you all score 100% because you can easily cheat. You also know what they are all thinking about you and automatically choose the mate of your dreams because your dreams are all prophetic (you probably choose not to marry because you can see into the future, then again, fate does move in strange ways!).

You move into the teen years with confidence, already knowing what life has in store (the suicide rate is high in Psychic City!). Not a pimple on your face, you know everything (sounds a bit like teens in every other city!). You invest in a car that is in perfect condition even though it is 20 years old. You hit your parents for every cent they've got because you know exactly how much it is and you know when to ask. All you decide is exactly confirmed by the facts presented by the astrologers.

If your car does break down when you are out driving, you need not worry as you knew it was going to happen and the mechanic is waiting at the side of the road exactly where you roll to a stop with the spare part and appropriate tool. The mechanic gives you a piece of his mind because you knew that your car would break down, then again, you are not upset because you also knew what he was going to say (he also knew that you knew etc. etc.).

Arguments are superfluous as all parties already know what the result will be. Police are no longer required as you now merely pay a police bill for crimes that you are about to commit. Everyone knows who did it, so they don't, and everyone knows who thought they might but didn't because everyone knows.

There is no sport at all because everyone already knows the results. There are no movies because the ending is known. There are no secrets. You pay your tax like a lemming because we all know what you know. You need not carry any identification.

Ian Plimer is broke. You didn't need to read his books! Harry and Barry merely edit responses to articles that have not yet appeared in *the Skeptic*, they write articles in response to responses and have a premonition that they are spiralling into their own trap!

You start work by turning up at the place where you always knew you would work. There are no phones, faxes, letters, etc because you all know the what, where, who, why and how of it all. The quality of your product is always perfect because you know you can't fool anyone here.

You have all of your finances precisely calculated because you know exactly what you will be paid for the rest of your life and when you will retire, fall sick, buy a house etc. If you are a chosen one, you will prepare now for the future role of Prime Minister or a Godhead of a cult that believes nothing of what you say but claims to because it is fun anyhow.

The role of Prime Minister is unworkable because you are unable to lie or deceive, elections are not required and you sack yourself in anticipation. You marry against your instinct, because you need to reproduce the Psychic race in the city. You introduce your new wife to others as 'my first wife' knowing full well that you will divorce and have

Continued p 49...

MEDIA MEDIUM

Fabulous Flavia Flops

Harry Edwards

For nearly four decades I have been an inveterate writer of letters to the editors of local and national newspapers. In total, approximately 900, of which 600 have been published. They have covered a range of topics, although in recent years they have inevitably dealt with various aspects of the paranormal.

Subject alternately to praise, condemnation, ridicule and flattery, I have been variously described by some as an ignoramus and a literary dwarf, and complemented by others on my ability to express my thoughts in concise and readable English. My efforts have resulted in both praiseworthy and abusive responses, I have been prayed for, received threats of physical bodily harm, and on one occasion even threatened with death (and that was from the Ed-in-Ch of *the Skeptic*. **Ed**). One reaction to my opinion, that single parents should not be the responsibility of the taxpayer, solicited an abusive phone call from a single female parent (I assumed) expressing the wish that my penis (not the euphemism used) shrivel up and drop off! At the time of writing the letter I was a single parent raising two teenage kids!

It is difficult to ascertain from the odd and disparate reactions, whether or not, either as a sceptic or a general commentator, I have exerted any influence in promoting critical thinking, particularly where the predilections of editors who favour promoting the weird and wacky are concerned.

In the April 26, 1995 edition of the *Manly Daily*, a suburban newspaper (circulation approx 88,000) with a claimed weekly readership in excess of one million, an article appeared under the heading "**Flavia foresees 'quake'**", featuring a 'psychic' prognosticator and her predictions. Among the claims, Flavia lists her past accurate hits as including the assassination of Sydney MP John Newman, the Rwandan civil war and the rise of John Howard. For the future, an earthquake in Sydney by the end of 1995, economic domination of the world by China and contact with aliens by the end of the decade.

It appears from her comments, that the *Manly Daily* proposes to give Flavia a regular column starting with the following:

Q: What impact will computer technology have on our society?

A: Computer technology will advance so fast it will redefine society on a near yearly basis.

By the year 2010 it will seem as if we are living four generations in one: things will be moving forward so fast.

Everything from cooking to transport will be revolutionised. Computers will make our lives easier, but they will also take away all our privacy.

Increasingly, people will work from home on computer terminals, meaning roads won't be busy as they are

now. Cars will also be extremely computerised; if you wanted to go somewhere you could tell the computer the address, and it would navigate for you as you drive. Computers could prevent accidents by warning you of coming dangers. In about three years there will be ginormous technical advances made in computing. In 8-10 years the drawbacks of computers will become apparent.

The article concluded with a phone number and a note that Flavia is available for psychic readings or private classes. As a free advertisement the article would conservatively be worth \$300.

Two letters commenting on the article were subsequently published, one from John Smyrk (a former Australian Skeptics' secretary) and one from me. John, observed that Flavia's "predictions" regarding computer technology were obvious common knowledge to any who were even vaguely aware of what was going on in the world, and went on to individually demolished them.

My general comment in a fax to the editor was as follows:

The definition of the appellation "psychic" designates those mental phenomena which appear to be independent of normal senses, such as clairvoyance, telepathy and extra sensory perception.

Before we are subject to Flavia's "amazing paranormal powers" perhaps she should learn to tell the difference between a "psychic" prognostication as defined above, and predictions based on pragmatic considerations and the projection of current common knowledge.

Surveys conducted by sceptical groups in Australia and around the world, show that predictions by so called "psychics" have a success rate of less than 5%, and even these were usually based on the laws of probability or prior knowledge.

Regarding the three "accurate" predictions she claims to have made - the assassination of MP John Newman, the Rwandan civil war and the rise of John Howard, would she be kind enough to let *Manly Daily* readers know whether she can support this with any evidence to show that they were specifically worded and made prior to the event. Anecdotal evidence is not acceptable, they must be in print and verifiable.

While my endeavours through the print media have, to some extent, been successful in influencing readers to become subscribers to *the Skeptic*, one can only speculate whether or not those letters to the editor have had any bearing on subsequent events. Suffice it to say that the evidence requested has not been forthcoming and Flavia's proposed prediction column has failed to materialise. ■

HOW HIGH IS THE END?

Millennium Forecasters & Prophets

Ben Bensley

Judging from the epidemic of millennium forecasts which preceded the year AD 1000, we must brace ourselves for similar outpourings from some committed religionists for AD 2000.

Both the second coming of Christ and/or the end of the universe have already been prophesied by many sober-faced prognosticators. Some Seventh Day Adventists and also Jehovah's Witnesses have already nominated 1999 as the end of the world. However, 2000 was predicted by St. Malachy who, 1094-1148, was an Irish cleric. (The so-called Prophecies of St. Malachy first published in 1595 are regarded as spurious.) Garabandal, Fatima, Alice Bailey and others, plump for 2000, together with some who claim to have unravelled the enigmatic quatrains of Nostradamus (1503-1566), giving 2000 as the Second Coming, but postponing the end of the world till 3797.

This, of course, does not complete the roll-call of apocalyptic prognosticators. Over the past couple of centuries or more the prophets number more than 80. A choice example was Mother Shipton. Her first recorded mention was 1641, but she allegedly lived from 1488-1560, but her prophecies were not published until 1797. The prophecies ended with the dire warning "The world to an end shall come, in eighteen hundred and eightyone". This was widely believed by uneducated people and children in Knaresborough and in the north and west of England. According to legend, believers spent nights in open fields, weeping and confessing their sins. When 1881 passed without disaster, it was then claimed that there had been a misreading of a corrupted text, which should have read: "The world will end we'll view, in eighteen hundred and eightytwo." However, the whole prophecy business was revealed as a fake when Charles Hindley, a well known London bookseller and publisher admitted that he had added the lines to a reprint of a chapbook version he had published in 1862. In the Dictionary of National Biography it is stated in the article on Mother Shipton that this interesting lady "is in all likelihood, a wholly mythical personage."

Mankind has apparently always had a great desire to know what the future holds in store. Girls wish to know what love and romance have in store for them; gamblers try to foresee the results of coming horse races; businessmen try to anticipate stock market future movements; weather forecasting has always been of great concern for many people. As a consequence, anyone who can confidently issue prophecies on any of these matters will usually be listened to with respect, and handsomely rewarded. As long as a few predictions prove to be approximately correct, numerous errors and failures are overlooked in the haste to hear further revelations.

A fact which seems to have escaped the millennium forecasters is that the 2000 has no fixed astronomical

significance. The decision to calculate modern history from the first century AD is purely a Christian religious convention which has also proved convenient for world commerce, as an historical starting point. Belated modern theological research now agrees that Jesus was born probably in BC 4. It is interesting to note that the decision to use the AD notation was not made until 525, by Dionysius Exiguus. In 1681 Jacques Bossuet, French religionist and historian, proposed the present notation of the years BC. Not all the world has agreed. The beginning of the Islamic calendar was proclaimed as being AD 622. The Hebrews and Chinese have differing calendars, but have submitted to the European calendar to facilitate their participation in world trade.

The Creation of the World

Looking back to the question of the creation of the world, the prophets are as equally confused as the millenniumites. The voluble and absurdly self-confident Bishop Ussher stated firmly that our world began on 22 October BC 4004. The Jewish historian Josephus was adamant for 3952, while Venerable Bede insisted on 3945. Nostradamus claimed that 4173 was the year, but The Septuagint postulates 5960. Despite the hard evidence of modern archaeology and geology that the world's age runs into millions of years, some people - creationists for example - continue to promote their wild, young world guesses.

Parallel with the millennium prophecies, the beginning of the Age of Aquarius (a hoped-for period of universal peace, brotherhood and goodwill) has been disputed fiercely. Gerald Massey claims that the Age of Aquarius began in 1905. When WWI and WWII made nonsense of this prediction, Willaru Huatya plumped for February 1962, Alice Bailey predicts 1999, Woldben 2000, Peter Lemesurier 2010, Adrian Duncan 2020, Woldben changes the year to 2023, Dane Rudhyar 2060, Woldben postpones again to 2160 together with Gordon Strachan and Robert Hand asserts 2813.

It is to be noted that the idea of a golden age in the future is a comparatively recent one. For centuries religionists looked back to days of peace and innocence of the Garden of Eden.

In *As You Like It*, Charles the Wrestler says of the banished Duke living in the Forest of Arden: "Many young men flock to him every day, and fleet the time carelessly, as they did in the golden world."

This is an undoubted reference to the golden age of Pericles, the age of Euripides, Sophocles, Aeschulus, Zena, circa BC 450. This was the pinnacle of Greek civilisation - provided you were not a slave or a barbarian. Right up until the late Middle Ages, the golden age was in the past

Continued p 43 ...

SKEPTICISM

Am I a Skeptic?

Annie Warburton

I recently had a letter from a listener who said he was a skeptic and that he'd noticed that from time to time I interviewed Prof Ian Plimer. He also noted that I was also 'a member of Australian Skeptics', and that I contributed to their magazine. He suggested that in future, 'in the interests of fairness and to avoid any suggestion of hidden bias', I should declare my status before interviewing Prof Plimer, in order to ward off 'the sort of slanging match that seems to be developing via ads in *The Australian*'.

In replying to the letter, I was forced to ponder at some length what being 'a Skeptic' means, and whether it involves any mental state that could properly be described as 'bias'. I thought some of the issues raised might interest your readers, and what follows is a version of my reply, edited and paraphrased where appropriate in the interests of clarity:

Should I declare myself a member of 'Australian Skeptics' before interviewing Prof Plimer? I'm not even sure there is such a thing. Barry Williams once told me that 'membership' really consists in subscribing to the magazine. We know that the Creation Science Foundation keeps an eye on what's in *the Skeptic*, and presumably someone there subscribes to it, but I'm sure they wouldn't like to be told they're 'Skeptics' for that reason!

That may sound a bit Jesuitical, but there is a strong point to be made here about what being a Skeptic means. Doesn't it just mean 'to have an open mind on all matters where some claim is made for paranormal influences to be at work, and to require proof of that influence before accepting the claim'?

What's more, I don't actually 'subscribe' to *the Skeptic*. I get free media copies, as I do of *The Bulletin*, *Time*, *The Independent Monthly*, *The Australia-Israel Review*, *Eureka Street* (Jesuit mag), *Well-Being* (full of quackery and charlatanism) and umpteen other publications, quite a lot of which have an obvious 'line' which I may or may not agree with from time to time in whole or in part. (Sorry - this is an ex-lawyer speaking.)

Obviously I tend to the rational humanist view in my personal philosophy, and therefore I would naturally tend to agree with Ian Plimer and others who so amusingly debunk paranormal piffle in *the Skeptic*. I do happen to agree with them on creationism. However, being a skeptic (note the small 's') doesn't require me to have any particular belief-system, unlike being a confessed Christian, or a card-carrying Marxist, or whatever. In fact, I can be both a Marxist and a Christian and still be a skeptic, as long as I'm prepared to acknowledge the difference between matters taken on faith and those taken on the best available evidence.

Yes, I have had articles published in *the Skeptic*..... In my first one I did describe myself as 'a good skeptic' and

I did facetiously inquire whether I risked being cast from the fold for having been temporarily hoodwinked by an enthusiast of kinesiology. However, that was very much a matter of adopting a jocular style for literary effect, and my story was structured in such a way as to amount to a plea for enlightenment on a subject about which I confessed my ignorance!

The point is, you don't *have* to be a skeptic to have articles printed in the magazine. The editorial philosophy is clear: it's an open forum for discussion of any matter of interest to skeptics. You might recall there was a series of articles and correspondence published not so long ago about smoking. There's certainly no 'correct' position for a skeptic on that issue, nor on whether the coriolis effect applies in bathtubs, nor on whether aboriginal cannibalism was myth or reality, nor on the efficacy of acupuncture, just to name a few. You *may* be a strict rationalist... but this can't be assumed from the fact that you contribute (or subscribe) to *the Skeptic*.

More to the point, you don't get paid! so you can say whatever you like without fear or favour. Not that it isn't a great honour to be published amongst this distinguished company &c &c.....

I went to the annual conference of the Skeptics in 1993, and again this year, but it was as a media observer, which is provable by the fact that:

- a) I gather material for broadcast. and
- b) I get in for free!

And if anyone has observed me having an unseemly amount of fun at the conference, all I can say is... please don't tell the taxman - er, person, who only notices my professional output.

I say I'm a media observer, but I acknowledge that I'm a sympathetic one. Does this amount to an interest that ought to be disclosed before I interview the likes of Prof Plimer?

For a journo, having an 'interest' in something suggests either that you stand to gain from it somehow, as when you have a proprietary interest in, say, a commercial enterprise about which you write or comment; or that you have some barrow to push which people should know about in the interests of fairness.

What's a skeptics' barrow? That people should think critically and not accept claims about paranormal phenomena without supporting evidence? Does this need to be declared? If so, then should I also declare myself an atheist humanist when I discuss religion with believers? Or should my more credulous colleagues declare themselves aficionados of, say, homeopathy, when discussing medicine with a real doctor?

We could extend this further and say that no-one would

Continued P 45...

REVIEW

Anti-science in the Academy

James Gerrand - Martin Bridgstock

Higher Superstition - The Academic Left and Its Quarrels with Science;

Paul R Gross and Norman Levitt.

The Johns Hopkins University Press 1994. 314pp.
hbk \$57.95

The influence of the higher superstition of postmodernism was dramatically exposed recently when *The Age* theatre critic savagely attacked from his postmodernist position David Williamson's latest play *Dead White Males*. Williamson has brilliantly and wittily exposed the falsity of the postmodernist case when deconstructing literature, using some dramas of Shakespeare - a dead white male - as illustration. Viewers of the drama *Signs and Wonders* just finished on ABC TV will have seen another exposure when the son who had become a lecturer in postmodernism finally admitted its illogicality.

The postmodernist thesis as presented by French philosophers Foucault and Derrida is that there is no knowledge, only understandings based on the social values and language of the period. And because these values have come from a patriarchal society then our understandings are not true but are what the patriarchs want us to believe.

Scientist Paul R Gross and mathematician Norman Levitt are principally concerned with the inroads being made in the USA by the academic left in their endeavour to deconstruct science. The academic left attack science principally because they see capitalism taking over globally through its use of science and its application, technology. A subsidiary influence is a Romantic attachment to Nature combined with an aversion to the cold scrutiny of Rationalism.

This deconstruction has achieved success in the non-experiential sciences, particularly anthropology where if you don't agree with a finding you can readily dismiss it as based on the writer's values.

Deconstruction is more difficult, if not impossible, in the experiential sciences such as physics, chemistry, biology, medicine, where experiments can be carried out and repeated to test the truths. The falsity of deconstruction is most clearly shown here because the postmodernists cannot claim that their conclusions are true, ie can be shown to be so by experiment, because, if so, these conclusions would become accepted science.

In effect the academic left gives up the battle against capitalism if they in effect give up science. A good case can be made that the communism of Lenin and Stalin was bound to eventually fail

because they could not accept science. Communism had to be accepted as a dogma - finding political truths by observation and experiment was heretical. A classic example of Stalinist communism rejection of science was

its acceptance of Lysenkoism - Lamarckian nurture over evolutionary nature - because it was in agreement with Marxism not because of the facts.

The authors cover a wide field - postmodernism, feminism, multiculturalism, radical environmentalism and AIDS activism. It is illuminating to read in the treatment of feminist science that Goethe considered he was as good a scientist as he was a poet and was upset that his conclusions, based on his understanding of nature, were not accepted, whilst those of Newton were.

The abuse of multiculturalism is exemplified by an Afrocentric science being taught in many US black schools, based on the claim that science arose in Egypt. Environmental causes such as protecting native forests are based more on emotion rather than scientific evaluation. Medical scientists are attacked for not finding a cure for AIDS with some deconstructionists claiming that AIDS was developed by Western patriarchs to destroy the Africans.

Gross and Levitt point out that the problem is that many of the world problems such as overpopulation, tribalism and global warming are complex, requiring a scientific understanding. If we are to retain democratic government then the community must be scientifically literate to make informed judgments. But with the developing antisience attitude then the community will be influenced by emotional appeals which the modern mass media is so skilful in using.

In the 70s when I was working for the UN the developing countries without exception put science and technology as their top priority for their development. The most recent example of a country that has successfully followed this path is South Korea.

This book is recommended as a most informative and important warning to what lies ahead for Australia unless we also place top priority on achieving a scientifically literate community.

JG

A Second Opinion

Have Barry and Harry finally gone mad, you ask? What on earth are they doing, publishing a review of a book about a tendency among humanities and social science scholars? Why should Skeptics bother reading the review, let alone the book?

Skeptics have good reason to be interested in the book. The authors are scientists and the topic is a new sort of hostility to science. This hostility, if it gains power, might not only endanger research. It might also render scepticism

impossible.

Gross and Levitt's target is what they term the "Academic Left". These are committed left-wingers in the social sciences and humanities, now working in academia. They became involved, in the sixties and seventies, in theorising about revolutionary mass movements, but are now left without any movements to actually theorise about. As a result they have turned to "perspectivism", the idea that Western perspectives, especially science, are simply one way of looking at things. Being left-wingers, they are committed to advancing the perspectives of the oppressed and ignored; racial minorities, women, gays and so on. Science, of course, with its claims to universal knowledge, is a particular target of the academic left. In the eyes of the academic left, and its links with white male supremacy exposed.

The relevance for Scepticism should be pretty obvious. Scepticism is all about finding natural explanations for apparently paranormal events. A Skeptic might demonstrate that a 'UFO sighting' is the planet Venus, or that a 'clairvoyant' is a conjuror. But if natural explanations are no better than paranormal ones - or worse, if they are covering up for white Western male dominance - then scepticism is simply one explanation among many. Debunking loses all its logical power.

A large part of the book is taken up with examining the attacks on science. Gross and Levitt find it fairly easy to show up the pathetic ignorance of many of science's critics. Their suggestion is that scientists should be arguing back: visiting seminars where perspectivism is used to attack science. It's hard to disagree with this.

The book is well written and moderate in tone. The authors freely grant that environmentalists, feminists and others on the academic left often have valid points to make. They also point out that many left-wingers are not in the least hostile to science. I suspect that Skeptics will enjoy the book's fearless assaults on the baffle-gab of the academic left. Whether or not you accept Gross and Levitt's thesis, this is a book worth reading. **MB**

Editor's Note:

It is unusual for two reviews of the same book to appear in the same issue. However, by coincidence, these two arrived independently at around the same time, and, as the two reviewers viewed this important topic from somewhat different perspectives, we decided it would be useful to publish them both.

By an even more remarkable coincidence, both reviewers happen to be Life Members of Australian Skeptics. Now, who said there was no such thing as synchronicity? ■

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...Millennium from p 40

rather than in the future. But discoveries from the Renaissance onwards turned men's thoughts to a better world to come, either on earth or in a mythical heaven. Wars, famines and plagues made prophecies of future bliss seem more remote, and prophecies of a coming age of peace and plenty proliferated.

A great deal of speculation by astrologists has centred on the expected alignment of Neptune and Uranus on 18 August 1999. Also, early in 2000 the earth will be with Pluto on one side of the Sun, with Mercury, Mars, Jupiter and Saturn aligned on the opposite side. In other words, a syzygy - a not uncommon astronomical occurrence. Similar alignments in the past have not produced any worldwide cataclysms. Similar alignments of Neptune and Uranus occurred in 1991, and on three separate occasions (February, August and October) in 1993. The world nevertheless rolled on without complete disaster. Should prophesied events fail to eventuate in 2000, we may expect the prophetics to resort to the old device of shifting the goal posts. When 1000 passed without any sign of heavenly intervention, the prediction for the millennium was fast forwarded to 1033, being 1000 years after the crucifixion.

Skeptics and other unbelievers in apocalyptic prophecies for the year 2000 should not feel overlooked or uncatered for. Pope John Paul II has approved a program of retreats and other ceremonies during that year, when he plans to travel through the Holy Land and conduct prayers on Mount Sinai, accompanied by Jewish and Islamic clerics if possible. The organising committee of the Sydney 2000 Olympics is pressing on regardless of threatened millennium tragedies.

From the USA (where else?) there are stupendous events planned. From California comes news of a proposed re-enactment of the journey of the Magi, with camels, horses and a Three Wise Men Visitors' Centre in Bethlehem - plus a planetarium. In Jerusalem, Pastor Robert Schuller and Los Angeles radio parson Jack Hayford are to conduct a 1996 birthday celebration, to be located at the very spot where Jesus fed the 5000 people. This time however, the crowd will be fed with hygienic box lunches of loaves and fishes. The year 1996 has been chosen because scriptural research now admits that Jesus was probably born in BC 4. For those American citizens unable to make the trip to the Holy Land, a Californian impresario is organising a gigantic Jesus stadium with orchestras, choirs, special visual effects and a colossal slide shown selected from a collection of 5000 slides depicting the life of Christ. It is also threatened that the whole circus will be taken on a world tour in 1999-2000. You have been warned!

A Mr Jay Gary, self-styled "Millennium Doctor", also plans a 2000th birthday tribute to Jesus, via an Internet forum. Mr. Gary does not wish doomsday predictions to overshadow his unconstrained Jesus birthday mummery. Other proposals include Jesus block parties, global prayer vigils and special charity drives, although the necessity for the last mentioned seems dubious if the end of the world is in progress. Altogether, 2000 is a year not to be missed. However, there could be an embarrassing oversupply of worthy candidates for the Australian Skeptics' Bent Spoon Award for that year. ■

REVIEW

The Non-denominational Day of Reckoning

Colin Keay

Rogue Asteroids and Doomsday Comets;
Duncan Steel. John Wiley and Sons, Inc. New York
1995

When one of our learned contributors writes a book, it is bound to be of interest to most of us. When that contributor is becoming renowned as someone who almost invariably has his facts right, then it becomes doubly interesting. And when our notable contributor is indubitably one of the world's leading experts on the subject of the book, then it must at least become quadruply interesting. The more so since it might in fact be a matter of life or death for you and me at any tick of the clock.

The future of homo sapiens is all too often taken for granted. Of course tomorrow will dawn on much the same Earthly scene as yesterday, or so we imagine. We attempt to guarantee this comfortable state of affairs by insuring our homes, our vehicles and even our lives by paying premiums calculated on the basis that the world in general will keep on keeping on. But.. shock, horror.. if tomorrow proves to be vastly different, with much of our civilisation wiped out, how much should the premiums really have been to adequately protect our investments?

Longtime sceptic, Duncan Steel, in a timely analysis of the ever-present threat of human extinction, brings us up to date with the latest scientific knowledge on the subject, soberly assesses it, and calculates the insurance premiums necessary to have a good chance of averting such a disaster.

Back in 1989, a near-miss by asteroid 4581 Asclepius spurred the US Congress to order NASA to do something about the problem. NASA set up two committees: a Detection Committee to find and track Earth-threatening comets and asteroids; and an Interception Committee to explore ways of dealing with such a threat. Duncan was appointed to both committees and was the only non-US member of the second committee, which was heavily loaded with Star Wars merchants. So you can readily appreciate that a doomsday book written by someone as intimately informed as its author, will be well worth reading.

The book details the findings of the two committees in a very readable manner although the revelations do not make good bedtime reading because so miserably little is thus far being done to implement the recommended countermeasures.

We all remember the cataclysmic impacts of Comet Shoemaker-Levy 9 on Jupiter last year and its implications for the safety of life on Earth. For the second time the US Congress reacted, on this latest occasion with a further urgent instruction to NASA to organise an international

effort to "... identify and catalogue within ten years the orbital characteristics of all comets and asteroids that are greater than one kilometre in diameter and are in orbit around the Sun that crosses the orbit of the Earth." To my knowledge, the Australian government has not yet responded with any increased assistance beyond the shoestring budget of Duncan Steel and his small team of dedicated astronomers hunting for menacing celestial objects. And just to cheer you up, the Australian support for Duncan's team is due to run out at the end of this year anyway.

American space scientist David Morrison sums up the situation by pointing out that the total number of astronomers in the world searching for solar system objects that could one day clobber us is fewer than the staff of a single Macdonalds restaurant.

Back to Jupiter: now that we know how to recognise the telltale signs from earlier observations, it appears that the giant planet must have been hit by large impactors in 1928, 1939 and 1948.

Therefore these stupendous events are not as rare as had been believed until now. In the Epilogue of his book, Duncan reports the discovery of Comet P/Machholz 2, hard on the heels of the SL9 impacts. This comet also split into a train of fragments just as SL9 had done. Therefore such fragmentation is more common than the pundits had imagined, which is a frightening thought.

But wait, there's more, as the TV advertisements promise: whereas the SL9 fragments were on a collision course with Jupiter, the P/Machholz fragments are moving onto Earth-crossing paths! But calm down, they and the Earth will not be at the same crossing point at the same time for an estimated 200 years at least, giving us plenty of time to get organised to cope with that particular threat. It's the hammer blows from heaven we know nothing about that represent the biggest worry.

Being the sceptic he is, Duncan Steel argues that the two US committees were mistaken in focusing on a somewhat rare source of danger to our terrestrial globe: that of single impactors, like the one(s) that did in the dinosaurs. He argues that clouds of debris from disrupted comets and asteroids pose by far the more likely danger. Moreover, such a danger is already present in the form of the Taurid complex of objects which contribute cosmic missiles ranging from harmless meteoroids, which are intercepted and destroyed by our atmospheric security blanket, all the way up to and beyond massive fragments like the one which caused the catastrophic Tunguska event of 1908.

In that year, an explosion equivalent to a ten to twenty megatonne hydrogen bomb flattened thousands of square kilometres of forest in the middle of Siberia. Had the destructive Tunguska body arrived a few hours later it could have wiped out St Petersburg and most of its inhabitants.

Such impacts are more common than we realise and may explain many enigmatic historical calamities, the destruction of Sodom and Gomorrah being one of the more obvious. Duncan also discusses the huge fireball explosion over an empty expanse of the western Pacific Ocean in February last year, which was caused by another object from within the solar system. It was the largest event ever monitored by the US nuclear warning satellites and an alarmed Defence Department alerted the President.

As far as is known, only two fisherman were in the vicinity to witness and survive the explosion, which was of a strength estimated to be ten times that of the Hiroshima atomic bomb.

Too late for Duncan Steel to include before his book went to press, comes the latest news that British astronomer Mark Bailey and his colleagues have discovered that a Tunguska-like event in 1930 blasted flat a huge expanse of jungle near an upper tributary of the Amazon in Brazil close to the border with Peru. The resulting fires burned for months. The only European near at hand was a Catholic priest, whose reports of the incident have lain unnoticed in the Vatican library until now.

This latest revelation, due for publication in November, is grist to Steel's mill, justifying his scepticism about concentrating surveillance on single large potential impactors, as Congress urged. He argues that a host of smaller bodies ten metres or so in diameter pose the greatest immediate danger. The Brazilian fireball was about this size and appears to belong to a different family than the Tunguska object which belongs to of the so-called Taurid complex of space bodies intercepted by the Earth in its annual passage around the Sun.

In *Rogue Asteroids and Doomsday Comets*, author Steel argues, with persuasive evidence, that the threat of destruction of a large city or small state tomorrow, or the next day, or the day after that, is very real. The incidents cited above leave little doubt that such a calamity is bound to happen sometime. Until skilled observers like Duncan Steel are given better support nobody will have the observational data to predict whether sinful Sydney or immoral Melbourne will go the way of Sodom and Gomorrah this year, next year or whenever. It will all happen so quickly that "The End is Nigh" brigade won't even have time to get out of their burrows and wave their placards.

But this is supposed to be a review, not a Readers' Digest condensation of a potential best-seller. The book is a great read for anyone with an IQ on the desirable side of the bell curve.

There appear to be few typos (I found only one: 'could' instead of 'cloud') and for all those on either side of the curve there are twenty-two plates, alas, none in colour. I dare to take issue on only one minor technical point: the use of the term spectroscope to describe that cute little device like a light-bulb with a four-bladed rotor inside. I always thought it was called a rotating-vane radiometer, but I'm sure Duncan will put me right if I'm mistaken. Overall, his arguments and evidence are well presented,

although there are a few places where, for someone familiar with the subject, it is a bit repetitive. The author is conscious of this because, when repeating some parameters for the third time in nine pages he refers to them as a 'litany'.

Rogue Asteroids and Doomsday Comets is well-indexed, and has a reasonably comprehensive glossary for those dunderheads who don't know the difference between a meteor, a meteoroid or a meteorite, let alone the numbskulls who can't tell an Apollo from an Amor or an Aten. Each chapter has copious notes, some even funnier than this review.

Yes, dear reader, if you are human, and would like to know your chances of staying intact for a few more years, duck out right away and buy this book. At A\$39.95 in hardcovers it is very reasonably priced. The meagre royalties will go to the Duncan Steel Benevolent Fund (taxed, unfortunately), and I must add that I personally have very benevolent feelings towards those unsung heroes who are slaving away to save my bacon in this world rather than the next.

Postscript: Look, if these revelations worry you, get on the blower or write a strong word or two to your local polmie and tell him that his butt as well as yours is on the line, and to do something about it. Otherwise you might quietly threaten to organise an entirely new sort of Right to Life Movement. ■

...Am I a Skeptic? from p 41

expect Paul Lyneham or Laurie Oakes or Kerry O'Brien to declare their voting intentions when interviewing a politician, unless of course they happen to be an active member of a party, in which case they are liable to be associated with party policy and shouldn't be in the job in the first place.

I would suggest that being a skeptic is more akin to being a swinging voter who votes according to issues, personality, or whatever, guided by their own common sense, rather than to being a member of a political party and thus bound to a particular ideology.

However, I should point out that when I had Kathy Butler on my program to run through this year's list of candidates for the Bent Spoon, I came clean and allowed as how I had nominated one of the (unsuccessful, alas) candidates - not to have done so would have been disingenuous, because obviously I was a player in that particular story. But that doesn't alter the general point.

In fact, there's a good argument to be made that I ought *not* to declare my private sympathies when conducting interviews on contentious matters. The ABC certainly doesn't encourage anything that smacks of editorialising. As long as I put the opposing arguments to Prof Plimer (or to any interviewee for that matter), am I not entitled, even professionally bound, to keep my opinions to myself?

Or am I just rationalising away like mad here? I'd be interested to know what other readers think.

P.S. I saw that ad in *The Australian*. It certainly didn't answer any of Ian Plimer's arguments, and I doubt that he'd shrink from such a 'slanging match' anyway. ■

CREATIONISM

The Creationist's Quote Book

Mark Dawson

Many readers of *the Skeptic* must have at sometime wondered if they were misjudging the Creation Science Foundation over their publication, the Revised Quote Book (see *the Skeptic* Vol 11, No 3). Maybe Carl Wieland and Andrew Snelling were innocently using US creationist sourced quotes in good faith, possibly believing with religious fervour that these quotes were indeed accurate. After all, good Christian folk would not try to deliberately deceive others, would they?

This puzzle was answered for me at the lecture/book sale *Creation/Evolution: the controversy* given by Dr Carl Wieland at the Salvation Army Hall, Braddon, ACT on January 18, 1995.

As the evening progressed, the lecture made way for a ten minute sales pitch for the multitude of CSF materials that were available in the foyer. These also included the infamous Revised Quote Book. As Dr Wieland described the merits of this book to the audience, he commented on the accusation against the CSF of misquoting with the following statement:

"We have been accused of quoting out of context because we don't tell people that these people also in the next sentence are saying, yes but we believe in evolution or something like that. Well we don't have to. Everybody knows that evolutionists are committed to evolution. What we're saying is, its important to look in isolation at what they're saying about these important facts".

Obviously good Christian folk **do** try to deliberately deceive others.

Later as I listened to my tape recording of the evenings proceedings, I pondered over this statement and found much to my surprise that yes, I agree with Dr Wieland. Yes, we must "look in isolation at what they're saying about these important facts". Yes, we must look in isolation at what Dr Carl Wieland says about these important facts.

So now I take great pleasure in presenting:

The Carl Wieland Quote Book : 13 Quotable Quotes On Creation/Evolution By A Leading Creation Scientist.

Carl Wieland On Creation Science

"I'm not saying the arguments of creation scientists are infallible or anything like this. Like everything else they are subject to change, to discarding, to error".

"There are unsolved problems with the creation model".

Carl Wieland On Evolution

"My point is not to say that therefore evolutionary theory is wrong, I never said that".

"If you want to believe in evolution you can".

"...hey we see evolution happening".

"You can believe, for example, that reptiles turned into

birds 300 million years ago".

"I didn't say, no new genetic material could not occur".

"What we have observed is quote 'beneficial mutations' right. Now I was making that point, it was a concession to evolution. I was saying yes, there are mutations which are beneficial".

"Good things happen by chance OK, I acknowledge that".

"...you wouldn't expect a mosquito to turn into an elephant in a few years, do you know what I mean. You would expect only a little change. You would expect it to take millions of years. So if you take a little bit of that change and you stretch it forward in time, does that show that evolution could happen? It would...".

"Theoretically an amoeba could grow into a man after generations and generations if there was a way to generate new information. Because its an open system, exchanging energy with its environment, that wouldn't deny the second law". [of thermodynamics].

Carl Wieland On Atheism

"It doesn't matter if you are an atheist".

Carl Wieland On The Biblical Flood

"By the way, nobody can prove the flood".

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(See comment in *the Skeptic* Vol 15, No 1 p 8)

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FORUM

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Aboriginal Cannibalism

I am a slow reader and have only just finished Michael Pickering's cannibalism article in the Autumn issue. Michael is not Margaret Mead's grand nephew, but nevertheless suggests that only trained ethnologists or anthropologists can reliably identify an incident of ritualistic cannibalism.

This is contradicted by the homicide case which was investigated by police, and which I reported earlier. That a part of the victim's liver was eaten strongly suggests memories of an ancient ritual unless you want to argue that the perpetrators were obligingly acting out the white man's stereotype of Aborigines).

Cannibalism is occasionally associated with gross psychopathology but there is no indication of the latter in this case. Opportunistic cannibalism was not the case either. The clear inference is that

this was ritualistic, in particular it was a type associated with the slaying of an enemy, and if two Aborigines practised it half way through the twentieth century then it was not new, but sanctioned by the past.

Michael claims that he examined four hundred and forty cases reporting cannibalism. This is like Steven Goldberg (The Inevitability of Patriarchy) claiming to have examined five thousand histories and ethnographs of societies to prove that matriarchy never existed. No disrespect intended, but common sense asks how well each and every case was analysed. Did he examine my case?

Michael complains of lack of objective detail in the colonial reports. Of course, if he starts with the assumption that only a professional could reliably report the facts then he would say that, wouldn't he?

He says that colonists were prejudiced and 'found' what they expected to see. His concept of prejudice is unscientific. Prejudices not only carry objective information but are maintained by it. For example when I worked with Aborigines the common prejudice was that they were lazy. As an officer involved in Aboriginal employment I can confirm that some were indeed lazy, but not half as lazy as some whites who could not balance their perception with the clear fact that very many Aborigines worked hard, as whites do.

The fault of prejudice can lie not so much in an absence of objective information but in its crude handling.

So what of the colonial prejudice that Aborigines were cannibals? Given that vivid data socially transmits well, these meat eating colonists probably came to this land primed with vivid information conveyed by stories of cannibalism elsewhere in the world, perhaps even cases of survival cannibalism amongst whites. If whites could do it, and primitive peoples elsewhere did it, then Aborigines might do it. This is not mere prejudice, but rational expectation.

The question arises then as to why their reports were

not detailed as expected. The answer surely is that some probably would tend not to report in detail 'what everyone knows' and for others the horror of it would be repressed (think of veterans who refuse to recall the horrors of the battlefield).

If prejudice or bias has not lead to factual error, then the charge of bias or prejudice, naughty as they are, is irrelevant. Does Michael seriously want to argue that each of several hundred cases examined was a case of factual error? And if not, why the charge of prejudice?

If the colonial facts do not meet with Michael's expectations then one could argue that we should not just examine these facts but also scan Michael's own inquiry for prejudice. After all, there is a widespread taboo on publicly criticising Aborigines, of calling a spade a spade, and Michael is right in the thick of them out there.

We could also consider what Bertrand Russell called the "superior virtue of the oppressed" prejudice. Some would say that it is racist to suggest cannibalism on the part of Aborigines.

I am also unhappy with his dismissal of Sievwright as an unmitigated liar. Our perception of liars is biased by our inclination to attribute dispositions to others, but lying is strongly situational. You need to look at the situation and motives to see if a lie is being told. There is no such thing as a disposition in anyone to lie to anyone, anywhere, any time (in order to lie, it is necessary to tell the truth). So how can the inference logically move from unspecified 'facts' underpinning the Colonial Office accusation to the claim that Sievwright lied about the cannibalism

There are two question-begging assumptions here: unqualified argument from authority is sound, and liars cannot observe cannibalism. "Once a liar, always a liar" is not a principle of historical inference.

Another point: if Michael can take the view of colonial public servants on authority then why cannot he accept the more recent authority of the contemporary government records that I accessed, with the bonus that the same archives contain references to massacres that he would recognise as veridical? Michael said the Sievwright report was detailed and vivid. This is consistent with having actually observed the act. Cannibalism in the eyes of a horrified witness would indeed have a salience not easily matched by lies.

The simple fact is that our species can be cannibalistic, like other species. So why would anyone go to extraordinary lengths to prove that Aborigines could not have done it? What's the beef, or is it long pig? Politics? For more on anthropological objectivity see John Forbes' sharp essay in *Agenda* Vol 1 No 2, Faculty of Economics and Commerce, ANU.

**John Snowden
Tarragindi QLD**

A Family Connection

Upon my first contact with your journal I was surprised to find an inaccurate reference to an ancestor of mine in an article written by Dr Michael Pickering: "Cannibalism?", (*the Skeptic*, Vol 15, No 1).

My great-great grandfather was Charles Wightman Sievwright, who, between January 1839 and June 1842, held the position of Assistant Protector of Aborigines for the Western Protectorate of the Port Phillip District of NSW. For this position he became a magistrate to help bring law and order to the area.

He took his wife and seven children into the protectorate while he attempted to do his job. He won the confidence of some of the aborigines and learnt one of their languages. One aborigine was reported to have told a white settler, "You hurt blackfellow, Mr Sievwright hang you."

Siewwright gave evidence for the defence of an aborigine charged with killing a settler, but to no avail, and the accused was hanged. He also brought a settler to trial for murdering a blackfellow. The accused had a brother who was a neighbour of the judge, who instructed the jury to bring a verdict of 'not guilty'. Sievwright was accused by the judge of wasting the time of the court.

Pickering refers to author Barry Bridges (*Investigator* 7(1) pps21-28, and 7(2) pps54-59), for the purpose of questioning Sievwright, who, towards the end of his term of office had commented on cannibalism. I question why he does not also quote Bridges' second paragraph of p54, which reports that Sievwright in 1839, "...had ridiculed stories of native outrage and cannibalism." These two opposing comments from Sievwright show that he did not have preconceived ideas and had seen things in the protectorate which made him change his mind over a period of four years.

Siewwright fell into disfavour with the settlers and the government. Chief Protector Robinson recommended to Superintendent Latrobe that Sievwright be dismissed for exceeding the budget of the protectorate. He was dismissed in June 1842, but curiously the letter of dismissal made no reference to this. He journeyed to England and saw the Colonial Office papers about himself, and, back in Melbourne he made a reply in the form of a self defensive report, which, Bridges claims, got a claim of "lie" from those in Melbourne who had dismissed him. Neither Bridges nor Pickering have investigated whether "lie" is applicable to his defensive report only, or to all or any of his previous work. Pickering has also claimed, (*the Skeptic* 15 : 1, p59) that the Colonial Office labelled Sievwright an 'unmitigated liar', whereas his own reference, Bridges, (*Investigator* pps57-58) is the first to use this expression after considering all of the papers from the Colonial Office and the local administration. Pickering assumes that it is applicable to Sievwright's contribution to the 1844 report which referred to cannibalism. Bridges, p22, also claims Sievwright to be English, but he was in fact Scottish.

Pickering is not accurate in his writing about my ancestor. He has copied the typographical errors in the *Investigator* of the initials of the given names, and the misspelled surname of Sievwright, and he has quoted the expression 'unmitigated liar' from Bridges and claimed it came from the Colonial Office. This proves that he has not

gone back to basic references, but merely copied Bridges, including the errors and claims. Sievwright had previously been an officer in the British Army serving in the garrisons at Corfu and Malta, and was not a Church Minister as claimed by Pickering. Again no basic investigation.

Pickering has generalised from Bridges' claim, and inferred that my ancestor was in all counts an unmitigated liar. I resent this slur very strongly. Copying second-hand material, not going back to basic references, and making generalised statements from a single instance, are qualities to which sceptics are supposed to be opposed.

**(Mrs) Constance E. Blake
(nee Sievwright)
Hampton VIC**

A Reply to Blake on Sievwright

More power to Mrs Blake. She has provided an eloquent defence of her ancestor. Her comments clarify and expand on the biographical details of Sievwright. She has also pointed out several methodological failings in my article. I think, that on the basis of Blakes' defence, the charge that Sievwright was an 'unmitigated liar' could be discarded.

The mistake I made in preparing my paper was in attempting to condense a 228 page thesis (Pickering 1985) into a two page summary. As I noted in my previous paper (Pickering 1995) my initial examination of cannibalism was based on the notion that it did indeed occur. I had intended to investigate the social and religious dimensions of the practice. However, I was frustrated in finding the quality material necessary for such a study. It quickly became obvious that the evidence was not there. I studied 298 sources documenting 440 accounts. (This sample reflects the library listings of the Australian Institute for Aboriginal and Torres Strait Islander Studies in 1984). I broke accounts down according to whether they were first, second or third hand observations and the level of detail they provided. Of the 440 only 7 accounts, or 1%, fell into this category. Sievwright was one of these and the most detailed. Let me now cite directly from the thesis (Pickering 1985:85):

Siewwright (1844 In Eyre 1845:256-8 see Appendix 3) described, in detail, seeing Aborigines around lake Terang in Victoria engaging in cannibalism. A woman wounded in a fight died. As funeral preparations began, Sievwright was requested to leave but didn't. Signs were then made suggesting to him that the body was to be eaten. The body was disembowelled and the liver, kidneys, and heart eaten, and blood drunk. The flesh was cut from the body and the body dismembered, the limbs being placed into baskets. At this point Sievwright was offered a foot which he refused and left the scene. During the day Sievwright did see portions of the body consumed. The reliability of this observation is difficult to challenge although there are some considerations that should perhaps be kept in mind as possibly relevant: Sievwright, whilst a Church minister and Protector of Aborigines in the Port Phillip district, had a reputation of being a dubious and unreliable character in

certain areas. Bridges, in investigating Sievwright, stated:

In the voluminous report tendered in answer to the Colonial Office instructions, various strong assertions by Sievwright were given the lie direct by La Trobe, Robinson and Parker. The papers as a whole establish satisfactorily the fact that Sievwright was an unmitigated liar as well as an inefficient and insubordinate Protector and magistrate. As Chief Protector Robinson said at the time of Sievwright suspension, his connection with the department was unfortunate and the sooner dissolved the better. (Bridges 1972:58) (In 1971 Bridges had written on cannibalism in an article in which he very briefly and uncritically mentions Sievwright's experience.)

This alone is insufficient evidence upon which to discredit Sievwright's account, rather the intention is to reassert the point that, as regards cannibalism, elements of doubt concerning the authors reliability are ever present.

Now, in reference to Blakes comments, the spelling of Sievwright is derived from Eyre (1845:255-258), and Bridges (1971, 1972). She has corrected me regarding spelling. I did not refer to Bridges second paragraph because I did not deem it relevant to the description under investigation; my mistake. Blake is correct that the accusation of Sievwright being an 'unmitigated liar' was Bridges' determination and not a direct quotation of the Colonial office. Again, my mistake.

I do, however, still think that there are legitimate grounds to question Sievwright's accuracy and reliability in the case of his observations of cannibalism. He did fall into disfavour with the Colonial office and some senior and (still) respected and informed officers. Subsequent research, including my own, leaves him open to question.

In my original study I did not prove that Sievwright's account wrong. Objectively, it provided all the criteria I required to be classed as a 'first hand account of a complete act'. What I did demonstrate was that despite this detail strong doubts remained. I personally believe that Sievwright, at most, misinterpreted a non-cannibal mortuary ritual. I cannot prove this however and so readers is still entitled to make up their own minds.

As I noted above, I eventually found only seven reports (approximately 1% of 440) that satisfied the criteria of 'first hand report of observation of a complete act' (Siewwright (sic) 1844, Mowbray 1866, Meston 1955, Chaseling 1957, Basedow 1935[two accounts]). There were good reasons to suggest that all of these were doubtful as regards describing cannibalism. I could not, however, totally disprove them on the basis of available evidence. Subjectively I believe that they were not accurate in their conclusions and at most were describing unusual, but not cannibalistic, mortuary rites. Statistically, however, when 99% of the evidence is wrong, then it is reasonably to suspect the veracity of the remaining 1%. Further, even if the 1% were accurate, this is insufficient evidence upon which to conclude that cannibalism was a widespread cultural characteristic of Australian Aboriginal societies.

I thank Mrs Blake for her response to my original article. It is only through the process of scholarly debate that such issues may be investigated. The question of Aboriginal cannibalism will never be resolved, it must, however, be questioned. Not surprisingly, the investigation is likely to tell us more about the characteristics of our own society than it does of Aboriginal society.

My original thesis is available for examination through the Department of Archaeology and Anthropology, Australian National University, the ANU library, the Sydney University Library, and the Library of the Australian Institute of Aboriginal and Torres Strait Islander Studies. A copy has been lodged with the Australian Skeptics.

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Michael Pickering
Alice Springs NT

... Vu Deja from p 38

seconds, thirds etc. Your mate leaves you on the first day of marriage knowing that you will be having multiple wives. Your home is prebuilt to your specification and is ready just when you need it. Affairs are impossible, hiding your monetary status is impossible, your teenagers really know everything, everybody knows everything. It is now no wonder to you that the teen suicide rate is high in this city. You consult a clairvoyant who tells you something different to what you knew to be true in the future, you must be insane, but everyone knew that anyhow!

You return to the hospital as arranged when you were born and die of some insignificant disease. Your body is crushed to fertiliser (you knew no-one cared) and the Priest says 'he had many previous long and testing lives and his future ones aren't going to get any better (you knew you would return as a cockroach and survive the nuclear desolation of the earth as predicted and then be eaten by a lizard!).

Life wasn't meant to be easy, *Deja Vu!* ■

FORUM

Aboriginal Religion

To answer one question raised by Annie Warburton in her article on the Hindmarsh Island affair (Vol 16, No 2), the analogous issue is the tax-exempt status of Christian churches. The analogy is even clearer when the rate exemptions they enjoy on their property is taken into account.

Without these, they would be hard put to hang on to much of their prime real estate. Think of the frenzied activity and boon to developers - which would be described as a boost to the economy - if that exemption were lifted!

Should we now expect politicians and developers to call for a judicial inquiry to determine whether the story of Jesus' resurrection from the dead was fabricated? On this and any number of other beliefs - heaven, hell, salvation through grace, transubstantiation etc. - there seems to be considerable disagreement across and within denominations.

Or is it only the beliefs of the colonised that are to be subjected to such scrutiny? In his article in the *Weekend Australian* (27-28 May 1995) Mike Steketee says, *inter alia*: ". labelling as an invention the 'women's business' at the heart of the controversy . . . requires in the end a bigger leap of faith than accepting it as a genuine belief of Aborigines."

Which suggests that Annie may be more deserving of the Bent Spoon Award than Robert Tickner! Her argument that the benefits colonisation has brought to Aboriginal people are such that they should show gratitude by rolling over and submitting to the ways of the coloniser flies in the face of any non-eurocentric assessment of history, or of the life experience of Aboriginal people today. It merits the sort of response Frank Knopfmacher made to suggestions that recognition should be given to the good things achieved by the Nazis: "Yes, they made excellent soap out of the Jews".

Even in this century, the record of the virtuous attributes of western civilisation has taken a pounding from the wars between the white tribes of Europe. The noble coloniser is as much a myth as the ignoble savage.

Western leaders frequently espouse noble principles relevant to the this debate. Take the dictums of Margaret Thatcher, for example: "Sovereignty cannot be changed by invasion!" and: "There will be no negotiations with a man who takes over, by force, someone else's country, except that he gets out completely. No matter how long he stays there, we will never recognise his right to be there." She made those statements in other contexts: the first re the Argentine/Falklands struggle; the second re Saddam Hussein in the Gulf War.

That she, or we, would not think of applying them to this land indicates the reluctance many have to acknowledge that we who have arrived recently - in the last 0.3 of the time of human habitation of this continent - are living in someone else's land.

We expect migrants to respect the laws, customs and institutions we have brought to this land in which they have come to live: but are reluctant to accord the minimum of such respect to the people whose roots in this land go back

tens of thousands of years.

Annie, you don't deserve a period in the stocks: but it might be appropriate to put on some sackcloth and ashes.

Richard Buchhorn
West End QLD

A Response

Richard Buchhorn commits a logical error in the second paragraph of his letter. I asked whether allowing public policy to be affected by the Hindmarsh Island 'women's business' was analogous to allowing creationism to be taught in schools or to giving Christian Churches tax-exempt status. He opts for the latter. Fair enough, but then he goes on to ask: should we then call for an inquiry into the truth of basic Christian beliefs?

He forgets that the South Australian Royal Commission is not enquiring into the truth of the 'women's business', but whether the very idea is a recent invention. There is a big difference. Personally, I don't believe in the divinity of Jesus Christ any more than I believe that building a bridge to Hindmarsh Island will adversely affect the health and fertility of any women who live in the area, but I don't doubt that many people devoutly believe in the Christian story. I can't be so sure that anyone believes in the women's business, though, and I'm no more persuaded by the inconclusive evidence put before the Royal Commission so far than I am by the opinion of Mike Steketee. (Why Richard Buchhorn should cite the opinion of a Sydney journalist as authority for the proposition that certain people believe certain things is beyond me.)

However, to make the argument interesting let's assume the religious *bona fides* of Doreen Kartinyeri and her followers. Let's assume they really do believe building the bridge will hurt them. In that case, what is the duty of a compassionate society which professes to respect all creeds?

A hard-line rationalist might say: simple. Make no concessions at all - such a belief, however genuine, is demonstrably unfounded and we'd be doing the believers a favour by pointing this out. After all, we don't humour those religious sects, Christian or otherwise, which periodically summon their followers to a mountain top to await the end of the world. In fact if one of us had family members or loved ones caught up in such a sect we would consider it a kindness to try to convince them of the foolishness of their belief, so as to spare them the disastrous consequences of quitting their jobs, pulling their children out of school, selling their homes and all the rest of it. The more unkind among us would simply laugh at them. What's the difference between this and the bridge belief?

A more thoughtful sceptic might say: very many people derive mental comfort and moral guidance from religion, and churches do a lot of good work among the poor at

home and abroad. You have to take the good with the bad - you have to make concessions, and you shouldn't favour one religion over another.

It's a tricky area, which is why I invited other readers to contribute their thoughts in my last column. Personally, I'm not a hard-liner, and I certainly don't put western religions above aboriginal ones. However, I do believe in the separation of church and state. And for 'church' read any religion or faith system. Governments must limit the extent to which religious attitudes impinge on public policy, otherwise we'd have to allow some minorities to deny their children blood transfusions, and others to sexually mutilate their daughters.

And by all means extend the argument to the tax-exempt status of Christian churches. Why shouldn't the followers of religion pay for its material upkeep? Charitable activities could still be tax-exempt, but if the odd church should lose its congregation and therefore its financial viability, so be it. If the building itself had heritage value then society at large could decide whether to preserve it on that basis. And who knows? Any number of self-proclaimed gurus might be put off inventing new religions if the money they could thereby con from gullible people had to be taxed at the same rate as the hard-earned dollars of ordinary taxpayers are.

As for the aborigines, obviously we can't say let them 'pay' for their religion in the same way, at least not in terms of money and property. But we can, it seems to me, ask them to acknowledge that they can't have it both ways. If they want schools, hospitals, roads, sewerage, modern telecommunications and all the other benefits of late industrial society, they have to acknowledge, as we all do, that there is a price to be paid. Trees have to be chopped down, mines dug, water sources tapped. This isn't an argument for unbridled development, or progress-at-all-costs, it's a simple statement of fact.

And it isn't simply a material argument. The aborigines need to make some - intellectual? spiritual? - concessions. You can't one day maintain that illness is caused by the vengefulness of an offended tree-spirit and the next day march off to the nearest hospital demanding the best in western health care. You have to acknowledge that your faith-system might be flawed, and that another world-view might be preferable in some areas. And yes, I know the aborigines acquired a substantial body of 'bush medicine' during their 40,000 years on this continent, and undoubtedly we have a lot to learn from it. But it remains a small body of knowledge acquired incidentally and with no understanding of the natural forces at work, whereas the huge volume of western medical knowledge and technique was acquired by means of an open-ended system of observation and enquiry with the potential for limitless understanding of the natural world.

Richard, in equating this reasoning with the notion that 'the Nazis did some good things' you are flagrantly misrepresenting my argument and being downright unfair. I specifically acknowledged 'cruelty and neglect' on the part of the European colonisers of Australia, but we have to remember that this same cruelty was meted out to poor, powerless, white folks as well. It's also a fact that many of the early white administrators actively sought to deal fairly and kindly with the aborigines, and that the blacks copped a lot of the worst treatment from those same powerless white wretches who had most to lose from competition

with another underclass; just as the schoolyard bully turns out to be the abused child at home, and just as nowadays we find anti-Asian thuggery most prevalent amongst alienated and unemployed Caucasian youths.

To compare this 19th century history, with all its confounding complexity and moral ambiguity, with the evil mid-20th-century ideology of the Final Solution, seems to me an enormous insult to the victims of the Holocaust and their survivors. But that's a matter for you, Richard.

**Annie Warburton
North Hobart TAS**

Theology and the Creation Science Foundation

Sir Jim Wallaby has done a good, if brief, job on the recent advertisement by the Creation Science Foundation (Vol 15, No 2) which asked for donations to help pay for the cost of the advertisement which asked for donations to help pay for the cost ... There are, however, some points he overlooked, or perhaps was unaware of, or maybe thought would be too embarrassing for that estimable organisation if they were revealed.

I am only well acquainted with one member of the committee which carried out the investigation, Rev John Walker. Like the other members (apart from the chairman) he is a minister, and would claim no special expertise in theology. However the CSF seems to want to gain some sort of prestige from the positions he holds in an *ex officio* capacity.

He is, as the advertisement claims, "President, Bible Society of Australia (Queensland) and President of the Baptist Union of Queensland, as well as Chairman of the Baptist Union's Executive Council and Ministerial Committees respectively." I am not sure that the Bible Society would be entirely pleased with this. The position of President, which rotates around the leaders of the different denominations on an annual basis, is a fairly nominal position, with the work being carried out by a board. For the 1994-1995 period it was the turn of the President of the Baptist Union of Queensland. Also the President of the Baptist Union of Queensland is, again *ex officio*, Chairman of the Executive Council and of the Ministerial Committee (I will assume that their plural "Committees" is a typographical error). They omitted to say that he is also, *ex officio*, a member of a whole range of other committees and bodies, and will be succeeded on these by the next President of the Baptist Union of Queensland. Perhaps including all his *ex officio* positions may have left little room for the report.

Since the Bible Society was mentioned, one wonders why the person who filled the position of President in the Queensland section for 1993-1994 was not included on the Inquiry Committee. This would have given the CSF the opportunity to include an eminent Anglican. But perhaps, in choosing their own jury, the CSF did not want

Archbishop Peter Hollingsworth, who wrote the Foreword to Ian Plimer's book, around to offer cogent criticisms of their claims.

I suspect that the CSF is not aware of just what the report of the Inquiry Committee reveals about CSF theology, even though the Committee was not asked to investigate it. The Committee reported "We were not asked to examine CSF's theological position which, as individuals from evangelical churches in different denominations, we may or may not share in all respects." In their comment following the report the CSF asked why they were being attacked. They suggested "Is it to deter people from even considering the many evidences favouring biblical creation (foundational to the Gospel and to the moral absolutes—rapidly eroding today — on which our society was based)?" Readers of *the Skeptic* will be well-acquainted with the lack of any such evidences, so I will pass over that part. But is their idea of "biblical creation" so important? More precisely, to what extent does the Christian church believe that this is "foundational to the Gospel"? In this article we will look at some of the classic statements of belief of the churches. We will see that perhaps the CSF was wise *not* to ask the committee to investigate their theological position, since some of their particular ideas come from unusual places.

As far as I am aware all the denominations involved would accept, perhaps with minor modifications, the traditional statements of faith as found, for example, in various Christian creeds. But there are two things which are distinctive about the "theological position" of the CSF: (a) its insistence that the universe was created only a few thousand years ago in six days, each only twenty four hours long, and (b) that nearly all the geological strata were formed during the (roughly) one year long, worldwide (in the modern sense) flood in the days of Noah. So let us have a brief look at these two particular teachings, to see just how they are mentioned in the various doctrinal statements of the churches, and to what extent the churches regard them as "foundational to the Gospel", as claimed by the CSF.

While one needs some theological training to appreciate the fine points of doctrine which have led to the proliferation of so many denominations down through the ages, one needs little more than a reasonable knowledge of the English language to look at Christian creeds, or read the various statements of belief. After all, in many churches these are recited regularly by the people in the pew, who, on the whole, have no theological training. This is in marked contrast to scientific matters, which can require years of training before one is regarded as competent to discuss them. Thus a committee of scientists (or even a single scientist) may be able to give a reasonable summary of Christian beliefs, while a committee of clergymen would be quite hard pressed to give any sort of reasonable summary of relativity, quantum mechanics or evolution.

Since the chairman of the Committee was an Anglican, we will start with the Book of Common Prayer. This contains the thirty nine Articles of Religion, and three Creeds, the Apostles' Creed, the Nicene Creed, and the Creed of St Athanasius. The following quotations are taken from these as printed in the 1662 Book of Common Prayer; the language is somewhat modernised in recent revisions, but the substance is the same.

Starting with the Articles of Religion, the first sentence

of the first article reads "There is but one living and true God, everlasting, without body, parts, or passions; of infinite power, wisdom, and goodness; the Maker and Preserver of all things both visible and invisible". So we have God as creator. But what about the six days? Sorry, no mention here, or in any of the other articles, about six days. And when did all this take place? 4004 BC or billions of years ago? Sorry, not mentioned. And Noah's Ark and the flood? Surely these must be mentioned somewhere? Sorry again; no mention of Noah or his ark or the flood. Not a very auspicious beginning for matters which are described as "foundational" by the CSF.

The statement in the Apostles' Creed is briefer. "I believe in God, the Father Almighty, maker of heaven and earth, and in Jesus Christ ..." No six days; no mention of a few thousand years or billions of years; and no mention of Noah anywhere. The Nicene Creed is slightly longer, but again provides no comfort for your friendly neighbourhood creationist: "I believe in One God, the Father Almighty, Maker of heaven and earth, and of all things visible and invisible, ...", with again no mention of six days, or a few thousand years ago, or Noah.

The Creed of St Athanasius would strike most people today as rather weird, if not incomprehensible. It starts "Whosoever will be saved: before all things it is necessary that he hold the catholick [sic] Faith. Which Faith except every one do keep whole and undefiled, without doubt he shall perish everlastingly..." It is almost entirely concerned with the doctrine of the Trinity. And the only mention of "creation" in it is the statement that God is not a created being. It doesn't even say that God is the creator of everything, much less when and how he went about creating. And nothing on Noah.

To summarise: the various statements of faith used among Anglicans make no mention of any six days of creation, or recent (only thousands of years ago) creation, or Noah and his flood. So at least the Anglican church does not see the peculiar beliefs of the Creation Science Foundation as "foundational".

I am not familiar with the doctrinal statements of the Uniting Church or the Wesleyan Methodist Church, so will not comment about them.

Presbyterians take the Westminster Confession as their basis. This was put together by a group of people appointed by the English Parliament in 1643, and was approved by that Parliament in 1648, having been ratified by the General Assembly of the Church of Scotland in 1647. It is quite lengthy, and goes into doctrine in much greater detail than the creeds of the Anglicans. Chapter IV is entitled "Of Creation", and the first article in this reads: "It pleased God the Father, Son, and Holy Ghost, for the manifestation of the glory of His eternal power, wisdom, and goodness, in the beginning to create, or make of nothing, the world, and all things therein whether visible or invisible, in the space of six days, and all very good." Well, there we have mention of "six days". But no mention here, or any where else in the whole of the Westminster Confession of how long ago all this took place. Nor is there any mention of the Flood, or Noah. So the Presbyterian Church, at least in its official statement of faith, makes no mention of at least one item which the Creation Science Foundation claims is "foundational".

And what about the Baptist churches? Here we are on rather different grounds. Each individual Baptist Church

is free to make up its own statement of faith, and there is no compulsion about either including or excluding particular beliefs. However since the CSF made much of John Walker's position as President of the Baptist Union of Queensland a brief look at the Constitution of this body is warranted. This contains a section entitled "Declaration of Principle", and the preamble to this reads: "It is recognised that every separate Church has liberty to interpret and administer the Laws of Christ. However, the following summary of generally recognised doctrines is submitted as a minimum doctrinal statement for affiliation with the Union." Then follows nine brief statements covering such things as the inspiration of the Bible, the Trinity, sin, salvation, and so on. And what about creation? Absolutely nothing! It does not even mention that God is the creator of everything! So it naturally makes no kind of statement about how long ago he did all this. And, of course, no mention of Noah or his flood, or its extent.

To summarise: The only mention of "six days" is found in the Westminster Confession of the Presbyterian Church. None of the statements make any claim about creation taking place only a few thousand years ago, rather than 15 billion (or thereabouts) years ago. And none of them even mention the flood, much less its extent, either temporal or spatial, or the way Noah and his family were saved.

There seems to be some sort of conflict here between the CSF and members of the evangelical churches. Even the members of the Inquiry Committee stated that they "may or may not share in all respects" these beliefs. Are these theological claims important - or "foundational" to use the word favoured by the CSF - or are they not? As Sir Jim wrote, the Committee would appear to be qualified only to comment in this area, but they did not. It raises serious doubts, as Ian Plimer and Archbishop Hollingsworth have said, that these are, in any way, part of traditional Christian teaching. These two are simply following in the steps of large numbers of Christian theologians, of all shades of opinion, from the time of Augustine (AD 400) onwards, and scientists from Galileo onwards. And if these beliefs are not part of such teaching, why is the CSF, which claims to be a Christian organisation, pushing them so vehemently? Just where did these beliefs arise?

Beliefs do not arise out of thin air - there is usually some basis, however nebulous it might appear to some people, behind them. And here we can thank the guru of the creationist movement, Henry M Morris, for enlightenment. In his book *A History of Modern Creationism*, published in 1984, he revealed that much of the inspiration for his 1961 joint work with John C Whitcomb, *The Genesis Flood*, came from reading a book published in 1923, *The New Geology*, by George McCready Price. Now Price was a Seventh Day Adventist, and his teachings form part of the teachings of that group (or at least they did until very recently - there has been some slight shift away from Morris's "strict young earth, flood geology" position in recent years).

The seven volume Seventh-day Adventist Bible Commentary was published in 1953. The first volume of this, in common with many other multi-volume Bible commentaries, contains some general articles. The first of these, "The Language, Manuscripts, and Canon of the Old Testament" is the sort of thing found in many other places, though the content reflects their particular ideas.

But the second and third articles bear the titles "Science and a Literal Creation" and "Evidences of a Worldwide Flood".

If you have read anything emanating from creationist sources don't bother to get this from your local library - there is nothing new, simply the same old creationist stuff, except that they are rather more honest about claiming that ideas are based primarily on the Bible. Note that this work was published eight years before Whitcomb and Morris published the book which started the modern creationist movement. There is nothing really new in Whitcomb and Morris: they simply re-packaged Seventh Day Adventist doctrine in a form to make it more palatable for the fundamentalist community.

And why are the Seventh Day Adventists so strongly in favour of these ideas? Well, this goes back to last century, and the source may not be altogether acceptable to a group where women know their place - I assume that it has not escaped the notice of readers of *the Skeptic* that all the members of the Inquiry Committee were male. The group which is now known as Seventh Day Adventists has its origin in the ideas of Ellen G White, who is widely referred to as the "prophetess" of the movement, and it was she who pressed the idea that creation took place only a few thousand years ago when all the other churches, Catholic or Protestant, liberal or conservative, were quite happy to accept the findings of geology that the world was many millions of years old. And she also pressed the idea that the flood was worldwide in the modern sense of this term, while other Christians were quite happy to read the account in Genesis as referring (in some way) to one of the many floods which have occurred in the Tigris-Euphrates region.

Of course, there is always the possibility that we have misunderstood the "theological stance" of the Creation Science Foundation. It may be that they are quite happy with a very old universe, and some sort of local flood in the ancient Middle East. But if this is so, could they perhaps be a bit more open with their supporters, and state these clearly and dogmatically?

The next time you find yourself disagreeing with your friendly neighbourhood creationist, you might suggest to him that he probably is not aware that the ideas he is supporting so strongly not only originate with a group (Seventh Day Adventists) about which he may have some reservations, they also come from the mind of a woman who led that group. While his mind is almost certainly made up, you may give him a few uneasy moments, and may make him a little less dogmatic about his ideas being traditional Christian teaching.

A final point concerns the management style of the CSF, which the Committee was also not asked to investigate. Since the advertisement appeared I have looked at many other advertisements in various papers and magazines. In not one of them did the advertiser appeal for funds to pay for the cost of the advertisement: "Buy the Sydney Harbour Bridge, and please send us some money to pay for this advertisement". But, again, this may be part of their particular theological stance. After all, creationism has its origin in USA, and we are well aware of the fund-raising tactics of American televangelists. So perhaps soliciting funds to pay for advertisements which solicit funds to pay for advertisements which solicit funds ... may be acceptable in this context. Perhaps the Inquiry Committee could be called together again to see whether this is acceptable

Christian ethics.

But I sometimes wonder how much additional charitable work the churches could do if the liberal donations to the CSF coffers were directed elsewhere.

(Dr) Ken Smith
Mathematics Dept
University of Queensland

But is it Education?

Readers may have seen a report by Denis Fitzgerald published in the NSW Teachers' Federation newsletter *Education* in February 1995 (and mentioned in *the Skeptic* Vol 15 No 1, p. 65) voicing the Federation's concerns at the continuing infiltration of our education system by the Creation Science Foundation.

Given the Federation's concerns and the continuing interest shown by fellow sceptics in this insidious cult I pass on some information I obtained from a copy of a report titled *Fundamentalist Education and Creation Science* by Cathy Speck and David Prideaux from the University of South Australia. The report was published in the *Australian Journal of Education*, Vol 37, No 3, 1993, pp. 279-295. Copies can be obtained from the National Library of Australia through your local library.

The preamble to the report is worth quoting in full: "It is argued that creation science education, because of its conservatism, has become accepted as a quiet presence in Australian education. The authors demonstrate, via an examination of the social studies and science components of a creation science education program, how these programs are at odds with widely accepted views on education in Australia and do not comply with requirements for registration of non-government schools, as set out by the Australian Education Council. Moreover the wider issue of creation science has been pushed aside as 'too hard' by Australian educators. It is argued that there is evidence to question seriously this narrow fundamentalist education operating in some Australian schools."

The report concentrates on the quality of the curriculum offered in these fast proliferating Christian community schools and parent-controlled Christian schools (a frightening concept) and refers specifically to those that operate on the American developed Accelerated Christian Education (ACE) curriculum.

The ACE curriculum is in essence based on creation 'science' beliefs and centres around a system of programmed learning booklets called PACEs (Packets of Christian Education). The American founder and chief 'theoretician' of the ACE curriculum is Donald Howard who writes:

"Education is life. The Bible is the Book of Life. It is the foundation of all human relations and principles of teaching. It is the basis of all Accelerated Christian Education text materials ... designed for programming

the mind to enable the child to see life from God's point of view ... Humanism, progressivism, situation ethics and the new morality ... are replaced by the absolute standards of right and wrong."

The report deals in some detail with the ACE social studies and science curriculum. It first makes a comparison with the ACE and primary school social studies curriculum documents from all Australian states and territories. I quote again from the study:

"The majority of PACEs have been developed in North America, but some have been ... prepared locally and substituted for the corresponding international PACE ... On the criterion of content alone, the ACE Social Studies booklets fail to give children a broad understanding of Australian society. The PACEs teach ancient Biblical history, a little modern history related to Christian leaders, and world geography via missionaries with an emphasis on the missionaries themselves, and a value-laden view of economics ..."

The treatment of Aboriginal Australians in the social studies PACEs consist mainly of simplistic generalisations, for example:

"In general, Aborigines ate whatever came their way which was fit to eat or edible and usually where and when they found it."

The curriculum shows no appreciation of Aboriginal spiritual beliefs except to teach that those beliefs are unacceptable to Christian fundamentalists. Substantive values are taught in an essentially one-sided and occasionally prejudicial manner, characterising members of government as 'evil':

"The government must be a busy servant of the people for good. The governments on earth are doing what God commanded in making rules and laws for men [sic] to follow. Not all men in government love God, so everything is not the way God wants it in government. The world is filled with sinful people. Some of those in government are evil men who do not love God. They do not know how to treat others right [sic] because they do not love God right."

ACE social studies also pushes a distinctly patriarchal line in depicting wives as being subservient to their husbands. A woman's place is taught as being in the home. The study quotes the mother in the 'Virtueson' family explaining her role to her son Ace:

"Ace, your father is the head of our home. It is God's plan for the father to be the head of his family. I talk to your father about things, but he is the one who decides what we must do. I would do wrong not to obey your father because he is the head of our home. God is pleased when a mother obeys the father in the home."

The study details the ACE science curriculum with its emphasis on creation 'science' and though readers will be well acquainted with the methodology employed I include some examples of what the study refers to as "... lack of objectivity, the corresponding creation science bias and the lack of problem solving in the reading comprehension approach to PACE work". The following example of creation 'science' bias is taken from a Year 10 biology PACE:

"Charles Darwin is one of the most important figures in the history of science. He observed facts and speculated about them. His ideas were wrong for the

most part, but they have been accepted by many scientists. Darwin visited the Galapagos Islands in the southern part of the Pacific Ocean. He noted the unique forms of life existing there and formed his theory of natural selection - that 'Nature' selects for survival the creatures that have the most adaptable organs. This theory is commonly called evolution ... Remember the Bible is completely against any such theory. Evolution claims that man arose through a series of random changes. This theory leaves no room for man's responsibility or man's sin. If evolution were true, no man would be born a sinner because Adam would never have fallen and committed the original sin of disobedience to God. If evolution were true, Christ would not have needed to die for sin."

There is only limited recognition of accepted scientific methods in ACE 'science' but students are required to test its veracity on the basis of its compatibility with the Bible: "Science is defined as a search for principles of God's creation based upon reproducible experiments ... We should always subject a principle to the test of the Bible."

The report concludes by claiming that students completing ACE schooling lack the appropriate knowledge, values and skills to enable them to participate in Australian society. Though the authors call for intervention by the state in those schools teaching the ACE curriculum, they put forward the view that such intervention may be difficult. It would need to be conducted through the courts, and establishing deficiencies in a curriculum based on 'pro-family', 'pro-free enterprise' and 'anti-secular humanism' sentiments, given the trend toward rightist educational policies which are gaining increasing favour in capitalist countries throughout the world, would mean that any legal debate would be protracted.

**John Stear
Coombabah QLD**

The Sanctity of Morality: Are Values Sacred?

Some of us may be religious. Some of us may have supernatural belief systems. There are those who have paranormal belief systems. Then there are those who have secular belief systems. The most notorious secular belief systems are Nationalism, Fascism and Communism. At worst, these latter three give an imagined assurance of superiority to the in-group, and involve intense blind hatred toward the out-groups, be it based on nationality, race or class.

Some of us have become so sceptical of our belief systems that we have lost them. Yet we feel the need for some sort of belief system, if only to underpin our values. One secular grouping, the Rationalists, offers us a belief in rationality, reason and science. Another such grouping are the Secular Humanists. One type of description of

Humanism is that it is a set of ethical ideals and moral values considered to be of ultimate concern by the individual holding them.

The Humanist Society of Victoria states its objectives as, "To help create a society in which a person may reach his or her potential free from supernatural beliefs; and to foster a scientific approach to human problems". On the other hand, the Humanist Society of New South Wales has declared itself to be a Religion; if not on the same level as the supernatural religions, then at least in the sense of a Life Philosophy or a Life Stance, in the manner of Confucianism.

Modern Secular Humanism has been plagued by this debate ever since its inception. For example, the young Karl Marx and Friedrich Engels held Humanist values. Socialism, their ideal socioeconomic system, was to be the means of achieving those values. However, following the criticism directed at their guru, Ludwig Feuerbach, by Max Stirner (another Young-Hegelian philosopher), Marx and Engels dumped both their Humanist values and their Socialist ideal. Why? Max Stirner (1806 - 1856) published his book, *The Ego and Its Own*, in 1844, causing a furore among his acquaintances, *Die Freien*, a Berlin group of intellectuals with diverse viewpoints, amongst whom Marx and Engels are the best known.

Max Stirner argued that all ethical and moral principles are 'Sacred', in that all such ideals are above and beyond the individual. Individuals must serve the ideal and not their own interests or desires. Individuals must revere the ideal and be prepared to sacrifice their lives for the ideal if called upon to do so. This situation applies no matter what ideal it is one's duty to serve:- God, Queen, Country, Nation, Family, Tribe, Community, Society, Class, Colour, Race, Truth, Justice, Freedom, Humanity, etc. The ideal is everything, the individual nothing. The ideal is Sacred.

Stirner further argued that the various religions are simply sets of moral and ethical ideals, and that the gods of each particular religion are merely the personification of that religion's set of ideals.

Stirner contended that the Humanist philosopher Ludwig Feuerbach, in his 1841 book *The Essence of Christianity*, had replaced one sacred ideal with another. Feuerbach had replaced God with Man, Mankind, Humanity. Instead of it being God to whom individuals were duty bound to sacrifice their interests, it was now a new sacred ideal, Humanity. Stirner further contended that his concept of Sacred also applied to ideal socioeconomic systems such as Socialism.

Engels, in a letter to Marx (19 November 1844), initially expressed partial agreement with Stirner, but later, Marx and Engels when writing their book *The German Ideology* in 1845-6, included a section entitled 'Saint Max', containing 350 pages vilifying, parodying and lampooning their colleague, Max Stirner, whilst at the same time utilising many of his ideas, and by so doing inaugurated what we now know as Mature Marxism or Historical Materialism.

This marks the turning point where Marx and Engels, although dumping their Humanist ideals, nevertheless began the attempt of resurrecting their Socialism as 'Scientific'. Socialism would not be the outcome of any ethical or moral values held by Humankind, but was inevitable. Socialism would be the historical outcome of the inexorable movement of objective economic forces.

Consequently, this outcome would have had nothing whatsoever to do with ethical ideals, it would be value-neutral. By this method Marx and Engels believed that they had avoided Stirner's claim that their Socialism was Sacred.

Where does that leave modern Secular Humanism? To follow Marx and Engels into the metaphysical alchemy of inverting Idealism and adding Materialism? Hey Presto, a new pseudoscience, Dialectical Materialism! Or should the Humanists ditch all their ideals and risk becoming totally lost like the Existentialists? Skeptics warn, "Don't take your scepticism too far". The Existentialists did take their scepticism too far, and fell off the edge. Many of them are floundering in a meaningless and purposeless void, a situation which can often become life threatening.

Another German philosopher, Friedrich Nietzsche (1844 - 1900), is accused by some scholars of plagiarising the less known Max Stirner. Consequently, Stirner is now considered to be the first atheistic Existentialist. Yet some label Stirner a Nihilist rather than an Existentialist (See "The Nihilistic Egoist: Max Stirner" by RKW Paterson, University of Oxford Press 1971). Nihilism shares with Existentialism the realisation of the meaninglessness of both belief and value systems. The Nihilist, like Stirner, wallows in this realisation and rejoices in the release from

such shackles.

On the other hand, the Existentialist is horrified by his loss of belief and despairingly searches for a replacement, knowing that he will not be able to really believe in it. An Existentialist can be said to be a Nihilist who cannot stand being a Nihilist. Meaninglessness might make a Nihilist joyful, but it gives the Existentialist 'angst'. This makes him flail about trying to generate a new meaning and desperately attempting to believe in this newly created meaning.

But Humanists already have their own created meanings, values and ideals. Or they have procured some with which they are quite content. So my serious advice to the Secular Humanists is to stick to their beliefs. They may need them for their personal wellbeing. They shouldn't allow themselves to be browbeaten into ditching their ideals by the Nihilist claim that all meanings, values, principles, ideals, etc, are necessarily Sacred; in other words, Religious.

**David Miller
Bundoora VIC**

WA Meeting with Dr Susan Blackmore

Following the Convention, Dr Susan Blackmore spent two days in Perth before departing again for Sydney and NZ. During her brief stay she had radio and newspaper interviews, one public meeting, and sessions with local skeptics and academics.

The public meeting at Curtin University attracted a capacity audience of about 60 people despite inclement weather. Of those who attended, nearly half were students

and academics from various WA universities who had seen the flyer sent to psychology departments, a handful had heard of the meeting via an ABC radio interview earlier on the same day, and the rest were Skeptics. A poll taken as they entered showed that their interest in the paranormal was mostly unspecific, with only two persons having

specific interests (dreams, heredity).

The format for the evening was somewhat unusual. It consisted of WA Skeptic Dr Geoffrey Dean interviewing Dr Blackmore using a mutually agreed structure, with additional questions from the audience at the same time, the idea being to encourage discussion right from the start.

The audience was lively and needed no encouragement. There was about an hour of structured interview and

questions, then half an hour of unstructured questions, then an hour of further discussion over tea and biscuits. Altogether the evening was greatly enjoyed by everyone and was rated a big success. The WA Branch is most grateful to the Victorian Skeptics for making Dr Blackmore's visit possible.



Dr Susan Blackmore with (left) Dr John Happs, President of the Australian Skeptics, WA Branch, and Professor Gary Groth-Marnat of the Curtin University Department of Psychology, a researcher in the area of NDEs and host for the public meeting. [Photos: Geoffrey Dean]

FORUM

Asteroids and Aliens

Arbitration

Duncan Steel's Article Asteroids and Aliens (Vol 15, No 1) has started a heated discussion (see *Forum*, Vol 15 No 2, p46) The problem is one of mathematical Statistics and Logic, and hence any argument against Steel's reasoning can only be right or wrong: If Steel is right, both Weiler and Culpin must be wrong and vice versa. The only other possibility is that both sides are wrong.

The issue is important enough to be decided one way or the other, and since all contestants are uncompromisingly fixed on their viewpoints, it has been decided to seek an independent arbiter. Background

I was surprised that Dr Steel's reasoning resulted in UFO 1991VG having a very high probability of being an alien vessel. The result was so unexpected that I checked Steel's mathematical argument. I found what I believe to be a mistake in his mathematics, however, trying to be a true Skeptic, I rang my friend and former colleague, David Culpin, to check my own reasoning. He said: "Don't tell me now; let me investigate the problem independently". He soon arrived at the same conclusion as I, namely that Steel's high probability was due to a confusion of prior and posterior probabilities. Correspondence with Dr Steel then followed, but no agreement could be reached choice of an arbiter. Since the problem is one of Mathematical Statistics, the arbiter must be an authority on Mathematical Statistics. He must be of high status and integrity to be acceptable to all parties concerned. A second (independent) arbiter satisfying these conditions may be submitted if desired. I shall abide by the arbiter's decision. If he decides that I am wrong, I shall grin and bear it. (It wouldn't be the first time.) I hope the others will adopt the same attitude.

Clarification

After several attempts to find an arbiter, Prof Joseph Garni, FAA, has been kind enough to study our problem. Some correspondence and several long discussions over the phone then took place and the following policy was agreed upon: Before any arbitration is possible, all mathematical symbols used must be unambiguously defined. We agreed that the symbols A,B,C shall have the following meaning: the letter A denotes the event that an asteroid has entered an orbit similar to the orbit of the UFO 1991VG. (Note that in general we do not know whether A has occurred at any given instant, because we may not have seen or observed any object at that time and even if we have seen an object we may not know whether it is an asteroid).

Let $P(A)$ be the probability that A occurs in a random calendar year and let $P(R|A)$ be the probability that the object is actually seen, given that it is an asteroid. Similar definitions hold for B, a man made object and C, an alien space ship. The problem can now be stated clearly.

1. The probability to be investigated is $P(C|R)$, the probability that an observed object is an alien space ship.

2. To calculate $P(C|R)$, the numerical values of $P(A)$,

$P(B)$, $P(C)$, $P(R|A)$, $P(R|B)$, $P(R|C)$ are required. None of these six probabilities can be derived from the other five.

3. Let D be the event that no object has entered an orbit of the type considered. (Astronomers will agree that $P(D)$ is close to 1.)

4. The following equations can now be stated:

$$P(A) + P(B) + P(C) + P(D) = 1 \quad (1)$$

$$\text{(Hence } P(A) + P(B) + P(C) = <1 \text{)}$$

$$P(A|R) + P(B|R) + P(C|R) = 1 \quad (2)$$

(Equation (2) should replace Duncan Steel's equation $A + B + C = 1$)

5. For the calculation of $P(C|R)$ it is convenient to determine:

$$P(R) = P(A\&R) + P(B\&R) + P(C\&R) \quad (3)$$

which is the probability that an object is observed in a random calendar year.

(Note that $P(D\&R) = 0$ and $P(R) < 1$ because $P(\text{non } R) \neq 0$)

These five points basically comprise what was claimed by both Culpin and Weiler. But thanks to discussions with Prof Garni, it is now in a very precise form, more likely to be acceptable also to Dr Steel.

Weiler's Suggestion for Mutual Agreement

Since Dr Steel estimates $P(C|R)$ without using $P(C)$ and $P(R|C)$, his mathematical deduction cannot be valid. But this does not exclude the possibility that his intuition as an astronomer will guide us to jointly make a valuable contribution to this important issue.

In an attempt to understand what could possibly lead to a high probability for $P(C|R)$, I reasoned as follows: Asteroids are unlikely to enter an orbit of the type considered. But even if one did, it would be extremely unlikely that it is observed. In mathematical terms we would say that $P(R|A)$ is very small indeed, some astronomers assess it to be of the order of 10^{-5} . Similarly it is most unlikely to see a man-made object in this type of orbit. Hence, if you actually see an object you would conclude that it is probably some object that has a better chance of being detected. Now, why should an alien vessel (C) be easier to see than A or B? The answer is that C is a steered vessel. Although it tries to hide (so they say) it will enter the orbit again and again to see what we Earthlings are up to. Hence $P(R|C)$ can be assumed to be larger.

Based on these considerations, I assume tentatively the following probabilities:

$$P(A) = P(B) = 10^{-3}; P(C) = 10^{-6}; P(R|A) = P(R|B) = 10^{-5} P(R|C) = 0.1$$

This gives:

$$P(R\&A) = P(A)P(R|A) = 10^{-8} = P(R\&B) \quad P(R\&C) = 10^{-7}$$

$$P(R) = 10^{-8} + 10^{-8} + 10^{-7} = 1.2 \times 10^{-7}$$

$$P(R\&C) = P(R)P(C|R) \text{ or } 10^{-7} = 1.2 \times 10^{-7} P(C|R)$$

Hence

$$P(C|R) = 0.83 \quad P(A|R) = P(B|R) = 0.085$$

Only $P(R|A)$ and $P(R|B)$ seem to be discussed by astronomers: They should also investigate $P(A)$ and $P(B)$.

By substituting different values for all these probabilities, within the range of reasonable assumptions, it may be possible to decide whether 1991VG is, or is not, a likely contender to be an alien vessel.

**Hans Weiler
Croydon NSW**

Arbitration

The interesting problem discussed by Dr Steel, Dr Weiler and Dr Culpin is one on whose solution we should all be able to agree, once we have reached agreement on the exact model and terms we are using. I think that misunderstandings may have arisen because of the difficulty of assigning exact definitions to the events involved. I have attempted to clarify the concepts of the astronomical situation by discussion with Dr Weiler, but I am still not certain that I have fully understood the exact position. If not, I hope that Dr Steel will set us straight by clarifying our views. For the moment, the comments below should be regarded as applying to the astronomical model as I understand it; I am well conscious of the fact that this may differ from the astronomical reality which Dr Steel had in mind.

Let us assume that in a particular region of the sky, over a period of one year, say, observations are made. There appear to me to be four possible observed events:

1. A&R, or the event that there is an asteroid and a moving object is detected,
2. B&R, that there is a man-built object and a moving object is detected,
3. C&R, that there is an alien vessel and a moving object is detected,
4. D&R, that there is no moving object and a moving object is detected, this being a null event.

On this assumption, we would have for the probabilities $P(\)$ of these events, that

$$P(A\&R) + P(B\&R) + P(C\&R) + P(D\&R) = P(R),$$

the probability that a moving object is detected, where $P(D\&R) = 0$. $P(R)$ may be less than 1, if there is a chance that a moving object may not be detected. This would constitute the event N, where $P(R) + P(N) = 1$. On the basis of the present model, Dr Weiler's and Dr Culpin's calculations appear to me to be correct.

What we are really interested in is the conditional probability $P(C|R)$, namely the probability that given that a moving object has been detected, it is an alien vessel. The classical Bayes' Theorem situation can be represented by the diagram below:

P(N)	P(A&N)	P(B&N)	P(C&N)	P(D&N)
P(R)	P(A&R)	P(B&R)	P(C&R)	P(D&R)
	P(A)	P(B)	P(C)	P(D)

with N indicating the event that no moving object is detected. $P(N)$ is the sum of the four probabilities on its right, and $P(R)$ is also the sum of the four probabilities on its right. $P(A)$ is the sum of the two probabilities above it, as are similarly $P(B)$, $P(C)$, and $P(D)$.

We start with the unconditional probabilities

- P(A) that the object is an asteroid;
- P(B) that the object is man-built;
- P(C) that the object is an alien vessel;
- P(D) that there is no object;

for which $P(A) + P(B) + P(C) + P(D) = 1$, and the first three may add up to less than 1. We now use the conditional probabilities $P(R|A)$, $P(R|B)$, $P(R|C)$ and $P(R|D)$ that, given A, B, C, or D, a moving object is detected. Then we can obtain the probabilities

$$P(A\&R) = P(A)P(R|A), \quad P(B\&R) = P(B)P(R|B), \\ P(C\&R) = P(C)P(R|C), \quad P(D\&R) = P(D)P(R|D) = 0.$$

If we are concerned with the probability $P(C|R)$, then we first require the probability $P(R)$ that a moving object is detected, and since $P(D\&R) = 0$,

$$P(R) = P(A\&R) + P(B\&R) + P(C\&R).$$

Then Bayes' Theorem states that

$$P(C|R) = P(C\&R)/P(R) = P(C\&R)/[P(A\&R) + P(B\&R) + P(C\&R)].$$

Let us illustrate this by an example, in which $P(A) = P(B) = p < 1$, and $P(C) = p/1000$ a very small number. Let us take $P(R|A) = P(R|B) = s < 1$ very small, and $P(R|C) = ks < 1$, where k is a large number, on the assumption that C is more detectable than A or B. Then

$$P(C|R) = pks/1000[ps + ps + pks/1000] = k/[2000 + k]$$

which could turn out to be quite large if k is a large number. For example, we list the values of $P(C|R)$ for $k = 100, 1000, 10,000, \text{ and } 100,000$:

$k =$	100	1000	10,000	100,000
$P(C R) =$	0.048	0.333	0.833	0.980

Thus it would be possible to have sizeable probabilities $P(C|R)$ emerging from one's calculations, even if $P(C) = p/1000$ were very small, as Dr Weiler has indicated.

I hope this will contribute positively to the present discussion, but remain aware that the model outlined above may not be realistic, and not reflect correctly the astronomical situation. I am convinced, however, that agreement can be reached by all parties by refining the model and agreeing on exact definitions of the events involved. I look forward to a happy conclusion to this fascinating problem.

**(Prof) Joseph Gani
Canberra ACT**

ASTROLOGY

Denise's Diary

Denise White

I would like to share with Skeptics an account of an extraordinary experience I had on July 22nd 1994. Here follows an account of that day from My Diary:

7.00 am - Woke and did mandatory exercises to maintain aging back,

7.30 am - Got out of bed. Fed dogs. Fed goldfish. Had own breakfast and glanced at first three pages of *West Australian*. (Husband gets own breakfast). Emptied dishwasher. Found explanation for alarming smell of burning plastic the night before - ie plastic lid from ice-cream carton stuck to heating element. Removed same. Re-loaded dishwasher. Started preparations for lunch for six people.

9 00 am - Answered phone. A friend to tell me her husband had died during the night. Talked for a while, then returned to cooking. Started dusting and vacuum cleaning.

10 00 am - Phone rang. - A friend to tell me a mutual friend had died during the night. This was not the friend subject of the first call. Endeavoured to phone other friends to pass on sad news. Continued cooking, etc.

11.30 am - First two friends arrived for lunch.

12 00 noon - Next two friends arrived. Settled all with drinks and nibbles. Finalised lunch preparations.

1 00 to 300 pm - Lunch and discussion.

3.00 pm - Settled to discuss Humanist affairs.

5 00 pm - Friends left after cups of tea

5.30 pm - Friend in New Zealand rang to tell me her husband had died a few days before.

6 00 pm - Fed dogs. Prepared and ate tea (husband included this time).

8 00 pm - Collapsed in front of telly and slept through half the film.

10.30 pm -Emptied dishwasher that still smelt strongly of burnt plastic.

11.30 pm - Sat down to modest supper. Thought, "What a helluva day! So busy and three deaths to mourn." Decided to glance at *West Australian*. Wondered what horoscope had to say.

Looked it up. Here it is:

ARIES

(Mar 21 - Apr 19)

It is unlikely to be a day of significant events, so use any time you have to spare for thought and constructive planning. Social life is quiet, but romance could bring surprises

What could have gone so horribly wrong? Those three deaths were not unexpected, indeed one could say they were welcome, since the end stages of cancer and Parkinson's Disease do not make for happy living. I knew they were going to happen, so how come the stars did not? If there was any romance, I missed it.

Now, I cannot agree that this appallingly disappointing failure of astrology is due, as has recently been said, to the newly discovered sign, Ophiuchus. For this sign, as you so rightly pointed out, has always been there. It must have had influence on astrological predictions even though ancient astrologers did not know it was there. We all know that astrology has been used for millenia to advise kings, presidents and generals when to carry out dastardly deeds - and half of them were successful. The other sides lost, and the peasants on both sides always lost. But there you are, astrology was not for them, since their lives were of no account. Latterly, however, astrology has been failing. Why is this so? What has changed so dramatically in the heavens in recent years?

Well, it started in the 1950s, when they began putting all that junk into space, thus making accurate astrological prediction virtually impossible. It's like the World War II use of aluminium foil to hinder radar. From Sputnik to Voyager, science has chucked spanners into the works! Shame on it! Is nothing sacrosanct?

I implore all Skeptics to campaign against this pollution of space, so that we may return to the good old days when prediction of storm and tempest came direct from the heavenly bodies and was not intercepted by these so-called satellites - false moons shining like stars in rapid orbit round the earth. And tell me, has science found any better way of predicting my future than astrology has?

Last, but not least, (and I'm sure Professor Paul Davies would agree with me) all that junk will also interfere with messages from God, whatever that is, out there in the general direction of the seminal Big Bang What shall we do to be saved!!!

PS Please, Paul, how could you possibly determine the Mind of God with all that scientific clutter hovering like false gods in your way? ■

Geography

I suppose that it is the nature of the sceptic, and therefore of readers of *the Skeptic*, that we doubt much of what we read.

So when I read in *the Skeptic*, Vol 15, No2, p64, that: "Leigh Dayton... ..is the only contributor in this issue with a town in Ohio named after her.", I had my doubts.

Cautiously, I dabbled my toes in the information driveway that is my Internet connection at Swinburne University, and made my way out onto the highway, searching for the names of other contributors as towns in Ohio.

I'd tell you where I found this information if I knew how to, but I'm only a trainee nerd.

Alynda Brown can lay claim to Brown, Ohio, though it's not very big.

Scott Cambell must be big in the US of A. Scott, Ohio had a population of 340 and Campbell, Ohio had a population of 11,619 in 1980. (How up to date do you want your Information Super Goat-track?)

Leigh Dayton has, as claimed, apparently had a town in Ohio named after her; Dayton, Ohio (population in 1980: 203,371).

Sorry Harry, there is no Edwards, Ohio listed, you will have to make do with Edward, Ohio.

Richard Gordon gets Gordon, Ohio with a population of just 230.

Yes, Peter Johnson, theres a Johnson, Ohio.

Roger Scott can fight it out with Scott Campbell.

Barry Williams will be pleased to know that there is even a Williamstown, Ohio.

Mark Avery, David Culpin, Paul Kaufman, Colin Keay, Mark Lawson, Roland Seidel, Geoffrey Sherrington, Duncan Steel, Kirk Straughen, Sir Jim, Annie Warburton and Hans Weiller all miss out, though some of them are immortalised in other states.

I do hope that Leigh Dayton did not pay to have Dayton Ohio named after her, though unlike Dr Colin Keay's caller who sought to know how stars are named, (Vol 15 No.2 p.52 "Astronomical scam"), at least Leigh Dayton can go to Dayton.

Would it be unduly sceptical of me to ask whether there is in fact any

LETTERS

We welcome letters from our readers on any topics that may be of interest to other Skeptics.

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

causal relationship here and in which direction it may operate? (Have you noticed how many Americans seem to be called John Wayne?) Of course, there can be no doubt that Williamstown, Ohio is named after Barry, since he's not called Barry Williamstowncitizen...

Graham (Ohio, yes, there's one named after me, too)
Wolstenholme.
Moorabbin VIC

There's always got to be one smartar... We are delighted to see that there is at least one alert reader who saw through our stratagem of placing a deliberate misstatement of fact in the last issue. All other readers should take this as an object lesson to not believe *everything* they read, even in *the Skeptic*.
Ed

Parapsychology

In the most recent issue (Vol 15, No 2) Roland Seidel wrote about the 1995 Convention, telling me, in part, that one of the guest speakers was to be Dr Susan Blackmore. He tells me that she has a PhD in parapsychology.

I understand that parapsychology includes the study of the paranormal eg astrology and divination. Roland says Dr Blackmore has "research interests in ESP, belief in the paranormal, astrology and divination etc".

I am confused! Does he mean she has research interests in ESP, as well as in the paranormal etc? Or that, apart from her research into ESP, she has a belief in the paranormal etc? The fact that she is also "a successful reader of

tarot cards" lends some credence to the latter.

Maybe I'm just a 'fuzzy reader', but you read the paragraph I am referring to; have I a reason to be confused?

Maybe I should have sufficient confidence in the organisers of the Convention to know they wouldn't have as a guest speaker someone who believes in astrology and divination.

Jim Alexander
Broadbeach Waters QLD

Well Jim, Roland is a mathematician, so it's little wonder he has difficulty with English - not a fibonacci number or a piece of differential calculus in sight.

But your confidence in the Victorian Skeptics, the organisers of the Convention (and bloody well organised, at that) was not misplaced and it was an outstanding success.

Dr Susan Blackmore is a genuine researcher into all the areas mentioned, and a properly sceptical one too. Her talks at the convention, and in Adelaide, Perth and Sydney after the convention, were highly instructive and entertaining.
Ed

Query

How many different calendars are there (1899 is the same as 1995)? There are only seven days the year can start on (MTWTFSS). The year can only be a leap year or an ordinary year. Thus the number must be 14. Despite what I heard on the *Goon Show* thirty years ago, the years do come back.

Re Chris Manning's letter Invisibility (Letters, Vol 15, No 2). What about Eugenie's clothes? Would they become invisible too? Would the phenomenon be in the eye of the beholder?

Mandrake 'made himself invisible' by hypnotising the other person (See *The Women's Weekly*).

(Dr) Michael J Farrell
Toowoomba QLD

Deity I

Albert Braunstein appears to have been misled by rabbi Kushner (*Letters* Vol 15, no 2). The biblical story of Mr Job is not evidence of a "good God". The mythical story tells of God's affection for Satan.

Job 1:6-7 "The sons of God came to see God (Hmm - God is not omnipresent) Satan came along as well for a chat. God said to Satan 'Where did you come from?' (Hmm - God is not allknowing). Satan replied 'Oh. I was on the earth, walking up and down it.'"

Then the compassionate God, the gambler, organised a wager with his son Satan, which allowed Satan to murder Mr Job's children and slaves. (How loving of God) Job 1:14-19

The outcome? Mr Job lost his children, God won his bet and satan went on his merry way.

Clearly Hans Weiler's letter (Vol 15, No 1) was correct; the Hebrew God is cruel and uses innocent children and slaves as gambling chips.

Ron Bernardi
Boolarra VIC

Deity II

In a Letter to the Editor, (Vol 15, No 1, Biblical Inconsistency), I pointed out that God cannot be both good and omnipotent. If he is good he must share his power with the Devil who would then be responsible for all the bad things in this world; if he is omnipotent he is responsible for the bad as well as the good. I then added the final statement that Christians abandon omnipotence while Jews believe in a cruel God.

This last statement has been attacked by Albert Braunstein (Vol 15, No 2, p.55), and I must admit that it was unjustified. What I should have said is that anyone (Jew or Christian) who wants to be consistent with the Bible must believe either in a god who is omnipotent and sometimes cruel, or in a god who is always good but not omnipotent. I am grateful to Albert Braunstein for pointing out that Rabbi Kushner believes in the latter; the book of Job seems to support this view. It is interesting that there are religious people like Rabbi Kushner who have given thought to this question

My assumption that Jews believe in a cruel God was based on Old Testament passages like Exodus 20.4 where God threatens to punish not only the wrong doer but also his offspring down to the fourth generation, and Exodus 21.5 where a slave refuses to leave his wife and children when, after six years, he is offered his freedom. For this he is punished by having his ears pierced with an awl and is condemned to serve his master for life. Again, in 2 Kings 5, a man who obtained wealth by a confidence trick was punished with leprosy as well as his descendants for ever.

I assumed, wrongly, that Jews reading such passages in the Old Testament would deduce that God is cruel, wrongly because it applies only to those who insist on consistency. I guess that most people will either sacrifice consistency and continue to believe in God that is both good and omnipotent, or give up believing in a personal God altogether.

Hans Weiler
Croydon NSW

Fertility

I put my hand up for Annie Warburton (Vol 15, No 2), and support her nomination of Robert Tickner for a Bent Spoon Award!. How anyone could really think that a bridge is a contraceptive is totally beyond me. However, I do have some over-riding "creationist-like" scientific nagging doubts about this opinion, and for my own sake, these need airing:

If we observe global societies where bridges (and freeway flyovers can also be included) have become prevalent, the birth rate is lower or dropping, compared to excessively fertile human societies where bridges are rare and ferries or sampans are prevalent, such as the Ganges Delta, China, South America, etc. etc. So there could be something in this 'Woman's Business' we haven't quite sussed yet but Robert has.

If this is so the Greenies should look into the Bridge Building Business, - "build more bridges in the fourth world" could become a PC catch cry. The world ecology could be solved and Western Engineering Led

Economies could benefit with a worldwide bridge building campaign. I believe Australia already has taken a lead in this on the Thai/Laotian border. We should follow this up with a scientific investigation on birth rates in this bridge's vicinity to establish the likely area of effectiveness; it may exceed in area the electro radiation of THAT pylons. As a result bridges may need to be built in, say, parts of Central Africa where there is little to no water, but fertility is excessively rampant.

John A. Wilson,
Springwood NSW

Creativity

Due to public outrage over the "dreadful slur" I made about bacteria I wish to retract the statement I made in *the Skeptic* (Vol 15, No 1, p.60) that creation scientists are the intellectual equals of, or in anyway related to, bacteria. Recent research has proven (to me at least) that creation scientists are a form of Prion (infectious proteins).

In an article in the magazine *Discover* (Feb 95, p.29), it was stated that prions "seem to reproduce through a kind of evangelism: they convert harmless proteins into more prions". Creation scientists do much the same by converting young enquiring minds into intellectual wastelands (creationists) through a kind of evangelism.

This link may appear a little tenuous until one looks at the types of diseases prions cause in humans: Kuru, Creutzfeldt-Jakob disease, Gerstmann-Straeussler-Scheinker disease and Fatal familial insomnia. All these terribly dreadful diseases cause a progressive decline in cognition, as does creationism. Perhaps creationism should be renamed Morris-Gish disease.

Many readers may be sceptical of my assertion that creation scientists lack intellectual credibility and require me to produce more factual evidence.

I propose the use of the Parkes Radio Telescope, most recently used for Project SETI. This new and most

challenging project would be called "The Search for Intelligent Creationist Oddities" or "Project SICO". Using crystals and pyramids to tune the telescope to human thought waves and aiming it at Acacia Ridge in Brisbane, I am positive the resulting silence would provide enough evidence for even the most sceptical of readers.

**Mark Dawson
Gordon ACT**

Husbandry

Your Autumn 95 edition (Vol 15, No 1) is very interesting and thought provoking. It also contains an item of (surely unintended) humour. On p 38, 1h column we read "...scientists and vets had discovered that the attributes of male cattle could be quantitatively measured in such terms of growth rate, carcase quality and milk yield..."

Bulls have certainly changed since I studied biology at school.

Keep up the good work.

**Sonja Delander
Hawthorn VIC**

The author, Dr Tony Wheeler, has been offered a course in Basic Sex For Beginners. And him a former physiology lecturer too. **Ed**

Prophecy

The Skeptics' quest for absurd beliefs and scams seems in no danger of running out of amazing examples.

A recent classified ad in a Sydney local newspaper offers "Total Being Seminars - The Celestine Prophecy's" (sic). A polite enquiry to the given number, as to which of the Celestine popes the seminar was based on (there were five popes named Celestine between 422 and 1294) brought a confession of complete ignorance. No, the 'Celestine movement' was based on alleged ancient South American manuscripts from earlier than 600BCE.

Well, as far as is usually known, there was no written language in South America until the 16th Century, when Spanish was introduced. Prior to that

the Peruvians, for example, employed the *quipu* or *quipu*, a device of coloured and knotted cords, used to convey taxation, commercial and other information.

Currently at No 1 on the Sydney Sun Herald best-selling book list is a paperback *The Celestine Prophecy* by James Redfield. Based on the same Peruvian manuscript fairy tale, this rambling and disjointed novel could well be a contender for the 1996 Bent Spoon award.

The purveyors of this fabrication of the Celestine seminars (doubtless at most rewarding fees) are unable to spell the word 'prophecies', using the verb form when obviously the nominative form is required (and with the incorrect inclusion of the apostrophe). Somewhere in the Scriptures it is stated "If the blind lead the blind, both shall fall into the ditch".

We certainly agree.

**Ben Bensley
Normanhurst NSW**

Next issue we will publish an analysis of the misuse of scientific terms and concepts in *The Celestine Prophecies*.

Ed

Telephony

Alerted by the mighty thump of the latest edition of the Sydney White Pages telephone directory landing on my doorstep, I hoisted the substantial portion of forest on to my desk. The first thing I found, having removed the plastic wrap, was the promotional flyer/competition entry form for the 0055 and 190 numbers. What drew my attention as I was about to flick it into the bin, was the mention of Psychic Connections as one of the six sample services, in two separate lists and a further mention in the text. Three times on the same page - my suspicions were aroused.

I next examined the full list in the directory and counted 389 separate numbers; 63 of these were psychic or tarot or astrology and their ilk. That came to 16% of all such services, which is approximately one in six. So much for my original conspiracy theories as to how they appeared on

the form at all.

I was intrigued now and after several calls found the information officer for these telephone services and arranged for some explanatory material to be sent. The 'Crux of the Biscuit' (To quote the late genius and sceptic, Frank Zappa) was surprise! surprise! - money. You may know all this but it was new to me. These services are purchased by the subscriber from any of the hundred or so Service Providers who in turn buy time on the Telecom system. There is an alarming amount of fat in this system and one should be most sceptical about the phone account; but I digress.

A deal is done, depending on such variables as the Service Provider one chooses and the number of calls made. The revenue collected from the callers is split between the Service Provider and the subscriber. Remember that calls to these numbers can cost from 35 cents to 70 cents per minute and my experience of psychics and astrologers does not include fast talk, more your deep and meaningful, drawn out drivel. Observing the number of services available and bearing in mind the set-up costs, this must be quite a nice little earner. Snake Oil from Cyberspace methinks!

**Marc Grunseit
Waverley NSW**

As opposed to the "good oil" one can get from the Skeptics Information Line set up by our Vic colleagues and advertised on page 4. **Ed**

Palmistry

I am compelled to bring to your attention the latest advertisement in the *Gold Coast Bulletin*, placed by the Gold Coast Institute of TAFE. Among the many courses offered is one on palmistry.

While I understand many of the courses are recreational in nature, I believe that, by offering such a subject, the entire reputation of TAFE is undermined and the credibility of their other excellent courses thrown into question.

I believe that previous TAFE advertisements offered astrology as a subject. Bent Spoon material?

**John Pieri
Robina QLD**

Conspiracy

I write as a humble Skeptic who is interested in politics, to ask whether the searching gaze of *the Skeptic* has ever been or could be turned onto the fascinating subject of political conspiracies

I have some knowledge of the theories put forward in books distributed in Australia by the Australian League of Rights over the past twenty years or so. In addition, I understand that many fundamentalist religious groups have added imaginative features of their own to the basic scheme advanced by the League of Rights and (in America) by the John Birch Society.

I believe there may also be Catholic versions of some of these theories, the League of Rights in Australia being, I understand, mainly a Protestant organisation.

The sceptical attitude, as I understand it, is that we will examine all propositions with a critical eye, to see whether they fall down because of inconsistency with external evidence, internal contradictions, or a failure to withstand Occam's Razor. I suppose there could be some problems that I can not see for *the Skeptic* in going after a political theory, just as I gather there are problems in going after religion as such. (As I see it, Occam's Razor disposes of all religions.)

I do not write this letter in order to belittle the League of Rights, and I may say that I am impressed by the scenario outlined in the book, *Tragedy and Hope*, by Carroll Quigley, distributed by the League of Rights, and by some of the writings of Antony Sutton. Also, to quote something Ayn Rand said about a man she had often criticised, President Richard Nixon, at a time when he was being unfairly rubbished by a pack of media hounds, "I do not join lynchings". However, it seems to me that sceptical or critical comment, as distinguished from the sort of superior dismissal we can get from the media, on this subject can only benefit us all, by destroying untenable theories and leaving the outlines of real conspiracies (if there are any) exposed in their full horror.

A least it would make a change from attacking such pathetic targets as

sideshow fortune-tellers and newspaper astrologers.

**Paul Rackemann
Rockhampton QLD**

Political conspiracy theories, because they are so often allied to wider conspiracies, would seem to be fair game for *the Skeptic*, and we have touched on these issues in the past.

If anyone has access to the Internet, they will find that conspiracies, particularly those emanating from the USA, can get pretty weird. Most readers of *the Skeptic* are probably not aware that the world is governed by a 'secret government', controlled variously by the Bilderbergers (whoever they might be), the Illuminati, little grey beings from somewhere in space and Henry Kissinger. And that is one of the more plausible of the conspiracies on the Net.

What we don't want is for *the Skeptic* to become politically partisan in the domestic scene. Our subscribers' political views (as far as we can tell) cover the broad political spectrum and we have MPs from all major political parties among our subscribers. **Ed**

Suitability

It is high time that somebody inquired into Professor Plimer's knowledge of theology and I was very glad to read in the last issue of the *Skeptic* that a committee of various trades is being set up. I offer my services for this Herculean task.

My qualifications are as follows -
Astronomer; Keen amateur observer of 35 years' experience.

Biologist; I am conducting experiments into the growth of mould in old coffee cups.

Butcher; Ask my boss at work.

Nuclear physicist; I have several degrees in this particular field of human endeavour. I have even earned some of them.

Palaeontologist; I am getting on a bit and can therefore report at first hand what life was really like in near-primordial times.

Plumber; I have installed the plumbing in a rebuilt house. See under

"Butcher".

Retired aardvark trainer; A bit thin here, but at least I know another Skeptic who once really did train an aardvark to drink beer from a bottle.

Zoologist; I have two pet cats.

Been to church at least once; Yes, when I was christened. I howled throughout the ceremony, and so would you if you were being forcibly inducted into a cult.

Since I am clearly able to constitute the entire committee, I have saved time by already conducting the inquiry and I hereby submit the committee's report: Professor Plimer has a very strong grasp of theology, mainly around the throat. May I conclude in the usual way by asking for money?

**Steve Roberts
Doncaster VIC**

Therapy

As a Skeptic for several years and a practising radiologist, using all of the hih technology which is currently available, I am always disturbed by your occasional articles on alternative medicine.

I write to draw your attention to a forthcoming meeting, under the auspices of the Royal College of Nursing, Australia titled *Complementary Therapies, Pathways to Healing*. I have enclosed selected pages from the conference brochure. The material largely speaks for itself in its advocacy of alternatives to conventional, scientifically based, modern medical practice.

I am particularly taken with the presentation "Aromatherapy in Inpatient Psychiatry". One can only imagine the dramatic clinical improvement in severely ill schizophrenics or the unfortunate victims of bi-polar disorder as they are confronted in their treatment environment with various floral essences.

I sincerely hope that a local Skeptics member in Canberra may be able to spare some time in late September to attend this conference and perhaps to ask some appropriate questions of the presenters.

**R K Morcom
Torrens Park SA**

Philology

I refer to Rob J. Hyndman's letter Vol 14, No 3 p53 in which he states that 'almah' translates into the Septuagint as parthenos (παρθενος). He then goes on to apply his own hermeneutic (which also happens to be that of the church's traditional interpretation) that this "unambiguously means virgin" and that there is therefore "no possibility of textual distortion due to prior beliefs about the birth of Jesus."

Παρθενος (parthenos) does, I agree, mean virgin/young woman but does not necessarily mean virgin as we understand it today. To thus interpret would be eisegetical and imputing a meaning into the text from our later standpoint. A parthenos was simply a mature young woman of marriageable age. The issue of whether or not she engaged in premarital intercourse is not etymologically inherent in the word but has more to do with our own cultural interpretation and making the text say what we want it to say.

Lorraine R. Delaney
Ettalong Beach NSW

I hope I have translated your Greek correctly Lorraine. As I have often said in the past, Greek is all ΓΡΕΕΚ to me. Ed

Astrology

Human Rights are, understandably, of great international concern these days, but it has been recently pointed out that, unbeknownst to the United Nations, there are a couple of groups of human beings who are uniquely and gravely disadvantaged compared to anyone else in the world.

Just the other day we came across Larson's NEW Book of Cults (by Bob Larson. Tyndale House Publishers Inc Wheaton, Illinois. ISBN 0-8423 2860-2). Larson very thoroughly lists all major cults known to him, and describes and discusses their beliefs. Evidently he has his own slant on life, because he has in each case a paragraph headed "Errors", wherein he lists where they go wrong according to the beliefs of some

Correct (we think creationist-type) Cult of his very own.

Be that as it may (and it well may); on p.141 he deals with Astrology: Some people are without a horoscope. What about those who live north of the Arctic Circle? No planet assigned to the zodiac is visible there for several weeks out of the year. Does this mean that Eskimos and some Norwegians have no celestial influences upon their lives and no astral destinies to guide their behaviour?

It is a matter of record (The Hitchhiker's Guide to the Galaxy) that Slartibartfast won an award for his design of the Fjords of Norway; perhaps these fjords, in the absence of horoscopes, might guide the behaviour of the unfortunate Norsemen.

Eskimos, however, remain without compensation; their abandonment by the planets apparently denies them even access to their correct name (Inuit).

Penny Main & Colin Groves
Dept of Anthropology
ANU

Or, astrologically speaking, *Outuits?*
Ed

Ornithology

In your fine publication, under the heading *Renewal Blues* (Vol 15, No 2 p.54), I perched upon a reference to the "sweet carolling of the tiny currawong". I assume this refers to a member of the genus *Strepera*, most probably *Strepera graculina*, which is common in your location. It is a large bird, (as avians go, 41-51 cm) and has a "noisy distinctive call" according to Simpson and Day's *Birds of Australia*. Perhaps you would receive a more rapid response to your anguished requests for renewals if you took more care with your descriptive ornithology, a study which sensible readers take very seriously indeed.

(Prof) P Dant.
University of Melbourne QLD

Ekchually, Prof old bean, it belongs to the genus *Poeticus licencus*, a species totally unknown to ornithologists (or bird-brains, as my good geological friend Prof Ian Plimer [who is large, angry and owns a fine selection of very useful hammers] calls them). Ed

Poesy

The Skeptic is good magazine, nay a wonderful magazine but in my mumble opinion it lacks, perhaps, that final roundness, that light touch, that *tempo giusto* required to make it mandatory reading not only for any average sceptic or common philosopher but also for a scientist or a nartist.

What we are lacking, I contend, is a Poetry Section. Think of it! A world first! I'll bet a pound to a pinch of parrot poo that no other magazine in the world has a section dedicated to Skeptical sonnets and all.

In 500 years time, when common sense has prevailed in the world, when the paranormal has been defeated, when the thirty seventh incarnation of Barry Williams has been installed as World President, the latest generation of sensitive souls, the seeds of those artistic flowers who have since the dawn of time been spending their lives in search of the perfect lay, will with trembling hands page through the last score of issues of *the Skeptic* for the 20th century and declare, in choked tones and with tears in their eyes, that "They don't write poems like that any more, by God!"

As I have little doubt that you will soon be calling for contributions, here is mine:

Claire Voiant's Lament

While trembling over the tarot
Psyching myself near blind
the secret word "Strabismus"
swam into my mind
and now I sit here sobbing
tears fall on my Queens
'cause I don't know how to spell it
and I don't know what it means.....

James Marchant
Poet Laurikeet
Tasmania

Chicanery

As an Aussie working in the Old dart, I thought it would be a nice little holiday to go visit Antigua to support Mark Taylor and his boys in the Second Test.

On the day before the match, I was watching the sunset from the beach in front of my hotel. As the last bit of

the sun disappeared below the horizon, it went a fluorescent green for a millisecond. A group of four people further down the beach also saw it and we agreed on what we had witnessed, although none of us were to observe it again for the remainder of the week. I assumed this to be the "Green Flash" effect.

Have any other readers observed, or heard of this effect, and can they explain it?

It is interesting to note that here in the UK, Uri Geller is still given some prominence. He was given a full page in the *Telegraph* recently, where he didn't want to discuss his latest court case because that would "create negative energy" (ie he lost).

Geller is also Reading Football Club's most conspicuous fan and, despite his help, Reading lost to Bolton for promotion to the Premier League. Two colleagues went to a Reading v Derby fixture in February, where Geller tried one of his famous public 'psychic' stunts before kick-off.

Fans at both ends were given either a red, green or yellow card, which they were meant to hold up as they received Geller's special vibrations from the middle of the pitch. It was, as could be expected, a total shambles.

David Molloy
Kidderminster UK

Ufology

I like the idea of Occam's Razor, that of choosing the simplest possible explanation as the most likely one, but sometimes its application can be awkward.

My mother, a firm believer in UFOs (the alien kind), told me how she was driving along a quiet country road late one night, when suddenly her car was bathed in light from above. The light followed her for a short distance before vanishing just as suddenly. "It had to be a UFO" my mother insisted, "What else could it be?" I suggested that perhaps there were some local hunters spotlighting on a hill, who shone their light on her car for a moment to see who it was. "Oh", she scoffed "how likely is that?"

Mark Avery
Petersham NSW

Relativity?

Any theory, proposition, hypothesis, or statement, can be tested by making deductions from it. We can see where these deductions lead and if any of them lead to absurdities or propositions that contradict the original proposition, then the original one must be wrong, given that your logic is right.

The concept that the speed of light is constant leads to the conclusion that time varies with gravity, and space can be warped. I can handle time varying but I can make no sense of space warping. How can a non existent be warped? how do you determine if angels have navels ? what is space but the distance between objects ? how does distance get warped ? and why would it need to warp ? to keep the speed of light constant.

At the speed of light an object (any object) would have infinite mass. The notion of infinite mass is obviously absurd, the notion of travel faster than the speed of light much less so, but the physicists tie the two and assure us both are absurd.

With warped space we can even talk meaningfully about the possibility of time travel (they tell us). I think time travel is a good candidate for the absurd label. And anyway it never happens any time in the future, or we would have seen travellers from the future. Perhaps that is what UFOs really are. You saw it here first folks. Or maybe not.

Then we have black holes. No problem with conceptualising there, but what about the light that travels in straight lines and has constant speed. Well the black hole warps space so much that the light does not get away. What are they talking about ?

Then the speed of light is constant leads to the notion that the Universe came from nothing. Not absurd perhaps, but very nearly so. And where did the energy come from? And then we are told that in the early moments of its creation the matter travelled faster than the speed of light. That statement contradicts their own first hypothesis. Whatever other distortions they produce to explain it away.

The universe is finite yet unbounded. As has been pointed out, that is clearly contradictory and absurd. Before too many new absurdities have to be formulated to

paper over the gaps in the theory, wouldn't it be better to drop the theory ? A hypothesis that has led to so many absurdities and contradictions should have been discarded long ago.

Physicists tell us, however, that theoretical physics is backed up by experimental data, particularly in relation to the 'speed of light is constant' theory. Every time the speed of light is measured with ever more sophisticated instruments the speed is shown to be quite constant. Some of the experimental verifications are so difficult they can only be achieved by one laboratory in the world. This sounds very suspicious to me, on the simple grounds of repeatability if nothing else. Moreover how do they know that they are measuring the speed of light ? They do their measurements, making due allowance for the effects of gravity and distortions of time. In order to prove that the speed of light is constant they have to assume it in the first place. The same raw data could just as easily prove that space was constant but the speed of light and time varied, or time was constant and space and speed of light varied.

The only formula that does not offend common sense, (logic, understandability) is space constant and time and speed of light varying. I agree with you that scientists should keep out of philosophy and religion, however they should take a long hard look at the history and philosophy of science, which would help them understand the processes of science and not repeat the logical errors of the past.

John Winckle
Currumbin QLD

Editors Note: I gave serious consideration to not publishing this letter, not because I thought John didn't have the right to raise these questions, but to protect him from the outrage of all the physicists who read *the Skeptic*. Then selfish motives took over. What better way to guarantee plenty of copy for the next issue (the next 10 issues?) than to throw this challenge to the physics profession? All I ask is that replies be confined, as far as possible, to the English language. I have had enough problems with formulae in the astronomer/statistician debate to last me for a lifetime.

I Want to Know

In which sceptics can seek information from informed readers, or provide answers to curious readers.

Aquatic Apes

Andi Stevenson (*Skeptic*, 15, No 2:61) wants to know if some learned, qualified and dispassionate person can tell her about the Aquatic Ape Theory (AAT) of human origins. I score on all three counts: I have some learning (exactly what I learned is not a subject I will enlarge upon), I am constantly qualifying everything I say, and I can wax thoroughly dispassionate any time you want.

The AAT originated in 1960 when Sir Alister Hardy, a noted British marine biologist, gave an after-dinner address to a sub-aqua club on why marine biology is important, and, presumably emboldened by the effects of his hosts' hospitality, ventured to expand their minds somewhat as follows: "Why, I have sometimes wondered whether man himself [these were pre nonsexist times] went through an aquatic or even a marine phase in his ascent from his apish ancestors: we are admirably suited to such an environment with thick layer of subcutaneous fat and relatively naked skin. We could have become upright because of wading in water, and acquired our manual dexterity by feeling for shellfish on the sea floor". Next morning the newspapers were full of it "Dip in sea turned Ape into Man, says scientist". He couldn't back down now, could he? Elaine Morgan, writing her book *Descent of Woman* (published in 1972), mounted an attack - and quite a telling one, I must say - on the hunting, aggressive, patriarchal apemen hypothesis, the dominant paradigm of the sixties promoted by the likes of Desmond Morris's *Naked Ape* and Robert Ardrey's *African Genesis*; and, casting about for a gender-neutral model of human origins, lit upon Hardy's AAT. With his blessing, she elaborated on it and convinced herself of it.

In her various books she listed the features of human anatomy and physiology which she considered require an aquatic phase in our ancestry:

Loss of body hair - like whales and

hippos

Descended larynx - like sealions and dugongs

Volitional breath control - like seals, sealions and whales

Legs at 180° angle to spine - like seals, and sealions while swimming

Increased fat deposits - like hippos, seals, sealions, whales, dugongs

Ventro-ventral copulation - like whales

Increased sebaceous glands - like seals

Sheds tears - like seals

Takes naturally to water, unlike Great Apes which are afraid of it

Babies can be born under water, and swim naturally

The list of similarities to aquatic mammals, as anyone can see, depends very heavily on analogies to seals; but two of the important ones - loss of body hair and ventro-ventral copulation - don't apply to seals. It's a "pick and choose" list. Still, some intriguing points are raised, and Elaine Morgan was certainly right to complain that nobody seemed to take her seriously. Really, anthropologists ought to have responded to her claims long before they did.

It was not until 1987 that a conference on the AAT was finally held; the papers from it were published in 1990 as a book, *The Aquatic Ape: Fact or Fiction?*, edited by Machteld Roede, Jan Wind, John M. Patrick and Vernon Reynolds (Souvenir Press, London). Reading over this book, there are some rather striking things which emerge.

First, there are fanatics. Not Elaine Morgan: she is sweetly reasonable she has put forward this hypothesis, why aren't the professionals responding? A really fanatic AATist, by contrast, is Marc Verhaegen, a Belgian medico. Because of him, we now know why Neanderthal people had such big noses: they floated on their backs in the water, their noses sticking out like snorkels (and they had sensitive moustaches, like a seal's whiskers). He is balanced by the noted ethologist Paul Leyhausen, who simply can't stand the AAT and trundles out a wonderful array of misinformation in opposition.

In contrast, many authors of chapters do go into some detail to explain what really gives. We learn that body fat is not confined to aquatic mammals, does not seem in any case to have an insulating function, and of course has interesting sexual differences in distribution in our species (it no doubt relates to sexual selection). We are absolutely not built for prolonged immersion - we get hypothermic quite quickly. Other mammals, not just humans and aquatic species, show the "diving reflex". Babies' swimming motions are more likely just a preference to keep horizontal; if unsupported, they drown. Our legs may indeed be at 180° to our body axis but, quite by contrast to any aquatic mammal, they are extremely long, and eminently suited to striding but not to swimming.

I would have added that our non-aquatic relatives gibbons, orang utans and especially pygmy chimpanzees commonly mate in the missionary position; that body hair is much sparser in Great Apes than in other primates, and only slightly denser than in us (rather, it is longer and more pigmented); that elephants and African rhinos are in any case as hairless as hippos; that Great Apes in zoos are often lazy and put on as much body fat as any Queensland Minister for Racing; that the human mouth, which for efficient swimming ought to be at 180° to the body, is actually at right angles to it, and in rectifying this evolutionary inefficiency most swimmers get a crick in the neck or train themselves to rotate their heads from side to side. And, finally, that we now know of populations of orang utans in eastern Borneo and of gorillas in northern Congo which live in swamp forest and wade unconcerned through the water.

Yet many of the anti-AAT writers in Roede *et al* are in some sense sympathetic. They point out that our ancestors did often live alongside rivers and on lake shores, and obviously did enter the water and exploit its bounty. And that we do undeniably sweat a lot and drink a lot

of water (especially when no alternative is available). And almost no-one has any other explanation for tears.

So, to Andi Stevenson's question, "Is there any shred of reasonable evidence for the AAT"?, the answer must be "some, but not much". It is an idea that has been taken not seriously enough by scientists, but too seriously by the general public. It is unparsimonious - it postulates a phase in evolution which arose and then vanished, leaving no present-day representative - and that, I think, is why scientists have not taken it into consideration. It was taken up, if not first propounded, by Elaine Morgan who is not a scientist but an example of that rolemodel of the public, the Gifted Amateur. And she certainly is that. Her books have got better and better; read *The Scars of Evolution*, published in 1990 by Souvenir Press, and admire her grasp of this complex field, even if you don't agree with her.

I must admit my own preference, though, to begin by getting the story right from the hard evidence. How many species of *australopithecines* were there, and were any of them our ancestors or were they all sidelines? Do the fossils called *Homo habilis* actually represent two different species, or even three? What are the boundaries of *Homo erectus*? What is the earliest evidence for bipedalism? What are the apomorphic (=evolutionarily derived) features of a separated human lineage? And so on; then, and only then, I suggest, should we begin to speculate.

Because sometimes palaeoanthropologists can get it spectacularly right. What would a member of the human lineage look like that had only just separated from common ancestry with the chimpanzee? We analysed, we deduced, and then last year it was discovered: *Ardipithecus ramidus*, 4.4 million years old, from Ethiopia. Except for one little surprise - thin, not thick, dental enamel - it was exactly, exactly, as we predicted.

Colin Groves
Dept of Anthropology
ANU, ACT

If Music be the Food (it's all you're likely to get)

Those who attended the convention dinner, and who remained sober while awaiting their meal, were entertained by Roland Seidel and Steve Colebrook on guitar and saxophone respectively and both on vocals. Roland penned the following item especially for the occasion.

It can be sung either to the tune of the Grand March from Aida, or Beethoven's Ninth Symphony (but not very easily).

How Can You Tell From Make-Believe?

C Roland Seidel 1995

Hey, I'm sceptical about the Loch Ness Monster
And I find UFOs hard to believe
And I got my doubts about dem water diviner
And crop circle sounds pretty silly to me

[refrain]

How can you tell that from make-believe
How can you tell from make-believe
How can you tell from make-believe
How can you tell that from make-believe

Now, the face on Mars is not convincing
And creationism don't make any sense at all
And fortune teller? Man, that's just wishful thinking
And Astrology has gotta be the dumbest of them all

[refrain]

[alternate]

Well you say it's a fact
And you can see that it's true
Well, if it weren't no fact
Would the world look any different to you?

Now, dem Clairvoyants, just who do they think they are?
And crystals shmistals and pyramid power
And don't we need an apology from Scientology?
And Uri Geller Geller silly fella?

[refrain]

Dowser, dowser, down yer trouser
And aca-dacka-spacka-packa-puncture
Reiki, reiki, not very likely
And Feng Shui phooey phooey

[refrain]

[alternate]

[refrain]

Who said you get no culture in *the Skeptic*?

TECHNOLOGY

On the Net

Alynda Brown

Well I've finally got onto the Internet and started using E-mail (no it isn't a whitegoods company). You may be wondering what many of these acronyms and terms mean. So this time we'll have a look at some of the Electronic Mail nerd-speak.

E-mail, Echomail, Netmail, Fidonet, K-12 and other types of electronic mail services are names you may have heard before now. E-mail works like a mail box. You ring up a service provider (Compuserve, OZ-Email etc.) and they assign you a mail box. You then receive an address. Mine looks like this.

alynda@ozemail.com.au

The first bit - alynda - is my user ID. That's what my mail box is called. I access the mail box through my provider - ozemail. This means that my mail box is located at (@) ozemail.

The next bit - com - means that it's a commercial box. I actually do have a company but private users also get the com bit. You may send a message to an address which has - edu - this is an educational site like a university.

The last part - au - means that it's an Australian location. Compare this address to the Skeptics address

sceptics@spot.tt.sw.oz.au

Now it's all very well to know how to type in an address but where do you type it? What you need is an off-line mail reader. I'm using Eudora which is Windows based and arrived partially set up. Mind you I did have some problems since I don't live in the 02 zone (sigh!). You'll get this software from your provider.

Echomail is something used in a BBS and you can access it through a Bulletin Board like mine. This isn't part of the Internet and it's a network of Bulletin Boards - like mine - run by amateur operators (don't be misled by the word amateur, these guys really know what they are doing). Since it is an amateur resource it doesn't cost anything to use it. The way it works is you ring your local BBS and go into the Mail section. There you can see a list of different conferences (usually by hitting the A button for Area

change and then ? for the list). Each BBS is different but the idea is that

you select the areas that you want to read - read the menu to find out how

to do this - and download those areas.

Since you don't want to waste time reading messages while you are on the phone you can also download and OFF-LINE MAIL READER. Blue Wave is a good one. This way you can read the message at your leisure, reply

to any that you want to answer and then upload the replies next time you contact your BBS.

When you send a reply to a BBS it is stored on that computer. In the wee small hours when normal people are snoring the computer will then send your message to the local co-ordinator which is a local phone call. This in turn is sent to an area co-ordinator. Other local co-ordinators ring the area co-ordinator to collect mail and pass them on to other Bulletin Boards all a local phone call away. In this way your message is ECHOED around the world through local phone calls each night. This means that it isn't too expensive.

Echomail unlike e-mail is restricted to subject areas called conferences. Each conference has a head honcho called a Moderator who sets the rules and steps in when people stray off topic or get particularly nasty. Take notice of warnings because you can be banned from a conference if you continually break the rules for that echo. Don't be too worried though, you really have to be pretty stupid to be banned.

If you have a look at my BBS the subject areas are restricted to those which would interest sceptics like Alternative Medicine, Astrology, Common Sense, Skeptic and Science vs Creation. Other Bulletin Boards run all available conferences from basketball to dog genealogy. Fidonet is the echomail network that I use. Others are K-12, Adventurenet (for games) and heaps more.

Once you start sending messages you will find that all sorts of funny acronyms are used and it's like a strange coding system (how unusual in the computer world) Here are a few of them to get you started.

Acronyms**BTW** - By The Way**IMHO** - In My Humble (or Honest) Opinion**CU** or **CUL8R** - see you, or, see you later**FAQ** - Frequently Asked Questions**FRZ** - Fervent Religious Zealot (you see heaps of them)**FWIW** - For What It's Worth**FYA** - For Your Amusement**HHOS** - Ha Ha, Only Serious**IOW** - In Other Words**ICBW,B** - I Could Be Wrong, But**LOL** - Laughing Out Loud**OTOH** - On The Other Hand**PITA** - Pain In The Arse ***PMJI** - Pardon Me Jumping In**ROFL** or **ROTF,L** - Rolling On The Floor Laughing**RTFM** - Read The Fucking Manual (Something I often think when giving phone support)**ESAD** - Eat Shit and Die**FOAD** - Fuck Off And Die (both of these often seen in

messages sent by morons. Don't be tempted to stoop on myBBS 'cause I'll delete the message. I just put it in here so you'll know what it means when you see it)

Symbols

Since you can't use fonts or pictures you need to use the symbols available on the keyboard for emphasis and pictures. Some can be quite imaginative

<g> Grin
 <vbg> Very Big Grin
 :) put your head on your left shoulder and look at it sideways - it's a smiley
 :-) Smiley with a nose
 : ^) another smiley with a nose
 ; -) wink
 : - (sad face
 | - (eyes closed, frowning smiley
 8 ^) sunglasses smiley
 : - 0 amazed smiley
 : - { smiley with a moustache
 * <: -) # Santa Claus smiley
 C =: -) Chef smiley
 + - <| : -) Pope smiley

Conventions

USING CAPITALS IS CONSIDERED TO BE SHOUTING and is also considered ill mannered. If you want to add emphasis you can use the underscore_ or you can type the line and then use the line underneath to put in carat marks.
 ^^^ ^^ ^^^^^^ ^^^

Of course "quotes" are also available

Flaming is when you really get stuck into the person you're sending the message to. It's not really nice but if you like that sort of thing then there are actually conferences available where flaming is *de rigueur*.

* The Editor-in-Chief's daughter, **Pita**, who just happens to be a solicitor, will be in contact with Alynda regarding this matter in due course. ■

About our Authors

Note: Except where otherwise specified, none of the authors in this issue is Ukrainian, nor indeed, a 24 year-old woman.

Dr Steve Bassar, VP of Vic Skeptics, is a medical administrator and is very concerned about the amount of untested remedies that are being promoted.

Ben Bensley is a retired copywriter and printer who lives in Sydney. As an octogenarian, Ben claims to be "chronologically enhanced".

Dr Martin Bridgstock is in the Science Dept of Griffith University, Brisbane. He is a Life Member of Aust Skeptics.

Alynda Brown, demon driver on the Infobahn, runs a computer training service in semi-rural NSW.

Steve Colebrook, musician, fashion plate and cartoonist, is a member of the Vic committee.

Prof Paul Davies is the Professor of Natural Philosophy at Adelaide University and author of many books on science.

Mark Dawson is a librarian in the ACT and a member of Canberra Skeptics.

Harry Edwards is a 25 year old Ukrainian woman, who masquerades as a crotchety old codger.

Dr Joseph Gani is an applied probabilist who has held Chairs at the Universities of Sheffield, Kentucky and California, and was Chief of the CSIRO Division of Mathematics and Statistics between 1974 and 1981. Dr Gani is now retired and lives in Canberra.

James Gerrand is a retired engineer, member of the committee of Vic Skeptics and a Life Member.

Dr Colin Groves is an anthropologist at ANU and a member of the Canberra Skeptics executive.

Dr Sarah Hamilton-Byrne is a medical practitioner and her story appears in this issue.

Dr John Happs is President of the WA Skeptics. The author of 16 books on topics such as general science, astronomy and soil degradation, John is a university lecturer and consultant in education.

Peter Johnson, cartoonist, still calls Adelaide home.

Dr Colin Keay is president of the Hunter Skeptics and indulges in astronomy, when not riding a bicycle.

Prof Tony Klein is Head of the School of Physics at Melbourne University.

Dr Ed Ogden is a Forensic Physician with the Victorian Police. He has written widely on the phenomenon of cults.

Dr Steve Roberts, Ukrainian to his boot straps, is a cryptographer and secretary of Vic Skeptics.

Jake Rolley is an electrical engineer who calls Sydney Ohm.

Roland Seidel, mathematician and song writer is on the Vic committee.

Sir Jim R Wallaby is one of the world's least understood philosophers.

Annie Warburton, ABC presenter, dispenses sweet scepticism on the Hobart airwaves.

Denise White is secretary of the WA Skeptics, a task she manages without recourse to astrological predictions.

Barry Williams, of whom the less said, the better, translates this column from the original Ukrainian.

Apology

In the previous issue, we gave **Hans Weiler** an incorrect title. He is actually Principal Research Scientist, CSIRO, Div of Maths and Stats, (Retired).