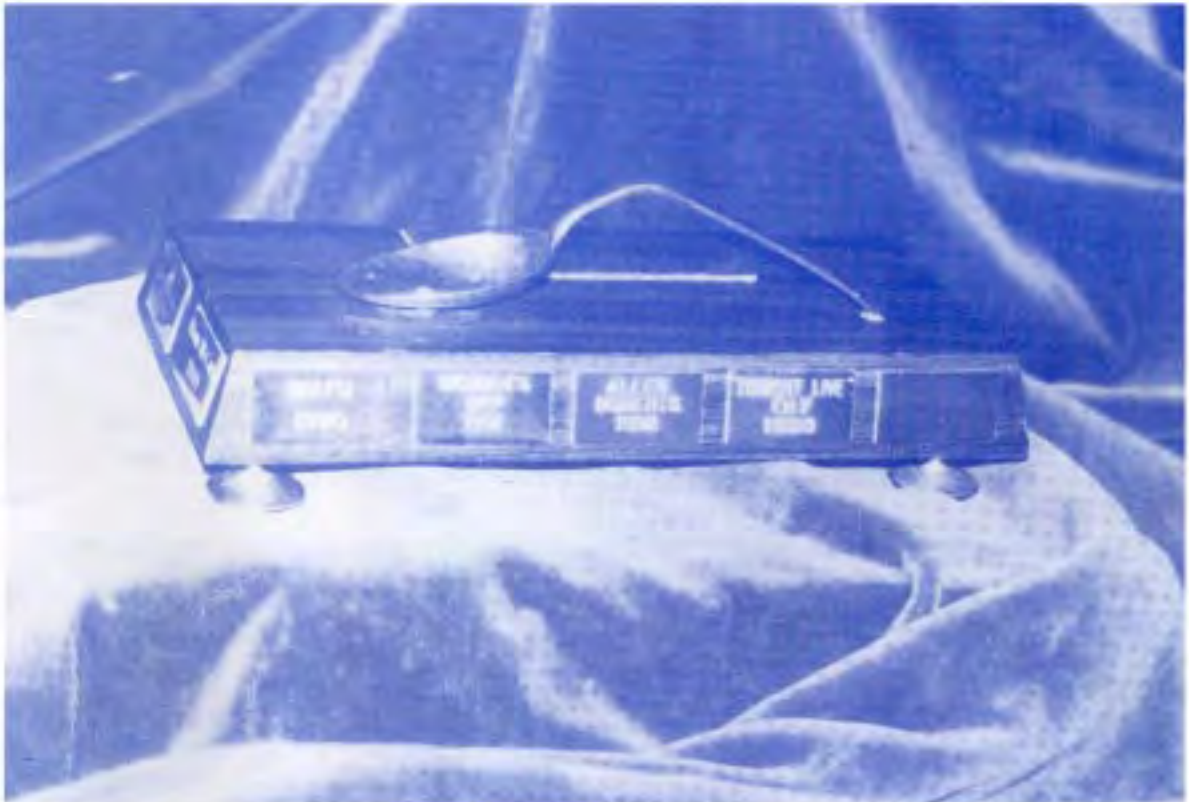


the **Skeptic**

Volume 14, No 2

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views and reviews



Linguistics
Critical Thinking
Coriolis - the Truth

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From the President

Something seems to be happening to our society and it is not very encouraging for Skeptics.

This was brought home to me when I realised that, despite the fact that the world seems to be getting less rational with each passing day, we have had a dearth of nominations for this year's Bent Spoon Award.

Optimistically, we might think that this denotes that a healthy scepticism is being fostered among the population by activities of groups such as ours. But the pessimist in me suggests that it could be that the promulgation of paranormal piffle is becoming so prolific that no single example lifts itself above the background noise. That the belief in arrant nonsense is becoming the accepted norm. That science has suddenly become a dirty concept.

Certainly, one could gain the impression from our popular media that there is no need to look sceptically on extraordinary claims. Even such a sober and respectable

newspaper as *The Sydney Morning Herald* has recently published a series of articles on 'alternative' medicine without seriously challenging the claims of the proponents. Popular magazines and TV stations produce more and more items which deal uncritically with paranormal and pseudoscientific nonsense.

This anti-science trend is even becoming obvious in areas in which we have traditionally had little interest. We now see the proponents of social change (for good or ill, depending on your own prejudices) using new age rhetoric rather than reasoned argument.

At our national convention, we will consider how new age thinking has infiltrated itself into the social policy debate and what effect this might have on our future. It could be controversial and it will be interesting. Don't miss it.

Barry Williams

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National Convention**Dates Changed - Venue Announced**

The 1994 Annual National Convention will be held on the weekend **June 11-12 at the Willoughby Town Hall, 411 Victoria Ave, Chatswood NSW.**

In the previous issue, we announced that the Convention would be held on the weekend June 4-5 and that Mr Phillip Klass, the prominent sceptical UFO investigator, would be our special guest. Unfortunately, one week after the last issue went to press, Mr Klass advised us that, due to health and other personal problems, he would be unable to travel to Australia for the Convention.

With this news and the fact that the dates selected would have conflicted with the Victorian Branch involvement in the Great Australian Science Show in Melbourne, we altered the dates to the following weekend. This is a long weekend and we considered that it would be more suitable for the majority of our subscribers.

We apologise for any inconvenience this has caused.

The programme we are still in the process of completing promises to be one that will interest and challenge the attendees.

We will begin with a debate with the Australian Psychics Ass'n on the topic: "That there is Sound Evidence for Psychic Phenomena". This promises to set the sparks flying.

There will be presentations on the misuse of science in the promotion of various political agendas. Topics covered will include nuclear energy, electromagnetic radiation, conservatism, repressed memories and various health claims. These are controversial topics and we expect them

to generate a great deal of discussion.

Other topics will include latest revelations on the Loch Ness Monster, UFO abductions and other issues of interest to Skeptics.

We will also present the Bent Spoon Award for the year at the Saturday morning session.

The convention times are:

Saturday June 11.

Doors open 10.00 am a get-together for Skeptics to mingle over coffee.

11.00 - 1.00-Debate and Bent Spoon Award.

1.00 - 2.00 Lunch Break

2.00 - 4.00 Presentations

7.00pm Dinner (Details below)

Sunday June 12

10.00 - 12.30 Presentations

12.30 - 1.30 Lunch Break

1.30 - 4.00 Presentations

Cost:

Each Session \$10.00

Full Day (2 sessions)\$15.00

Two Days (all sessions)\$25.00

Pensioners & students

Full Day \$10.00

Two Days \$20.00

Pay at the door.

Convention Dinner

Crows Nest Club

33 Hayberry St

Crows Nest

7.00 for 7.30

**Cost:\$27.50 for three course meal
 (Pre-booking essential on the form
 enclosed with this issue.)**

**Editors: Barry Williams
 Harry Edwards**

**Subscription:
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News and Views

Edited by Barry Williams

In the last issue we mentioned the impending visit to Australia of Professor Clyde "Kipp" Herreid, Professor of Biology, SUNY at Buffalo, CSICOP consultant and professional magician.

Kipp proved to be a most impressive visitor and entertained Skeptics and magicians in all states, as well as conducting a number of media interviews, with his informative talks about critical thinking and his fascinating demonstrations of his magical skills.

In Sydney, 90 guests attended a dinner for Kipp and took part in his presentation which were based on population stereotypes in answering questions, eg "Think of a colour" and a very large percentage of people will say "red"; "think of a flower" and most will say "rose". More than 100 people attended a meeting with Prof Herreid in Melbourne and in Brisbane he had a meeting with Dr Ken White who used the same population stereotypes to conduct experiments on the *ABC Science Show* And Channel 9s *A Current Affair* in 1992.

Kipp Herreid and his wife Jan were very welcome guests to our shores and we would be delighted to have them back at any time they choose.

* * *

We are grateful to our recent guest, James Randi, for sending us some clippings about an amazing story that appeared recently in the USA.

It seems that there is a Florida children's TV programme about Barney, a purple dinosaur, which drew the wrath of one Luscious M Bromley, president of Citizens Concerned About Barney. Mr Bromley, a house painter, claimed that Barney was delivering a "melange of Satanism, occultism and witchcraft", designed to weaken the resolve of children. "When they get

older, they will not have the moral integrity to withstand drugs, gang-related activity, abortion, homosexuality, premarital sex and so forth", Bromley is claimed to have said. Mr Bromley's rantings drew a lot of support from Christian fundamentalist groups and caused a great deal of media comment around the country.

Then came the denouement. Luscious Bromley and his organisation were the brainchildren of two University of South Florida postgraduate psychology students, John Bunch and David Bennett, who set out to test how gullible the media were. That they succeeded was shown by the outrage of the various media commentators who had been taken in by the hoax. He said that he was astonished that any media would not bother to check the *bona fides* of someone with the unlikely name of "Luscious". (Speaking as one who knows quite a few Americans, I would not be at all surprised to meet one called Luscious. Ed)

As James Randi noted, the whole thing had overtones of the "Carlos" scam pulled on the Australian media by himself and Richard Carleton on the 60 *Minutes* programme several years ago.

* * *

Thanks to reader Jim Alexander of Broadbeach Waters for sending us a copy of *Rainbow News* which appears to consist largely of self-promotional pieces by Ms Jeni Edgley for her Hideaway Guesthouse located in the Gold Coast hinterland.

The magazine contains the usual collage of New Age nonsense, as a glance at the contents page and the advertisements will attest. "Astrology: Towards Aquarius", "Healing Energy Available To All", "Natural Therapies for Infertility", "Dreams Do Come True" — you can imagine the rest. One book

advertisement particularly caught my eye -Tissue Cleaning Through Bowel Management by Bernard Jensen.

An article, "How Life on Earth Began" by Bashar, "an extraterrestrial from the planet Essasani which is approximately 500 light years away in the direction of the constellation Orion", if the blurb is to be believed, tells how the Earth was formed from a collision between a large planet outside the orbit of Mars and a planet from another location that entered the solar system in a retrograde orbit. The resultant cosmic billiard cannon shot caused Earth to assume its present orbit, the debris to make up the Asteroid Belt and the rings of Saturn and caused Pluto to stop being a satellite of Saturn and pretend to be a planet. From there on the article becomes truly weird.

More worrying is the article attacking immunisation, and advocating homeopathic treatments. This article, which seeks to promote the idea that immunisation causes more diseases than it prevents, contains a selection of sensational quotations that would make a creationist feel proud. Several medical practitioners I have asked tell me that they are now seeing more cases of whooping cough and measles than they have in years and this reflects the drop in immunisation numbers in Australia, which has one of the lowest rates in the industrialised world.

My contacts at the Gold Coast tell me that the hinterland of the area, the Nerang and Numinbah Valleys, the Macpherson and Darlington ranges, is developing a reputation as the Australian home of the New Age. No doubt this is because it is such a beautiful part of the world which induces 'spiritual' feelings into the inhabitants. The thing that concerns me is that Mt Tamborine, right in the heart of the region, is where I was born and raised.

Daryl Colquhoun of Dulwich Hill sent us a very interesting little leaflet from his letter box.

The unattributed leaflet was headed "Repent, the Kingdom of Heaven is at Hand" and advised readers to "Pray to be awakened, changed to meet Jesus. He will be coming (sic) at any moment to take us with him." It goes on, in execrable English, to warn readers of the dangers of the Barcode system which, it avers, is the means by which the Antichrist will take over the world. Just a few examples of the tortured language of the piece may give readers the flavour (all typos and punctuation in the original):

"The Bible is a sign of the Antichrist's emergence..."; "Therefore it is only inevitable that 666system is naturally becoming a part of humanbeings. The666 system only function in rapid speed, computers with high capacity , communication and baking system." "The university of Washington has invented a lazer beam that could code numbers to fish."

I'm not too sure what it all means, but the references to the 'baking system' and barcoding fish must surely refer to the 'miracle' of the loaves and fishes. Roll on the year 2000, when all this nonsense might ease off a bit.

* * *

Although prediction is hardly the business of *the Skeptic* we are about to chance our arm.

We predict that somewhere, sometime soon, some creation 'scientist' will claim that fossils can be made in a matter of weeks by means of a bacteriological process. This, they will claim, will show that the Earth is only 6,000 years old and that geologists, palaeontologists and biologists are wrong to use fossils as evidence of great age.

Of course, the geologists have only themselves to blame for this. *New Scientist* of March 19, 1994 reports on research conducted by Derek Briggs of the University of Bristol into some Lower Cretaceous fish from the

Santanna Formation of Brazil. These fish were found to have various parts of their muscle tissue and even cell nuclei preserved by phosphate minerals.

Investigating the role bacteria play in this rare phenomenon, Briggs' team found that prawn carcasses left in sealed containers with sea water into which had been introduced aerobic and anaerobic bacteria began to mineralise within a couple of weeks. Muscle tissue and eggs were found to have been replaced by calcium phosphate within four weeks.

Now this is an esoteric sort of experiment which gives information about a very special kind of fossil and says nothing about fossils in general. But that has never stopped creation 'scientists' in the past from misquoting anything that may seem even vaguely to give support to their infantile religion-posing-as-science.

Of course, by making this prediction, we are assuming that some very courageous creation 'scientist' will imperil his immortal soul by reading about real science in either the *New Scientist* or the *Journal of the Geological Society* (Vol 50, p 1035), in which the paper was first presented. But, from an organisation that once presented a fossilised hat as evidence for something or other, nothing would surprise us.

* * *

At last, the medical breakthrough we have all been waiting for.

Dr Marc Russo of Strathfield, NSW has sent us a leaflet he found in his letter box which boldly proclaimed "Miracle cure for any disease" and invited recruits to join up for 100 days of "Chundo Sunbup Training". Among the ailments specifically mentioned were, "Series of bad dreams; skin that does not take cosmetic make-up (?); constant failure in life; *unidentifiable and incurable disease*". The brochure also invites people to "create for yourself a protection screen against the harmful sun rays coming down directly unchecked by the diminishing Ozone

Layers".

All this is accomplished by learning how to "draw into all your internal organs and body elements", "Powerful energies [that] are being radiated from the center of the universe (omega point)."

Presumably the NSW Health Department would (or should) be very interested in any claims made for a "cure for any disease". If so they should make a call to (02)642 5620, or visit 4 Albyn Rd Strathfield.

* * *

Updating Uri Geller's legal problems, we have received the following message from Prof Vic Stenger, astronomer from the University of Hawaii.

"On March 17, 1994, Federal Judge Ungaro ruled on her own motion to dismiss with prejudice the case Geller v. Prometheus Books and Victor J. Stenger and to assess sanctions against Geller for attorneys' fees of the defendants subsequent to April 12, 1993. These sanctions add to the previously-imposed \$49,148.82 which were not paid as ordered."

* * *

As if the citizens of the former states of the Soviet Union didn't have enough to worry about, it has been widely reported that "one of Russia's most famous astrologers" has been hired as a safety consultant for one of Lithuania's Chernobyl style power stations.

He is reported as having a "funny feeling" about one of the reactors in the station, not the one that the engineers were worried about, but another one.

Despite the wide reporting of this message, we can't help thinking it might be an urban myth. Can anyone imagine the Lithuanians employing one of *Russia's* most famous anything's as a consultant?

* * *

All readers are encouraged to attend the National Convention at Willoughby Town Hall, Chatswood NSW on June 11-12.

We are all aware of the claims made by various ‘psychics’ to have helped police in the solution of various crimes. Nick Cowdery QC has sent us a report on a British case of this nature which was reported in a recent volume of the *Australian Law Journal*. The reference is quite long and I will summarise and paraphrase it here.

A farmer’s wife was worried that her husband had not returned from a visit to the market town. The following morning, a man called at the farm and told her he had had a vision. “The ghost of your husband appeared to me, pointed to several ghastly stabs in his body and told me he had been murdered by X and his carcass thrown into a pit.”

The woman went to the pit and found her husband’s body. X was arrested and sent to trial. Lord Raymond CJ presided at the trial and said to the jury *inter alia*:

“I think, gentlemen, you seem inclined to lay more stress on the supposed evidence of an apparition than it will bear. I cannot say I give much credit to these kind of stories; be that as it may, we have no right to follow our private opinions here.”

The judge then asked a court official to call the ghost to give evidence. Having done this three times and the ghost not having appeared, the judge mentioned the accused’s sterling character as attested by several witnesses, his lack of motive and the absence of other evidence and then acquitted him.

The judge then said of the informant: “. . . But from the many circumstances which have arisen during the trial, I strongly suspect that the person who said he had seen the apparition was himself the murderer; in which case he might easily ascertain the pit, the stabs etc, without any supernatural assistance.”

The informant was apprehended and a later search of the his premises revealed property belonging to the deceased. He confessed his guilt, was tried and executed at the next assizes.

Executed? Haven’t the British abolished the death penalty? Well, yes they have, but this trial took place at

the Warwick Assizes in 1732. Which just goes to show that nothing much changes in the world of psychic claims.

* * *

Our peripatetic Hon Sec, Harry Edwards reports on trends from the USA

Angelologists

Move over channelled entities, spirit guides and psychics, here come the new breed -the “angelologists!” Yes, according to a recent issue of *Woman’s Day*, we are about to become infected (my term) with the latest occult disease from America and Europe with those (who for a fee of course) will put you in touch with your guardian angel.

Beth Palko, who claims the patronage of Princess Di, says the angel introduction service is about to boom. “There are millions of angels just hanging around waiting to help . . . all I do is help the two sides to get in touch.”

American angelologist Karen Martin-Kuri on the other hand warns that there are fallen angels and that they are behind the crazies who kill people.

Evidently this new fad has psychiatrists up in arms complaining that their businesses are suffering -those who used to pay good money for a consultation now get their advice for free from a guy in a white nightshirt, halo and wings.

(My own guardian angel -a former cleaner who used to empty astrologers’ trash cans, and who is now the director of the Cosmic Bulldust Eradication Service, may be doing a good job “up there” but his advice doesn’t engender much confidence - as fast as I clean up one pile of psychic garbage another accumulates! **HE**).

Tele-psychics

Another craze has already surfaced in Australia - the Psychic Hot-line, advertised on Channel 7, whereby you are invited by the sponsor, the Australian Psychics Association, to “dial a psychic” for advice on whatever ails you. “Hold the line, and you will

be put in touch with the first available psychic. ” Advertising in my local newspaper someone has already jumped on this lucrative bandwagon with “dial-a-psychic for occolt (sic) advice.”

Apart from claiming to be psychics, clairvoyants and astrologers, there is no indication in either advertisement to whom one would be speaking or what qualifications (if any) they have to act as counsellors or advisors. However, if past performances by psychics on TV and radio is taken as being indicative of possessing infinite wisdom in any field, then prospective clients would be better advised to put their faith in fortune cookies.

The American experience (already exposed as a multi-million dollar scam) demonstrates this conclusively. (American) ABC-TVs *Primetime Live* went under-cover using hidden camera techniques for three months to investigate many of the Tele-psychic companies. A college student was hired to apply for a job as a phone psychic, she had no psychic powers and used cues written on tarot cards to help her do the readings. As she put it, “I was just kind of blabbering to the callers.”

The programme, titled, *Hello Tele-psychic* convincingly showed how cynical the bosses in this business are, not only about the callers but also their so-called psychic employees -“most of these people’s personal lives, people who work for us, are just a total shambles. How they could even give this stuff out is incredible.” (The blind leading the blind? **HE**)

The service typically costs about \$120 per half hour should one bite, and the enticing web is mostly spun by ex-cons who have resumed conning for big bucks. One tele-psychic addict had a telephone bill for \$1700!

ABC reported that up to 10,000 people a day are using the services, and it is estimated to be a \$100 million a year business.

How about a Skeptics Hotline, with Plimer on Creation or Mendham on Monsters?

The Skeptic's own agony aunt, Canberra Skeptic Julie McCarron-Benson, provides some useful advice for the lovelorn and true disbelievers.

Some thoughts on seeing yet more advertisements for psychics (an outline of some of the tribulations of the true believer; or what not to do).

There it was, amongst the ads for cards, crystal balls and readings in English, German and Italian, an ad for a Psychic-Clairvoyant, with a telephone number under the words Confidential-Private. What alerted my interest was the further message "If no answer ph: 018 [number] (Please leave message)". Wouldn't you think a psychic would know that someone had tried to ring or something? I toyed with ringing up and leaving a message along the lines of "Guess who?" Sense prevailed. It would be just my luck -sorry, there was a high probability of coincidence -that someone would recognise my voice. This set me to pondering the tribulations of being an active campaigner against charlatans and other purveyors of psychic phenomena.

One of the drawbacks in being widely recognised as a Skeptic is that often you become the first port of call for anyone interested in consulting any of the psychics. Some time ago, I set up a database of local soothsayers and took considerable pleasure on tracking their activities. Unfortunately my interest became known and I would get phone calls that went like this:

"I know you don't believe in this stuff but if I were looking for a good clairvoyant, who would you recommend?"

Or from the media:

"Who would I need to talk to to get some predictions for the next year, horse race, election result . . . ?"

Another drawback is that you can become rather notorious at dinner parties. You can do this two ways. You can stop the dinner conversation dead when it reaches its inevitable discussion of star signs, by declaring yourself an Ossiefirmus (ie two feet firmly planted on the ground). Most people don't seem

to be able to move on from this. Or you can point out in considerable detail and at length how ridiculous the whole thing is, and either end up boring everyone silly, or having a heated fight with the other dinner guests. In my personal experience, a discussion of star signs can cover UFOs, psychic counselling, smoking, lawyers, Nessie and, if I'm really lucky, racism and creationism. Regardless, you can guarantee that you will probably be struck off that guest list.

Concerning star signs, I've discovered another drawback (which most of my fellow Skeptics [being male] will not experience, but I'm going to share anyhow, as you might like to take notes). For some reason, a large number of single males, when seeking to introduce themselves to females, use as their introductory remarks, "What star sign are you?" or "I'll bet you're a . . . (star sign)?" to any female they hit on. In my observation, this is quite a successful ploy. The female immediately begins prattling on and the male is seen to have achieved the first step in a fruitful relationship by appearing aware and possibly as a Sensitive New Age Guy (SNAG). For female Skeptic colleagues though, here is a word of caution. Do not laugh in these men's faces or pour your drink down their trouser front. Remember, they are simply making the first step in a meaningful dialogue and have been socialised into believing all women think in trivia. With some help, they may be redeemed and shown that neither believing in star signs, nor the believer, are terribly desirable.

Sometimes however, it is extremely useful when confronted by door-knocking evangelists - of any persuasion -to simply say "Sorry, I'm a Skeptic". For some reason, some people confuse scepticism with some psychic belief system. I've received many blessings on my house, although my most successful rebuff occurred when I opened the door dressed as a Druid. (I was deciding what to wear to a bad taste party.)

I must say, though, I do sometimes miss the innocence of the tealeaf reading

afternoon tea parties, the casual conversations at bus stops about Indian guides and some quite tasteful discussions regarding the significance of some people's auras. No-one tells me these things any more.

* * *

Regular correspondent, Alan Towsey of Tahmoor sent the following update.

Regarding the Miracle of Saint Januarius (Vol 13, No 4), my article on the liquefying of the blood of a saint in a Naples cathedral, Barry Williams has sent me some material sent to Harry Edwards (how did Barry get hold of it?) (By *Droit de fauteuil* if you must know. **BW**) by the Italian equivalent of our Aussie Skeptics, and signed by Luigi Garlischelli, Dept of Organic Chemistry, University of Pavia. Summarised, the material suggests the explanation is thixotropy:

"Thixotropy denotes the property of certain gels to liquefy when stirred or vibrated, and to solidify again when left to stand. Shaking or often slight mechanical disturbance thus makes a thixotropic substance more fluid, even to the extent of changing it from a solid to a liquid."

Dr Garlischelli and his associates (Franco Ramaccini and Sergio della Sala) report further that:

"In support of our hypothesis of thixotropy, we have been able to reproduce liquefaction of samples resembling the blood relics that we have prepared using substances available in the fourteenth century."

and go on to give technical details in full. They also examine in detail the previous 'scientific' examinations of the phials and conclude:

"In summary, we surmise that the 'scientific' claim that the reliquary contains blood is based on very flimsy evidence."

(Readers who wish to experiment on an anti-thixotropic substance ie one which becomes firmer with stirring, should make a paste of cornflour and water. When stirred gently it acts like a

liquid; when stirred vigorously, it resists like mad and becomes impossible to stir. Also fill a bowl with the liquid and punch it. It feels just like a solid. I saw this demonstrated at the Great Australian Science Show by some people [from CSIRO, I think]. **Ed**)

* * *

Victorian VP, “Sir” Steve Roberts tells of his acquisition of nobility.

Degrees of Disbelief

Usually I have to read the *Financial Review* at work for its sober financial reportage, so imagine my amazement when one day it ran a half-page advert for honorary degrees and medals! I could hardly wait to snip off the coupon and whang it in the fax machine. After all, the Chief Manager above me had been flaunting a bogus PhD for years (and he wasn't found out until well after they had fired him for some other reason). Imagine how a medal would break the ice at parties* and formal do's - even if you had to be careful not to expose it to heat.

(*You hit the ice with the pointy bit of the medal. Next question please?)

Back came a letter, printed all in block capitals, using a rather worn-out ribbon. This, with considerable good taste and accurate judgment, extolled my “outstanding service, example and excellence”. On offer to such august persons as myself were all sorts of honorary awards, each awarded by an institution that you have almost heard of. Photocopies of other photocopies of the awards and medals were enclosed, as proof that they were genuine. (But genuine what?)

If a PhD didn't tickle your fancy, there were also State, Governmental and Knightly (sic) medals and things - you could become a Baron of Bohemia, or get the Einstein Medal, or join the order of the Temlars (sic), etc And all awards would bear a seal from “the relevant department of the Duchth Government”.

An application form, much photocopied and then cut down to A5 size with scissors, was also included. The prices, at \$5 000 - \$10 000 (US

dollars) per award were a little high, but ribbons (to hang the gongs from) would be thrown in free! Ironically, for that sort of price a graduate can get a genuine PhD - a small amount being fees and the rest required for three years' survival somewhere below the poverty line. . (This is a special rate, only for graduates - imagine what unqualified people have to live on).

This first letter was headed “Eurotrade Corporation” and was signed by the Chairman of the Board. . But soon another letter arrived which apologised that the first one was sent mistakenly “by our junior officer” - wow! The second letter sported even more misprints than the first one, and now wanted the bank drafts in US\$ payable to “Transglobal Immigration Agency”, which appeared to reside at the same address (and certainly used the same dot-matrix printer and fax machine).

A couple of weeks later another letter came. This hotted up the pace by offering gongs and awards to the first 50 Australian applicants for “only” US\$1 000 each. Curious as ever, I phoned the various numbers mentioned, each time getting various people with heavy Russian accents who offered different excuses for nobody useful being available. The address given turned out to be a huge house in one of the best suburbs, surrounded by high walls and festering with burglar alarms, but nobody ever at home. I finally got hold of someone who would talk - but not on the radio. How many enquiries had they had? “Thousands”. And why did the honours cost so much? Well, actually the honours are bestowed for free, but the art-work for the certificates is **very** expensive. (Ironic note: my real PhD was actually awarded in the form of a tear-off computer sheet, sent through the mail.)

Finally, I got yet another letter which said that I was very “distinguishished” and “therefor . . . a decision have been made by our Chairman to grant an Honorary Degree or any other award to you”. I will spare my readers the block capitals in which this missive was couched. All

I had to do was send the usual folding stuff - bank drafts only please - to get the certificates and/or medals. Well, who needs those when you've already been granted the honour you wanted? So now I am Sir Steve Roberts, of the Order of the Knights of the Holy Grail, and you peasants had better start bowing when I walk past or I'll have Lady Roberts put the boot in.

* * *

While the “noble” National President describes the day he became a war hero

It's funny how things happen. More years ago than I care to remember, I joined the RAAF as an engineering apprentice. I spent 15 largely uneventful years in the service of Queen and Country and then took my discharge and sought to make my way in the real world. No-one fired a shot at me in anger, nor in fact, in friendship (I steered well clear of the US Air Force).

I remember my years in the service with some affection as I went to some places I probably would never have chosen to visit and I learned a lot about aeroplanes and have a continuing interest in the species, particularly those of venerable vintage. But that was all a quarter of a century ago and of the two lives, I prefer that of the civilian to that of the serviceman.

Then, on April 20 the *Sydney Morning Herald* published an article under the headline “Unsung Heroes Recognised”, stating that the government had decided to correct an anomaly that had persisted since WWII. Some people who had served in Australia during that war had not had their service recognised by the award of campaign medals and the Australian Government had removed the anomaly by making an award to those people. It also extended the recognition to Australian who served in the British Commonwealth Occupation Force in Japan 1945-48, to various UN peacekeeping operations and to those who served in Ubon, Thailand between 1962-68.

I served at Ubon twice, in 1962 and 1963, and the only heroism I recall exhibiting was in getting over some of the hangovers I suffered. Indeed, I had hitherto regarded myself as a card-carrying member of the Cowards Union. But now, by government fiat and courtesy of an unnamed headline writer, I am an 'unsung hero'.

Which bears out one of my most firmly held convictions, and one of the guiding principles of the Skeptics. You shouldn't believe everything you read in the press.

* * *

Just after laying out the previous item, on Sunday May 8, I was watching the ABCTV's *Compass* religious programme. The lead story in this episode was about members of the RAAF who had had 'mystical experiences. In particular, the story talked about the RAAF's Chief Public Relations Officer who had give up flying when he found he was uncomfortable at high altitude. He visited a Canberra 'psychic' who told him, after

reading his Tarot Cards, he had been, in a past life, a Luftwaffe bomber pilot who had been killed on a raid over England during WWII and that that was the cause of his disquiet.

He has written a book which discusses the strange experiences which have been reported by other members of the service.

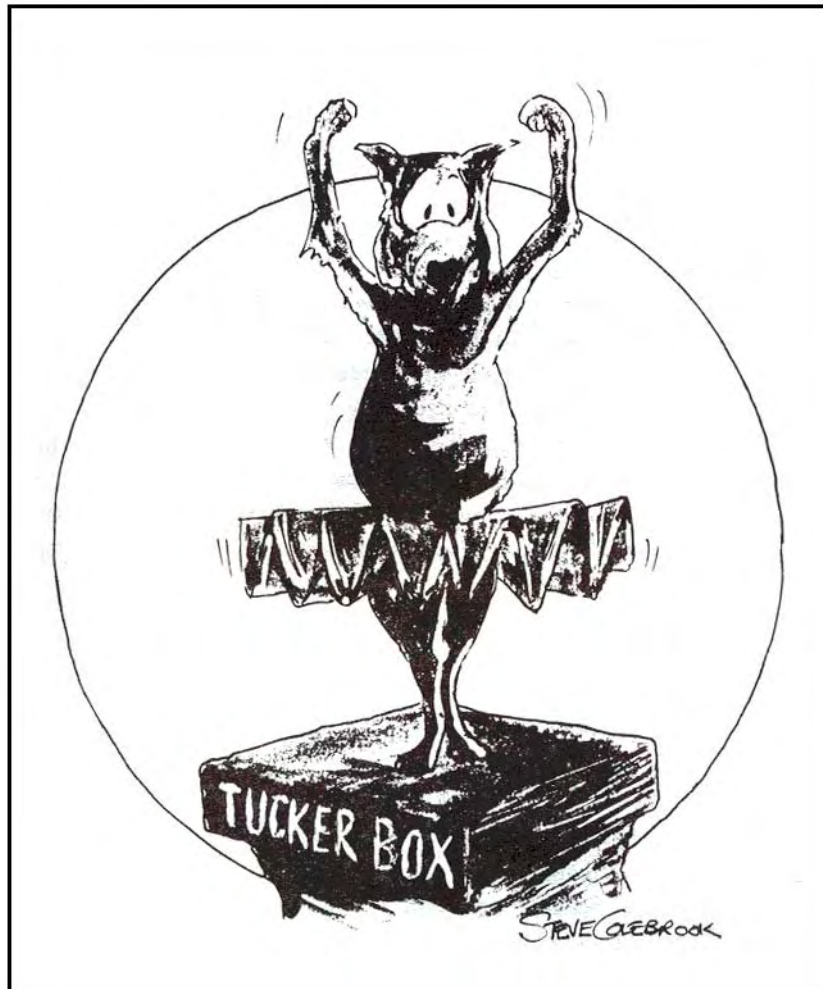
I must get hold of a copy of the book to check whether our defence dollars are being wisely spent on such important professional services as psychics and tarot readers.

I was not at all amazed by these revelations, as, during my time in the service I had a lot to do with (mainly

fighter) pilots.

Many of them believed they had had a past life -trouble was, most of them seemed to believe that they had been Biggles.

* * *



Vic President Adam Joseph delivers the following piece of revisionism.

On a recent trip back from Far North Queensland to Melbourne, I required a petrol stop five miles from Gundagai where that famous Australian icon The Dog on the Tucker Box resides.

Although I am not one to ever attempt to destroy what little mythology this young country has, I did observe a mistake of major proportions. The Dog on the Tucker Box is in fact a bitch ! Upon close investigation with video camera and my Canon 'tourist' special, there appeared to be no appendage on the sculptured piece that indicated it's

maleness. If such an icon is to be confronting overseas tourists and others, surely the trustees of this mutt could at least get it right. (Come to think of it, if you just called it a 'Mutt on a box', gender wouldn't matter.) No doubt there are those out there who are thinking right now how pedantic this all

is. True. It's only a minor point but nevertheless should be corrected. One story goes that when the mutt was first bronzeified, morals of the day did not permit a true-to-life sculpture of a naked male on public display, which makes one wonder about the dogs wandering the streets in those days. This brings to mind just how many statues out there are not representative of their true stature. (Statue !?) Maybe readers can assist in matter. (In the original version, the dog did something much more fundamental than sit on the box. Ed)

* * *

If the (unnamed here to prevent his embarrassment) subscriber who listed among his "Interests" on

his Subscription Renewal Form, "Worshipping Harry Edwards", would care to send us some more details of his condition, we will be delighted to put him in touch with one of the psychiatrists who subscribe to *the Skeptic*.

All correspondence will be treated in the strictest confidence.

* * *

Long serving Vic Committee member, Peter Hogan does a follow-up on a technological breakthrough .

After reading Colin Keay's article Electronic Antenna or TV - top

Paperweight in the last issue, I checked my copy of RoyalAuto to see if it was advertising the device. RoyalAuto is the journal of the RACV, the Victorian equivalent of the NRMA. Sure enough, it has a full page ad for the Electronic Antenna. As the official magazine for RACV members, I felt it had a responsibility to (a) provide reliable information and (b) protect its readers from wasting their money on dubious gadgets. I decided to send Colin's article to the magazine with a suggestion about how to protect their readers.

I wrote to the Manager of RoyalAuto, Peter Stuart. My letter included the following:

"I understand that RoyalAuto is not endorsing a product by publishing an advertisement for it (as noted in the disclaimer on p. 3). I also appreciate that you are not able to test products that you advertise. However the RoyalAuto does have a reputation as a responsible journal which gives reliable information. I think some effort should be made to protect readers

from advertisers who make dubious or incorrect claims.

I would like to suggest that advertisers who make specific claims for a product should be required to produce evidence that the claims are correct when they apply to advertise in the journal. This evidence could then be assessed by a person with relevant expertise. This should enable you to filter out products which are shonky and give your readers some protection."

The reply from Mr Stuart was encouraging. He first assured me they were aware of the product and would not be running the ad for it again. I shall quote two paragraphs from Mr Stuart's

letter.

"At present we are preparing a set of guidelines for advertising products such as this antenna. Where we have facilities for testing items such as motoring accessories and safety products we do so. Many goods are rejected on the grounds that they do not perform as promoted, or they are not able to independently substantiate claims made. We have also had instances where manufacturers/distributors change the



labelling on the product. . . (Mr Stuart comments about the difficulty of judging the benefits and value of a product.). . .

Certainly we will, in future, be submitting items such as this antenna to independent scrutiny."

RoyalAuto are to be commended for their responsible attitude to advertising and for endeavouring to protect readers from dubious products. But how many other publications are prepared to protect their readers in this way?

I believe that if a publication wishes to be taken seriously, that is it claims to be a provider of reliable information, then its readers should also be able to

trust the claims made in advertisements in that publication. This protection for readers could be achieved as follows:

- advertisers who make testable claims in an advertisement submitted to the publication would be required to submit evidence to support the claim(s);
- the evidence to be assessed by a person with relevant expertise who decides if the claim is justified;
- . . if the claim is not justified either the advertisement is refused publication or the claim is modified or withdrawn, depending on the nature of the product and the claim.

I would like to suggest that readers of *the Skeptic* who see advertisements with dubious claims in serious publications write to them to see if they will give their readers this kind of protection.

I do not expect publishers to endorse products that they advertise. But the reputation of a publication can influence its readers when assessing its advertisements and advertisers are not above taking advantage of this. Publishers need to give their readers some protection against these advertisers.

* * *

Most of the readers would be astonished if I failed to mention an important historical event that

took place as this issue was going to press. I cannot think of any excuse by which I can legitimately tie this story to our aims of exposing the claims of paranormal practitioners, so I won't. I will just ask readers to indulge the whims of an ageing Editor.

Allan Border, to my knowledge, was never dismissed for 87 in his long and distinguished career as an Australian cricketer and captain. There was nothing paranormal about AB's cricket; it was the epitome of the normal Australian, doing normal things, but doing them extraordinarily well.

Well done Allan Border and thank you for the pleasure. **BW**

Hypnosis: Who says so?

Adam Joseph

Interview:

Stage Hypnotist Martin St James answers blunt questions with hypnotic clarity.

To fully understand the complexities involved in the practice of hypnosis would require a much longer article than this one. We do know that the word itself came from the Greek *hypnos* and refers to 'sleep', a sleep-like state that can then be interpreted quite broadly.

In the most basic of explanations, this state is supposedly a communication only between the hypnotist and the hypnotised who will respond to all manner of suggestions in an uncritical way. The subject will see, feel, smell, taste without a will of their own, but in response to the 'controller'. Even the memory is suspended. This is at least what the public understanding is of hypnosis. Of course, critical thinkers know it's a much broader concept and it has more than its share of non-believers. In the next issue of *the Skeptic* we will take a deeper look at the subject itself and the controversy surrounding it.

The requirement of 'the Victorian Psychological Practices Act of 1965' states that one has to be over the age 21 to practice hypnosis, and is not allowed to do it in a public performance. Further, the act states that hypnosis only be practised under the supervision of a medical practitioner, although this doesn't apply to dentists.

Martin St James has been practising what he calls Suggestive Relaxation Conditioning, Mind magic, hypnosis, and a number of other names depending what part of the world he is in, for some 40 years. Essentially he is a showman, and his run-ins with authorities over his alleged use of hypnosis have gained him a considerable following and reputation. But does he hypnotise people? The Victorian courts in 1969 said he did, as was also the case in Tasmania. But in a 1985 Adelaide decision and again in Melbourne in 1990, he was vindicated by a decision in his favour, albeit an expensive one in the latter case. The following are 20 questions bluntly put to him during a recent interview on the Victorian Skeptics radio show *The Liars' Club* on 3RRR-FM by this writer, magician Terry McSweeney and Kathy Butler. What Martin St James does on stage is quite clear as you will read.

You seem to have had a battle with the Australian Psychologists Society over hypnosis. Don't they like you? *I Think they're a little jealous. Probably I'm working and*

they're not.

What's your view of hypnosis, or trance-like states, or altered states of mind, or whatever people call it? With what you perform on stage, is it what people perceive to be hypnosis, and we'll call it so-called clinical hypnosis, or is it like professional wrestling where you use a lot of real elements to create an illusion of a perceived reality?

I think it's pretty well what you say there in a sense...

Which one? The second?

The thing with hypnosis is that nobody really knows. There's the X factor there. Doctors, psychiatrists, psychologists, we talk about trance states and nobody really knows. Nobody can give a real definition what hypnosis really is.

Come on Martin, you're tap dancing here, is it World Wrestling Federation here or hypnotism? We were looking at the Psychological Practices act of 1965. You have been to court in Victoria, Tasmania and South Australia. In Tasmania, a psychologist stood there in the court and said "Yes, I believe hypnosis was used to produce the phenomena we saw". But there's no definition in the act that says what is hypnosis. Are they just basing it on the fact that you dared to say on stage "Hi I'm a hypnotist" so it must then be hypnosis? How do we know you're not lying? That you're not really doing hypnosis at all, you're just calling it hypnosis? How do they prove what you do?

They can't. That is the point.

So how come they won the court case?

They won a court case in 1969, the first time I had a court case. Even then, I claimed I had not hypnotised anyone, the people hypnotised themselves. Therefore they did self-hypnosis. They should have thrown the case out of court but the judge saw fit to say that I was in breach of the act, and yet every authority in the business today will say that a person hypnotises themselves. They use self-hypnosis. However, the second time I took them on, we actually proved that the definition of hypnosis (they were giving) was wrong.

In Tasmania, you referred to what you do as 'suggestionising'. It just seems very strange that a body such as the Psychologists Council or Hypnotists Society, can sit back and say "Oh no, that's hypnosis and that's wrong". For all we know you could just have had 20 paid actors up on

stage.

Would you believe that my evidence never came to court in Tasmania. Unfortunately I had to be in England and I left it to a counsellor to take control of the thing and he never presented the evidence. He thought he had a different case so he presented it his way.

What I actually did in Tasmania before I was arrested, I knew that the members of the Psychology Board were in the audience, so I said 'Now ladies and gentlemen, I'm not going to do any hypnosis here tonight, I'm going to do some demonstrations of suggestive relaxation conditioning'. And I said "Look into my eyes" to about 20 subjects. I then closed the curtain and said I'll now have a break of 20 minutes while we are preparing for our show. With that, I took the 20 people out into an ante room and I got them all to sign statutory declarations that I did not hypnotise them, did not go through any form of formal method of hypnosis, and I told them all would they just go on stage, close their eyes and just make out that they look like they're hypnotised.

You suggested that they act as though they were hypnotised?

Yes. So they came on stage and we pulled the curtain open, and then I was arrested the next day for hypnotising these people. Now, I thought I had an open and closed case and what I got charged for, which is quite ridiculous, I got charged for 'intending' to hypnotise. Which is the same as me looking at some lady and saying 'wow she looks good to me' and I get charged with rape.

It would be lust on that occasion or a conspiracy to hypnotise.

Well, it's the same thing in Victoria. I really believe when I was charged in Victoria the same thing happened. I felt that the whole case was very biased. We had to put up

everything to try and show that the people on stage were not hypnotised as defined by the law. And the law states that they go into a trance and all sorts of things, I don't know what the exact definition of hypnosis is in Victoria now. The word trance has so many definitions and meanings that it is not one that can be used.

We have been pondering what the word hypnosis means. What is your definition of hypnosis if you indeed have one?

It's very difficult to have a definition because there are so many definitions. My definition is that a person basically goes by attitude, motivation and expectation. They are in no such thing as a trance. I do meditation 3 times a day and I know what it feels like to be in a trance where you leave the rest of the world and you go on to a state that's very very euphoric. People go into this euphoric state on stage but they're always aware of everything that's happening around them. So they're not in some sort of state that they don't know where they are.



One of the things that are brought up by psychologists and psychiatrists and those who oppose the practice of hypnosis on stage, are the possible dangers. Recently we had on *Real Life* a Dr

Rob Stanley. His argument was that there is the possible or probable likelihood of something harmful occurring, and on radio here in Melbourne, Dr Glen Rose was discussing a possible police action against Channel 7 for screening Paul McKenna's TV specials. He was suggesting that there have been cases where suggestions have not been removed. In our research, no-one has ever been able to come up with any case saying anything harmful has occurred in a stage hypnotic performance.

It's been said that people can give up smoking under

hypnosis. The ratio of success in giving up smoking under hypnosis or alleged hypnosis is about 50% or less. The average person who really wants to give up smoking and goes to the trouble of going to a hypnotherapist 2-3-4 times which involves quite a bit of money, they really are on the brink of wanting to give up, they are pretty desperate, so that already plays that part in helping them push themselves over the edge.

That's the thing, the hypnotist actually pushes the person over the edge. But then again, they need that person to do that. Let me answer two questions, first of all, there's never been a case in medical history of a person suffering of the after-effects of being hypnotised, and you have these people saying this could happen, may happen, might happen, and they love those words. But they never happen.

On smoking, there's another reason why psychologists dislike me intensely and I understand that. It's a minority really. What I do is I trade off a little more than my entertainment, I sell tapes to help people to stop smoking, I sell tapes to help people to lose weight and to help them with stress related problems. Now my tapes sell for about \$25. It's a beautiful racket, but those people can take those tapes and carry their hypnotist with them all over the place. The results are phenomenal, we get the same if not better results than people that use actual hypnosis, inducing hypnosis by each person.

Do people get their money back if it doesn't work ?

We give a 100% money back guarantee. The point is, they can come and get a tape for \$25 or they can go to other people and it can cost them thousands sometimes to do the same treatment.

What are you actually selling in that case, hypnosis or hypnosis as placebo?

I'm selling hypnosis, I'm selling a motivational system or technique. Hypnosis is a goal orientated thing, it's motivation, attitude and expectation. The placebo effect is an enormously strong effect and that's what hypnosis basically is. Scientists use placebo, doctors use placebos, and hypnotists use placebos because that's basically what hypnosis is.

In a book you are releasing shortly, our understanding is that you have a \$100,000 challenge to psychologists who do hypnosis. Can you tell us what that challenge is ?

I've had interviews on the ABC with certain people (psychologist hypnotists) who claim that they can just look at someone and know that they're hypnotised, and therefore that's how I get charged in court cases.

I maintain that if you got 6 people and allowed a psychologist to hypnotise 3 of those people for instance (I won't hypnotise them, let somebody else hypnotise them) so the psychologist knows who is hypnotised and who is not. And then get another psychologist who doesn't know what has transpired here to view the 6 people and tell us which 3 have been hypnotised and which 3 haven't. As simple as that, and I'll give \$100,000 to charity if they can pick the 3 people who have been hypnotised.



In the news at the moment is what is referred to as the False Memory Syndrome. In the US a number of people have, under hypnosis by psychotherapists, made allegations that they were sexually abused at

the age of 6 months, one year, 2 years, and to a lot of psychologists that's an incredible feat because people don't have memories that far back.

Some of these cases have later been revealed to have no basis for credibility whatsoever. People have said they were hand-held by the psychotherapist. Where does that put hypnosis? All of a sudden somebody remembers all sorts of things under hypnosis, then it's proven and agreed with by the subject that it did not happen. In the eyes of the world, the hypnotist, or those who claim they can hypnotise, where does that put everything?

It's not reliable. That's number one. You can't rely on the mind in that way. It's like using hypnosis in the law, in courts, it's not reliable. You're now getting away from my line, I don't claim to be in this side of it.

I know my business on stage as an entertainer and as an entertainer I make actors out of people and I become the director. I have no more power than any ordinary person who walks the street, I'm just an ordinary guy who happens to know how to direct and entertain people on stage. But I do know a little bit about the other side of it. I was called into a case at one stage a few years back where I had to hypnotise

a policeman to try to remember where he was at a certain time, and I was able to do that, and it was the key to a murder case. This policeman remembered he was with this particular person at this certain time and it got the person off the murder case.

Things like that can happen. You can also be talking by innuendo and the way you use your speech to a person, you can implant suggestions to them, for instance if a person goes right back in time and regression, and if the hypnotherapist is saying such things as 'did someone interfere with you' or whatever, you naturally start to think 'oh gee, did somebody' and it goes into your mind and becomes a fantasy which can become a reality to you.

We are talking about psycho-suggestion now, to a highly suggestible person.

It comes to the other side, the therapeutic side. Some of these psychologists would say that by giving wrong suggestions in the therapeutic side can also be dangerous.

First of all, there's never been a danger. The thing about our brain is that we seem to have an in-built situation whereby everything over-rides, for instance if you were told that you weren't going to have a headache and you had something wrong with your brain, that headache would still sustain even though you were told that the headache would go because we have a self-perpetuating situation within our brain in that it tells us this is wrong.

Given that the psychologists, whenever they're on radio or television chastising you or any other hypnotic performer, here's a chance to set the record straight.

Can you make anybody do anything they wouldn't do such as make someone into a killer, give them a post-hypnotic suggestion?

No, I have been trying to get girls to strip for all these years and do all sorts of things and I just cannot get them to do that. I go to my bank manager and say 'give me all the money, I will refuse to take it but you will insist you give it to me'. It doesn't work like that.

The suggestion is that, in the so-called hypnotic state, if a person is not removed from it, they will remain in that state forever and ever.

Absolutely incorrect but believed by some psychologists to be true to this day, especially in Victoria.

Only the hypnotist can remove the hypnotic suggestion?
Absolutely wrong.

When on stage with the people from the audience that you have dragged up, are any of them pre-warned of what's going to happen?

Yes. First of all, they come to my show knowing what's going to happen. That's it. That's a very good question. In cults, when you go to a motivation session to learn mind power

or whatever it might be, you really go there with the idea 'gee, I'm just going to go to a lecture there', and after the lecture they're taking your money off you and they're also getting you aroused to such a state you just become so attentive to the whole thing, you virtually become hypnotised.

The perfect example is personal development courses where you pay \$800-\$1200 to go along. You have naturally been hypnotised, or at least made willing to go along, by the amount of money you have spent.

Exactly and you have got to carry along with it. When they come to my show, people know that they're going to be hypnotised for a special purpose and that is, if you like to call it, make silly fools of themselves. It's interesting how many people in this world want to make silly fools of themselves. I work in Japan, I work in Germany and all over the world and people are the same everywhere. There are always people that want to be on stage or up there in front of the public, at every party you go to there's always someone that wants to be up there making the rest of the audience laugh. Now I think it's a marvellous thing to have a good laugh, laughter is the best medicine. It is more beneficial to have a good laugh than to sit on a psychiatrist's couch.

How many times have you had someone on stage who wouldn't cooperate with the hypnosis act?

In the early days everyone wanted to take the mickey out of the hypnotist. I hope to make a movie one day of my life story because I've been in this business for 45 years and when I first started we had to drag people on the stage. I had just a terrible time, every night was like a bullfight, I went out there on stage wondering when the bull was going to kill me. That's what the audience came to see.

Would it be fair comment to say that the audience that participate in your act is much like the Pied Piper syndrome, follow the leader?

They come along and in all of us or most of us, an awful lot of people like to be the entertainer. The buzz, the adrenaline buzz that you get from an audience when you get them laughing. A couple of years ago I was working down in Victoria somewhere, a place called Colac I think, and my daughter was on the side of the stage helping me. There were two people in the front row, elderly people, and they were laughing so much they were crying, and I pulled her over to one side of the stage and I pointed down and I said "Tanya, see those two elderly people there. That's why I love doing my show. It gives me such a kick to see those people laugh" The doer or the giver of laughter is a wonderful thing. It keeps me alive, it keeps me young, and that's why I enjoy doing my show.

Martin St James, thank you very much.



Cows, Dogs and Ancestors

Historical Linguistics and Modern Myths of the Remote Past

Mark Newbrook

Introduction

In this paper I want to deal sceptically with one of the several important areas in which the discipline of linguistics is relevant to claims about unexplained phenomena and the like. The specific type of belief/proposal I have in mind here involves the relation between linguistic evidence and the history -or, in some hands, the pseudohistory -of the remote past.

Many popular writers whom one might describe as pseudohistorians, and even some linguists, have claimed, with little supporting evidence, that superficially similar names and other words in different languages are cognates. Cognates are words descended one from another or all descended from a common ancestor word; thus they originally had the same meaning and are, in effect, the same word, historically speaking. These 'findings' are taken to show that the languages themselves are genetically related or have experienced important mutual influence in the distant past. This is then invoked further as evidence that the cultures involved, traditionally perceived as unconnected, are to be identified with each other (they are in fact the same culture under different guises, or at least one of them is a later, perhaps spatially displaced manifestation of the other); or, if not this, that they experienced influential contact with each other in the remote, poorly documented past. In many cases these ideas have even been linked with accounts of 'ancient astronauts' —as in von Daniken's *Chariots Of The Gods* (1968) -or with fundamentalist or other similar religious stances.

I propose to argue here that the linguistic deductions underlying such claims are usually of uncertain validity; and that, where they are in fact known, the facts of linguistic history are typically highly complex and would be difficult (often impossible) to reconstruct without extensive documentation.

The beginning of writing

It is certainly possible for groups of people to migrate or travel large distances, especially given sufficient time, and it is thus possible that some alleged connections of this kind are genuine. Writing is only a few thousand years old and much early writing is very hard -often, at present, impossible -to decipher and interpret. Before the development of writing the only solid evidence available to us (as opposed to folk traditions - often second-hand or worse) is the frequently problematic data unearthed by archaeologists. Even in dealing with relatively well-documented societies such as the Greek

of the fifth century BC, there are huge problems in determining exactly what happened when gaps exist in the historical record. However, the fact that something - especially, something deemed to be historically unlikely or implausible on other grounds -may have happened is not evidence that it did happen. Positive archaeological evidence may be adduced, but, as noted, the data will typically bear more than one interpretation. Such positive linguistic evidence as is advanced is thus of crucial significance: if it is weak the whole case is critically weakened as a result.

Superficial similarities

Many of the linguistic examples involve pairs or groups of short, isolated words. Thus some writers at one time made much of the fact that *Madoc* is a Welsh name and *Modoc* a name in the Mandan languages of the Americas, and claimed that these languages were therefore connected. In the same vein, some nineteenth-century writers, notably members of the British Israelite sect, identified the Greek name of Russia, *Ros* with Hebrew and other Semitic names in the Old Testament. This latter case is typical in respect of the further deductions made: the writers claimed that a conflict between Russia and the other European powers was imminent, would be staged in Palestine, and would be the final struggle between good and evil as described by the prophet Ezekiel. The tracts in question are replete with additional 'philological' arguments in support of this view.

However, it is very easy indeed to find accidental similarities between (a) very short words and (b) isolated pairs or sets of words. To take (a) first: there is a strong likelihood that, given enough short words in enough unrelated (or effectively unrelated) languages, some pairs will have similar meanings by pure coincidence. There are only so many possible very short words. Pairs of longer words are less likely to exhibit chance similarities of this kind; there are more vowels, consonants, stresses etc which are liable to be different if the words are not really cognates. But chance similarity can still arise on occasion, even with longer words, when pairs are taken in isolation (especially in the more potentially confusing circumstances) .

This brings us to point (b). When, in the nineteenth century, the discipline of comparative historical linguistics was being developed, scholars quickly became aware of the existence of many apparent cognates, and wished to use them extensively in working out the histories of the languages in question, in particular their sound systems. It became apparent

that the only reliable cognates were those where the correspondences of sound between the members of successive pairs were largely **regular** -shared across many such pairs - and thus predictable by rule. As the number of pairs where the correspondence was the same grew greater and greater, the possibility that chance similarity was involved rapidly declined almost to zero. But, in cases where only one or two pairs manifested the same correspondence, this possibility remained quite high.

Genuine cognates

I illustrate this with a specific example in which, as a matter of fact, the relationship was never actually in doubt. What shows that the following pairs of English and German words are indeed cognates, and that the two languages are therefore related, is none of the individual pairs of cognates *to/zu ten/zehn plant/Pflanze* etc, but the **regular** correspondence of English *t* and German *z* (and of the other pairs of sounds present) in these and in so many other pairs that chance is virtually excluded as an explanation. The mere general similarity of the words in any one of these pairs taken alone, while interesting and possibly calling for explanation, would in no way be decisive evidence.

Where such systematic correspondences are not found, deductions are unreliable in various ways. It is easy for genuine cognates to pass unnoticed in the absence of detailed investigation. This is because the systematic correspondences often exist in long chains, allowing one armed with all the information to move with some confidence from claims about closely related languages spoken at the same period, such as English and German, to more distantly related languages and to earlier and later stages of the languages in question.

At third or fourth remove in these chains, the correspondences may be complex and indirect and may not be at all apparent without careful examination of the evidence, or of attested or posited intermediate forms.

Thus the following are all pairs or sets of cognates, demonstrably related and in most cases still sharing all or most of the relevant meaning. In some cases the cognates are words of the same language, some 'native' and others derived from different, ultimately related source languages (eg, English *hundred* (native) and *century* (from Latin, ultimately -but not closely -related to English)).

English *five*, Irish *coig*, Welsh *pump* (Irish and Welsh in fact have a common Celtic ancestor form, perhaps used as recently as 3,500 years ago; Celtic and Germanic (the ancestor of English, German, etc) have a common ancestor in Indo-European, perhaps 6,000 years ago)

English *hound* (compare German *Hund* 'dog'), French *chien* ('dog'), Welsh *ci* ('dog')

Latin *sol* (compare English *solar* derived/borrowed from Latin) and Welsh *haul* ('sun')

English *century* (derived/borrowed from Latin *centum* 'one hundred') and *hundred* (Latin is Indo-European. but not Germanic)

Classical Greek *blosko* ('I come') and *emolon* ('I came'); cognate parts are *bl-* and *-mol-*

English *cow* and *beef*

English *hen* and *chant*

English *-dise* in *paradise* and *fig-* in *figment*

A lot of bull

One of the more extreme (but not at all freakish) examples listed here is the case of *cow* and *beef* and it may be worth going through this case to show what can happen to linguistic forms, given a few thousand years. The two words, in their modern forms, have related meanings (not, of course, identical) but apparently have nothing else in common, and if we did not know the history of Indo-European fairly well we would never guess they were connected. In fact, the two words do indeed have a common ancestor form: something like *gwous* (Proto Indo-European, probably meaning 'ox' or 'cattle'); but this is not at all apparent from their current spelling and pronunciation. The form *cow* exhibits the result of a process by which the Germanic languages, as a group, altered initial *gw-* to *g-* and then to *k-*. The final *-s* was lost in a separate change. The Old English form was thus *cu* (pronounced 'koo'; compare German *Kuh*) and a vowel change in Early Modern English yielded *cow*. The other form *beef* is from Latin *bos* (compare the derived/borrowed form bovine *gw-* went to *b-* in such words in early Latin and later the vowel changed) via the Norman French equivalent of Modern Standard French *boeuf* introduced to England after the 1066 Conquest. The English word refers to the living animal (minded by English-speaking serfs) and the French word to the cooked meat (eaten mainly by French-speaking nobles). This sequence of changes could never have been reconstructed on the evidence of the modern forms alone; they would have been seen as totally unrelated.

Traps for the unwary

It might be replied at this point that all this proves only that some genuine cognates are likely to be missed in more obscure cases; it does not impugn those correspondences which do appear (to pseudohistorians) to be plausible. These latter must be a subset of the set of genuine cases of cognates. However, this is not so: many cases of apparent cognates presented by such writers might well, if adequate evidence were available, prove to be wrong. This is because, as indicated earlier, the forms in question are typically presented as isolated pairs, without the crucial check provided by systematic correspondence.

To exemplify: in Malay the word for 'name' is *nama* and for 'same' *sama* and the number 'two' is *dua*, remarkably like Greek/Latin *duo* (which is cognate with *two*). Malay is not Indo-European and, as far as we know, is not related to the group at all; neither have these words been borrowed through contact. In some Iranian languages (Indo-European but only very distantly related to English), *bad* means 'bad' and *path* means 'path', again apparently by coincidence. In

one Australian Aboriginal language, the word for 'dog' is *dog*, and this is again not a borrowed form but a native word, demonstrably derived from an earlier form *gudaga*.

Some chance similarities of this kind occur even in languages which are themselves known to be quite closely related. It might appear obvious at first glance that English *have* (with its genuine German cognate *haben*) is a cognate of Latin *habere* (the ancestor of French *avoir* Spanish *haber* etc), which has the same meaning. The fact that Latin is demonstrably quite closely related to English/Germanic (Western Indo-European) would encourage this conclusion. However, the English and Latin forms are not in fact cognates; they are unrelated. Latin does have a cognate for have, but this is *capere* ('take', 'capture'). There is no doubt that, if we did not know the history of English and Latin as well as we do, we would take *have* and *habere* to be cognates, quite wrongly. It is only the fact that both languages have long, very well documented written traditions that saves us from this error. With little-known, ancient languages (especially if we already believed them to be related) we would undoubtedly persist in mistaken beliefs of this kind (and would possibly make false deductions).

I suggest, then, that studies of this kind should be pursued only through examination of systematic correspondences and other well-established, careful techniques and principles of historical linguistics (all of which are, of course, always open to further improvement). Where the state of the evidence does not permit studies of this degree of rigour, any deductions made should be regarded as, at best, highly tentative, and speculation should be limited and sober. Claims regarding cognates and *a fortiori* claims regarding the relatedness of whole languages should be treated with great caution, particularly if they refer to the very remote past or to languages lacking long written traditions.

Dubious claims.

I propose to conclude with a brief survey of some works which make claims about the relatedness of languages (and hence of cultures) traditionally perceived as unrelated, seen in the light of my comments above. There is of course much work of a quite legitimate nature, carried out within the discipline of academic historical linguistics, the results of which are considered dubious by other historical linguists. In some cases the work may even appear unjustifiably daring (or worse) to those not persuaded by its claims. This is the nature of a developing subject, and I do not include work of this kind here. I confine my comments to work of a more truly 'fringe' character, much of it done by writers with limited expertise in the subject.

Swadesh

One writer of this nature was Swadesh, who started off as a legitimate academic historical linguist. In his early period the worst that could be said of his work was that it was perhaps unduly influenced by his Marxist politics. As a result of the

persecution of those with such views which prevailed for part of the 1950s in his native USA, Swadesh became more and more estranged from mainstream linguistic work, eventually basing himself in Mexico. His major book, *The Origin and Diversification of Languages* appeared posthumously in 1971. It presented a theory which he had been developing during his final years, involving a formula for estimating the date at which any two related (or supposedly related) languages had diverged from each other in the course of their development out of their common ancestor language. The method was called *glottochronology* and involved the typical rate at which 'basic vocabulary' - a concept which is itself not easy to define uncontroversially - was supposed to be lost in any one language.

Early calculations of this rate ran into difficulties owing to conflicting evidence from known language families with established dates of divergence. Swadesh, however, persisted, and as time went by he became willing to accept as cognates pairs of words with fewer and fewer shared sounds, or with sounds sharing hardly any features. It would be only slightly unfair to say that in the end, for Swadesh, any vowel might have become any other vowel, and most pairs of consonants might also be connected with each other, depending on the specific word in question.

He thus almost certainly exaggerated the closeness of related languages, and saw relationships in cases where none probably existed. Eventually he felt able to outline the distribution of language super-families as early as 25,000 years ago. In one of his maps, the northern parts of Europe and much of Canada are covered in glacial ice, and languages related to Basque (a very interesting, genetically isolated language now confined to parts of northern Spain) occupy most of ice-free Europe. It goes without saying that this sort of thing is utterly undemonstrable given our present state of knowledge. The book met with hostile reviews and is treated by most linguists today either as a joke or as a sad example of a scholar in his dotage producing wild and/or sub-standard work.

Some scholars (notably Wang in the USA) have recently tried to re-develop the ideas involved with the intention of cutting out the wildness and perhaps even reaching well-supported and exciting conclusions. It has to be said, however, that many linguists regard glottochronology as an idea best laid to rest, at least for the moment, and are not encouraged by the use of similar methods by some more recent linguists.

Marr

Another, even crazier historical linguist was the Georgian scholar Marr, a contemporary and compatriot of Stalin, who emulated scientists such as Lysenko in reinterpreting his discipline from a Marxist standpoint (the parallel with Swadesh will not be missed). Relating linguistic structures to systems of social organisation, Marr argued that languages developed through evolutionary layers rather than the family trees posited by orthodox linguists.

Each layer corresponded with a type of social organisation; languages were essentially class phenomena. The objections to this were (or should have been) obvious, but official endorsement of Marrism in the USSR deterred most potential critics! The final version of Marr's theory claimed that all the words of all languages could be traced back to four primeval syllables. Marr died in 1934 but his theories continued in favour until 1950, when Stalin himself disavowed Marrism, pointing out that if Marr were right Russian should have undergone enormous structural changes after the 1917-18 revolution (which had not, of course, happened).

The strange case of the Dogon

Still stranger work has emanated from writers with no training of any kind in linguistics. I conclude with an examination of one such piece of work, albeit one which is more coherent and plausible than the fantasies of Armageddon with which we started. Indeed, in this particular instance there are some not uninformed commentators who do perceive something of a genuine mystery, if not the truly dramatic anomaly in which we are invited to believe.

The linguistic evidence adduced here is, to be fair, only part of a larger picture, but the cavalier way in which it is treated is not at all untypical of the work of those lacking any training in the subject. This somewhat unscholarly approach should be seen as particularly distressing in this instance, given that the author in question, Temple, claims expertise in Sanskrit. This is scarcely an easy language to master, and one would hope that the effort involved would have inculcated in Temple some respect for the discipline engaged in describing and explaining such complexities. On the other hand, Temple is at the very least a most unusual western-born languages scholar: he states that he is unable to read any French at all, which makes a marked contrast with his proficiency in the much more exotic Sanskrit. Temple's ignorance of French has serious consequences: most of his primary sources were written in French and many have never been published in English.

The book is entitled *The Sirius Mystery* (1976), and Temple's thesis is that certain myths and rituals of the Dogon, a tribe in Mali (West Africa), are associated with the star Sirius and are founded in a fairly detailed knowledge of the solar system centred on this star. Sirius is some 8.6 light years -over 80,000,000,000,000 km -from our solar system, hence a near neighbour in galactic terms. In particular, the Dogon are said to be aware of the existence and orbital period of the white dwarf star Sirius B, the main known companion of Sirius. This small star is invisible to the naked eye and was discovered by western astronomers only in the nineteenth century.

Assuming that the Dogon do indeed possess this knowledge (and this is not beyond dispute; nor is it clear how long the Dogon have held such beliefs), some spectacular explanation seems to be required. That offered by Temple involves a visit

to the Dogon, in the remote past, by intelligent space-faring inhabitants of a planet in the Sirius system. Temple is able to interpret -to his satisfaction -some other Dogon stories as accounts of this visit.

Up to this point, Temple -despite the apparent outrageousness of his story -is on relatively firm ground, involving interpretation of oral narratives recorded in near-contemporary Mali on the one hand and astronomical facts and theories on the other. Even here there are, however, problems.

Although Sirius is relatively nearby, it is very different indeed from our sun, being much more luminous and hence, in all probability, much shorter-lived; it is doubtful, to say the least, if an intelligent life-form has had time to develop on a planet associated with Sirius. There are also problems involving the nature of the orbit which would be required for a planet to lie in the habitable zone surrounding such a luminous star (even allowing for a metabolism very different from ours), not to say the stability of such an orbit in a system also containing at least one other massive body (Sirius B).

Nevertheless, it is possible in principle, if rather unlikely, that there could be such a space-faring civilisation on a planet in the Sirius system (although a visit from the Sirians would imply that interstellar travel is in fact feasible, which is another matter altogether). Temple, however, is not content with this. In Part 2 of his book, he seeks to strengthen his case by arguing that many myths from other parts of Africa (notably Egypt), from the Mediterranean and from the Middle East also relate to this visit from the Sirius system or to the later diffusion of information transmitted to the Dogon by the Sirians.

Much of this evidence invoked by Temple involves finding cognates in Dogon, Ancient Egyptian, Greek, Hebrew and other ancient languages of the region. For example he suggests that a large set of superficially similar words including Egyptian *arg* Greek *Argo* (Jason's ship) etc are in fact cognates, relating them all to Noah's *ark* and arguing that they refer to the Sirians' spacecraft. Some of these words have known, unrelated origins. For others the etymology is so doubtful that any comment must be speculative. Elsewhere Temple plays fast and loose with various Ancient Greek words, nonchalantly announcing that words with the same or similar consonants but different vowels are obviously cognates (not even that they **might** be). Here again he repeatedly flies in the face of the large existing body of knowledge about Greek etymology and in particular about which words really are from the same roots. He also introduces highly speculative and controversial re-interpretations of Egyptian hieroglyphs. Although archaeological and other historical evidence (also dubious, in many cases) is often added, the main specific, concrete evidence is linguistic; and it is almost all of this highly suspect nature.

Alchemy in History

Kirk Straughen

Introduction

A number of shops I frequently visit carry a range of books on alchemy, some of which appear to claim that it is possible to accomplish a transmutation of the elements using this method, and it is for this reason that I have chosen to write an article on the subject.

I shall proceed to give a brief history of alchemy, followed by a description of its theory and practice. This shall then be compared to our modern theories of matter, followed by a discussion on why some alchemists may have thought a successful transmutation had been achieved, and how frauds may have been perpetrated. As the reader progresses, it should become evident as to whether alchemy works or not.

History

The word alchemy is derived from the Arabic *alkimia*, in which *al* is the definite article, and *kima* is thought to be derived from either the Greek, *chyma* meaning to fuse or cast a metal, or from *khem* "the dark land", the ancient Egyptians' name for their country.

The origins of alchemy can be traced to Greece's Hellenistic period from 300 BC to 300 AD, and is thought to have been centred around the Egyptian city of Alexandria, which was the cultural capital of the time.

Alchemy diffused into the Muslim Empire with the fall of Alexandria to the Arabs in the 7th century AD, and then into Europe in the 13th century AD via Toledo and Sicily, which at the time were Muslim centres of learning.

Alchemy flourished vigorously in Europe up until establishment of modern chemistry, which was spear-headed by such men as Joseph Priestley (1773 -1804) and Antoine Lavoisier (1743 -1794).

What is alchemy?

Alchemy is similar to the legendary Chimaera in that it is a composite creature which resulted from the union of Egyptian metal working techniques with Greek philosophy. From this melting pot of ideas emerged a philosophical system in which laboratory experiments were performed in an attempt to prove the veracity of spiritual concepts on a material plane.

According to alchemy, both animate and inanimate matter were unified through the possession of a permanent 'soul' housed in a variety of temporary bodies, and that chemical change could be shown in terms of human change, that a union of two substance was like a human marriage, and that the turning of base metals into gold was mystically linked by imitative magic to the transformation of the adept's nature into a nobler state. The successful production of gold was

considered to be a sign that the practitioner had achieved enlightenment.

Alchemy's theory of matter is based upon Aristotle's (384 -322 BC) theory of the two pairs of opposed qualities (hot/cold, dry/wet) and the four elements (Earth, Air, Fire, Water) produced by pairwise conjunction of the four qualities. These elements could interchange their qualities to produce others, as for instance: Water (cold wet) +Fire (hot dry) «—» Earth ((cold dry) +Air (hot wet) .

The essence of the four elements was thought to be the *Materia Prima* the 'soul' of the matter, which existed only potentially until given form, thus producing the elements. According to Aristotle, all matter was composed of these elements in varying proportions, and it was the ratio of these proportions which produced the multitude of substances that comprise the material world.

The Philosopher's Stone

It was from these philosophical assumptions that the alchemists deduced their own postulates about the unity of both the material and spiritual world, and the existence of a transmuting agent called the Philosopher's Stone which, if produced, could transform base metals into gold, and act as a panacea when dissolved in alcohol.

There was much confusion as to how the Philosopher's Stone was to be produced, and the following description is a generalised account of the process. The first step in the production of the Philosopher's Stone was to place a substance (ie excrement, semen, thaumaturgic herbs) in a thick walled hermetic flask. When the planets were in conjunction in the appropriate zodiacal signs and the invocations uttered, the flask was slowly heated in the furnace and the substance was thought to separate into the four elements: Earth (the residue in the bottom of the flask), Water (condensation in the flask's long neck), and Fire (the ignition of material within the flask). The second stage in the process was called the Nigredo. At this stage, the substance had been reduced to a black inert mass under the vapours that had been driven off. These vapours were allowed to condense and return to the black mass in the belief that the spiritual essence of the material (vapours) that had been driven off from the charred body (inert mass) would give birth to nobler substance when reunited with it (analogous with Christ's resurrection).

This second stage was repeated many times until it gave birth to the Phoenix, the third stage, so called because the black mass was said to burst into expanding feathers of white fire. These flames became red, then golden, then erupted into a coruscation of colour, the Peacock's Tail, the fourth and

final stage of the process. The explosion of light faded and left behind a red powder, the Philosopher's Stone, which, when dissolved in molten metal would transmute it entirely to gold.

The science of matter

After having given an account of alchemical theory and practice, I shall now seek to answer the following question: does alchemy work? The answer is no, the transmutation of the elements cannot be achieved by alchemical methods, and in order to understand why, we will need to examine the true nature of matter which has been elucidated by modern science.

All matter is composed of atoms, which in turn consist of a nucleus of protons and neutrons. The number of protons in the nucleus determines the nature of the element; for example, mercury has 80 protons while gold has 79.

The nucleus is surrounded by electrons whose number is equal to the number of protons; since the electric charge of the electron is equal but opposite to that of the proton, the atom is electrically neutral. The electrons orbiting the nucleus are arranged in shells, and it is the number and arrangement of electrons in the outermost shell that determine how an element behaves chemically.

Chemical reactions occur when the electrons in the outermost shell of the atoms involved are shared or transferred so that their total number is eight, that being the most stable arrangement. Any atom that already possesses eight electrons in its outermost shell cannot take part in chemical reactions, as is the case with argon and neon which are inert gases.

The alchemist's experiments were of a chemical nature, and no chemical reaction can alter the nucleus of an atom. The number of protons in the nucleus must be changed in order to effect a transmutation. This occurs in nature with the radioactive decay of elements such as radium which eventually decays to lead. Radioactive decay occurs because the number of neutrons in the nucleus is appreciably different from the number of protons. This nuclear instability results in three distinct phenomena: the emission of alpha rays (2 protons and 2 neutrons), beta rays (electrons) and gamma rays (high frequency electromagnetic radiation). Each of these events tends to increase the stability of the atom by altering the proton-neutron ratio to a more equal proportion, or by the release of nuclear strain through the emission of radiant energy.

Modern transmutation

The first artificial transmutation was performed by New Zealand born Ernest Rutherford (1871-1937) who bombarded nitrogen with alpha particles to produce oxygen and protons. Armed with nothing more than crucibles, alembics and other primitive laboratory equipment, the alchemists, with their erroneous theories of matter, stood no chance of changing one element into another. Not only did alchemy fail to transform the elements it also failed to ennoble its

practitioners. Charlatanism was rife in the period 1400 to 1600, and did not always go unpunished. Emperor Rudolf II (1552 -1612) imprisoned and tortured the English alchemist Edward Kelly for falsely claiming to be able to achieve transmutations.

It is possible that some alchemists sincerely believed that they had achieved a successful transmutation. In many cases, they may have succeeded in giving some other metal a golden colour, and concluded that they had made gold. Alchemical manufacture of silver has been explained by reference to arsenic compounds like orpiment and realgar (arsenic sulphides) which, together with copper, form 'silvery' alloys. Alchemical gold may have resulted from a combination of calamine (zinc carbonate) and copper which would produce a brass alloy.

Fraud

However, there were cases where alchemical gold was tested and found to be genuine. In these instances, fraud is the most likely explanation. How might the deception have been achieved? One possibility is that powdered gold was introduced into the crucible via a hollow stirring rod, or the crucible may have had a thick layer of gold lining its bottom, and concealed by paint. Alternatively, an ingot of lead dropped into the crucible may have been a mere shell which encased a solid mass of gold, and in cases where a sceptical observer provided a sample, the alchemist may have made a substitution using techniques similar to those employed by magicians.

Conclusion

In conclusion, I think it can be said that although alchemy made contributions to chemistry in the area of laboratory techniques, such as distillation, its esoteric and magical theories have no place in the modern world, except as sign-posts to human folly.

In today's world, anyone who suggests that an alchemical transformation of the elements is possible is either woefully ignorant of some very basic science or no better than the charlatans of old.

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Moving?

Don't forget to tell us your new address

Volunteers wanted...

Harry Edwards

Roll up, roll up ladies and gentlemen, now's your chance in a life-time to take part in an experiment which will ensure the inclusion of your name on the roll of honour of those who gave their all to advance the cause of medical science. No discrimination here ladies and gentlemen I assure you - males, females, other genders, the old, the young, employed, unemployed, the pregnant, sceptics, believers, Uncle Tom Cobby and all, are welcome to take part in this history making experiment.

All you have to do is stand still while we stick skewers into the fleshy parts of your body and take photographs.

Now before I get trampled on in the stampede of volunteers, let me assure you that I have it on the best authority that you will feel no pain, you will not bleed, will not become infected and the small wound will heal instantly and leave no scar. Just contemplate the ramifications; the revolution in surgical procedures; the future prospects for mankind.

Do I hear a murmur of scepticism? Would I lie to you? Is this a con? No sir, I swear to you on the Koran that the aforementioned experiments have been conducted by scientists in laboratories over the past ten years and the results have proved to be megamazing! Tape back your eyelids and read on.

A little over a year ago we received a letter from a Mr Jamal N. Hussein, PhD, Director of Paramann Laboratories, in Amman, Jordan, (It is possible, although not confirmed, that "Paramann" is a contraction of "paranormal-man," [mann, *Ger. man, husband*]) in which he introduces himself and his staff as a group of experimental physicists and experts in medical sciences who, for the past ten years, have been studying the phenomena of unusual body reaction to pain,

injury and infection as demonstrated by swamis, gurus and fakirs etc: Due to the unstinting cooperation of the Tariqa Casnazaiyyah (an old sufi doctrine dating back to the seventh century, and a chain of Masters in possession of its secrets and powers) the Paramann programme has been able to perform hundreds of highly sophisticated experiments on its dervishes, all of whom are endowed with the unusual reaction (ability to withstand) to pain.

In 1988, Paramann developed techniques called "Spontaneous Transmission" which allowed the "mass production" of individuals capable of resisting pain, injury and infection on performing Schmerzdemstration (Smertz,

Ger. pain), and the "Switch Technique" which allowed the former to be "switched off." The letter was accompanied by a photograph of a rather fleshy male individual with skewers stuck through various parts of his anatomy and concluded by suggesting that we, (the Australian Skeptics) may be interested in joint research - hence the headline.

Cognizant that there are many groups around the world who, for some obscure reason, indulge in masochistic demonstrations and self-mutilation, and having witnessed the Indian sceptic Premanand attach a lemon to the skin of his forearm with a needle and thread, I was inclined to comment "so what?" and file the letter in my green plastic bag emptied every Wednesday and Sunday nights courtesy of the local council.



However, for the price of an air-mail stamp, I decided it would be worthwhile giving the fellow a bit more rope and asked for details of any surgical procedures in which the techniques may have been used. I also suggested that they contact Premanand of the Indian Skeptics who for sure would

have had experience of fakirs (or fakers as the case may be!).

By return mail I received four typewritten foolscap sheets outlining the aims of the Paramann Programme, the Spontaneous Transmission Technique and the Switch Off Technique, more or less reiterating what was in the first letter. However, one point which caught my eye suggested that rather than an organization engaged in scientific research I was corresponding with a parapsychologist looking to confirm his own beliefs.

Referring to the aim of the Paramann specialists in medicine and experimental physics seeking to provide the medical media with new effective methods of controlling pain, bleeding and infection, the sentence reads: *"The scientific legitimacy of this aim is based upon the following simple logical analysis: there are many persons who possess various kinds of paranormal abilities . . . therefore all human beings are potentially prepared to have these useful talents."* In view of the fact that the existence of any form of paranormal ability has yet to be proven, such a conclusion is a logical fallacy and has no scientific legitimacy whatsoever. Further on, referring to the devotees of the old sufi doctrine of Tariqa Casnazaniyyah it is claimed that they *"have paranormal abilities with unique characteristics . . . each dervish acquires his abilities immediately after becoming a dervish and obtaining an oral permission from the present Master of Tariqa, Shaikh Muhammad Al-Casnazani."*

This is about as plausible as Duane Gish becoming inculcated with scepticism after receiving oral permission from Prof Ian Plimer! And finally, *"No other achievements in parapsychology can be compared with the new fabulous techniques of the Spontaneous Transmission and Switch Off."* One could well ask what parapsychological achievements?

At this point I was about to inform Paramann that we were unable to help in the investigation as I doubted we could find anyone endowed with the ability to demonstrate the phenomena. Then, having seen an elderly gray-bearded arthritic gentlemen gamely limping over glowing embers at the Sydney Science Show, and whose frame was amply endowed with surplus flesh ideally suited for skewering,

changed my mind, and told them that we may have found a subject suitable for experimenting on. (I really must make enquiries to find out who he was!)*

In his response, Mr Hussein expressed his delight that we had found a volunteer and was pleased to hear of my concurrence with his view that Paramann's findings could revolutionize medicine around the world. This "agreement" I might add, was based solely on the highly unlikely assumption that their claims had some substance. Paramann's director also had this to add about the Spontaneous Transmission Technique: *"All you need to succeed in learning this technique is to be in the vicinity of one of our gifted subjects whom we discovered to be endowed with such a power of will that makes inevitable the transference of their exceptional abilities to all in their vicinity."*

No doubt if the New Age aura therapists get to hear of this gain without pain, auric transference will become the new craze!

Anxious to find out whether Paramann's ten years of research had led to any worthwhile practical application, I contacted Dr Steve Bassor of the Australian Council on Science and Health, Dr Richard Gordon of the National Committee and William Jarvis, Professor of Health Education, Dept of Preventive Medicine, Loma Linda University, California, and of the National Council Against Health Fraud, Inc. for professional opinions and some pertinent questions I could put to determine that end. They were equally



sceptical of the claims made but nevertheless obliged by suggesting I ask for (1) an unedited video of a conscious alert person having the abdomen cut into with a scalpel, experiencing no pain or evidence of bleeding, (2) an explanation of the proposed mechanism by which the claimed technique exerts its effects, (3) the proposed mechanism by which bleeding is prevented and (4) the size limit on blood vessels that can be prevented from bleeding.

Paramann's reply was hardly encouraging.

After ten years research and experimentation *"no surgical procedures have been carried out."* *"There is no limit to the size of the blood vessel, vessel, size of the blood vessel,"* but they obviously haven't tried sticking a dagger into the jugular

vein or carotid artery, and they *“have not succeeded in uncovering anything to explain how the wounds heal and repair in such a short time.”* The video tape requested (notwithstanding the previous admission) is in the mail. Date of letter, August 10, 1993. With the letter were a dozen gruesome photographs of men and boys with skewers, daggers, spikes and other sharp implements stuck through cheeks, jaws and various fleshy parts of the anatomy.

Professor William Jarvis expressed the following (edited to conserve space) opinion:

“These people have written to CSICOP and NCAHF with these claims and asking for cooperation in a research project ... my opinion is that it is probably a scam ... their pictures show only the piercing of the body, which is a very old practice with mainly carnival value... I do not understand why they are contacting skeptics and anti-quackery groups unless it is to defuse our criticism in advance which might be forthcoming if they take their show on the road... I suspect that this is a ploy to arrange a media tour for an entourage of fakirs and fakers ... my understanding is that instruments are run through body regions with no vital organs, left in place tissue around them heals forming a scar tissue. Once a channel is established the instruments may be removed and replaced. It probably takes a bit of grit the first time, but the result is status and even a way of making money. These dramatic pictures only serve to create a ‘Gee whiz!’ reaction with an accompanying suspension of critical judgement. They have nothing to do with the claim of being able to teach others. The claim that this has no bleeding or risk of infection for neophytes is hard to believe. If they were to stop grandstanding with the fakirs, and instead devise a useful medical application, someone might take them seriously.”

Dr Richard Gordon, not renowned for his ebullience, summed up by commenting

“I’m not impressed,” and my letter to the Information & Public Relations Dept of the Embassy of the Hashemite Kingdom of Jordan requesting any information they may care to provide on Paramann Laboratories remains unanswered nine months later.

The latest communication from Paramann came in the form of a 31 page booklet giving an abstract of Paramann’s investigations, and a list of the DCBD abilities of Tariqa Casnazaniyyah, among them, (1) the insertion of sharp objects such as skewers and spikes into the body, (2) with the aid of hammers drive daggers into various sides of the skull bone and just below the eyes, (3) chew and swallow glass and razor blades, (4a) handle fire and apply to face, arms and legs, (4b) hold red-hot plates in their bare hands and bite them with their teeth, (5) handle snakes and scorpions and allow them to bite their tongues, (6) cat poisonous reptiles demonstrating immunity to poison, and (7) resist an electric shock of 220 volts for several minutes.

Well it is easy to make claims but some of these are extraordinary. Without more investigation, I would be inclined to suspect trickery. An explanation for number (1) has already been given. In number (2) I would really like to see this. (3) and (4a) have been demonstrated to us by Premanand; (4b) same as walking on hot coals, preparations are also available to insulate both the tongue and hands against burning; (5) again, if true, a natural immunity from reptile poison can be built up by subjecting oneself to small doses over a period of time; (6) to be fatal, poisons must enter the blood stream, no doubt they can be absorbed and/or rendered harmless by the prior ingestion

of an appropriate solid or liquid and passed through the body. (7) 220 volts need not necessarily be fatal, there have been cases of prisoners sentenced to die in the electric chair surviving 60,000 volts.

It would seem to me that reading a few books on magic tricks and “miracles- that have been exposed as such would have saved the Paramann researchers an enormous amount of time.

End of story? Not quite. Late in August 1993 I received an invitation from Paramann Laboratories to attend the *“1st World Congress on the Instantaneous Healing of the Deliberately Caused Bodily Damage phenomena and Unconventional Healing methods”* to be held in Baghdad in November. Full board and accommodation in first class hotels, transportation, and tours to historical sites would be



supplied free of charge, all the participant would need to pay was the air-fare. The National Committee voted to pay my fare as a delegate on one condition - I buy a one way ticket! Recalcitrant scumbags- that made my aura bristle!

I responded thanking Paramann for the invitation to attend their congress and made my apology, then, having decided that I had beaten around the bush long enough, decided to lay it on the line with the following:

“Consideration has been given to the information provided by you over the past year or so in respect of your experiments, but we are unable to concur with the conclusions reached by your group, that is, that the feats exhibited by the subjects are indicative of paranormal powers.

In your booklet, *The Deliberately Caused Bodily Damage Phenomena*, the following “paranormal” abilities are attributed to the Tariqa Casnazaniyyah.

1. Insertion of sharp unsterilised objects into the body - without pain.
2. The chewing and swallowing of glass and razor blades.
3. Exposing parts of the body to fire and the handling and licking of red-hot metal.
4. The handling of serpents and the exposure to poisonous bites.
5. A resistance to electric shocks.

All the above are or have been performed in circuses and carnivals and the explanations can be read in the many books available on magic and conjuring. Some in fact have been performed by members of our own and other investigating groups.

Regarding the claimed ability to resist pain and infection, the control of bleeding and rapid healing, it seems strange that your organization has been conducting experiments for ten years and as yet have not conducted a single surgical procedure which would prove beyond a reasonable doubt whether these claimed paranormal abilities have any substance.

In your last letter responding to my questions you stated that “*there is no limit to the size of the blood vessel that could be severed.*” and in the booklet (p2) it says that “*various organs may be pierced.*” This being so, would any of your subjects agree to have their jugular vein or carotid artery severed, or have their heart pierced with a sharp stake?

With respect, I suggest that considerable time and effort could be saved without going to the above extremes simply by performing any standard abdominal surgical procedure using unsterilized instruments, without anaesthetic, and without suturing the wound on completion.”

My letter crossed with one from Paramann in the post, this time a mini-booklet -entitled ‘Proceedings of The Eighth International Conference of the International Association for Psychotronic Research’. University of Wisconsin, Milwaukee, Wisconsin USA. July 9-13, 1993, consisting of an extract from those proceedings (pages 475 - 480) , being

an abstract of ‘The Unusual Immunities of the Human Body’ —in essence a reiteration of the information already at hand but with a couple of items worth mentioning. The research into fire-walking by Leikind and McCarthy, 1985, 1988, and Walker 1977 (no other references) for example, who explained fire- walking in terms of established physical knowledge was dismissed and countered by Barclay 1973 and Kane 1982 (again no further references) who rule out any possibility of accounting for the phenomenon physically. Without any possibility of checking what was said this may well come down to ‘faith versus science’ again.

My supposition that the “unusual ability” of dervishes to transfer their supposed powers of immunity to others by “rubbing auras” was proven wrong on pages 478 - 479. It’s done by a simple handshake and a mantra!

According to the spiel “*To become a dervish the person has to put his right hand in the right hand of one of a certain group of dervishes and recite after him a few sentences announcing his loyalty to the masters of Tariqa Casnazaniyya - the ritual takes 2-3 minutes . . . this gives a real example of an “immediate” acquirement of Super Reactions without the assumed need for long physical or psychological training.*” The paper goes on to say that “*the experiments carried out with the dervishes have proved that during their performances they were not in any kind of hypnotic trance or altered state of consciousness*” and that “*the most important feature of Spontaneous Transmission is that it is the first technique ever known to transfer abilities such as Super Reactions without any of the traditional ‘religious’ or ‘magic’ contexts.*” (But did they check to see if they were they “stoned”?)

Now it seems to me that Paramann is claiming a home run before even getting to first base. Despite years of experimentation, in reality all they have succeeded in doing is confirming that certain people can pierce their non vital parts apparently without showing any discomfort or adverse reaction. Something that has been known for centuries. There are prosaic reasons to explain this, none of which need paranormal explanations. Unless these alleged abilities can first be shown to be other than those which can be explained in terms of established physical knowledge, Paramann Laboratories is jumping the gun.

I often wonder why parapsychologists deem it necessary to set up long complicated and sophisticated testing procedures to determine whether a person possesses paranormal abilities. To my mind, Paramann’s ten year effort to prove that paranormal abilities were responsible for resistance to pain, poison, bleeding and healing could have been reduced to ten minutes -a whack over the head with a seven kilo sledgehammer, a blow torch applied to the gluteus maximus and a strychnine sandwich in the coffee break. I doubt even the dervishes would come back for more!

*This inclusion is chronologically out of sequence, but why let that fact spoil a good story! ■

Nessie's Secret Revealed

Tim Mendham

"I realised, for the first time, with complete assurance, the picture was *not* a fake and that the Loch Ness Monster was real and tangible; a living animal -or one that had been real and alive when the picture was taken in 1934." *

So the late Tim Dinsdale, a leading Nessie hunter who had taken the only seriously considered motion picture film of the monster in 1960, described a classic photograph of the infamous resident of the Scottish Loch -a photograph which was to be the real inspiration for his throwing himself fully into the pursuit of the monster, and a photograph now revealed to be a hoax.

The revelation of the hoax says more about the willingness of believers to force evidence to suit their own inclinations than it does about the existence of a large creature in the loch.

Background

The photo in question is the so-called "Surgeon's Photograph", supposedly taken by Lieutenant Colonel Robert Kenneth Wilson, MA, MB, ChBCamb, FRCS, a gynaecologist, who supposedly took the photo in early April, 1934. (If the good surgeon's qualifications listed above seem superfluous to the story, they are, but that was how he was presented in Nicholas Witchell's book, "The Loch Ness Story", for reasons which will become obvious.)

The story goes that Colonel Wilson, joint-lessee of a wild-fowl shoot close to neighbouring Inverness, was driving northwards past the loch early one morning with a friend. Stopping for a break, they noticed a commotion on the loch surface about two or three hundred yards from the shore. The friend said "My God, it's the Monster", and Wilson ran back to his car to retrieve a camera he had brought to take photos of birds. For the technically minded, the camera was a quarter-plate model with a telephoto lens (unstated focal length) using plates with "almost certain . . . a relatively slow orthochromatic fine grain emulsion" (Dinsdale's claim, p56).

Having made four exposures over a two minute period, Wilson took the plates to Ogston's, an Inverness chemist, where he gave them to Mr George Morrison for development. Wilson asked for particular care to be taken, and Morrison replied "You haven't got the Loch Ness Monster, have you?".

The plates were developed the same day. The first two were blank; the third, the most widely published, showed "an animal's upraised head and neck", with some associated bulk evident front and back and rippled water; and the fourth a very fuzzy depiction of the head and top of the neck disappearing beneath the waves.

On Morrison's advice, Wilson sold the copyright of the

third photo to the London *Daily Mail* which published it on April 21, 1934, "thereby challenging the evasive ingenuity of the scientific community yet again" (the ever-restrained Witchell, p45, 1975 edition, Penguin).

A further quote from Witchell is particularly ironic considering the recently revealed circumstances: "Colonel Wilson refused to enlarge upon the bare facts of his story and would not try to estimate the size of the object. In fact, he never claimed that he had photographed the 'Monster'; all he ever said was that he had photographed an object moving in the waters of Loch Ness."

Reaction

The publication of the photograph immediately created controversy, with believers claiming that it was absolute proof of Nessie's existence (Nessie mania had in fact only been really up and running since the previous year) and sceptics calling it a hoax, some even suggesting it was taken in a London pond.

The Surgeon's Photo, to be honest, is not very clear, showing a somewhat fuzzy "head and neck" in silhouette, with a partial reflection distorted by the disturbed water around the creature. It was normally published somewhat enlarged, showing less of the surrounding water than the now lost original plate. Nevertheless, Dinsdale, after studying the photo many times, from all angles, and holding the photo at arm's length, felt that he could discern "a tiny knob or protrusion" on top of the head, complying with independent eye-witness accounts of horn-like stumps, and a second set of rippling circles somewhat behind the bulk of the monster, indicating disturbance caused by a further part of the animal. It was this moment of epiphany which gave rise to his conviction quoted at the head of this article.

Witchell described the photo as "believed to be the only genuine picture of the head and neck of one of the animals", while admitting that it was nevertheless controversial.

The sceptics, on the other hand, dismissed the photo as an out-and-out hoax or, often, as the tail of an otter or a bird diving beneath the surface of the loch, or a tree trunk.

As to the photographer's reticence for further comment, Witchell put this down to "professional reasons": "The detached and entirely objective approach of Colonel Wilson is surely commendable. He made no wild claims and, as one would expect from a professional scientific man of standing [thus the long list of initials after his name], he merely reported what had happened as far as his recollection would allow him. Having done that he wished to have no part in the

wrangling which inevitably follows every photograph purporting to show one of the animals.” Note the “purporting to show one of the animals”, rather than “one of the purported animals”.

Perhaps, there were other than “professional” reasons for the Colonel’s silence.

Revealed Hoax

On March 13 of this year, the London *Sunday Telegraph* published a story which claimed that the last of several men involved in hoaxing the photograph had made a confession before he died last November, to David Martin, a former zoologist with the Loch Ness and Morar scientific project, and fellow researcher Alastair Boyd.

According to the story and Christian Spurling’s confession, the *Daily Mail* had hired Marmaduke Wetherell, a film-maker, “big game hunter” and Mr Spurling’s stepfather, to find the monster. Wetherell asked Spurling to make him a monster, which he did using “plastic wood” attached to a 35cm toy tin submarine “bought for a few shillings from Woolworth’s in the London suburb of Richmond”.

According to one report (*Sydney Telegraph Mirror* 14/4/94), “a detailed study by . . . David Martin has found that Nessie was made in just eight days. The finished monster was 30cm high and about 45cm long with a lead keel to give extra stability.”

Wetherell’s son Ian took the photo on a quiet day on the loch. (*Australian* 14/4/94, *Reuters* report). A friend recommended Colonel Wilson as a front man, no doubt because of his impeccable scientific credentials and “commendable” detachment.

Admittedly, the two reports published in Australian newspapers and quoted above diverge somewhat. There is some slight difference on the number of people involved, with one report quoting five conspirators (Wetherell, son, stepson, Wilson and ?) and another a vaguer “several men”. The *Telegraph-Mirror* says the photo was sold to an “unsuspecting newspaper”, whereas the *Australian/Reuters* report implies the newspaper was at least indirectly involved in the hoax. On this latter point, according to Witchell (pp39-41), in 1933 the *Daily Mail* had hired “a famous big-game hunter”, Mr M. A. Wetherall [sic], a Fellow of the Royal

Geographical Society and Royal Zoological Society, to track down Nessie. After only four days Wetherall’s team came across footprints on the south shore of the loch. Plaster casts were made and sent off to the British Museum of Natural History, which early the next year reported that they were “unable to find any significant difference between these impressions and those made by a hippopotamus”. The footprints, it turned out, were made using a Loch Ness resident’s hippo foot umbrella stand, which probably explains why all the footprints were of the same foot!

Wetherall, on January 15, reported seeing something while cruising the loch, but he said he was convinced the loch only contained a large grey seal. The following year he resigned his Fellowship of the Royal Geographical Society. No more was heard of him, until the recent report.

Witchell makes no suspect (or otherwise) connection between the *Daily Mail*’s sponsoring of Wetherall/Wetherell, its apparently innocent publishing of his 1933 claims, and the same paper’s later publication of the surgeon’s photo.

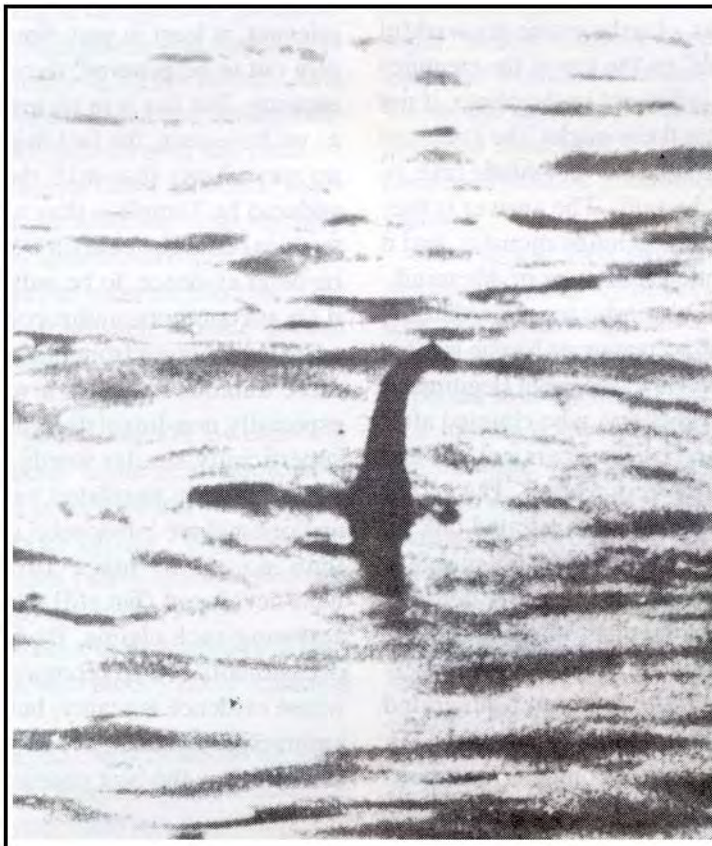
He also, along with almost everyone else, apparently failed to notice what Ronald Binns, author of “The Loch Ness Mystery Solved” (Rigby, 1983), finds extremely significant, ie the date on which the photo was taken: “When was that? ‘April of 1934’ says Tim Dinsdale; ;

‘early in one morning in April 1934’ adds FW Holiday in “The Great Orm of Loch Ness”; ‘early April’ agrees Witchell; ‘April 1934’ says Costello in “In Search of Lake Monsters”. Although clearly identified in Gould’s “Loch Ness Monster and Others” (1934) the date was not mentioned again until forty years later, in Professor Mackal’s “The Monsters of Loch Ness”: April 1st, 1934.”

April Fool’s Day joke or not, apparently the perpetrators of the hoax were “overwhelmed by the huge fuss their trick aroused and were afraid to confess”, a reaction shared by many another hoaxer. Nonetheless, their photo remained in active circulation for another 60 years, becoming the most famous photograph on the subject and reprinted almost without fail with every subsequent report or book.

Conclusion

The history of the surgeon’s photo is a classic cautionary tale for all involved in the search for proof of the paranormal,



be it unknown animals, UFOs, psychic powers or whatever, and a particular warning for the use of photographic evidence.

Proponents of the surgeon's photo stressed the supposed photographer's impeccable scientific credentials and demeanour. Their attitude amounts to nothing less than ironic, naive and probably hypocritical snobbery, especially when one considers Witchell's comment about the "evasive ingenuity of the scientific community". Either they're "detached" or they're "evasive", but they can't be both.

They also stressed that the photo had not been tampered with, indicating that they are in dire need of a little application of Occam's Razor, for they seemed to too rapidly overrule the possibility that it could be a real photo of a fake monster.

Dinsdale, in particular, was clearly prone to wishful thinking, claiming to see "a knob" on the top of the creatures head. Such detail is extremely indistinct in the photo, if not totally nonexistent. "It seems that these marks [the knob and the extra set of ripples] are either part of a very subtle fake, or genuinely part of the Monster," he said. The answer is they are neither, for it is not a photo of a genuine monster, and it isn't a very subtle fake - the subtle aspects are in his mind.

The ripples circling out from the monster seem inordinately big, even for such a large and bulky creature as Nessie is often described to be. This in fact is the view of current (legitimate) investigators of the loch's natural history, who claimed after the hoax's exposure that for the last ten years no-one had given credence to the photo for this very reason. The author of this article made this same point at an illustrated talk on unknown animals given at Sydney University in the mid-80s. But what seems obvious to some people is obviously invisible to others, particularly those with a predisposition to believe.

In the current age of computer-enhanced, computer-manipulated and more importantly computer-generated images, photographic evidence becomes entirely shaky. An original photograph can be scanned into a computer, enhanced to an almost infinite degree and a new, apparently untouched, negative produced.

Of course, there are still eye-witness reports to be dealt with, but these by their nature are intangible and prone to innocent and ingenuous enhancement of their own, as every friend of a fisherman will tell you.

In a way, it is sad to lose an icon of the age. The surgeon's photo truly was a classic, not of the "real" Loch Ness Monster as it turns out, but perhaps of our wishful thinking for what we would like to think exists there. What it does represent, quite clearly, is how our wishes can run away with us, leading us to see what is not there, and to characterise our wishes as reality. In the future, as much as in the past, we would be advised to apply some common sense and commendable detachment before heading for the deep end of the loch.

* "Loch Ness Monster", fourth edition, 1982, Routledge & Kegan Paul, p53 ■

...Linguistics from p 19

Temple invokes the approval of an astronomer who read his work in proof; but there is no evidence that this reader had any specialised knowledge of linguistics or even of ancient history. While his comments on the astronomical side of the case are valuable, what he says about Temple's linguistic theories is thus, it seems, of little relevance. It is possible that Temple saw his own proficiency in Sanskrit as qualifying him to speculate in this way about linguistic matters. However, proficiency in languages is no guarantee of expertise in linguistics, as is demonstrated daily by some 5 billion people, all of them fluent in at least one language (and many in more than one) but knowing nothing of linguistics.

Now I do not wish to suggest that the Dogon 'mystery', or even Temple's thesis, should be dismissed as nonsense. Even the linguistic evidence he adduces might conceivably be relevant, at least in part. **Some** of his alleged cognates **might** turn out to be genuine, through borrowing or even common ancestry. But this is in no instance proven or even likely; and, as we have seen, the fact that something **might** be the case in no way shows that it **IS** the case. The linguistic evidence adduced by Temple is thus unable to bear the weight he seeks to place on it. The case for a Sirian visit to the Dogon must rest on other evidence, to be judged by those competent to assess it (ie astronomers, anthropologists, etc).

What emerges from these works and from others of a still more dubious nature is a warning: do not believe writers, especially non-linguists, when they state that a pair or set of superficially similar words (especially in languages which are apparently unrelated and/or widely separated in space and/or time) are 'obviously' cognates (in so many words), and then go on to make further deductions. We have a well-developed (but still developing) discipline, capable of assessing such claims. By following its principles we may occasionally fail to recognise genuine cognates, especially where evidence is scanty; but we will gain much more by not embracing inadequately supported claims or theories. And surely that is the best course for careful thinkers.

Notes:

- 1) References for this paper and suggestions for further reading are available on request from the author c/o Dept of Linguistics, Monash University, Clayton, Victoria 3168, fax 03 905 2294.
- 2) Another version of this paper appeared in *Tirra Lirra* 3:2 (1992-93). The author is grateful to the editors of *Tirra Lirra* for their permission to re-use this material.
- 3) Some of this material was also presented as a talk to Victorian Skeptics in May 1991 and again as a seminar at the University of Canberra in June 1991. The author would like to thank all those who contributed on these occasions. ■

National Convention
June 11-12

Teaching Critical Thinking

Brant Abrahamson

Can teenagers be taught to think critically? To think through problems they face in an effective manner? To avoid quacks, con-artists and deluded individuals seeking their minds, money or bodies? Can young adults be taught to spot destructive cults before becoming emotionally involved in them? Almost without exception teachers throughout the Western World want their pupils to develop a trusting yet questioning scientific outlook. We want our young people to approach problems through active and structured investigation — as opposed to blindly following tradition, authority or folk-wisdom. As a teacher, occultism is one dark aspect of the community folk-wisdom with which I have had to contend over the years.

Among the members of a class of thirty students, in all likelihood some students will have relatives who strongly believe in the “evil eye.” And, my students-like their relatives-will wear specific kinds of jewellery to ward off this evil. One “protective” device looks like a one inch twisted golden carrot. Another is an image of a hand with the first and fourth fingers raised.

Perhaps a half or more of the young ladies in my class will have entered a darkened bathroom while at an adolescent party. They think that they could summon forth an apparition by looking into a mirror and softly calling, “Mary Worth! Mary Worth!” For several decades I have heard stories that vary little from one generation to the next.

Of girls tumbling from bathrooms more scared than they have been in their lives! Of girls with bloody faces scratched by “Mary Worth!”

A third to a half will have played Ouija Boards with some degree of seriousness. Often encouraged by their coaches, members of our athletic teams participate in a wide variety of “good luck rituals.” Ours is a community where ghostly images in local grave-yards are reported in the local press, where icons are occasionally believed to weep real tears and where small statues of St Joseph presumably help people sell their homes. (A hole is dug in the yard of the home to be sold, and the statue is buried head down.) Almost all students are familiar with astrology to one degree or another, and I recall a couple of students whose parent was a professional astrologer. In short, occultism lives in our community. In addition, many of the students harboured strong group prejudices. These were partly based upon the social class and partly upon race among other factors.

Brookfield is “blue collar” working community. Riverside is an upper middle class planned community with winding streets and many very expensive homes. Students from these two communities have somewhat different life experiences

and expectations which are reflected in their school groupings. In addition, our community has been a “white flight” corridor for people moving out of Chicago.

How does one teach critical thinking in such an environment? How does one combat superstition and bias effectively?

Many years ago my colleagues and I decided that concentrating on a short list of fallacies was the best way to begin. Before studying occultism, prejudice or other related topics we would concentrate on a few logical shortcomings. We would develop a “remedial thinking unit” that would provide a framework for our later units on prejudice, occultism, presumed psychic phenomena, authority analysis and other topics.

One of our first sources of inspiration was *Guides to Straight Thinking* by Stuart Chase (1956. New York: Harper & Row). Following Chase, we kept ideas simple. Students concentrated on learning only thirteen fallacies that they were expected to avoid throughout the course. Using fallacy study as a starting point has proven to be one of the best decisions that we made. It has been a defining element during my thirty years as a public school teacher. Based upon my five-year feedbacks, it is the one specific element of my teaching that students are most likely to remember.

In the 1960’s and early 1970’s we used lectures to transmit fallacy concepts to our students and constructed written versions of our lectures for absent class members. These summaries gradually became formalised into a Student Readings booklet that we currently hand out at the beginning of the unit.

Students take notes from the booklets and from our illustrative lectures. After copying definitions word-for-word, they write out examples from their lives as we give examples from ours. Together we concentrate on questions which will enable us to avoid fallacies, the essential purpose of the unit.

Next we concentrate on mastery drill. Our fallacy study and the units that follow were developed in a non-tracked semester course required for graduation. That is, seventeen and eighteen year old students of all ability levels were in each section. Those struggling to graduate sat next to the brightest students in our high school. To insure that almost all students succeed, we developed a four-part quiz series that everyone has to master, followed by a writing assignment.

Fallacy titles are matched with definitions and then examples. Third, students complete a quiz on “questions to ask” to avoid fallacies. Finally each writes definitions from memory. Some students can complete these drills in a couple of hours, other may take twice or three times as long. Once

the drills are completed, each student writes a description of a social injustice without using fallacies. These papers are critiqued by parents and classmates before being accepted by the teacher. If English errors, fallacies or carelessness are spotted through skim-reading, the pupil is given correcting fluid to immediately make necessary changes.

As students complete this assignment, they work on individual and group application exercises for the remainder of the two weeks. Some sketch cartoons that can be used for bulletin board displays or - when turned into transparency masters - as illustrations for future lectures. They make memorisation flash cards and word games. Some have created computerised drills and illustrative colouring books. We also use recent-issue newspapers to find fallacy examples.

We have found that this fallacy study provides durable foundation for the units that follow. Prejudice -hating a stranger because of some ascribed grouping -is explained, in part, as a critical thinking failure. It is shown to be based on fallacies, or child-like thinking that include over generalization and guilt by association. Occultism is viewed from the same perspective. We discuss how *post hoc ergo propter hoc* reasoning helps explain many magical practices found in our community. We discuss how *argumentum ad populum* helps explain why intelligent young girls think they see apparitions in bathrooms.

But, does our system work? What evidence do we have? If we ask our students to think critically, we should be prepared to do so ourselves. And, logical decision-making requires factual data. Ours is based primarily upon the course evaluations that we have accumulated for more than 20 years. We ask our students to evaluate the overall utility of the course and the specific units within it during their last class period. During the last ten completed school years 526 students have been enrolled in my sections. 62.9% ranked the course as being superior or above average. 28.9% considered it average, and 8.2% thought it was below average or gave it a failing grade. (Only 7 of the 526 students have considered it a "failure".) During this decade, four other teachers have taught the course. Two of these colleagues consistently have received somewhat higher evaluations than I have. One teacher received lower evaluations, and one did not use them.

To evaluate individual units, students were asked to check those units that they found to be "especially helpful". Semester after semester more students check the fallacy study than any other unit.

As an individual teacher, since 1975 I have also contacted my students five years after they have graduated. About 10% reply, telling me what they remember of the course. Over the years I have received 135 testimonials. 77.6 percent of these students still consider it to be one of their superior or above average courses. 20.1% now view it as average, and only 2.2% give it a below average rating. Once again, the fallacy unit is ranked more highly than any other unit taught.

Can teenagers be taught to think critically? Our answer is a qualified, "Yes" if one means simple fallacy avoidance. If

the teacher makes sure that the concepts are thoroughly understood and then refers to them repeatedly in a variety of contexts, progress can be made. However, no unit or class will have an enduring effect if it is isolated from the larger culture. As we adults shed our biases and our superstitions, our young people will tend to follow suit.

One part of our critical thinking course is devoted to studying "traditional authorities". During one three week period we examine local occult and "psychic" folk-wisdom beliefs.

As a starting point, we - teacher and students - try to establish what we accept as true or helpful. Often I begin by reciting memories from my childhood.

I tell students of being taking to a witch to have a wart removed from my hand. I remember sitting by an old woman who took my hand in hers and mumbled something that I didn't understand. My mother later explained that she was "Saying the Lord's Prayer backwards". I relate how I watched my father dowse for water using a freshly cut branch from one of our peach trees.

After this introduction, I invite students to tell their stories. Year after year their stories follow certain themes, and one of the most prominent revolves around belief in ghosts.

Listening to the tales, I've almost become convinced whole legions of apparitions inhabit the large hundred-year-old homes found in our district. and the cemeteries that border our area.

One cemetery contains the remains of circus personnel killed in a 1918 train wreck. Stories continue that on still nights the cries of the animals killed can be heard.

Year after year I hear about "Resurrection Mary," our most famous ghost who presumably has wandered our roads at night since the 1920's.

Most recently - in August, 1991 - a local resident, Joe Reinholtz, believed that he had been miraculously cured while visiting the war veterans section of a local cemetery. He told others of his experience, and thousands of people started flocking to the burial ground to see "the Blessed Virgin" whom he predicted would appear. According to a local newspaper account, "an estimated crowd of 10,000 made a steady pilgrimage through Queen of Heaven Cemetery . . . Thursday with the hope of experiencing a visitation from the mother of Christ". Some took metal objects which these insisted that "turned to gold" during their visits —further indication of miracles being performed.

On one occasion a group of students insisted that they could "prove to me" that there were ghosts in our grave - yards. So, one night we went to where "Resurrection Mary" is buried. And after sitting for perhaps twenty minutes we did see a light that seemed to travel from across a section of the graveyard about three feet above ground. Some students started screaming and ran for the cars.

Others with a more scientific frame of mind stood their ground, and together we walked toward the area where the lights appeared. Rather quickly we determined the source of

the “ghost”.

Many gravestones in the area were rough cut on the bottom and had tops that were highly polished. As we stood and watched, we saw how car lights -when turning from a side road onto the main highway - reflected off the tops of these stones in a sequential way. Mystery solved!

Are people happy when their paranormal beliefs are rationally explained? Will visitors who hear animals roar in the night after hearing of the 1918 circus wreck be pleased to learn there is a large zoo nearby? Will student graveyard “screamers” be delighted that their fright was unfounded? Will believers in silver-to-gold miracles express joy when learning of natural causes? (As a class project we wrote a letter to the Council for Democratic and Secular Humanism, publishers of *Free Inquiry* We found out that rubbing hard on cheap metal trinkets wears off the light silver coating causing underlying brass alloy to show through.)

Probably the answer to these questions is, “No,” especially if viewed as isolated lessons. More often students as well as older people become angry when cherished beliefs are challenged. But teachers -like parents -cannot become overly concerned with short term reactions. We must keep our eye on the long-term behaviours. Providing alternative explanations to paranormal events is a small part of an extended process through which we hope influence the young. Taking a historical perspective, rational and scientific approaches to world understanding and social problem-solving have increased. Reliance on the occult has decreased. Through our efforts as parents, teachers and concerned citizens, this trend can be accelerated. ■

Harry Edwards Comments

Brant Abrahamson and Fred Smith have worked since the 1960's to develop units which will promote critical thinking among upper-age teenagers. At the present time materials for two of the six units are being commercially published. These are *Thinking Logically: A Study of Common Fallacies* and *Prejudice in Group Relations*. Other units on topics such as traditional authority analysis (occultism, presumed psychic phenomena, etc) will follow. Each unit consists of a “Student Readings” pamphlet and a “Teacher’s Manual.” In addition, *Prejudice in Group Relations* is accompanied by a student workbook.

The materials grew out of Abrahamson’s and Smith’s interactions with their students, and their simple, utilitarian origins are evident. The authors believe that their job is to clearly present basic concepts to students, and that it is the students’ job to provide illustrations, witty sayings, and sidebars that relate the concepts to their individual lives. Therefore, teachers in search of richly illustrated teaching

materials should look elsewhere. On the other hand, those instructors interested in a very durable, tested and cost effective program promoting a scientific world view might seriously consider them.

While in the US recently, I examined Abrahamson’s file of student evaluations and can attest that they are as he describes them in the accompanying article. Abrahamson and Smith have tried hard to ground their work on durable foundations of western intellectual thought. For instance, the second entry in their extensive fallacy bibliography refers to Aristotle’s work called “On Sophistical Refutations.” Ideas found in the prejudice unit come from the post WWII period when many leading intellectuals tried to understand why the German people fell prey to Hitler and his Nazi colleagues. For instance they were heavily influenced by Gordon Allport’s 1954 classic work, *The Nature of Prejudice* .

Even the lack of illustrations can be viewed as a plus. Probably illustrations more than anything else makes such material seem tied to time and place. Because students provide the pictures, create exercises and so forth, the booklets can probably be adapted to the Australian classroom more easily than most educational imports.

Certainly the price is right. Upon purchasing one instructional folder, a teacher receives permission to duplicate any materials therein. The Fallacy unit materials (reading and manual) cost \$14.00. *Prejudice in Group Relations* -which includes a student workbook in addition to the readings and manual -cost \$19.00. When purchased together the combined cost is \$29.00. Surface transportation costs to Australia are \$4.00, air transportation cost are \$20.00. All prices quoted are in US currency. Contact: The Teachers’ Press. 3731 Madison Ave, Brookfield, IL, USA. ■

Victorian Skeptics

Visit the Australian Skeptics stand at the *Great Australian Science Show*, June 2-5 at the Royal Exhibition Building. Or, more importantly, bring along some kids, or tell your local school about it.

Fun and instruction for all is guaranteed, including demonstrations of Fire-Walking, Water Divining and other amazing things.

If you would like to help out at the show, contact the Victorian Committee on 850 2816.

Police use of a ‘Psychic’ in Tasmania - Reprise

James Marchant

She ruled the toads of the short forest and every newt in Idaho. . . !

(Zappa)

In 1988 Dr Michael White presented us with a cautionary tale about what happens when the police are “guided” by “psychics”, and Skeptics write to politicians (*the Skeptic* Vol 8, No 1 p31). (It is difficult to decide which concept is the more terrifying).

He recounted how a woman disappeared while bushwalking in northern Tasmania in 1985 and how the police were seriously misdirected in their search for her by “information” from a woman (Mrs X) claiming to be a psychic. The local (northern) newspaper, naturally, went along for the ride, publishing uncritical claims about the previous “successes” that the “psychic” had under her belt. Dr White records that he subsequently wrote two letters to the Minister for Police in which he asked, in effect, why and how the police became involved with this “psychic”. Dr White noted, with complete justification, that he found the replies from the Minister most unsatisfactory. It is fair to say that the Minister’s replies had nothing to do with the questions that Dr White asked.

Well, time passes and now, it seems, everybody is having them dreams.

(Dylan)

Meanwhile, back at the ranch, Tasmania’s leading(?) (southern) newspaper (?), *The Mockery* continued to promote paranormal drivel on a regular basis and in March last year found yet another thaumaturge (Mrs Y) who had “assisted the police” with her “psychic powers”.

Now, seeing this sort of thing in *The Murkury* is not surprising. After all, this is the rag that can’t see anything wrong in using (with reference to a fossilized egg) the expression “the egg would have unhatched a monster”. Unhatched? This is the grand old journal that recently reported that a worker in Tasmania had been electrocuted and was now in hospital in a satisfactory condition. Talk about proof of reincarnation.

What is amazing is that the paper, which never misses an opportunity to trumpet its unswerving dedication to **The Truth**, refuses point blank to retract the claim about Mrs Y even though the Tasmanian Skeptics have demonstrated conclusively that the story can’t be true. The only joy I have received is an hysterical letter from the editor, in which he promised that he would never speak to me again. Well, he

can’t be all bad.

I hope to present details of the sordid saga of the newspaper’s report about Mrs Y in a later article but for the moment I wish to pursue only the matter of letters to Ministers of Police.

She said she was a magic mama, and she could throw a mean tarot.

(Zappa)

As part of an investigation of the published allegation that Mrs Y helped the police, I wrote to the new Minister of Police in Tasmania and invited him to comment on both cases, Y and X. After summarizing Dr White’s previous letters, I reiterated, verbatim, the specific questions that Dr White had put to the former Minister, with respect to X:

- (1) Exactly what was the nature of her previous successes?
- (2) Who supplied this information to the Launceston Police?

Once again, these questions went unanswered.

The others are complete bullshit. . . .

(Sting)

I also asked the new Minister three questions of my own:

- (3) Is there documentary evidence that shows that Police Tasmania received material assistance from a paranormal source during the X case?
- (4) Is there documentary evidence that shows that Police Tasmania received material assistance from a paranormal source during the Y case?
- (5) Can Police Tasmania provide any instance where they have, or any other agency has, received significant information that appears to have been generated by paranormal means?

The Minister has kindly allowed me to publish his reply of 2/8/93, provided that I do not identify people involved. His reason is that innocent third parties are involved and I believe that this view is both sustainable and reasonable. In quoting the Minister’s reply, I have changed only personal

Continued p 36...

Fundamental Doubts

David Lewis

Tsk, tsk! As if the Church doesn't have enough on its plate with its quarrels over women priests, along comes Dr David Jenkins, the Bishop of Durham, frightening the horses with his iconoclastic scepticism about the very fundamentals of Christian belief. First it was the virgin birth, then it was the bodily resurrection and now he's saying there's no place like Hell and there was no star of Bethlehem. At least he still believes there was such a person as Jesus Christ, which is also debatable, but that's another story.

Though I'm not familiar with his specific objections to all these articles of faith, it shouldn't be hard to run through some of the difficulties he is likely to have wrestled with. Dr Jenkins is often portrayed as a loose cannon that has just broken free but in fact theologians have been grappling with these issues for decades, almost centuries, as we shall see.

The Virgin Birth

The virgin birth is mentioned only in the books of Matthew and Luke, but no other book in the Bible implies the slightest awareness of this remarkable genesis. Indeed, John's Gospel describes Jesus as ". . . of Nazareth, the son of Joseph" (1:45). But even Matthew's and Luke's were long ago recognised as "irreconcilable and mutually exclusive" in the *Encyclopedia Biblica* of 1903. In other words, they contradict each other and can't both be true, which must make us wonder if either one is.

Even more strange is that Matthew's and Luke's own later chapters proceed in apparent ignorance of Jesus' extraordinary nativity. Matthew 2:2-3 describes how Herod and all Jerusalem knew about him "born to be King of the Jews" but by 14:1-2 Herod's son exhibits no inkling of his origins. Luke loses the plot as early as chapter 2 because verses 2 and 48 imply Joseph is Jesus' father. Similarly, by 2:48-50, Mary has so forgotten the import of her visits from the Archangel Gabriel and the Holy Spirit that she cannot understand why her 12 year old son has stayed at the temple to amaze the elders with his precocious answers. This does not ring true from a woman who has been told by an Archangel that she will be impregnated by the Holy Ghost and whose son will rule on the throne of David for ever.

As for the famous "prophecy" from Isaiah 2:22-23 "Behold the virgin shall be with child and shall bring forth a son. Any they shall call his name Immanuel . . . [meaning] . . . God with us", few texts have ever been so misrepresented. The Old Testament context here is that the prophet is simply assuring King Ahaz that, by the time of this child's birth, the political and military situation will have so improved that

the child will be given a name of good omen, Immanuel. The original Hebrew text does not mention a virgin but uses the word "almah" meaning a young woman. This somehow got transcribed as "virgin" in the later Greek translation (The Septuagint) to which Matthew obviously referred.

But even here nothing supernatural is suggested, merely that a woman who is now a virgin shall conceive by natural means in conjunction with her husband. "The" young woman implies she was known to the king and was possibly a new addition to his harem who would soon become pregnant.

The Bodily Resurrection

To emphasise the antiquity of rational Biblical scepticism it should be noted that as long ago as 1872 the German theologian David Strauss remarked of the resurrection that "Rarely has an incredible fact been worse attested and never has a badly attested one been intrinsically less credible". His earlier 1835 work "The Life of Jesus Critically Examined" virtually launched modern critical biblical scholarship and was about as welcome to the establishment as Darwin's "Origin of Species".

The gospel accounts of the resurrection then have long been found to be contradictory and Bishop Carnley of Perth (WA) writes that "The diversity of the resulting traditions just cannot be added together to form one synthetic account of what is supposed to have happened at the first Easter".

This internal incoherence of the Gospels makes it difficult to believe in Jesus' bodily resurrection except in one of a most extraordinary kind. If the tomb was found to be empty, as we are told, then he certainly didn't leave his mortal remains behind. We are also told that his disciples were able to handle him and that he took drink and ate fish. His resurrected body must also have been sufficiently solid to have supported clothes because no-one supposes he manifest himself naked, yet this same body allowed him to arrive in a locked room and to vanish at will.

When we turn from the Gospels to the very first Christian writer, St Paul, we discover that he has a completely different concept of Jesus' resurrection. In 1 Cor 15:50 he wrote that "flesh and blood cannot inherit the kingdom of God" so he can hardly have supposed Jesus rose bodily into Heaven. In further contrast to the Gospels, Paul appears to believe that Jesus ascended directly to Heaven (instead of waiting forty days on earth) and made his post-resurrection appearances from there. Acts 9:3 describes Paul's vision of Jesus on the road to Damascus as "a light out of Heaven".

Incidentally, virtually nothing in Paul's genuine writings identifies Jesus with Palestine or Pilate. Paul's Jesus could

have lived at any time or place in the previous centuries. Furthermore, Paul's Jesus lives an earthly life of unimportant obscurity in complete contrast to the Gospels' picture of his ministry being marked by spectacular miracles and popular acclaim.

What of Hell?

Although Christianity likes to portray itself as an unchanging moral tradition, in fact its bricks and mortar premises tend to be far more enduring than its ethical precepts. Three extreme examples would be the observations that we no longer burn witches, bait Jews or keep slaves, yet all were once founded on Biblical authority. Similarly today, despite the best efforts of Dennis Wheatley and Stephen King, belief in Hell has dwindled considerably. Theologian Morna Hooker writes that "we no longer think, as Mark and his contemporaries did, of a world dominated by demons", so we gradually notice modern churchmen quietly setting aside things that have been taught as literal truth for hundreds of years. Another theologian, ME Marty, wrote in an article delightfully entitled "Hell Disappeared. No One Noticed" that superstitious fears about Hell and the Devil are no longer "culturally available" to educated people.

John Hick notes that the idea of Hell and eternal torture is to most people "morally revolting" especially in our more enlightened intellectual climate of rehabilitation rather than retribution and revenge. We are all too familiar with the pernicious effects of the vicious, vengeance-driven cycles of violence and hatred in places like Belfast, Beirut and Bosnia. Modern commentators then, have therefore found some difficulties in reconciling ethics of love and forgiveness alongside the "incendiary language" of many New Testament books calling for sinners to be cast into lakes of fire, consumed by fire and brimstone or burnt up as chaff in unquenchable fires.

Though no 19th century preacher would fail to periodically threaten his congregation with fire and brimstone, this "repulsive theology of wrath" sits uneasily with most modern believers. Ideas creeping in from the rationalist fringe, viewing death as simply a peaceful oblivion begin to seem far more preferable and probable than the torments of Hell or the dubious delights of eternal existence.

Another uncomfortable contradiction that is readily set aside is the so called Messianic Secret of Mark where Jesus seems to be deliberately excluding many people from salvation, for no fault of their own, and who will presumably then be consigned to Hell.

The Search for the Star

The star of Bethlehem has exerted an endless fascination, and York Films recently released a TV "documentary" (SBS, 19/12/93) of the same title examining David Hughes' of Sheffield University's claims to have identified this star. He goes to considerable trouble to examine all the possible celestial candidates between about 7 BC and 1 AD which

includes comets, meteorites, supernovae, aurorae and rare planetary conjunctions. This last turns out to be his most favoured option. However, he could have saved himself an awful lot of trouble if he had first checked out Matthew's credibility rating instead of unquestioningly assuming there must have been a star just because it was mentioned in the Gospel.

Matthew is the only record we have of the star. It wasn't noticed or even referred to by any other Christian writer nor by the meticulous first century Jewish historian Josephus (he didn't notice Jesus either, even though he also came from Galilee.). Nor was it noticed by any astronomers or astrologers of the time, for whom a star that not only suddenly turned South but illuminated a particular house would have been "a celestial phenomenon unparalleled in astronomical history" as Catholic theologian Raymond E Brown put it.

But even Matthew on his own is inconsistent and incredible, for after the star has led the wise men ("three" is never mentioned) west to Jerusalem, Herod's advisors simply look up the scriptures and direct them south to Bethlehem, thus making the miraculous rearrangement of the rhythm of the whole cosmos to turn the star southwards quite unnecessary. If God can so readily divert a star from its normal course, one wonders why he then allowed Herod to be such an inconvenient threat to the infant Jesus (forcing the family to flee to Egypt and slaughtering the unfortunate innocents) rather than just terminating him with a visit from the angel of death, or simply making him a nicer person if he has any New Age inclinations. At one moment he facilitates his plans by miracles of cosmic scale but the next he is almost thwarted by a petty despot. As mentioned previously, even Matthew soon forgets about this stupendous, if superfluous, miracle because nothing in chapter three onwards in his Gospel presupposes Jesus' extraordinary origins. Apart from Herod's blank incomprehension of who he is at 14:1-2, the local community obviously regarded him as "a familiar but undistinguished citizen whose wisdom and mighty works take them completely by surprise" (13:54-56).

Mischievous Iconoclasts?

Dr Jenkins and other radical theologians like Professor GA Wells (to whose lucid works I am indebted) are often regarded as mischievous iconoclasts who challenge these fundamental belief out of sheer perversity. But even since the time of David Strauss in the early 19th century, Biblical scholars, albeit with the most pious of motives, have turned up more and more difficulties and contradictions in the texts. Dr Jenkins and his ilk are simply the inheritors of this tradition, trying to make sense of what are essentially highly improbable records.

This article may have given a glimpse of some of the difficulties of reconciling traditional Christian teaching with the demands of common sense and a world view that can no longer accommodate Devils and demons, fire and brimstone or magical miracles. ■

The National Suicide of the Xhosa

James Marchant

The next time some Peter Pan asks you what harm there could be in a belief in the paranormal, tell him about the national suicide of the Xhosa peoples, in which tens of thousands died because they believed a “seer” who predicted that their ancestors were soon to rise from their graves.

The following account of this astounding tragedy is based on that of Theal (1904). Theal is a controversial figure today and he has been accused of misrepresenting the source of the fateful prediction for political ends. This is as may be but it is not my purpose here to take sides on that issue. Irrespective of the origin of the prediction, nobody seriously disputes that it was communicated to the Xhosa tribes, that vast numbers of people believed it and that vast numbers died as a direct result.

The heartland of the Xhosa people is the northeastern corner of the Cape Province of South Africa. In the 1850s these tribes faced the expanding European settlements across a tense and troubled border. They had suffered several military defeats at the hands of the British. Raids and skirmishes were commonplace and feelings were running high. The situation was exacerbated in 1855 by a serious outbreak of a fatal lung disease in the cattle of the area. It is difficult to exaggerate the importance of cattle in the traditional economy of the Xhosa and it must have caused great anguish amongst them to watch their animals die in large numbers. Theal writes that “In the presence of this calamity, which they could not explain, nothing was too improbable or absurd for them to believe”.

In May 1856 a girl of about 14 years, named Nongqause, returned home to inform her uncle that she had encountered men of most unusual appearance at the river. Her uncle, Umhlokaza, had a reputation as a seer and he went to meet these strangers. They instructed Umhlokaza to retire to his hut and purify himself with ritual ceremonies and to return to them in four days. “There was that in their appearance which commanded obedience, and so the man did as they bade him”.

On the fourth day Umhlokaza returned to the strangers and was astonished to recognize amongst them a brother who had been many years dead. The strangers announced that they had come from battlefields beyond the sea, to oppose the settlers. Umhlokaza had been chosen as the medium of communication between the strangers and the Xhosa chiefs. Amongst the first directives given by the strangers was that the people should kill fat cattle and eat. The local chief, Kreli—a great leader of the Xhosa—commanded that the directions of the spirits were to be obeyed and the best cattle of his tribe were slaughtered. He immediately dispatched emissaries to other chiefs, most of whom accepted the authority of the

spirits and soon fat cattle were being killed in droves. Only a few chiefs were sceptical. “Kama not only refused to join . . . but did all in his power to counteract the mischief. . . Many of his heathen followers, however, finding that either their loyalty to him or to the supreme head of their tribe must be abandoned, preferred to renounce the first. Siwani and his people escaped the general infection”. They were amongst the few.

“The revelations communicated through Umhlokaza and Nongqause grew apace”. The spirits ordered that more and more cattle should be killed. Other prophets arose in the land, telling similar tales and the delusion gripped almost the entire Xhosa nation. Makoma, a brother of the powerful chief Sandile, announced that he had himself conversed with the spirits, who had said that all doubters would perish along with the white men. Umhlokaza now brought the final command from the spirits: The time of reckoning was close at hand and all believers were to prepare for the momentous hour by demonstrating complete obedience. “Not a goat, ox or cow out of all their herds must be left living, every grain of corn in their granaries must be destroyed, no garden must be planted, nothing but horses and weapons of war must be preserved. On a certain day countless herds of cattle, not subject to disease and more beautiful than any they were called upon to kill, should issue from the earth and cover the pastures far and wide. Great fields of millet, ripe and ready for eating, should in an instant spring into existence”. There was much more in this vein. The dead would rise up, youth would return to all old people and so on. A great hurricane would sweep unbelievers and the settlers into the sea.

The wholesale destruction went on for months. Two hundred thousand cattle were killed. The people worked feverishly to build new kraals and sew skin sacks to hold the spirit cattle and the rivers of milk that were coming. Huts were reinforced against the coming hurricane. “And even as they worked, some were starving”. The British high commissioner at Kingwilliamstown, having failed to dissuade the chiefs from destroying their food and seeing the disaster unfolding inexorably, built up stocks of food in the Colony for the purpose of saving life.

After several postponements, Umhlokaza fixed upon “Wednesday the 18th of February 1857 as the day upon which the cattle and the mighty dead were to appear. . .” The sun would rise in the east and then set again in the east and the hurricane would follow.

“The morning dawned of the 18th of February, the day so . . . ardently looked for . . . The sun rose as usual, and the hearts of the watchers sank . . . The sun went down, and the Xhosas . . . woke to the realities of their dreadful position”.

The prophets declared that the magic day had merely been postponed but belief had given way to general despair.

“The horrors that succeeded can only be partly told.” Xhosa society collapsed. Battles broke out for the control of what little food remained. The young, old and sick were abandoned. People turned to wild plants, roots, shellfish, banditry and cannibalism for sustenance. Disease swept the starved survivors. “A continuous stream of emaciated beings poured into the colony”, seeking food. This was provided liberally by the British and the settlers but the price the Xhosas paid was of course the final destruction of their independence as a nation. The Colonial Government estimated that in the area immediately adjacent to the Cape Colony some 67 000 people perished or fled, despite the relatively close proximity of food stocks. Of the above number, some 29 000 survived only on government stores of food. “What then must have been the loss of life in the Galeka and Tembu countries, with no such storehouse and from which flight . . . was almost impossible”?

The figures provided by Theal are not easy to interpret unambiguously but it is clear that, in total, at least 25 000 people died. Most estimates place the figure at 50 000 and it may have been far greater. Thus did a powerful commitment to the paranormal induce a powerful nation to fall on its own spears and to pass under the shadow of a more sceptical culture for well over a century.

Now our Peter Pan, having heard this tale, will likely knit his brows and say “Well, that ’s an awful story, but what has it to do with my belief in the paranormal? You have related an account from the dark pages of history. That sort of thing could never happen today”. This view is of course in all probability correct but it begs the question. The reason that it is unlikely to happen is that for the past 150 years or more, generally speaking, the cohorts of the paranormal have been in steady retreat before the forces of rational analysis. There is nothing in the history or the nature of humans that guarantees that this state of affairs will persist.

The virus of irrationality has ravaged human society for millennia and the contagion, although largely checked in this century, festers on. It manifested itself at Jonestown. It lives in the hearts of the Umhlokazas of the creationist movement. The reincarnation of Nongqause dwells in your town, trying to persuade your neighbours to abandon medical inoculations and turn instead to distilled water laced with magic spells. He who would be umthakathi omkhulu (a great sorcerer) patiently awaits the hour of his opportunity. The price of freedom is eternal scepticism.

Theal, G McC, 1904. *History of South Africa*. Vol. III, p198 et seq. ■

...Tasmanian psychics from p 32

names. I have substituted X or Y for all names associated with the cases in which Mesdames X or Y were respectively involved:

“Receipt is acknowledged of your letter of 31 May 1993 in relation to police use of a psychic in Tasmania.

In particular, you mention two cases namely X and Y. As with most searches for missing persons and other police enquiries, a great deal of public interest is generated which results in police receiving numerous calls from members of the public offering assistance and/or information.

As is normal police procedure, all the information offered by the various callers is noted and checked out in accordance with allocated priorities. In the X case at least one of those callers claimed to have psychic powers and provided information which was checked by police but found to be without any foundation and fact.

In the other case mentioned the mother of Y was approached by a psychic, who held seances with the family and arrived at a misguided conclusion which added nothing positive to the investigation. All of her advice was wrong and misleading.

In summary it can be said that police are often contacted by people who claim to have psychic powers, offering assistance in the investigation of major crime and generally the attitude adopted in dealing with these matters is that they cannot be ignored completely and are therefore checked to the extent necessary to either prove or disprove the validity of the information.

According to the records of Tasmania Police there has never been any approach by police investigators to any psychic with a view to enlisting their aid as psychics in the investigation of any matter and no investigation has been successfully furthered or concluded as a consequence of information supplied by persons claiming to have psychic powers.

I trust that this information will be of some assistance to you”.

Didn't seem like much was happening, so I turned it off and went to grab another beer

Seems like every time you turn around, there's another hardluck story that you're gonna hear

And there's nothing really anyone can say

And I never did plan to go anyway ■

National Convention
Willoughby Town Hall, Chatswood, NSW

No Scientific Basis for Freud's Theory

James Gerrand

Review:

Freudian Fraud: The Malignant Effect of Freud's Theory on American Thought and Culture, E. Fuller Torrey, MD 1992 Harper Collins New York. Hdbk 362pp \$45.

Torrey is a clinical and research psychiatrist who authored the best sellers *Surviving Schizophrenia* and *The Roots of Treason: Ezra Pound and the Secret of St Elizabeth*. This book is the final and definitive nail in the coffin that lays Freud's theory to rest. The book has a similarity with Darwin's *Origin of Species* in that both, through the weight of scientific evidence presented, were or will be, respectively, the means of finally demolishing accepted understandings. In Darwin's case it was the overthrow of the belief that God created human beings; in Torrey's it will be the final collapse of Freud's theory that early childhood experiences, particularly those sexual in nature, are the crucial determinants of adult personality and behaviour.

This book is of special concern to Skeptics as it details how a theory can be widely accepted in a 20th century society without it having any proven scientific basis. Also Torrey reveals that Freud had an avid interest in the occult. Freud wrote in 1921 "If I had my life to live over again I should devote myself to psychical research rather than to psychoanalysis".

Torrey relates how Freud himself confessed in a letter (1900) "I am not really a man of science, not an observer, not an experimenter, and not a thinker. I am nothing but by temperament . . . an adventurer . . . with the curiosity, the boldness, and the tenacity . . ." Freud said "those critics who limit their studies to methodological investigations remind me of people who are always polishing their glasses instead of putting them on and seeing with them". The concepts of the unconscious and the use of dreams, developed by Freud to bring to light the repressions of childhood, were well developed in Europe prior to 1880. Nietzsche had written "Every extension of knowledge arises from making conscious the unconscious" and had introduced the concept of the id. Freud's ideas about dreams came from existing European literature. Freud elaborated and popularised ideas that were already extant.

Torrey reports that there "is not a single study verifying Freud's theory that events in the anal stage of development determine adult personality characteristics. The same conclusion is reached when . . . the oral and Oedipal stages are examined". The evidence, such as from research on identical twins, is that the genetic inheritance plays the major part, about 50% for most factors.

Torrey relates how Freud's theory took particular hold in the USA. It occurred over three periods and each time it was

a case of people believing what they wanted to believe.

The first phase began with Freud's theory being married to sexual freedom and social reform. An early American disciple was anarchist and advocate of free love "Red Emma" Goldman who attended his lectures in Vienna in 1895. Freud came to lecture in the US in 1909 as the apostle of sexual freedom, following the path prepared by English doctor Havelock Ellis. The sexual revolution in the early years of the 20th century was part of a broader social revolution that included birth control, divorce laws and women's suffrage. This gave Freud a wider audience that produced advocates to spread his message.

The evolution of Freud from sexual liberationist to the even greater role of social reformer was due to the attraction to many psychiatrists of his theory offering the possibility of preventing mental illness. They wanted to be part of the medical advances that had seen the coming under control of smallpox, yellow fever, typhus, cholera, typhoid fever and syphilis. From its founding in 1909 The National Committee on Mental Hygiene amalgamated Freud's theory of human behaviour with ideals of social reform. But with the onset of the Depression in 1929, and with the sexual revolution won, America's interest in Freudian ideas waned. The concerns were now jobs and money.

The second phase was Freud's influence on the nature/nurture debate. By the beginning of the 20th century the eugenicists, taking the side of nature or heredity and begun by Englishman Galton in 1883, had become very influential with their promotion of measures to improve the racial qualities of future generations. In 1908 The US Senate had set up an Immigration Commission to ascertain whether the immigrants (one million in 1907) were debasing the population. American anthropologist Franz Boas, the then leading opponent of immigration restriction and racism, taking the side of nurture or culture or experiential factors, became the most important person for the dissemination of Freud's ideas in America. Boas attended Freud's 1909 US lectures and became an enthusiastic supporter of Freud's theory as it reinforced his nurture approach.

The debate became politicised. Advocates for nature tended to be nationalistic, conservative and in favour of aristocratic forms of government. Advocates for nurture were more likely to be pacifists, liberal and supporters of democratic forms of government. World War I saw the supremacy for the nature supporters. But post WWI saw two students of Boas, Ruth Benedict and Margaret Mead, carrying on promoting the nurture side aided by their Freudian adherence. Benedict main anthropological work was in studying Polish migrant families, concluding their problems were economic, social and linguistic in origin, not genetic.

Mead gained worldwide renown for her book *Coming of Age in Samoa* (1928) concluding that “adolescence is not necessarily a time of stress but that cultural conditions make it so”. She wrote that both heterosexual and homosexual relationships were so easily accepted that neither sexual problems or neuroses occurred in Samoa, a finding compatible with Freud’s theory. But Mead’s study has been severely criticised by anthropologists such as Derek Freeman in his *Margaret Mead and Samoa: The Making and Unmaking of An Anthropological Myth* (1983). Mead, who could not speak Samoan, had been told not the truth by her Samoan contacts but what they thought she wanted to be told.

Mead reached a similar conclusion - sex roles are culturally determined and have virtually nothing to do with biology or genetics -after studying four New Guinean tribes (1935), but this work has also been harshly criticised by her colleagues. Jessie Bernard wrote (1945): “I for one found myself constantly confused between the facts Miss Mead reported and the interpretations she made of them . . . one can come to exactly opposite conclusions . . .”. Benedict in 1935 wrote a similarly prestigious book *Patterns of Culture*, a description of three markedly different cultures. Benedict’s book joined Mead’s as a cornerstone of 20th century teaching that culture is a crucial determinant of human behaviour. This was useful data for supporters of Freud promulgating his theory about the importance of childhood experiences. However as objective and scientific studies they have little value.

World War II saw in the US the victory of nurture over nature. Hitler’s inhumane and cynical embracing of nature, promising a Valhalla in which only Nordics would qualify, began in 1933 with the sterilisation of the “genetically diseased”, followed by a law in 1935 requiring “fit for marriage” certificates for couples intending marriage, then in 1939 the murder of the mentally retarded and mentally ill, culminating in 1942 with the “final solution” to the Jewish problem. Hitler’s program was represented in the US as applied eugenics. The victory over Nazism was also seen as a victory of nurture over nature.

Post WWII saw the third and greatest phase of acceptance of Freudian theory. There was the migration of a large number of Freud’s European followers, mainly Jewish psychiatrists, to the US. At a deeper level there was the impact of the Holocaust, precipitating a crisis in consciousness among American Jews in general and among intellectuals in particular. Henceforth theories extolling nurture as the primary antecedent of human behaviour, including the theory of Freud, would be considered politically correct and encounter little intellectual opposition as they moved across America.

The other important postwar factor was the split between Freud and Marx. As Marxism waned the “Red Menace” rose in its place. Many intellectuals, forced to repudiate their Marxist ideology moved closer to Freud. Psychoanalysis substituted concern for the self for social activism. Freud took over many Marxist trappings; foremost was the mantle of the humanist, the benefactor of mankind and hope for its

future.

Life magazine in 1947 widely disseminated Freudian psychoanalysis with a nine page enthusiastic article under that name. *Time* magazine ran an article each year from 1945 to 1948. *The New York Times Magazine* published regular articles in 1946. Freud also became a star of stage, screen and radio.

The greatest disseminator postwar of Freudian theory was Benjamin Spock whose book *Baby and Child Care* sold 40 million copies. Spock persuaded two generations of American mothers that nursing, weaning, tickling, playing, toilet training and other childhood activities are psychic minefields that determine a child’s lifelong personality traits. Maternal missteps can result in disabling oral, anal or Oedipal scars. Spock later attempted to prove the validity of Freud’s theory by studying 21 families who received skilled counselling during the child rearing. The results provided no support. Spock acknowledged “the children in the study had just as many problems as any other children”. The Co-director of the Gesell Institute of Child Development, Dr Louise Ames, was more damning. “In child care I would say that Freudianism has been the psychological crime of the century.”

Freud’s theory was incorporated into America’s prisons more quickly than it was in the nurseries. In 1915 Freudian psychiatrist Healy concluded that the most important cause of delinquent behaviour was “mental conflicts and repressions”, the source of which in “most cases (was) hidden sex thoughts or imageries, and inner or environmental sex experiences”. Similar conclusions were reached about adult offenders. Before long a leading psychiatrist was stating that prisons should be replaced by psychiatric treatment centres. The 1924 murder trial of the Leopold and Loeb was a watershed for the community acceptance of Freudian theory. Defence lawyer Clarence Darrow successfully argued that the two young men were not responsible because particular childhood events had led to emotional immaturity.

The full flowering of Freudian theory in American criminology and prisons took place after WWII. With the defeat of Nazism, genetic theories of criminality were completely discredited and the influence of Freudian theory extended beyond criminal responsibility to areas of crime prevention and the use of punishment.

But what is the evidence here. Torrey reports that in 1975 a thirty-year follow-up of some 600 Boston-area boys, judged in 1945 as likely to become delinquents, half of whom then received Freudian counselling and psychotherapy, found that “as adults, equal numbers of the treated and the non-treated had been convicted for some crime . . . Unexpectedly . . . a higher proportion of criminals from the treatment group . . . committed more than one crime”. As regards rehabilitation rather than punishment, a 1991 report on a Freudian program in operation for 35 years at a prison, Patuxent, stated that “former Patuxent inmates are just as likely to be re-arrested as are people released from other state prisons”.

Torrey concludes with an audit of Freud’s American

account. On the credit side he does admit that Freudian theory played an important part in extending the frontiers of sexual morality. Freud made a major though simplistic contribution to interest in dreams and the unconscious and its popularisation produced a wealth of material for use by artists and writers. Another major contribution was the nest his theory provided for the growth of humanistic and egalitarian thought in America. The widespread use of counselling and psychotherapy has promoted greater importance to intrapersonal feelings and interpersonal relations than merely the accumulation of material possessions. (Torrey points out that Freudian psychoanalysis has been proved to be neither more or less effective than other brands of psychotherapy.)

On the debit side Torrey lists many liabilities. One of the most important is Freud's contribution to the "Me" generation, one's own happiness is the greatest good. Another major liability has been its promotion of irresponsibility. Men and women are seen as puppets of their psyches. The corollary of "don't blame me" is "blame my parents". A third deleterious effect has been its denigration of women. Freud's biographer, Ernest Jones, acknowledged that Freud's view of women was to have "as their main function to be ministering angels to the needs and comforts of men". This led to an epidemic of mother-blaming and women-bashing among mental health professionals. "Women have been caught between the Scylla of restricting children, thereby damaging their fragile egos, or the Charybdis of letting children do what they want, thereby spoiling them." Then there is the misallocation of resources in mental illness where the vast majority of America's 200,000 psychiatrists, psychologists and social workers spend their time doing counselling or psychotherapy mainly based on Freudian theory. The losers have been individuals with serious mental illnesses such as schizophrenia and manic-depression. Another effect of this misallocation of resources has been the diversion of professionals towards psychotherapy and away from social change. "An individual who is a reformer and who undertakes psychoanalysis quickly learns that protestation against social iniquities are mere displacements of one's anger against father, another manifestation of neurosis".

Then there is the similarity to a religion, noted right from its beginning. "Psychoanalysis in the hands of the physician is what confession is in the hands of a Catholic priest." "Freud was the new prophet and his pupils were his apostles." Freud postulates were appealing to those who had set aside formal religion but still craved the certainty of a catechism.

Torrey concludes "The challenge of the 21st century is to place human behaviour on a more solidly scientific basis and to ensure that all children have the maximum opportunity to develop the potential with which they have been born. Freudian theory would appear to have no role in this endeavour since it has no scientific base."

I have endeavoured to highlight the salient features in this thoroughly researched, well-written and easily read book. A recommended read to all Skeptics. ■

Seducing the Psyche

Kathy Butler

Review:

Dangerous Persuaders. An expose of gurus, personal development courses and cults, and how they operate in Australia, Louise Samways. Penguin. Pb \$12.95

So you're pretty sceptical? Immune to the tendrils of TV adverts, and certainly not likely to be seduced by a fanatical cult? Don't be too sure! In *Dangerous Persuaders*, Louise Samways clearly sets out the various groups that can harm, their subtle methods of persuasion, and those who are their choice of prey.

The old family favourites are given plenty of mention : Scientology, the Moonies, Kenja. A few newer contenders have joined their ranks, however. Reiki, The Forum, various political groups (find out why the Labor government was re-elected in spite of the odds), and multi-level marketing groups.

Louise Samways considers that Amway attracts and retains recruits using cult-like psychological techniques: guilt; dependence on other members; reluctance to identify the organisation at first; and an evangelical approach to marketing and recruiting. Anyone who has attended an Amway mass-meeting (as a life experience!) will recognise the feverish chanting and religious fervour induced in the devotees, with money as God! The persuasive techniques used by these groups seem so benign on paper, but Samways shows how powerful they can be when applied by a recruiter in an appropriate setting. I must admit that I found her explanations of how these techniques misguide your grey matter a little difficult to digest. At times she leans towards the loopy, and momentarily wades knee-deep in it. The "basic phenomenon of accessing the body's electromagnetic field for ideodynamic healing" smells badly of the crystal-clutching fraternity. This aside, the book makes fascinating reading. The little glimpses of the inside of various destructive groups are quite amazing, as are the four case-studies in chapter 5.

The story of the woman who lost her four children to the Moonies after a USA holiday is terrifying. Her son managed to return home months after their disappearance, sick and malnourished. Her three daughters, however, had been sent away to marry within the cult and have not been heard from since. It is 20 years since their disappearance. *Dangerous Persuaders* is a riveting read. It is easy to rip through in an evening or two (it even has large type for we optically challenged individuals.). I paid \$12.95 for it in paperback and consider it a bargain. Many of the groups featured have protested its publication in various ways - all the more reason to read it. I give it 3 curious koalas. ■

Murphy's Law

David Hagar

I am a life-long (so far) student of Murphy's Law as well as Dr Parkinson's Law, Mrs Parkinson's Law and the Dr Peter's Principle. While surveying the literature on the subject, I ran into various and sundry corollaries attributed to observers long lost in obscurity. I chose Murphy because it is topical to teachers who actually do teach, though the principles are probably multi-disciplinary in their effect.

"If anything can go wrong, it will." This is the paradigm and ethos of Murphy's Law. It is a proverb-like slogan meant at least half-seriously. Firstly, it is humorous because it is formulated as a 'law'.

We do not literally believe our daily plague of nuisances is deterministically caused. On the other hand, the very aptness of the joke implies that we do sort of suspect there are karmic gremlins ever lying in wait for us with a monkey wrench at the ready. How often, after all, do we comment on an annoyance with "Wouldn't you just know it?". In other words, it should have been predictable and this implies a 'law' at work even while whistling in the dark against a fear that there be a cosmic conspiracy.

Three parts

Like Caesar's Gaul, the life of Padre Martini, and Tom Collins, Murphy's Law may be divided into three parts, all based on three separate observations. The first of these is about human nature. At first they seem to be the cruel workings of fate, but on closer examination are simply observations on human frailty.

Finagle's Second Law:

No matter what the anticipated result, there will always be someone eager to (a) misinterpret it, (b) fake it, (c) believe it happened to their pet theory. Here the cards are not cosmically stacked against you; rather, you simply have to realise that some people are petty, selfish and that you are seldom going to avoid peevish opposition.

Chisolm's Law, 1c:

If you explain so clearly that nobody can misunderstand, someone will. Some people are impenetrably dense and there are enough of them out there so that one is likely to show up in your throng.

Murphy's Law, 8c:

It is impossible to make anything foolproof because fools are so ingenious.

The second category deals with 'entropy', or the much

vaunted Second Law of Thermodynamics, whereby all closed systems tend towards greater energy loss and disorder. Most Creation Science Freaks (CSF) seems to think the Universe and all it contains is enveloped in a cosmic bag called "God", or substitute your own shaman.

Simon's Law:

Everything put together falls apart sooner or later.

Murphy's Law, 5c:

Left to themselves, everything tends to go from bad to worse.

Issawi's Law of the Conservation of Evil:

An insightful summation of the entropic dilemma of all social reform efforts. Given the finitude and ambiguity of life: the total amount of evil in any system remains constant. Hence, any diminution in one direction, for instance, a reduction of poverty or unemployment, is accompanied by an increase of an equal magnitude in, say, crime or air pollution. Nothing mysterious here.

Now we come to the third category, the proverbs dealing with Negative Synchronicity (NS). The name derives from the foggy thinking of Carl Jung who may soon be canonised by the Vatican for his denial of the 20th Century. NS implies a really nasty pattern of nuisances. Here, the cards are truly stacked against us. Jung and his Vatican cosmic co-conspirators barely touch the Sistine Ceiling. Too late, mate. The egg white is already dry.

Murphy's Law, 1c:

If there is a possibility of several things going wrong, the one that will cause the most damage happens first.

Johnson's Third Law:

If you miss one issue of a magazine, it will be the issue which contained the article you were most anxious to read.

Atwood's Law, 14c:

No books are lost by lending except those you want particularly to keep.

Boob's Law :

I will always find a lost item in the last place I look.

Jenning's Law of Selective Gravity, 7c:

The chance of the bread falling with the jam side down is directly proportional to the cost of the carpet. Silly fool: the

person applied the jam to the 'wrong' side of the bread.

Hagar's Inverse Proportional Square Law:

The desirability of an event happening is inversely proportional to the effort expended. This is shown mathematically as:

$$D = 13/E$$

where D = desirability, and
E = effort.

As effort (E) increases, its chances of happening (D) diminish at an alarming rate!

What does all this mean?

None of these strokes of ill luck may be ascribed to entropy. Even though they all concern disorder, it is only disorder relative to our desires. Or to put it another way, the 'order' being eroded here is that of human convention. The 'law' about the buttered bread matters little to the carpet, but it matters a lot to us. In these instances, events do take on meaning. Further, it only demonstrates that we have faulty memories. When the buttered side falls up as it does 50% of the time, the event is meaningless. By default, then, bad things seem to happen with a vicious regularity only because the bad events are the only ones we remember. This is Negative Synchronicity at its best (or worst?).

Negative Synchronists are 'out there' and seriously believe the world is 'out to get them'. Paranoid schizophrenics with their delusions of grandeur and persecution complexes fit the bill. The paranoid schizo-phrenic views himself to be so important that virtually everyone is hell-bent on spoiling his happiness, even destroying him.

Fortunately, it is not that simple. (Murphy, 3f) "Nothing is as easy as it looks." The paranoid schizophrenic accounts for these happenings as communicating 'true' meaning with a definite message to the individual and a reassertion of his already faulty beliefs.

Murphy's Law, on the other hand, deals precisely with these instances as absurdity and, therefore, totally meaningless. Ultimately, the only pattern of significance in Murphy's Law is the repeated denial of meaning in chance events which go 'wrong' at the 'best' opportunity. Those that are acquainted with me know that I could not allow a Classical example to slip by.

The ancient Greeks had a goddess called Eris. Bullfinch in his wonderful 19th Century tome on the subject tells us that at the wedding of Peleus and Thetis, Eris was left off the guest list which included all the other gods and goddesses. For this social theo-snob, Eris managed to screw up the wedding in absentia. Eris was the goddess who controlled disorder, if that is not a contradiction in terms.

Murphy's Law is our modern version of Eris. It probably ought to surprise us that things work out as well as they do. We project our desired order onto the world and then expect an explanation for why things 'go wrong'. It will not stop things going 'wrong', but we ardently hope to fend off the awful uncertainty in ignorance by at least ascribing some method to that madness.

That madness is summed up in Murphy's Law. ■



Therapeutic Touch

Harry Edwards

While in the USA recently I received an invitation from the Rocky Mountain Skeptics to attend and speak at their monthly public breakfast meeting.

It was a fortuitous event in many respects, firstly for the opportunity to broaden my knowledge of an alternative, pseudoscientific, healing modality being uncritically accepted (and taught in some nursing institutions) and secondly, for enabling me to better appreciate a dedicated group of people whose faith in the scientific method and concern for the health needs of the consumer motivated them to take action.

Therapeutic Touch

The underlying premise of Therapeutic Touch, a derivative of the ancient technique of “laying on of hands”, is that healing is promoted when the energy (vital life force) enveloping the body is in balance. Practitioners believe that this energy extends beyond the body’s surface creating a bioelectric field in which “weaknesses” can be felt. They claim that by passing the hands lightly over the body without actually touching it, the energy can be redirected and so balance the field.

Developed by Dolores Krieger, a professor of nursing at New York University, and Dora Kunz, a clairvoyant, in the late 1960s, the technique now has wide acceptance and is being taught in many universities (including Flinders in Melbourne) and nursing institutions. The claims made for its efficacy are manifold and include the reduction of headache pain, the raising of haemoglobin value, a decrease in anxiety, speeding wound healing, the alleviation of asthma attacks and emphysema, curing of a wide variety of illnesses, and generally facilitating healing.

Placebo or science?

Are the positive aspects of therapeutic touch, reported by practitioners, simply placebos induced by faith in those invisible and undetectable cosmic energies unknown to science? Or do the claims have any scientific basis? If the former, does it have a legitimate place complementing orthodox medicine or should it be relegated to the archives alongside other discredited and abandoned mantic arts?

The Rocky Mountain Skeptics (RMS), located in Boulder, Colorado, had little doubt as to which category TT belongs, and this report details its enquiries, findings and conclusions.

Concerns

The RMS, concerned at the Colorado Board of Nursing’s policy on continuing education classes instructing nurses in practices which have no scientific validation and which have been approved for credit in Colorado, expressed that concern

by addressing the Board on January 30, 1992, by asking, “How can Board recognized, credentializing organizations be made responsible and accountable for the continuing education classes? ”

Although the subjects approved for credit included Neurolinguistic Programming, Reflexology, Applied Kinesiology, Crystal Healing and Acupuncture, TT became the focus of attention and central issue.

The Board’s response was to appoint a sub-committee to address the question and present a recommendation back to the Board. The outcome of the sub-committee’s deliberations was hardly encouraging, and in a letter dated June 8, 1992, from the Colorado Board of Nursing to Linda Rojas, the then Vice President of the RMS, said, “that after review of the research literature and discussion, the sub-committee had made the recommendation that the Board should continue to award continuing education credit to such programs . . . the Board voted (8-1) to reaffirm its previous determination that TT was an acceptable study area for continuing educational credit”.

Undeterred by the rejection, the RMS replied, thanking the Board for their indulgence and seized upon the claim, that “research literature” exists supporting the practice of TT, that was used by the Board to affirm that it is an acceptable study area.

Research

Excitement rippled through the ranks when it was learned that studies existed to show that TT was not a pseudoscience, such studies having eluded sceptical researchers for years. This immediately prompted a request for a bibliography together with a copy of the sub-committee’s report and minutes of the meeting.

I have always understood the word “research” to mean a systematic investigation or inquiry into a particular subject, ostensibly one would think, to come to an objective and unbiased conclusion. However, perusing the bibliography provided to the RMS by the Board (a reading list of some 200 entries) it became clear that objectivity was not uppermost in the mind of the researcher. A breakdown of the references disclosed that, of the 200 listed, only 52 or 26% could be placed in the “possible” category of valid research; most of the rest were culled from publications of dubious scientific respectability such as *Woman’s Day*, *People* The Tao of Physics, *The American Theosophist* and unrefereed articles in newsletters and trade publications. A further breakdown, eliminating correspondence, surveys with no original work in them and re-packaged items, reduced the number of possible authentic research papers and genuine reports to 30

of which 15 were contrarian research or responses. Of those 15, the RMS were unable to trace 5 possibly authentic research papers, and in five of the remaining 10, the experimental designs were in dispute. One could not be replicated and in four the research was unevaluated. Thus, out of a total of 200 items there were *none* that would qualify as validated or replicated research.

TT Techniques

To acquaint themselves with the techniques employed by TT practitioners, RMS member William Aldorfer enrolled in a therapeutic touch class conducted by Colorado Free University (CFU). Entitled "TT Healing at Your Fingertips", it was advertised as an "easily learned healing technique . . . to alleviate pain in yourself and others". The CFU winter 1992-93 catalogue that advertised the course claimed that TT "is being used successfully to help with PMS, migraine, chronic back pain and depression". On request, certification could be obtained for 12 Continuing Education Units (CEU) towards the 20 CEU biannual requirement needed to maintain registration as an RN or LPN.

The following is a condensed version of an article by Aldorfer that appeared in the July/August edition of the RMS newsletter outlining his course of instruction. (Refer also to my report "Heigh Ho Come to the Fair" in *the Skeptic* Vol 12, No 1) It should leave no doubt as to which category (genuine healing modality or pseudoscience) TT belongs.

Aldorfer says, "I was instructed that I could not use my own 'energy' as an agent in the ritual because I would become exhausted. Rather I would have to draw energy from the ground. I was told that in the process of detecting the 'pain ridge' and sweeping it away, that the process would feel as though the performer was pulling taffy. TT is therefore dependant on what is currently marketed as 'vibrational medicine'."

"I was taught several methods for relieving pain . . . the first employs a bundle of cotton wool. In the belief system of the TT advocates, cotton stores energy from the hands of the performer in the way a nicad battery stores energy from its charging unit . . . the cotton wool is then placed over the injured area as if it were a poultice."

"The second method . . . involves raising one hand towards the sky to trap 'sky energy'. By holding my other hand on the afflicted area, I can direct 'sky energy' into the injury and heal it. No advocate of the ceremony has yet demonstrated the existence of the so called 'human energy field' . . . belief in 'vibrating and rotating chakras' is required or assumed . . . the TT ceremony is only effective upon people who do not, or cannot, differentiate between symptomatic relief and truly effective remedies. The RN who instructed me said that small children and the mentally retarded are the easiest to train in TT, as they lack the scepticism of adults."

"In my view, the ritual of TT holds two distinct attractions for its advocates:

1. Advocates claim that 'no harm' can be caused by

performing the ritual of TT; and

2. Advocates must, as a condition for performing the ritual, be willing to divorce themselves from the outcome and accept any result.

What could be more attractive to an advocate of this ceremony, this belief system? . . . no harm comes to the subject and no accountability accrues to the person performing the ritual. No accountability. None ever."

"The 'no harm' claim is highly suspect . . . as is the claim that each of us swims around in a magical, mystical 'energy field'. The Board is obligated to document its support of the 'no harm' claim with valid replicated, unequivocal clinical data . . . likewise document its support of the 'energy field' claim."

"To date, no valid, replicated, unequivocal clinical data have been produced by any advocate of TT . . . the most damning indictment of all came from the Registered Nurse who trained me . . . she advised that it could take time for me to 'feel' the 'energy field' of a subject, and told me that it was 'entirely appropriate' to fake the manipulation. On her refrigerator door was a sign: 'FAKE IT 'TIL YOU MAKE IT'." (Of course the intended connotation may have been orgasmic not organic. **HE**)

Practical demonstration.

At an oral RMS presentation to the State Board of Nursing, William Aldorfer, now as qualified as any in the techniques of TT, demonstrated the ceremony or rite referred to as Therapeutic Touch. The following extracts from the RMS July/August 1993 newsletter reporting on the presentation indicates the pseudoscientific nature of this 'healing modality'.

"Prior to commencing the person performing the ceremony (nurse) meditates to 'draw energy from the ground'. The subject (patient) is then 'scanned' with the hands to locate 'dips' and 'bumps' in the 'energy field' surrounding the body."

"Supposedly, the 'parameter' of the 'energy field' can be detected in this way, as can a so-called 'pain ridge', which can then be swept away with the hand. In this manner, I was taught, the hands of the ritualist 'direct and create energy flow' in the subject by manipulating the subject's so-called 'energy field'. 'Tuning and balancing the vibrations' of this so-called 'field' is accomplished through opening of 'Chakras'." (chakras demonstrated)

"TT depends on a belief in doctrines that have no scientific basis. No advocate of the ceremony has yet demonstrated the existence of this so-called 'human energy field'."

I was taught that no particular system of belief was needed in order to conduct the ceremony. This is not correct. Belief in 'vibrating and rotating chakras' is required or assumed. Belief in radiant human 'energy fields' that have the consistency of taffy is required or assumed. Anyone who tells you that belief is not a component of TT is deceiving you. Indeed, deceit lies at the very heart of this issue."

Mr Aldorfer concluded by saying, "You, the Board have been deceived. . . The Board has not seen any meaningful evidence. . . The Board has not shown us any meaningful evidence. None; not one shred. No meaningful evidence."

Objections to TT

The RMS's objections to the teaching of TT are manifold - the abdication by the Nursing Board of the University of Colorado Health Science Center of its responsibility mandated by the legislature and usual ethical standards being its prime concern.

Among others is the claim that the practice 'can do no harm', yet Dolores Kreiger, the founder of the TT practice states in a training video that the nurse must be careful to 'center' since negative attitudes can be passed on to the patient. The same video also notes that babies and small children are very sensitive to energy: consequently, the practitioner must be careful not to over stimulate such patients, an acknowledgement that the manipulation of this postulated energy could indeed be harmful.

Another is the scientific illiteracy evident in TT literature, and an anti-science bias in response to those who draw attention to the lack of scientific evidence for the efficacy of TT, and not least of all, the allotment of health funds to unproven alternative healing modalities at the expense of those practices with proven scientific merit.

Recognition

On December 16, 1993, there was a dramatic break-through in the RMS's two year campaign to convey their concerns regarding the scientific issues surrounding Therapeutic Touch.

Meeting at the CU Health Science Center, to consider a report from the Academic Relevance Committee, Jim Martin, one of the University of Colorado's Regents stated, "I do think the Rocky Mountain Skeptics serve a useful purpose in monitoring this scientific accountability. I think it does keep the process open and people focused on what is scientific and what isn't".

The report of the Academic Relevance Committee came about after the intervention of Sally Hopper, Chairman of Senate HEWI (Health, Environment, Welfare and Institutions) who, in a letter dated May 7, 1993 stated, ". . . the Senate HEWI Committee expects board members to thoroughly review alternative healing practices such as therapeutic touch, neurolinguistic programming and crystal healing, prior to approving the study of these healing methods for continuing education".

Recommendations

Among the comments and recommendations by the ARC were:

"The Center Directors should realize that they do themselves, their concepts and the School harm by the use of jargon that cannot be clearly understood, and by the

espousal of theoretical constructs which appear devoid of proof. Our Committee believes that the following should be done with regard to Therapeutic Touch. The Chancellor and the Dean of the School of Nursing should appoint a special committee of investigators to carefully read the very extensive literature on this subject, to view all the videos and relevant course material, and to witness actual demonstrations of this technique. It should solicit testimony from both critics and advocates. The members of the committee should be investigators well-versed in the scientific method and should come from several disciplines on the Health Science Center campus with the exception of the School of Nursing. If TT is not recognized as a bona fide activity with academic relevance, then no further course work should be offered under the aegis of the University."

While the setting up of another committee may be seen as a cause for lament, it is significant that for the first time (at least in Colorado) the validity of paranormal claims will be subject to scientific scrutiny instead of being uncritically accepted, and isn't that what it's all about?

In my view, the efforts of the RMS have been vindicated, and the result stands as an inspiration to all those dedicated to upholding the scientific method and opposing the uncritical acceptance of wacky concepts and mumbo-jumbo.

My special thanks to Bela Scheiber and William Aldorfer -Good-on-ye-mates! and congratulations Rocky Mountain Skeptics. ■

The success of the Rocky Mountains Skeptics confirms my opinion that an outside concerned minority group can, with perseverance and pressure, achieve positive results. (Look what the anti-smoking lobby has achieved!)

In view of the deliberations of the ARC resulting in a committee composed in part of critics dedicated to the scientific method, I am encouraged to further consider my proposition to licence psychics, clairvoyants and other paramongers. Consideration is now being given by myself and another interstate colleague to proceed independently of the Australian Skeptics. **HE**

In The Beginning the First Five Years of the Skeptic

Available from Australian Skeptics
\$25.00 (+\$250 p&p)

New Age Law

Lindsay Ellison

Don't be surprised if, sometime in the not too distant future, when you go and visit your friendly Barrister or Solicitor, he asks you for your star sign, together with your favourite cricket and rugby league teams and the television programme you enjoy the most. Why? Well he's probably got his degree from the Faculty of Law at the University of Sydney.

In November, 1993, the Teaching and Curriculum Committee of the Faculty recommended that courses titled "Television and the Law", "Rugby League and the Law", "Cricket and the Law" and, most excitingly, "Astrology and the Law" be approved as courses that can be taken by undergraduates as part of the jurisprudence requirement for the law degree.

In support of the astrology course, the following comment was made:

"In order to ensure a multi-disciplinary and multi-cultural approach under the strategic plan, and other faculty, university and governmental policies, various astrological systems and theories, eg Tibetan, Chinese, Egyptian, will be examined and compared, as will political and ideological critiques, e.g. "Adorno on astrology in the Los Angeles press".

Presumably, each student will be required to have his own crystal ball to understand what it all means.

The thirteen (13) week course included such fascinating topics as "The Star Signs of Law Teachers" and "The Star Signs of the Profession". To prove that astrologers can move with the times, the topic of "Astrology and Alternative Dispute Resolution" and "Astrology and Gender" were included.

Week 11 "The Critiques - Post Modernism, The Decline of the Meta-Narratives and Astrology" obviously needs no further comment.

Week 12 "Law and Astrology - The Future?" is probably rather more accurate than any topic concerned with the past and would no doubt be part of students' work experience inside a tent in Side Show Alley at the Royal Easter Show.

The course does not appear to be a significant drain on the resources of the University, since students are advised that "use of our library will be minimal", with the only requirement being to purchase a daily newspaper. Presumably, purchase of *Woman's Day* and *New Idea* is only for advanced students with an ability to comprehend what no other man (or woman) could otherwise do.

Regrettably, when I obtained my law degree I had to contend with much more temporal subjects such as Contracts, Torts and Equity. Not being a New Age Barrister, I have no choice when it comes to predicting the results of my cases, other than to slash open a nearby chook or lamb, throw the entrails against the wall of my chambers and see how the

viscera fall. It is a method that has worked for the last few thousand years and I see no reason why I should change.

So far as the other proposed subjects are concerned, the compulsory text for the television course is *TV Week*. Presumably, on this basis, half the population should already be entitled to a law degree. Bart Simpson is to be considered as a "table dancer or Supreme Court Judge", whilst *Twin Peaks* is considered under the heading "David Lynch - Legal Genius or Pervert? Is there a difference?"

In the cricketing course, Rampaging Roy Slaven and HG Nelson provide one of the three recommended text, while *Rugby League Week* is the text for the football course. Clearly, a graduate with this qualification would be ineligible to practice at the Victorian bar and one would hope that Melbourne University could be induced into providing an "Australian Rules and the Law" extension course to take care of this anomaly.

But perhaps all this New Age Law is not to be; well not just yet in any case. Those conservative elements in the Faculty of Law, who have caused the law to be as it is, have rejected these recommendations (with the exception of "Cricket and the Law*") and, for the moment, we are to be deprived of the undoubted benefits of these courses. The law can only be the poorer for their lack of foresight.

*And quite right too. Ed

Postal Changes

Under new regulations being instituted by Australia Post, as from May 30, *the Skeptic* will no longer attract subsidised postage as a Registered Publication. The new system, Print Post will mean an increase in our postage costs for our interstate subscribers, although some local mailing costs may be lower. We are investigating the changes and if our total postage costs rise, we may have to increase subscription rates at the beginning of 1995. We will keep them as low as we can without driving the organisation into insolvency.

In the last issue, we advised that we would have a new PO Box number from the end of March. This was on the advice of Australia Post, but the new Post Office is still not ready. At last count, it should be ready by the end of June. So far, mail posted to either of our Box numbers has been getting through, so we will continue to advertise the new number, PO Box A 2324, Sydney South 2000.

Gimme that New Age Religion

Sir Jim R Wallaby

Sometimes world changing concepts crop up in the most unexpected places. It was a letter to the editor of that fine publication *New Scientist* (April 22, 1994) that caused me to question all my long held prejudices about how the world actually operates.

Unusually (even perhaps uniquely) for that publication, the letter was anonymous and contained this explanation "My apologies for remaining anonymous. I am a 'professional researcher' with a string of letters after my name. My employers would not like this letter and jobs are hard to find these days. Anon"

The letter itself addressed a previously published review of a book about the theories of Rupert Sheldrake. (Sheldrake is the British scientist, whose proposed theory of Formative Causation [or Causative Formation - I'm never sure which is correct], suggests that a 'morphic field' exists in conjunction with all living things, which allows, among other effects, that once a task has been successfully conducted once by one individual from a given population, it thereafter becomes easier for other members of that population to do the same task, even though they have never had contact with the original experimenter.) At least that is what I take it to mean, although the Wallaby's have never been scientific in any way.

But back to the letter. The anonymous writer, while conceding that Sheldrake's theories appear to be 'a little farfetched' goes on to describe one of his own experiences, in which he set out to measure some parameters and found his results to be inconsistent rubbish. After he went off to read about other work on the same problem, and, with no alteration in his testing apparatus, he returned to his task, to find that his results were now consistent with the previous research.

Interesting, but hardly world shattering. Well perhaps not to you Dear Reader, but to Anon and, by extension, to the scion of the ancient house of Wallaby, this event heralded an epiphany. He suggests that his theory is easily testable. "If what I am implying is true, all we need to see data taken before a theory has been worked out, and then examine the results to see if the earlier recorded data is in accord with the new theory. "

It may still seem a little thin to you Skeptics, but hearken unto the evidentiary support he adduces (Language! I must stop associating with lawyers.)

"Look at pre-Newtonian ideas on the trajectory of projectiles. Early manuscripts report that projectiles followed nearly triangular paths; a projectile went up into the air until its energy ran out, then fell to earth vertically. You will see early religious tapestries showing just this, arrows sticking

straight up from the ground without the slightest hint of a parabolic trajectory These guys were not stupid: they would have stood sideways on to the archer and seen the arrow's trajectory from a distance."

And then he posed the hypothesis that dispelled the scales of scepticism from before my eyes. "What", he asked "is going on? Would it not be a dirty trick if every time a Newton or an Einstein comes along with a logical argument or theory, 'nature' obliges by falling into step with the great thinker. Did planets follow elliptical paths before Kepler?"

Let us consider the implications of that seemingly simple hypothesis. The world really was flat before Eratosthenes; the planets did follow epicycles and the Earth was the centre of the universe between the times of Ptolemy and Kepler; combustion was caused by phlogiston until Priestley discovered oxygen; the world was only a few thousand years old until Lyell, but then its age retroactively retrogressed to number in the billions, people were the result of special creation until Darwin came along, then they started evolving; ether did fill the universe until Michelson and Morley showed that it didn't. I will leave it to the reader to extend these speculations into other areas. E did not = MC2 until Einstein said it did. (What it did =, I will leave to some other Great Thinker.)

What a theory! It explains everything. Nothing is wrong - any idea is (or was) right. But isn't that the hallmark of a great religion, rather than a scientific theory? This, then is the answer. This is a tolerant faith that will unite all of humanity in the 21st Century, because everybody's ideas will be right and nobody will ever be wrong. All one has to do is to accept that old religious tapestries count as hard evidence, and surely that goes without saying.

I realise that Anon mentioned 'great thinkers', but this is a new, caring, non-confrontational sort of faith and it would be terribly politically incorrect to suggest that L Ron Hubbard was in any way inferior as a thinker to Albert Einstein or that Duane Gish could not hold his own with Charles Darwin.

Well the saintly Anon has convinced me. I am left with no doubts that the Messiah has come amongst us and I plan to get in on the ground floor as chief acolyte to the All-Seeing Anon. And I wish to allow you, my fellow former Skeptics, to join me in the Genesis of the all new, New Age, No Fault, Everything Accepted. No Belief Too Far-fetched to Believe, Evangelical, Apostolic Anonian Church.

Tenders for Cardinalcies and Bishoprics are now open (no reasonable offer refused).

Please send all donations (tithes) in small denomination, unmarked, banknotes to:

Vice-Pope Sir Jim c/- the Skeptics Post Office Box. ■

Cyber Sceptics

Part II: The Net

Glenn Capuano

Many large computer systems are now connected to one another by high-speed data telephone lines, exchanging information at huge rates. These machines make up what is known as the Internet, which is short for International Network. This is by far the largest computer network in the world, and it has meant an information explosion, since messages can now be sent by anyone connected to the network, to anyone else connected, anywhere in the world.

Internet machines are traditionally located in universities, which usually have accounts available for students at little or no charge. Many large companies and government institutions now provide Internet access for their employees. For those who can't beg, borrow, or steal a "full" account, there are also public access sites which provide access to newsgroups and e-mail for a small charge (see end of article). Every user on the Internet has an "address" which functions as an electronic mailbox from which they can send and receive private mail to any other user on the network (these addresses look rather strange at first (for instance my own is kappa@yoyo.cc.monash.edu.au) but you soon get used to them.

There are approximately 20,000 machines connected worldwide to the Internet and each machine may have hundreds of users. It is estimated that there are more than two million Internet users around the world, a number which doubles about every two years. With the growing accessibility of the network to a large cross-section of the community, the paranormal was bound to find its way in eventually.

Electronic News

Probably the main focus of the Internet are the "newsgroups". There are over 3000 of these, where people from all around the world write public articles about every conceivable topic. One person will write an article, and anyone, anywhere in the world may reply, privately or publicly, to this article in a "followup". Some of the more popular newsgroups have thousands of messages posted per day. Most newsgroups are totally uncensored and have no controls over what is written in them (though you're likely to get "flamed", ie abused by other users, if you do anything really out of line), so in a sense they are the epitome of free speech. While this is of course good, it does lead to some rather way-out claims, which is what makes our lives so much more interesting.

For those of you with Internet access, below is a list of

newsgroups which may be of interest to sceptics (a full list of all 3000+ groups is available on the network).

Note for those unfamiliar with the way newsgroups are named, the first three letters are the "hierarchy" which shows which general area the subject belongs to ("SCIENCE", "RECREATION", "ALTERNATIVE", "SOCIAL", "COMPUTERS"), and the following words roughly describe the subject matter (though some of them will remain forever a mystery).

Since Internet is basically a UNIX system, the names have no spaces in them; full stops separate words.

Sci.Skeptic

The sceptics newsgroup. A very popular group, with several members of CSICOP posting here regularly (including James Randi).

Plenty of sceptical discussion on every sceptical topic and much more besides. However you won't find too many "believers" willing to stick their heads in here.

Alt.Astrology

This one is for discussion of Astrology in all shapes and forms, except if you want to argue about its validity, in which case you'll probably get flamed to hell. I speak from experience. Since I gave them a hard time in 1992, they now expressly forbid questioning of the premises of astrology in their newsgroup.

Alt.Alien.Visitors

A newsgroup specifically for the discussion of UFOs/Extra-Terrestrials, which has some surprisingly sane and interesting debate.

Alt.Religion.Scientology

I'll give you three guesses. There is a bias towards the Scientologists on this newsgroup, but some dissenters make their views known from time to time.

Alt. Meditation. Transcendental

Transcendental Meditation. Seems to be fairly balanced debate on the pros and cons of the TM movement.

Misc. Health. Alternative

Informed discussion on alternative therapies from Aromatherapy, to that one starting with Z that I can't think of

right now.

Talk.Origins

This newsgroup gets a little heated at times. It's a slanging match between creationists and evolutionists. It can be fun, but stay away if you don't want your hair singed by "flames"!

Alt. Prophecies.Nostradamus

Supposedly about history's best known seer, but last time I looked there were no messages in here. Maybe all the message posters have fled to Mars before 1999.

Alt.Atheism

Anything and Everything you ever wanted to know about Atheism, and specifically, the separation of church and state. Religious debate is allowed as long as no-one tries to force their opinion on anyone else.

Sci.Astro

This is supposed to be the sane and rational Astronomy newsgroup, but there are always one or more quacks trying to push their personal theory about how the moon is actually hollow and houses the remains of Atlantis.

Alt.Folklore.Urban

This newsgroup is sure to have you in stitches. It has one of the highest posting volumes in the whole network, with over 500 messages per day, all about urban myths. They have a huge file, which is worth a look, containing brief descriptions of hundreds of urban legends and a note about whether it's True, False or Unknown.

Alt. Paranet.*

This is not a single group, but about a dozen different newsgroups which actually originate from an amateur BBS network in the US - called Paranet - and are gated through to the Internet daily. They have discussions about many paranormal areas, with UFOs being the dominant topic. A sample of a few of the Paranet areas are:

Alt.Paranet. Paranormal - Paranormal General.

Alt.Paranet. ufo - UFOs.

Alt.Paranet. Abductions - UFO Abductions.

Alt.Paranet. Skeptics - Skeptics.

Alt.Usenet.Kooks

Basically a collection of the weirdest crackpot postings from all of the 3000 newsgroups. Saves having to wade through rec. sports. basketball for the article about the second coming of Jesus next October.

For those who are new to the Internet, a little jargon explanation might be in order.

Firstly, a "flame" is something every sceptic comes across at times when trying to make his views known. A flame is an abusive message sent to your mailbox by someone who didn't like what you wrote. Some people get rather a lot of these.

Also if you see little symbols like :-) ;-) 8-) #-)), they're smiley faces and they mean to take what is written in a light-hearted way. Each one has a slightly different meaning but I won't go into that here.

Also, many newsgroups have a **Frequently Asked Questions (FAQ)** file, which is posted to the newsgroup every month or so. Newcomers would be well advised to read this as it contains some information about the particular newsgroup, and also answers to the questions most often asked in that group.

Other Internet Resources

James Randi James Randi is a regular poster in the Sci. Skeptic newsgroup, and also has a mailing list for anyone who wants the latest details on his activities, particularly in relation to Uri Geller. (A mailing list is just a list of internet addresses of people who want the same information sent out to them via their electronic mailbox). To join this list send an email message to the address **geller-hotline-request@ssr.com**, asking to be put on the list. To contact Randi, his email address is **geller-hotline@ssr.com**

CSICOP

CSICOP have their own online service on the net where they post information about the latest sceptical news. To reach it you need to have an account with a direct Internet connection and "telnet" access. Most university and government institutions use direct connections but they're very expensive to set up and smaller systems, particularly public access systems, often use dial-up access instead and may not have this feature.

If you do have telnet capabilities, telnet to the address "**freenet-in-a.CWRU.edu**", which is the Cleveland Freenet Bulletin Board. If it tells you the lines are all busy, try the alternate addresses "**freenet-in-b.CWRU.edu**" or "**freenet-in-c.CWRU.edu**". You'll have to log on as a visitor (permanent accounts are available but you must send a form by "snail-mail" (normal postal service) to the administrators in Cleveland, USA.).

From the main menu, type "go skeptic", and you'll find yourself in the Skeptics **SIG (Special Interest Group)**. There are large numbers of questions and answers from sceptics all over the world, as well as a message board entirely devoted to press releases from CSICOP.

This is a good way to keep in touch with what is going on overseas. Many US sceptics groups also have their newsletters online for you to read.

FTP Sites

FTP is another interesting feature of the Internet. It stands for File Transfer Protocol, which is a rather dry name for the ability to connect to anywhere in the world and transfer files, programs and information to your own system. It is the Internet equivalent of downloading on a BBS, but it's much faster.

To use FTP you must have a direct internet connection (the same as is required to use Telnet), and the address of the site you wish to connect to. There are numerous lists of such sites and information about what they contain available in various newsgroups. Here are just a few that may be of interest to sceptics.

The site "**netcom.com**" has a large section containing, in text file format, all the back issues of various US sceptics magazines and newsletters. This includes the Bay Area Skeptics of San-Francisco, the Arizona Skeptics, Association for Rational Thought and the Georgia Skeptics.

The recent issues of the magazines even have pictures from the magazines electronically scanned into a format which can be displayed on PCs so you wont miss a thing. To reach this archive, you'll need to ftp to netcom. com (how you do this varies depending on your account), and then change to the directory /pub/ansan. All the magazine files are accessed from there.

Other sites of interest are the urban legends archives. There are two FTP sites for these, "**balder.nta.no**" in the "**/pub/alt.folklore.urban**" directory and "cathouse.org" in the "**/pub/cathouse**" directory. They contain the FAQ file of the **Alt.Folklore.Urban** newsgroup (one-line information on over 1000 urban myths!), plus detailed files on dozens of popular myths, in categories such as Classic (classic urban legends), Animals, Death, Disney (!), Etymology (origins of words), Movies, Science, Sex and TV.

Another FTP site "ftp.mantis.co.uk" contains atheist information, and files about contradictions in the Bible and arguments to use against Creationists.

the Skeptic

You can even submit articles to the Skeptic via the Internet using e-mail. The address is **skeptics@spot.tt.sw.oz.au** and this is inside the front cover of every issue, in case you forget it. Barry Williams would be delighted to have your article sent in by e-mail since it means he doesn't have to retype it. (Hear Hear. **Ed**)

This article is just an overview of the most interesting parts of the network to Skeptics. There's a lot more to it than what

I've detailed here. Be warned, if you get heavily involved in the Internet, it can be very addictive and take up a lot of time. If you need any more information or want to ask me any questions about this article, you're welcome to write to the Skeptic of course, but if you have network access, why not write to me directly via e-mail? My Internet address is: **kappa@yoyo.cc.monash.edu.au** . Alternatively, if you don't have network access, you can call my bulletin board via modem, the number is (03) 752-1171. Full details of that were given in the last issue of *the Skeptic* I'd also like to hear if anyone has discovered other newsgroups, or Telnet or FTP sites of interest to Skeptics.

Finally, if you're absolutely desperate for an Internet account, and have no idea where to get access, here is a brief list of some Bulletin Boards (dial up via modem, see last article) which provide access to Email and Newsgroups ONLY (no Telnet or FTP) for free or a small cost. These boards are all part of the APANA (Australian Public Access Unix) network and the numbers are taken directly from an APANA BBS list from October 1993. I cannot vouch for them being available by the time this article goes to print.

Melbourne

Werple (03) 888-1726

ZikZak (03) 562-8814

Cloud (03) 803-6984

Geelong

Vortex (052) 23-1671

Sydney

Arc (02) 949-1224

LsuPoz (02) 418-8750

Newcastle

Scorch (049) 62-1783

Adelaide

Apanix (08) 373-5485

Cswamp (08) 370-2133

Editor's Note

Western Australian Skeptic, Marc Howland, advises us that he has just started a science BBS on the Fidonet. The details are:

BBS Natural Selection 09 244 4020.

Fidonet address 3:690/384.0

e-mail address mhowland@tartarus.uwa.edu.au

Marc would like anybody who has anything to contribute to contact him on that address.

Whatever you say Keith!

Adam Joseph

Review:

Supernatural No.2. Keith Smith. Pan Australia \$11.95

With his background of writing twenty-three books for or about children, it was with some trepidation that I turned the pages of Keith Smith's second book of paranormal musings, a sequel to *Supernatural! Australian Encounters* which he published in 1991.

The introduction set the trend by proclaiming that combined collected evidence suggests "that there *is* another life, a mysterious existence in parallel with our own and closer to us than we know". This 178 page paperback was going to be an unabashed and unbiased inspection of psychic phenomena, or so we were being told. Unbiased? Sure Keith. Only the other day whilst visiting the zoo I met a genuine pink elephant who claimed he flew before having his wings shortened. But as Smithy wrote this book, then of course he's allowed to say it is unbiased. Shame about the content.

On ghostly visitations, who could possibly dispute the story by Mrs Valerie Yates, 53, who lives in the Blue Mountains, who told Keith that her deceased brother appeared to her wearing the leather jacket and dark pants he wore on the day he was killed in a motorbike accident. He didn't speak but 'thought transferred' to her "I am not dead", and then faded away. Mrs Yates was only fifteen at the time and clearly had a great love for her lost brother. There is no doubt many of us would like to seek the vision of lost loved ones and some might convince themselves that they have, but relying on memory remaining accurate over 40 years is exhibiting a little too much faith.

Smith here has collected stories from many people. He has talked to the likes of clairaudients Gwyn Turner and Len Wood, who believe that their 'incredible' kind of communication is provided by the pineal gland, which, when stimulated, pours an extra secretion into the blood, which in

turn enhances another sensory system able to pick up higher frequencies. The result? Extra strong intuition of course. Whatever you say Keithie!

Clairvoyant Janine Wood is another contributor who related that she saw people moving up in the ceiling when she was all of three-and-a-half years old, used to talk and play with spirit children, and saw no problem with this until reaching puberty. She then realised she had a special gift. Lo and behold, she went on to become a school teacher; "My teaching career was never easy because my clairvoyance kept

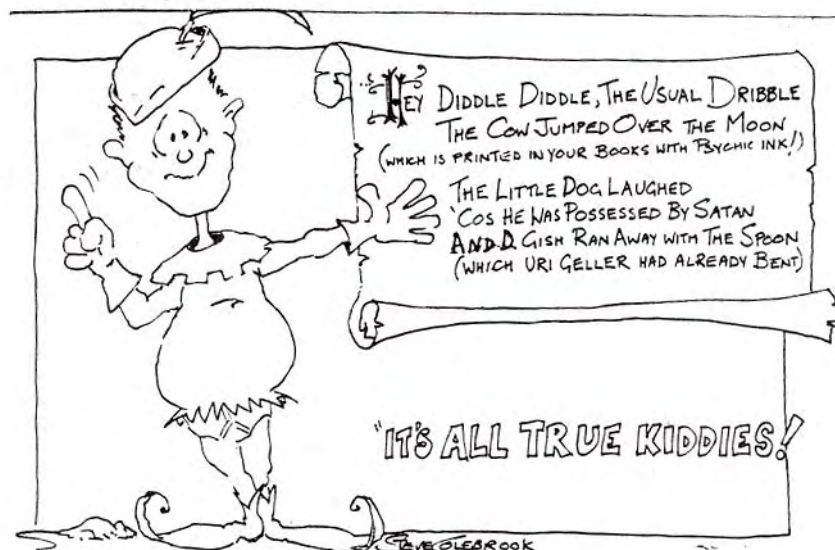
on getting in the way and didn't always sit easily with conventional teaching methods. I could see things and could make short cuts which weren't always acceptable within the school system". Jamine is no longer a school teacher. Medium Cliff Dorian explains in his banter that people who come to a seance "with a negative or pre-judiced attitude to the phenomena, can upset

the vibrations and damage communications with those in the spirit".

Psychic artistes' aside, Australians have always been able to spin a good yarn, and Keith, in his unbiased style, has collected some whoppers from those who believe in almost anything. Psychic communication, psychic art and photography, ghosts and haunted houses, even psychic surgeons.

There is even an entire chapter devoted to that questionable (questioning?) group he calls Skeptics Incorporated. One Barry Williams is quoted at length and comes across as a person who you would only invite along to a party if you wanted someone to ask inquisitive questions about silly stories. Keith has the last word on them when he sums up; "There is no 'use-by' date on the opinions of the Skeptics. They even hold grave misgivings about the existence of Noah and the Ark". What more need be said?

I offered the book to a friend's nine-year-old son, but he declined. People have grown up Keithie. ■



On Bath Water, Cosmology and the Holy Inquisition

Joe Wolfe

Steve Hynes (*the Skeptic* Vol 14, No 1) asked about bath water and plug holes: does it spiral down in a particular direction, and if so why? This apparently mundane question naturally leads to others, such as whether the sun goes round the Earth or vice versa, and why Newton's laws involve distant stars. I shall try to answer some of these, and I shall start by explaining Coriolis forces, the "forces" which appear to make moving objects curve counter — clockwise in the Southern hemisphere, and clockwise in the Northern.

With respect to the earth and viewed from above, and with no forces acting in the horizontal direction, an object moving in the southern hemisphere does appear to curve very slightly counter-clockwise, or veer to the left. The key to understanding this behaviour is in the phrase "with respect to the earth". To a stationary observer suspended somehow above the South Pole, the Southern hemisphere turns clockwise. If someone standing at the South Pole throws a ball, the non-rotating observer would see the ball travel in a straight line, as seen from above, in accordance with Newton's laws. The person who threw the ball, however, is rotating clockwise with the Earth and s/he would therefore see the ball appear to move counter-clockwise, or veer to the left. Now the Earth only turns about hundredth of a degree during the flight of a ball, so we don't notice the effect: when Australian sporting teams visit the Northern Hemisphere, they do not have to think about throwing passes to the left of the receiver instead of the right! We can however notice the effect on a rotating merry-go-round -an experiment I would recommend to anyone who doubts the effect. It works like this:

Newton's laws only work for frames of reference which are not rotating or otherwise accelerating. The surface of the earth is not such a frame of reference -it has a small acceleration. To calculate the motion of bodies on the earth using Newton's laws, we need to refer the motion to a non-accelerating frame. It is much more convenient to make measurements with respect to the earth, however, so the usual practice is to introduce imaginary forces called "centrifugal forces" and "Coriolis forces" to account for the accelerations with respect to the earth that are not the result of any physical force. An object on the spinning body tends to continue travelling in a straight line. To an observer on the body this looks like a tendency to fly off and that observer may invent the "centrifugal force" to explain it. Similarly, an object moving on the surface of a clockwise turning body seems, to an observer on the body, to be turning counter-clockwise, so the observer may invent "Coriolis forces" to explain that

relative motion*.

Can we observe Coriolis effects on the surface of the earth? Perhaps today this seems like an obscure exercise, but it was not always so. You see, the answer tells you something about the motion of the earth. If the earth were stationary and the sun travelled around the Earth (as was widely believed for 1800 years between the times of Ptolemy and Galileo), then there should be no left-curving paths in the Southern hemisphere. If, on the other hand, the apparent rising of the sun is caused by the earth rotating on its axis, then objects should veer left in the Southern hemisphere and right in the Northern.

Whether or not the earth moves was an important question for Christians, as well as cosmologists. Giordano Bruno taught that the earth moved and was charged with heresy by the Holy Inquisition in Venice. He was sentenced by Pope Clement VIII and was burned alive, with his tongue gagged, in 1600. Galileo was charged with the same heresy in 1633 but he was spared on condition that he renounced his views. Galileo was forgiven by the Vatican in November 1992. Bruno has not yet been forgiven, so, for my sake, please do not pass this article on to the local branch of Opus Dei.

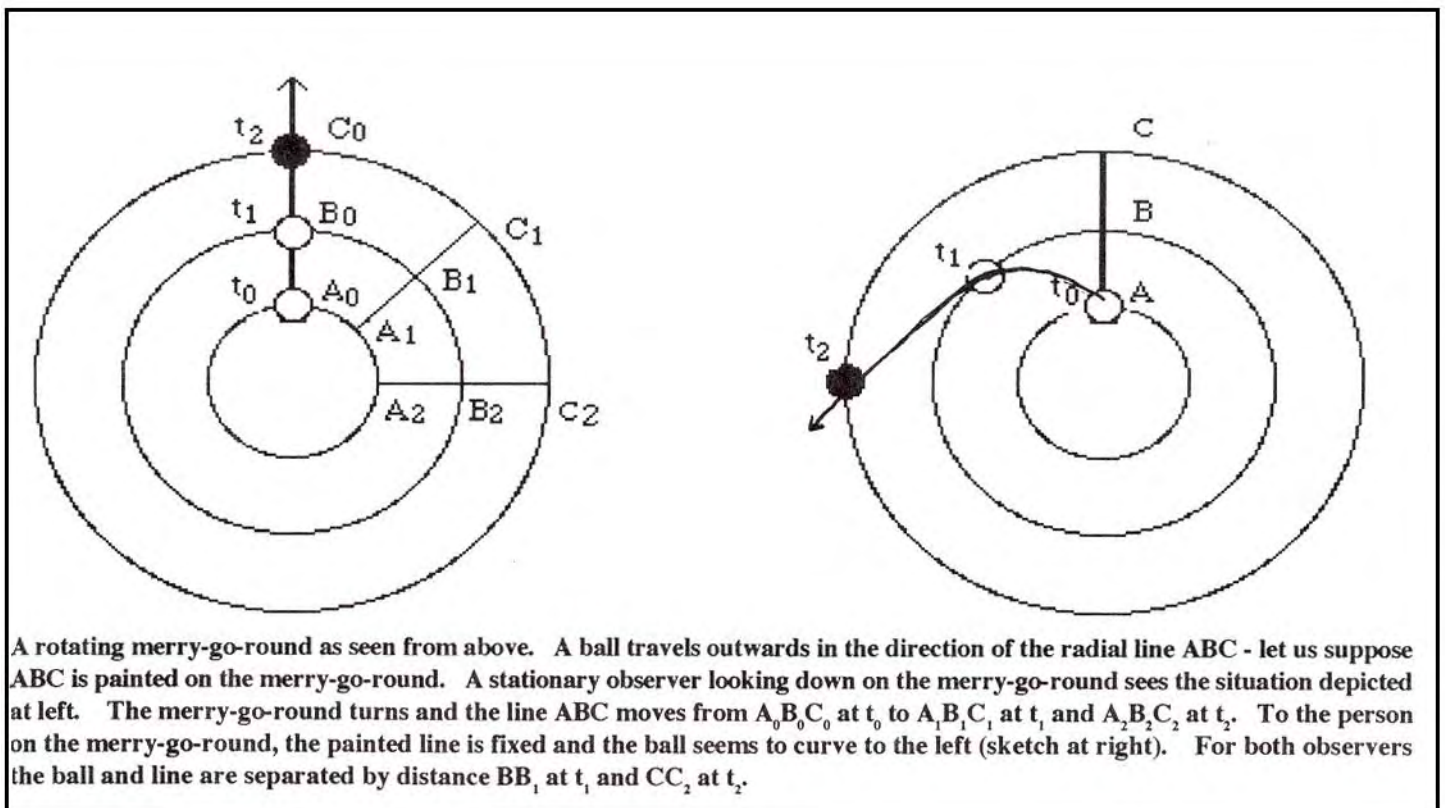
Now in order to see this effect, we have to observe a motion that continues in a predictable way over the time that it takes the earth to move through an observable angle. One of the best demonstrations of this effect was made in 1851 by Jean-Bernard-Léon Foucault, who suspended a 67 metre, 28 kilogramme pendulum from the dome of the Panthéon in Paris (in the Northern Hemisphere). The plane of its motion, with respect to the earth, rotated gradually clockwise.

With colleagues Ken Jackson and Gary Keenan, I have recently installed a pendulum in the foyer of the Physics building at the University of New South Wales. It is 12.5 m long, its period is 7.1 seconds, and it weighs 25 kg. A visitor can set it swinging in a plane and, as the earth rotates slowly clockwise beneath it, the plane of the pendulum's path precesses slowly counter-clockwise. At Sydney's latitude, it takes several minutes for it to precess a degree. If you take the time to read the quantitative explanation of the motion, you will clearly see the precession. (In case you are thinking of making a visit, I remark that there are several nearby displays of other aspects of physics, including wave optics, electricity, magnetism and digital electronics.)

The whole problem of rotational motion raises a further, cosmological question: one that is of particular concern to

me because I first thought about it as a young high school student. It took me many years to find any information about it, and my search was not helped by teachers and lecturers who could not see that it was a serious question. The question is simply this: What does non-rotating mean? What is the frame of reference in which centrifugal and Coriolis forces vanish, the frame where Newton's laws work? Observationally, we find that this Newtonian or inertial frame is one in which the distant galaxies are not rotating. But if we removed everything in the universe except the earth, how would we know if the earth were turning or not? How would the pendulum know whether to precess or not? Or, to put the question formally, is it just a coincidence that the frame in which the distant galaxies do not rotate is an inertial frame? Ernst Mach thought not, and speculated that the distant stars

equator". Now in principle this applies to the bath as well: the north side of the bath is closer to the equator, is further from the earth's axis and is travelling very slightly faster. Because Steve's bath is (presumably) very small compared to the earth, the effect is very small. Any moving water would tend to turn counter-clockwise, like the pendulum, but the earth does not turn very far in the time it takes the water to run along the bath to the plughole. On the other hand, viscous forces (the drag between the water and the bath) become more important in small systems because viscous forces depend on the variation of velocity with distance. In small systems these often dominate. Slight asymmetries in the bath or the initial conditions determine whether the water flows clockwise or counter-clockwise. For major ocean currents, the reverse is true -viscous effects are relatively small and



must somehow affect inertia (Mach's Principle), but no-one has come up with a successful theory. The recent cosmological hypothesis of the inflationary universe offers hope of a different resolution: if the universe expanded exceedingly rapidly in its early phase, then any initial rotation would be slowed down correspondingly and so the distant objects have almost no rotation. This is hardly satisfying and, like Mach, I rather hope that someday someone will do better. But at least I know now that, contrary to the opinion of my teachers and lecturers, it is a serious question.

But to come back to bathtubs and the rotation of the water. Steve Hynes' article has the answer to his own question. He writes: "Cyclones do rotate in different directions in different hemispheres, and this, I believe, is due to the increasing surface speed of the earth's rotation as one moves toward the

Coriolis effects dominate. In principle, one could see Coriolis effects in an object the size of the bath if one eliminated any initial angular momentum and used a fluid with a very low viscosity. I have heard it said that it works with liquid helium below the superfluid transition when its viscosity becomes virtually zero, but I know of no reference for this, and perhaps it has no more observational evidence than the story of the bath water.

* Coriolis 'forces' differ from centrifugal 'forces' in that the former depend on velocity. Both centrifugal and Coriolis 'forces' are proportional to the mass of the object upon which they are supposed to act. In this sense they resemble gravitation. The local indistinguishability of weight and the apparent forces in an accelerating frame is the principle of Einstein's general theory of relativity. ■

Coriolis and the Bathtub

Anthony G Wheeler

Steve Hynes reported that his physics teacher claimed that water whirls clockwise down northern plug-holes, and anti-clockwise down southern plug-holes (*the Skeptic* Vol 14 No 1, p 14). But Steve has been unable to observe this effect for himself. Is this nonsense or just bad science?

If you happen to be in Melbourne, and you managed to jump 0.012 metres upwards you would be off the floor for 0.1 seconds. During this time the earth at this point would have rotated on its axis towards the east 36.7 metres. However, since you had shared this same motion towards the east before you jumped, and in the absence of any other force continue this eastward motion during your jump, you would land 36.7 metres to the east, which would in effect be in the same spot that you started. This matches our usual experience (for those of us inclined to jump up from time to time).

Let us imagine instead, taking a rocket trip directly upwards from Melbourne. Let us imagine us taking this rocket trip up and down again for a total time of 2 hours 8 minutes 13 seconds. In this time the earth will have rotated 2821 km to the east.

Fortunately, since our rocket would share Melbourne's eastward motion of 2821 km throughout its flight, again we would land where we took off from.

Let us now aim this same rocket northwards, with an average northward velocity of 1000 km/hour. Where would our rocket bring us down? Our 2 hours 8 minutes 13 seconds flight would take us 2137 km due north. Looking at my school atlas this distance north of Melbourne just happens to lie the beautiful city of Townsville. Is this where we would land? No! Because during our flight our rocket would have continued Melbourne's movement to the east at 1320 km/hour, but Townsville, closer to the equator, is travelling to the east at the faster speed of 1578 km/hour. So our northerly flight would land us 551 km to the west of Townsville (roughly half-way between Dobbyn and Croyden, north of Julia Creek, which is just about nowhere). Melbourne's rocket has missed to the left.

If the inhabitants of Townsville were to respond with a 1000 km/hour rocket (ground speed) fired due south to Melbourne, they too would miss to the left. This rocket retaining Townsville's eastward motion of 1578 km/hour, while Melbourne moves at only 1320 km/hour, would miss to the left (again), landing 551 km east of Melbourne in the Tasman Sea.

This effect was described by the famous Gaspard Gustave de Coriolis (French; 1792-1843) in 1835. Coriolis discovered

other important relationships which are in daily use, like kinetic energy = $\frac{1}{2}mv^2$. But it is this apparent sideways motion of objects following a northerly or southerly course that his name is attached to: the Coriolis Effect.

The Coriolis effect explains why rockets aimed at a target in the southern hemisphere will always miss to the left (and in the northern hemisphere will always miss to the right). The Coriolis effect explains why air moving from a high-pressure weather system towards a low-pressure system similarly misses, producing the anti-clockwise cyclones in the

south (and clockwise cyclones in the north). The Coriolis effect similarly explains the southern anti-clockwise (and northern clockwise) currents in the world's oceans.

(The same missing to the left in the southern hemisphere (and to the right in the northern hemisphere) occurs with movement due east and due west, though for a different reason. The only times that this does not occur is for movement due east or west along the equator.)

Now imagine a large circular bath-tub full of still water, with the central plug gently removed. The water on the equatorial side of the tube will have a greater movement to the east than that at the centre. As it drains to the centre with its lesser eastward motion it too will miss to the left (here in Australia). Water draining from the polar side with its lesser eastward motion to the centre will also miss to the left. Hence a clockwise spiral of draining water will be produced. In the northern hemisphere the same effect will produce an anti-

Location	Latitude	C	V
London	51x 30'N	24 962	1040
Equator	0x 0'S	40 099	1671
Nauru Island	2x 31'S	40 059	1669
Darwin	12x 21'S	39 169	1632
Townsville	19x 10'S	37 873	1578
Mackay	21x 8'S	37 405	1559
Brisbane	27x 30'S	35 568	1482
Perth	32x 0'S	34 004	1417
Sydney	33x 53'S	33 290	1387
Adelaide	34x 58'S	32 861	1369
Melbourne	37x 50'S	31 670	1320
Hobart	42x 48'S	29 421	1226
Davis, A 'arctica	78x 30'S	7 996	333
South pole	90x 0'S	0	0

C =Circumference of this latitude (Km)
R =Rotational velocity (km/hour)

clockwise spiral.

Does this really happen, however? In real life bath-tubs, hand-basins, etc, are relatively small, not circular, not having central plugs, and are not drained with the water starting perfectly still. And the differences in the speeds of water across a 1 metre-wide bath-tub will be approximately only 1.473 mm/min (here in Mackay).

Hence the entry in *The Hutchinson Softback Encyclopedia*: “. . . but despite popular belief it has negligible effect on the clockwise or anti-clockwise direction of water running out of the bath”. So it seems that the emptying bath-tub is a physics ‘thought-experiment’ that has attained reality through careless descriptions as a real observable effect, which whenever sought could not be found. (Like the Snark.)

The tragedy of Steve Hynes tale is not that the history teacher taking the physics class mis-led him, but that with modern management of secondary education this is, and will continue to, occurring more and more. Teachers are teachers; what they can teach well is of lesser importance to school administrators than filling the timetable.

More about plug-holes

Steve Hynes is on the right track with his plug-hole scrutiny: in everyday experience, the direction of a plug-hole vortex is not determined by the earth’s rotation. Instead, the direction of the vortex is dominated by the net angular momentum of the little currents and swirls that are there before you pull the plug -and even, as Steve suggests, by the swirls you set up as you pull the plug.

But if the water is motionless - and do I ever mean motionless -then the earth’s rotation can cause clockwise rotation of the vortex in the Southern Hemisphere and anti-clockwise rotation in the Northern Hemisphere (because the feeble ‘Coriolis effect’ is then the only player).

My authority? In the September 4, 1965 issue of *Nature* there’s a paper with the solemn title “The Bath-Tub Vortex in the Southern Hemisphere”. A research team at the University of Sydney* carried out experiments using a circular tank, six feet in diameter, with a central drain. They could detect the effect of the earth’s rotation only by taking extraordinary precautions to eliminate other possible causes. For example, they needed to let the water settle for as long as 20 hours before stray currents died out. They also needed to keep the water at a steady temperature and to avoid air currents across the top of it.

That is not all. There has also been meticulous lab work in the Northern Hemisphere. The results are another triumph. Their swirls went down counter-clockwise - after they had got their water quiet enough. (Details in “Whirlpools vortices and bathtubs” by Prof EN daC Andrade FRS, , *New Scientist* Feb 7, 1965.)

The chances of getting this to work consistently in your bath tub are about zero. There are all those stray currents to get rid of, and you don’t normally have the speed-up ratio the Sydney researchers enjoyed: “One revolution in three seconds is what one would expect of a ring of particles rotating with the surface of the earth at the latitude of Sydney, and then brought in from a diameter of six feet to a diameter of 0.375 inches, provided the ring conserves its angular momentum.” See? The bigger the bath tub, the faster the vortex you’ll get. It’s like a spinning ice skater with long arms, who then draws them in and spins much faster. A skater with stubby arms can’t get the same revs. At a large scale, like the scale of cyclones, the Coriolis effect dominates everything. So every cyclone rotates in a predictable direction.

Reader’s Digest paid me to find out about all this and to write something for them. Hundreds of thousands of people will eventually read about the plug-hole vortex on page 157 of the just published *Reader’s Digest* book, *Why in the World*. But I think it’s going to take more than that to kill the plug-hole myth. People love it.

Jim Heath
Darlington WA

*See the final letter in this section. Lloyd Trefethen was leader of that team.

And more

My encounter with Rationality down the Plug-hole parallels that of Steve Hynes at first, but leads to the solution, to be revealed later. Our geography teacher was one Joe Taylor: unlike Steve’s Rumpy, he knew his job and imparted his subject well (proof: he gained me top pass in the State Leaving Certificate three years later).

In second year high school, he told us that all waters in the Southern Hemisphere went down the plug-hole anti-clockwise and, in the Northern, clockwise. This, he said, obeyed Ferrel’s Law. He was not dogmatic: a good teacher, he offered proof. First, if we fired a shot from, say, Auckland, directly at a point on the Equator, it would hit a spot well to the left (ie West) of the point aimed at. This was of course due to the greater speed of the surface at the Equator. Similarly, a flow of water, travelling north would find itself well to the left of where it first set out to reach. This would cause the flow from the Great West Wind Drift, hitting the coast of South America, turning northward, to deflect at the Equator, later to turn left again, and come down the east coast of Australia.

He hammered this home with the plain factual truth that the world’s greatest whirlpools -in essence the biggest plug-holes -were clearly visible: those of the South Pacific, South Atlantic and Indian Oceans, all swirled anti-clockwise. Further evidence came when we realised that the whirlpools of the northern Pacific and Atlantic swirled clockwise. The God Ferrel was proven correct, and Joe’s class enjoyed

throwing imaginary bottles containing messages into the Pacific at Bondi, then tracing their path around the whole world, before they were retrieved in Norway, Japan and Calcutta.

Like any true religious zealot, I swallowed this, with no thought of checking. Not until decades later, in my first visit to the Northern Hemisphere, did I discover that this divine Law, from the god Ferrel, was not consistent, that, in fact both basin and bath water went down any darn way they liked. Frankly I was shattered, I sought the Truth and, after some research, found it.

First of all, Ferrel had nothing to do with it. American meteorologist, William Ferrel's studies were entirely confined to the atmosphere, not the waters of the earth. He established the reason for the great westerly wind drift in both hemispheres, known partly in the Southern Hemisphere as the Roaring Forties, as due to the Earth's rotation. On a model, in 1856, he showed that air, moving from the warm latitudes, meeting the west wind drift, was deflected to the left in the Southern and to the right in the Northern Hemispheres. I believe that this was the reason for Joe Taylor's statement: he assumed that this finding also applied to the waters of the world. By his reading, flowing waters would turn left in the Southern Hemisphere, whether in the ocean or the plug-hole.

(Mr Mathews letter continues with a description of the Coriolis effect, covered in previous contributions.)

Harold Mathews
Cronulla NSW

Harold Mathews, born six months before the Wright Brothers first flew, is probably the most chronologically enhanced subscriber to the Skeptic. He is a former headmaster, a frequently published writer to Letters columns in Sydney newspapers and an active bowler.

From the Northern Hemisphere

Scepticism can be carried too far, and I believe Steve Hynes has been guilty ("Rationality Down the Plughole," *the Skeptic*, p14 Vol 14, No 1). Perhaps scepticism induces impatience. Your author's experiments appear to have allowed rather brief settling times, and of course, as he notes, the very act of removing the plug can induce currents that dominate the Southern Hemisphere's clockwise motion. A more carefully done set of experiments some years ago arrived at conclusions differing from Mr Hynes's ("The Bathtub Vortex in the Southern Hemisphere," Lloyd M Trefethen, R W Bilger, P T Fink, R E Luxton, and R I Tanner, *Nature* Vol 207, p. 1064, September 4, 1965). The settling time required, for an axisymmetric container with water 6 inches deep, is over 17 hours if all the water is to be rotating with the Earth. Air

currents and temperature variations need to be small enough not to overwhelm the viscous flow forces tending towards solid body rotation. These earlier results are not consistent with Mr Hynes's belief that clockwise rotation in the Southern Hemisphere is "a case of nonsense perpetrated by people failing to question what they are told." There are many valid, unanswered questions in fluid mechanics (some of which are archived and available from qbank@pearl.tufts.edu), but this is not one of them.

Lloyd M. Trefethen
Tufts University Medford Mass 02155, USA

Editor's Comment

This topic drew more responses than any other since I have been Editor. Apart from those published here, we received thoughtful contributions from Keith Rex of Paddington NSW, and Peter Cotton of Eastwood NSW, as well as several shorter items. So many, in fact that I could have filled half this issue with them and risked drawing the wrath of those readers who have no particular interest in the topic of bathtubs and vortices. So enough is sufficient and I think I have selected those items that explain best what is going on with the Coriolis effect.

It is instructive, on a broader perspective, to see what this tells us about popular mythology. I have often been asked by Americans about the plug-hole myth and when I respond by asking them how many times they have carefully observed the vortices in their own bathtub, they usually answer by saying "Never". But, having heard that it goes down clockwise in the Southern Hemisphere they assume that it goes down anticlockwise in their own tubs. No amount of reasoning will convince them otherwise.

Lloyd Trefethen's experiment shows that Coriolis does have an effect, even on a small body of fluid, but only under extremely tightly controlled conditions. It is such a small effect that any of the other random effects will usually overwhelm it in everyday applications.

So, surely, it must be with the findings of parapsychologists, some of whom claim to have found effects which they allege support the existence of psychic phenomena. Maybe they have, but the results they report are of such tiny effects that they are difficult to distinguish from background 'noise' and are even more difficult to replicate. If what they claim to have found turns out to be true, and it is not just some artifact of measurement, it will be certain to cause a rethink of how science perceives the world to be. But such effects can give no comfort to the everyday 'psychics' who blatantly claim to exercise these powers.

Coriolis does not really explain which way water goes down everyday plug-holes, and the parapsychologists findings will not explain why everyday 'psychics' are psychic. The effects are just too tiny to work in the gross mundane world.

FORUM

Smoking - A rebuttal

Stephen Basser

It was not the intention of my letter in the last edition of *the Skeptic* (Vol 14, No 1) to suggest that certain issues or topics should or should not be published in the journal. Rather, I wished to raise the issue of whether *the Skeptic* should publish specific claims on any topic, such as those made by David Lewis in relation to smoking (Vol 13, No 4) without supportive evidence.

I agree wholeheartedly with Barry Williams that the Australian Skeptics must uphold the right to question, but I believe it must also hold to the principle of expecting those who are making a claim to support it with evidence. I did not (and do not) believe David Lewis' original article fulfilled this requirement.

Barry and David have both expressed some concern about perceived attacks on smokers, and in their responses to my letter it appeared that some of this displeasure spilled over on to me. This was inappropriate, and I challenge either of them to show that any of my comments were directed at smokers, rather than at the issue of smoking.

I also challenge either of them to produce any evidence that supports the suggestion that I wish to deny Barry, or anyone else, their individual right to smoke. It may be true that there are zealots, but that was not the issue I was addressing, and I believe that I have been unfairly tarred with the same brush. The fact that smokers keep smoking does not rankle me - the fact that some individuals use questionable methods to seek to deny, or diminish, the evidence linking smoking with adverse health effects does.

In this letter I will explore this issue in more depth, and will leave till another time discussion about the ethics or morality of public health measures that infringe upon individual rights, such as seat belt and bicycle helmet legislation, drink driving laws, and attempts to reduce tobacco consumption.

There were two main reasons I queried whether Barry's editorial was venturing into the territory of the pseudoscientists. Firstly, because like the pseudoscientists he seemed to be unwilling to accept the available scientific evidence - Barry wrote of the "unscientific basis for much of the opposition [to smoking]" - and, secondly, because it appeared to me that Barry was applying a different set of rules to this issue than he does to others.

Evidence is rarely incontrovertible, and one can usually find anomalous results in any area of scientific investigation. For example, there are anomalous results in the research examining homoeopathy^{1,2}, but the overall weight of evidence

at present is unequivocal, and does not support either the theoretical basis, or therapeutic efficacy, of this technique³. Where smoking is concerned Barry stated that he feels it is the responsibility of the "anti-smoking lobby" to scientifically disprove the anomalies:

"Those who are at the forefront of the anti-smoking campaign. . . should not seek to dismiss these anomalies as being of no consequence until they can show, scientifically, that they are not valid." (*the Skeptic* Vol 14 No 1, p55)

This strikes me as a reversal of the standard application in science of the onus of proof principle? Why is it not the responsibility of those who are presenting the anomalous claims to provide further support for them? What happened to not being able to prove a negative?

Those of us in the "anti-homoeopathy lobby" (and I assume I can count Barry in our ranks) agree that, at present, the evidence and the claims do not intersect. Is it our responsibility to disprove any anomalous results, or the responsibility of the proponents of homoeopathy to perform better studies, and provide more substantial evidence? Are we to regard homoeopathy as being effective until we can disprove the anomalies, or ineffective until proponents provide sound supporting evidence?

David Lewis' 'rebuttal' of my letter ('No Smoke Without Ire!') contained a number of lapses in accuracy, and carried a general tone I felt was inappropriate to rational scientific dialogue. In misrepresenting a number of my assertions he has presented himself as either a sloppy reader, or as a person who has chosen to hold to a position regardless of the evidence. Either way it is difficult to accept that David is really interested in "honest and open debate".

David is in error in assuming I was irritated that the subject of smoking and adverse health effects was broached at all - I was not. I was concerned at the unscientific way in which it was presented. Because this was my primary concern, and claim, I focused on providing evidence to support it.

As Barry stated in his editorial, *the Skeptic* has a diverse readership, and I believe that one of the reasons it is important for claims to be supported by evidence is so that any reader may seek to question if they choose to.

Barry may choose not to read the references I provided on passive smoking but, by providing them, any reader who does wish to check my use of them can do so. This openness and willingness to be questioned is an important difference between science and pseudoscience.

Yes, of course I knew about the MRFIT trial, but many

readers of the Skeptic would not have done, and by failing to provide a specific reference David Lewis made it difficult for them to seek out the paper referred to, and decide for themselves if it had been used appropriately. If David doubts the importance of this then I suggest he re-read John Warren's letter (Vol 14 No 1, p51- 52) - particularly the last paragraph, in which John, a reader who decided he did want to check out David's claims, points out the inadequacy of David's references.

I maintain that David Lewis has failed to demonstrate that he has properly researched the results of the MRFIT study, and I believe that he has selectively, and misleadingly presented some of this material. It is not clear, from what he has written, that he has familiarised himself with the papers reviewing the results after 10+years, and it is interesting to note that in his follow-up article ('Breaking Through The Smoke Screen') he all but ignored these. He also failed to detail the supposed "unexpected anomalies" he claims are present in these papers.

In my original letter I noted that in the MRFIT study no lung cancer deaths occurred in the non-smokers. The deaths from lung cancer were only in smokers or ex-smokers. David Lewis has not denied, or refuted, this, nor provided an alternative explanation for the result, if he claims smoking was not an important aetiological agent.

David's only response was to report that for cancers of the respiratory and intrathoracic organs there were 66 deaths in the experimental group, and 55 in the control group, and he carefully placed the word smokers in brackets after the word control. By doing this David may have caused some readers to conclude that there were two groups in this study - non-smokers (experimental), and smokers (control) - and that there were fewer deaths in the smokers. This is incorrect.

The MRFIT study was a primary prevention trial targeting men considered at high risk of coronary heart disease. That is, all entrants in the trial were considered high risk by virtue of the presence of one or more risk factors such as cigarette smoking, high serum cholesterol, high blood pressure etc. These high risk men were divided into two groups, one merely being observed (control group), and the other being targeted with attempts to modify their risk factors (experimental group). The purpose of the study, therefore, was to see if, by modifying these risk factors, the morbidity and mortality from coronary heart disease could be reduced.

Not all smokers in the experimental group stopped smoking, and some of the smokers in the control group chose to quit. Therefore, both groups contained smokers and non-smokers at the commencement of the trial, and both groups contained smokers and non-smokers during, and at the end, of the trial.

Thus, to reach valid conclusions from the MRFIT study, about smoking and its effects on health, one needs to compare the health outcome of non-smokers, ex-smokers and continuing smokers, regardless of whether they were in the experimental or control group.

This was done in a 10 year review of the MRFIT study that specifically examined the relationship of cigarette smoking and smoking cessation to mortality, among those screened for, and entered into, the trial¹⁴.

This review found that cigarette smoking was an important risk factor for all-cause mortality, as well as mortality from coronary artery disease and lung cancer. For both the experimental and control groups there was a significant reduction in all cause and coronary artery disease mortality in those men who stopped smoking compared to those who did not.

Interestingly, though my letter specifically referred to the association between smoking and lung cancer, David refers to the broader category of "respiratory and intrathoracic organs." It appears he prefers not to deal with the MRFIT results specific to the smoking/lung cancer issue, but it is not clear why this is the case. Data specific for lung cancer is obviously available, and as this is the condition I am claiming is associated with smoking, I fail to see why David avoids referring to it?

David is also in error in suggesting that I was saying Dr Gray's article should not be subject to criticism - I was not. David Lewis is free to criticise Dr Gray's article, but I do not regard Dr Gray's piece as being the evidence against smoking, and felt that to concentrate on this single article was to pursue a red herring. Let us assume that Dr Gray's article is full of errors - the evidence linking smoking and adverse health effects does not stand or fall on this one paper. I do not accord it the importance David Lewis does. If others do then they are free to enter into discussions with David over it.

David goes on to mockingly suggest that I had failed to read his piece, noting that he had mentioned MRFIT, detection bias, death certificate information, and Dr Gray, and he implies that I overlooked these. I ask any reader of *the Skeptic* to re-read my letter and judge for themselves.

I addressed MRFIT, death certificate information, and why I felt Dr Gray's article was not the primary issue. Due to space limitations I did not address detection bias, which John Warren's letter has now done. Is David annoyed because I didn't read his article, or because I did?

It is incorrect to claim, as David does, that female smoking rates have remained constant. In my letter I challenged David to "directly compare the trend in smoking and lung cancer rates for each sex separately", but he decided not to do this, and again it is not clear why.

Smoking prevalence among men was greatest for those born between 1911 and 1920, and for women smoking prevalence was greatest for those born between 1931 and 1940. The pattern of lung cancer incidence, and mortality, for each sex has followed these smoking trends, with the incidence in males rising to a peak in the early 1980s, and then beginning to fall, and the incidence in women still climbing, at a rate of approximately 5% per year⁷⁻¹². By the late 1980s more women were dying each year from lung cancer than breast cancer¹³. Since the mid-1960s the overall

prevalence of smoking has declined, but at a faster rate in men than in women. In recent years smoking rates in younger women (<18 years) have increased slightly¹⁴.

David's denial of these figures is further evidence of his 'never let the facts get in the way of a good story' approach to this issue. I supported the claim in my original letter with two references and have now provided more. David did not address the previous references used, and provided no evidence to support his claim.

David decided to resort to sarcasm in demonstrating that he still does not understand the dose- response relationship in relation to smoking and lung cancer.

A dose- response relationship is established if the risk of developing lung cancer increases with increasing number of cigarettes smoked and/or number of years smoked:

"... the existence of a dose- response relationship- that is, an increase in disease risk with increase in amount of exposure - supports the view that an association is a causal one."^{15(p235)}

"Dose- Response Relationship. A relationship in which a change in amount, intensity, or duration of exposure is associated with a change - either an increase or a decrease - in risk of a specified outcome."^{16(p39)}

As previously stated, if such a relationship exists between smoking and lung cancer then we would expect more cases of lung cancer to develop over time in a cohort of heavy smokers compared to a cohort of lighter smokers¹⁷. The age of onset is not the issue - the change in risk is, and the numerous prospective studies show just this relationship.

David has misquoted me in relation to the British Doctor Study. I did not claim that this single study was "the strongest evidence showing the relationship between smoking and cancer". I stated that prospective studies have given us this evidence, and used the British Doctor Study as one example of such a study. This kind of error on David's part is annoying for it misrepresents both my position, and my approach. In addition, it suggests only a superficial consideration of what was written.

I have never stated, or implied, that lung cancer is a common condition. I have merely pointed out that it is commoner in smokers when compared to non- smokers, and that it is commoner in heavy smokers compared to lighter smokers. I believe that the British Doctor Study bears this out, and suggest that David perform a different calculation to the one he proposes, if he wishes to put this issue into better perspective.

There are an estimated 50 million smokers in the USA. Using the British Doctor Study results (14 deaths/100,000 for non- smokers, and 347/100, 000 for heavy smokers), and any reasonable estimate of the proportion of heavy smokers in the USA, work out the number of expected lung cancer deaths associated with smoking. Then try and tell me that it is not worth trying to prevent this number of deaths.

The logic David has employed here is spurious. AIDS is still a relatively uncommon condition in Australia, but we know that the risk of contracting it is increased by certain

behaviours, such as unprotected sexual intercourse, and reusing needles. Because it is uncommon, should we neglect endorsing those actions that will reduce the risk, such as using condoms, or needle exchange programs? Are the lives of those who may contract uncommon conditions, and die from them, not worth saving?

David again plays loosely with the facts, and indicates an indifference to accuracy and fairness, when he questions my reference to the British Doctor Study, saying that the results of "more recent surveys" contradict it. To support this he refers to papers published in 1978, 1982, and 1989.

My reference - number 18 - was a report published in 1993, which referred to the presentation of results covering the period 1951-91. How can a 1978, 1982 or 1989 paper be referred to as "more recent" than this? Is this just sloppiness, or is there a motive behind such an approach?

I also find it hard to understand how David can claim that the results of the papers he mentions contradict the British Doctor Study. The 1982 paper co- authored by Geoffrey Rose, referred to by David, reported that:

"Over ten years for the intervention group mortality from coronary heart disease was 18% lower than controls and for lung cancer was 23% lower."^{18(p102)}

The 1989 paper by Carl Seltzer was a review of data from the Framingham Study and dealt only with coronary heart disease¹⁹, so I cannot see how this paper contradicts the British Doctor Study lung cancer results I quoted? If David is truly interested in presenting the results of the Framingham Study why doesn't he share with us the most recent evidence - the 1993 review of the results after 34 years of follow- up? This showed that:

"A significant relationship was observed between cigarette smoking and the incidence of cancer of the lung, stroke and transient ischaemic attacks, intermittent claudication, and total cardiovascular disease, and most especially the average annual death rate."^{20(p417)}

There may be a good reason why David Lewis failed to report the lung cancer and coronary heart disease results from the 1982 Rose *et al* paper, and it may be the same reason why he failed to mention the other paper co- authored by Geoffrey Rose which was published in the same edition of the journal as the paper David did use. This other paper reached the following conclusion:

"in common with previous studies we found among cigarette smokers a much increased risk of lung cancer and fatal coronary heart disease."^{21(p115)}

These oversights would be bad enough on their own, but a further glaring omission is David's failure to cite the most recent paper in the series co- authored by Geoffrey Rose²².

The 1978 and 1982 papers referred to by David were progress reports from a single study that aimed to measure the effects in middle aged men of stopping smoking. The subjects were 1,445 male smokers selected from a sample of 16,016 civil servants on the basis of a high risk of cardiorespiratory disease.

The paper not mentioned by David was published in 1992 in the same journal as the first two papers, and reported the results of this study after 20 years. Comparing the intervention and normal care groups the authors reported that, for those who stopped smoking there were reductions of 7% for total mortality, 13% for coronary artery disease mortality, and 11% for lung cancer mortality and registrations²².

It seems the only way David can get the scientific evidence to fit his views is to omit relevant data, and it will be interesting to see how David tries to explain away these lapses.

If readers need further evidence of David Lewis' approach to scientific dialogue then I recommend they seek out two other papers mentioned by David - the 1966 paper by Harold Kahn reviewing the results of the Dorn Study²³, and the 1966 paper by Cuyler Hammond, reviewing the results of the study he was involved in²⁴.

David refers to these papers in a way that suggests they provided early evidence of the beneficial effects of smoking, and readers could have reached the conclusion that these large scale studies (the cohorts for these studies were about 200,000 and 1,000,000 men respectively) support David's position.

I will let the authors of these papers tell their own story, and leave it to readers to decide if they think the information David Lewis omitted is important in a scientific discussion of this issue. Readers may also wish to ponder why David may have decided not to share this information with them.

"For the total group of current smokers mortality ratios above 3.0 are observed for cancer of the mouth, pharynx or oesophagus, larynx, lung and bronchus; bronchitis; emphysema without bronchitis; asthma. . . For the entire period, mortality ratios of current cigarette smokers compared with those who have never smoked are 1.7 for death from all causes, 10.9 for lung cancer, 12.2 for emphysema without bronchitis, and 1.6 for coronary artery disease. . . For all categories of current smokers risk was related to amount smoked."²³(p13, 15, 26)

"Death rates of both men and women were higher among subjects with a history of cigarette smoking than among those who never smoked regularly. Death rates of current cigarette smokers increased with number of cigarettes smoked per day. . . Death rates were higher among current smokers starting the habit at a young age... Among both men and women, death rates from the following diseases were much higher in cigarette smokers than in non- smokers: emphysema; cancer of the lung; cancer of the buccal cavity, pharynx, larynx and oesophagus; aortic aneurysm; cancer of the pancreas. . . In both sexes and in all age groups the CHD death rate was higher in subjects with a history of cigarette smoking than in non- smokers; in both sexes the CHD death rate of current smokers increased with amount smoked."²⁴(p168)

The Dorn Study, in particular, did reveal an apparent protective effect in the case of Parkinson's Disease, but in my previous letter I provided references to recent papers that suggest firstly this is probably not a true effect, and secondly

that even if a slight beneficial effect is confirmed the risks of succumbing from conditions such as lung cancer and heart disease are far greater.

Next, David gives us supposed results from the 1990 National Health Survey, conducted by the Australian Bureau of Statistics (ABS). David neglects to tell readers of *the Skeptic* the source of his figures, but after checking the available evidence it seems that it wasn't the Australian Bureau of Statistics (ABS), or its National Health Survey publications.

The group 'non- smokers' in the results quoted by David includes those individuals who were not smoking at the time of the survey. This means both non- smokers and ex- smokers are included, and, therefore, this group will include persons who may have given up smoking prior to the survey because of illness.

If David is genuinely interested in "honest and open debate" then I encourage him to obtain figures directly from the ABS, who conducted the National Health Survey.

When David does this he will discover that the ABS collected quite detailed information on smoking^{25, 26}, and he will find they actually presented the information on diseases by the categories current smokers, ex- smokers, and non-smokers.^{27- 29} Some of the findings, as reported by the ABS, include²⁶:

1. 16. 3% of persons aged over 45 years reported bronchitis/emphysema. 82. 8% were smokers or ex- smokers.
2. Of the current smokers who reported bronchitis/emphysema 99.3% had smoked for >10 years. Of the ex-smokers reporting bronchitis/emphysema 76.5% had smoked for >10 years.
3. 16. 3% of persons aged over 45 years reported heart disease. 71. 8% were smokers or ex-smokers.
4. A higher proportion of ex- smokers reported heart disease compared to current smokers. The ABS felt this was likely to be due to heart disease being an important factor in the decision by some smokers to quit.
5. 44.6% of ex-smokers reported they had quit due to health effects, including cancer, lung disease, and heart disease.
6. 12. 2% of persons aged over 45 years reported cancer. No breakdown was provided by site. 68. 9% of those reporting cancer were smokers or ex-smokers.

One final example of David's approach is provided when he quotes a review of passive smoking by G ran Pershagen, published in 1986.²⁹ David has again been mysteriously selective and has omitted later work by Pershagen, such as his 1987 paper on passive smoking and lung cancer in Swedish women.³⁰ This study:

". . . revealed a relative risk of 3.3, constituting a statistically significant increase for squamous cell and small cell carcinomas in women married to smokers, and a positive dose-response relation."³⁰(p17)

The fact that many people experience emotional or psychological effects from smoking does not justify the activity, nor does it negate the evidence linking smoking with

other adverse health effects. Valium also happens to be an agent that has been used to regulate mood, but the weight of evidence now strongly suggests that the side effects associated with its long term use far outweigh any likely benefit. It would only be possible to justify using smoking for the means alluded to if it was the only way to influence mood, or if it was the most effective and/ or least dangerous. Unfortunately smoking fails to satisfy any of these criteria.

One of the more remarkable assertions made by David was that the best way to assess smoking's effect on life expectancy "... is through a prospective intervention study, wherein the performance of two matched groups is compared for quitting and continuing *smoking*." (*the Skeptic* Vol 14, No1, p59) This is incorrect, and demonstrates a poor understanding of basic epidemiology, though if David really believes this then I look forward to reading how he tries to explain away the MRFIT results and the G. Rose *et al* study - particularly the final results paper he missed.

The best way to assess the effect of exposure to something is to compare those who are exposed and those who are not. In the case of smoking this means comparing smokers with non- smokers. Comparing those who are exposed with those who were exposed is not the same thing, and I find it hard to believe David could make such a fundamental error. I agree that comparing ex-smokers with smokers can give us valuable information about how a persons risk profile changes after they quit, but it is definitely not "the best way" to determine if non- - smokers live longer than smokers.

David attempts to support his proposition by referring to the MRFIT study (without reference to the later papers I have mentioned), and three other papers - the 1978 and 1982 papers by Rose *et al* and a trial described by Eysenck involving a total of only 274 male smokers.

From the extensive literature demonstrating the association between smoking and adverse health effects these are the studies David selects to support his case. Having already dealt with MRFIT, and the omission of the 'unfavourable' results from the Rose *et al* papers, we are left with a single study of only 274 subjects that didn't even compare non- smokers with smokers.

Why doesn't David refer to any of the large prospective studies that have compared smokers and non- smokers? Why did he choose a study involving such small numbers when others, involving much larger cohorts, are available?

Just a few examples of papers from different parts of the world, in addition to the results already noted, should suffice to demonstrate to readers of *the Skeptic* the consistency of the findings of the research in this area, and should also further demonstrate the type of papers that David Lewis has 'chosen' to overlook:

A Norwegian study involved following a total of 44,290 men and 24,535 women for an average of 13.3 years. There was an increased mortality from cerebrovascular disease, coronary artery disease, and lung cancer in smokers compared to non-smokers³¹.

A cohort study of 7,961 Japanese- American men followed for 22 years found that cigarette smoking significantly increased the risk for lung cancer³².

A study of lung cancer in southern China revealed an increased risk associated with cigarette smoking. The risk increased with duration of tobacco use and number of cigarettes smoked per day³³.

A Scottish review of 3070 new lung cancer patients diagnosed during the period 1981- 5, from a catchment population of 950,000, found that only 74 were lifelong non-smokers³⁴.

A review of 401 new lung cancer cases at a hospital in South Africa during 1987 found that 378 (95%) were smokers³⁵.

And finally, as David Lewis feels that "no one seems to be considering peoples genetic predisposition to cancer", a Finnish study of 2488 smoking discordant monozygotic twin pairs revealed that smoking members are at higher risk, and have a higher mortality, from coronary artery disease and lung cancer than their non- smoking pair³⁶.

One of the frustrations of being a scientific sceptic is the need to try and adhere to the principles of scientific discourse, something that does not restrain the pseudoscientists.

Attempting to provide a scientific rebuttal of pseudoscience can be time consuming, and one doesn't have the same escape route of the witty, or sarcastic, throw away line. It is because of this that many scientists decide not to bother, and at times I can understand why they choose the path of least resistance.

When groups such as the creationists produce brochures, or articles, is it worthwhile checking their references, and detailing when they have misquoted, misrepresented, or ignored relevant material? It can take considerable effort, and the benefits are not always obvious.

I believe it is important, and I believe it is crucial that organisations such as the Australian Skeptics pursue, and expose, those who are using dishonest means to present their position, or themselves, as scientific.

Professor Ian Plimer's expose of Dr Andrew Snelling, who was simultaneously publishing papers in creationist and mainstream scientific journals, giving totally different ages of the Earth, is a classic example of this kind of work. By 'merely' researching and documenting the facts of the case Professor Plimer effectively allowed Dr Snelling to dismantle his own scientific credibility.

Dealing with David Lewis' attempts to present his position on smoking as scientific has been a similar exercise. I defend David's right to have a belief, just as I defend the right of the creationists to have theirs, but David's position is not supported by the scientific evidence, and he should stop trying to present it as if it is.

It is true that I have not specifically addressed the issue of passive smoking this time (I am only too happy to do so next time), and this is for two reasons. Firstly, I believe I provided appropriate references in my original letter and David Lewis has ignored these, indicating an indifference to "rational

scientific enquiry”, and secondly, whilst it has been important for me to show that the scientific evidence linking smoking and adverse health effects is solid, it has been much more important to show the unscientific approach taken by David Lewis. It is up to readers of *the Skeptic* to determine if I have been successful.

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More Smoking Responses

I am not a smoker, but I do not believe that smokers should be persecuted because of their habit. However, I also do not believe that they should be allowed to subject non- smokers to the effects of their habit; for example, smoking in confined spaces such as restaurants, public transport, offices etc is, in my view, rightly prohibited. Whether or not smoking is dangerous to the health of the active smoker (or the passive bystander) I do not know - I do, however, like most of the lay public, accept the view of the medical profession that it is. If smokers choose to ignore, or to disbelieve, that view, that is their right.

Which brings me to the recent discussion in *the Skeptic* Australian Skeptics is not a learned society, nor is *the Skeptic* a learned publication, in the accepted sense. This does not mean that we should not discuss any subject of interest to members, but when 20% of the magazine is devoted to a

subject requiring detailed knowledge of medical research conducted over a period of thirty years or more, as well as an ability to analyse findings based on that research, which in turn requires considerable medical knowledge, one wonders whether the Editor is carrying his interest in the subject too far.

Detailed discussion of the relationship between smoking and health properly belongs in medical journals. If David Lewis and Barry Williams feel that they can successfully challenge the current medical view, then let them submit papers to such journals. All such papers are screened by experts in the subject, so David and Barry will have to show those experts that their views are worth publishing, thereby stimulating discussion and ultimately advancing medical knowledge. This advice is, in principle, exactly the same as that given by the Skeptics to the so-called Creationists who claim to have refuted Evolution.

Finally, if we believe that Barry and David are right, then we have to believe also that the entire medical research establishments of the USA, the UK, Europe, Japan, Canada, Australia, NZ etc are incapable of properly analysing the results of their own experiments, tests and investigations in this field. While this is possible, it is unlikely.

Don Tonkin
Somerton, SA

And More

I would be grateful if you publish these additional comments about issues raised by you and Mr Lewis in regard to whether sceptics can legitimately argue with the evidence regarding smoking.

I reiterate that without a background in the field they cannot. I make no apologies for not citing evidence in my original letter. I could, of course, reach 2 feet from my desk, open one book on epidemiology, another on respiratory medicine and a third on pathology and copy out the bibliographies in the relevant chapters. This would keep Mr Lewis busy for the rest of his long life (I believe that he is a non-smoker), if he were to refute it intelligently - although I doubt that he had the time to read the studies Dr Bassler kindly listed in his bibliography between the two editions of *the Skeptic*.

But this would be wrong. You can't just quote such papers. You must analyse their quality as well and allow for the errors they make - even potentially. If Mr Lewis really does understand that such information is otherwise meaningless, he learned something after all.

It's too bad that we now exist in a sea of information beyond the reach of an ordinary, erudite intellectual, but it's a fact of life that most educated non-physicists cannot explain the ins and outs of quantum theory, that nobody except professional mathematicians understands the proof of Fermat's last theorem, or even that we drive around the outback in cars that can't be fixed without a computer and parts imported from Japan.

But alas, this is all happening, and it is simply not possible for a layman to question the tenets of various disciplines. I don't actually like that, Mr Lewis, the reason I am wary of "scientific medicine" is not that the likes of you can dabble with it, but because people like you lose sight of the fact that it is far from infallible. Kindly stop quoting only the studies that you like - at the very least, it will make you more credible. If you hope to succeed where tobacco companies have failed, I wish you luck in your endeavour. Present a well-researched argument discussing all available evidence, and you will certainly deserve a serious, grown-up reply in all its long and complex glory. Whether or not it may bore the Editor beyond publication, is another matter.

The editor states that comprehensive knowledge of science is not a prerequisite for a sceptic. I beg to differ - if you want to argue with the scientists of today, your knowledge of their area needs to be exquisitely detailed. Otherwise you make a fool of yourself and amuse the expert audience with your half-baked assumptions into ignoring you. Then you can say that they cannot answer your shattering arguments and... Does that remind you of anybody *the Skeptic* regularly derides?

To lambast creationists you don't need much more than primary education, because that is the general standard of their target audience. But if you decide to question the evils, of, say, smoking, whether or not CFCs created the hole in the ozone layer or whether or not we should have stuck with leaded petrol, you really must do a lot of homework. As for the witch-hunt against smokers, I am afraid that it is not - for most people - a question of morals or political correctness. Smokers stink. They may or may not cause health problems in others but they sure offend. I do believe this is the real reason society has turned on you with such force, whilst alcoholics and other drug addicts who actually do themselves and others a lot more harm are not persecuted with the same enthusiasm.

Dear Editor, I don't want to trample on your rights. My view is Darwinian and couldn't be less politically correct if I tried. As I stated before, it is your business if you wish to ignore the advice of your doctor and smoke around consenting adults. The planet could do with less population and I, in general, don't care either way. If you come to me with lung cancer, I will treat you equally whether you copped it from smoking, asbestos or radiation. You know what I have to say about the risk - there can be no suggestion that you smoke in ignorance of that. Far from being apoplectic about being disbelieved, I salute your desire to be different. It is a source of great strength of our species that we are willing to take stupid risks to prove a point. If you do find that smoking helps you - I am interested, although I will be wanting to see that benefit reproduced without the nastiness of tobacco combustion. Nicotine is a powerful drug. Of course it will benefit in some cases. It has many legitimate uses - just look up its pharmacology. But one small aside. There are now so few thinking people left. It would be a real pity if someone like you left us prematurely just because you crave to be politically incorrect.

Dr I B Englin

Barry Williams retaliates

Dr Basser's article arrived too late for me to pass a copy to David Lewis for a response and it would be discourteous (not to say foolish) of me to attempt to respond on his behalf. He did send a response to the other letters, however, as I am sure that he will want to answer some points made by Dr Basser, I will give him space in the next issue to address all the objections.

To Don Tonkin, who raised the point that 20% of the previous issue was given over to this topic, I say only that as the issue was 30% larger than any previous one, you came out substantially in front. However, I do not wish *the Skeptic* to become consumed with a single issue, so I will ask further contributors to this topic to be brief.

For my own part, as I believe I made clear in the last issue, my argument is not with those who conduct research into smoking, nor to the broad thrust of their findings. I said that they are probably right that smoking is doing me no good at all and I certainly do not have the skills required to challenge their findings. Indeed, I have taken the first steps towards giving up the habit, partially for health reasons, but more importantly because I am thoroughly sick of providing even more funds for the government to waste.

I merely question whether the evidence against passive smoking is quite as damning as many would have us believe. I did refer to one of Dr Basser's quoted references and it seemed to show that, in the worst case, the 'passive smoker' would be exposed to a risk of less than 1% of that faced by a heavy smoker. That didn't seem to suggest that the amount of smoke I contribute to the general atmospheric pollution would pose a major threat to the health of anyone else.

And as for Dr Basser's trying to turn the burden of proof around, I don't have to prove that the research is wrong. I just don't believe that the conclusions drawn from the research are entirely warranted. It is up to those proposing the theory to dispel the doubts raised by anomalous results. The sceptic is only required to raise a doubt. I could well be wrong, but anyone, even a homeopath or a creationist, is entitled to question authority. That is what being a sceptic means. Of course, the homeopath and the creationist also propose their own theories and then the burden of proof is clearly on them to show that these theories are valid. I am not trying to sell my theory, because I don't have one, only a doubt.

Dr Englin, who certainly understands that the way to the Editor's heart is through flattery (this could be a breakthrough in cardiac research), says that smokers stink, and he may be right. But I see no evidence of his support for the regulation of vegetarians, who, through excessive flatulence, certainly cause a degree of discomfort in those around them. If passive smokers need protection, what about passive eaters? Are we to cause cloves of garlic to be branded with a government health warning because those who consume it fail to meet

some bureaucratic standard of fragrance? Should we abjure the company of the humble fellmonger because he pongs a bit?

Dr Basser allows that there may be zealots, while dissociating himself from their activities. I willingly accept Steve's word for that, but I can assure him that there is no 'may be' about it. There *are* zealots among the anti-smoking lobby and, while they may not be generally from the medical profession, some of them undoubtedly are. My beef is that their contributions to the debate favour the polemic rather than the scientific, hence my reference to unscientific attacks on smokers. And, like zealots in any field, they pose a threat to the wellbeing of their fellow humans.

One of the more regrettable aspects of the human condition that we all harbour to some degree, is the nasty sneaking suspicion, that somewhere, somehow, someone is enjoying themselves. And far too many of us resent that thought, hence regulation, control and burgeoning bureaucracy (see government waste above).

And, of course, the debate is not confined to smoking. We only have to think of scare headlines over many years in which sugar, salt, dairy products, bread, potatoes and so on have all been touted as being disastrous to our health.

A careful researcher finds that too much of something can be deleterious to the health of certain individuals and that starts the hares running.

Headlines scream "Turnips are Killers" and panic begins to spread as the humble swede takes its turn in the pillory. Next thing you know, some politician (not from the National Party, we would have to assume in this example), finds an issue on which he can run and laws are being made to ban the noxious root. A bureaucrat with too little perceived power, seizes on this chance to make himself important, and we have the Turnip Eradication Board investigating our every activity. Finally, some other researcher finds that turnips are very useful in preventing pellagra and we are encouraged to consume them with gusto. Of course this requires the establishment of a Turnip Promotions Board, but not the abolition of the Turnip Eradication Board, and so these two mutually contradictory organisations continue on into the indefinite future in some form of bureaucratic heaven.

No, I am not proposing any form of conspiracy here. I don't believe in major conspiracies, because experience tells me that we, as a species, are just too incompetent to successfully conduct a really big one. In place of conspiracy, I would propose bureaucracy, which we are very good at. The main difference between the two is that conspiracy presupposes evil intent, while bureaucracy normally begins with the very best of intentions. The end results are, of course, very often indistinguishable.

My plea is for a moderate and tolerant approach to issues which impact on the lives of others, although I suspect I am whistling in the dark. The Skeptic will continue to publish people's questions and opinions and I hope it will continue to attract the support of the readers. ■

BLANTANT PLUGS

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Most overviews are followed by sceptical comments and suggested further reading. Some may see the comments as dismissive invective but what else can one say when Blackburn, the Fox sisters, Leonore Piper and others have publicly confessed to their fraudulent activities?

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We are happy to publicise works of relevance to our aims by subscribers to *the Skeptic* but, unless shown otherwise, the books described here are not official publications of Australian Skeptics. Reference to these books in this magazine can in no way be taken to indicate that Australian Skeptics endorses the contents of the books.

Philosophy

Those of us who think that Skeptics tend to worry too much about the Creation 'scientists' will be upset by some research findings from Monash University. *The Sydney Morning Herald* (April 10, 1994) quotes a paper from *The Lancet* reporting a survey of 150 first year medical students.

More than a quarter claimed that they did not believe the Darwinian account of evolution by natural selection and the evolution of humans from ape-like ancestors. No less than a fifth believed that God created Eve from Adam's rib. The simplest explanation for these odd replies is student humour, a joke played on the researcher. Unfortunately for this comforting theory, among those with no professed religion, 98 per cent accepted evolution.

Two thirds of the group had not previously studied biology but the researchers apparently did not cross tabulate the answers to assess whether high school biology provides an antidote to anti-evolutionism. Eight lectures on evolutionary theory after the first questionnaire survey had no impact on the statistics when the group was tested again. Apparently this was too little and too late: this is even more disturbing than the results of the first survey.

In the long term the answer to Creationism is to persuade students to subject fundamentalist doctrines to the same kind of critical scrutiny that scientific theories are supposed to survive. This does not mean equal time in school courses but it does mean exposing children to Creationist doctrines.

Again in the long term the answer to many varieties of nonsense is to dispense with the dogmatic structure that pervades Western thought and philosophy, including the philosophy of science. As I explained in some articles on Popper and Bartley (*the Skeptic* Vol 13, Nos 1 and 3) there is a well-developed alternative to the dogmatic

LETTERS

Letters to the editor on any topic of interest to other Skeptics are welcomed.

tradition, but as Mr Huber and David Stove have demonstrated, Popper's views tend to attract a great deal of unhelpful commentary.

Turning to Mr Huber's contentions, it is an elementary principle of logic that repeated observations of white swans do not verify the proposition that all swans are white, while the proposition is demolished by a single instance of a black swan. Popper's achievement was to use this commonplace of logic to show how evidence could be used to advance the growth of knowledge, not by verification but by an evolutionary process of error elimination. Of course Popper knew that the colour of a real-life swan, outside a logical formula, could be contested, hence the need for controlled tests, replication of crucial results and the like.

Mr Huber's computer password example is irrelevant but revealing because the problem of verification concerns general theories or laws, not isolated facts like a computer password (or the colour of a single swan). It is revealing because it shows how Mr Huber has failed to grasp the structure of the problem, in particular the way that the demand for justified beliefs created the problem of induction and blocked its solution. There is no way to justify beliefs in the way that dogmatists and fundamentalists demand, and there is no need to do so because we can use the test of evidence (among others) to form critical preferences between rival theories. And if we are content with critical preference, then there is no need to promulgate justificationist theories of knowledge which generate a climate of dogmatic thinking where prejudices persist despite our best efforts to defeat them.

**Rafe Champion
Cremorne NSW**

Rhino horn

While I enjoyed reading Anthony Wheeler's article on the myth of the Unicorn (Vol 14, No 1), I was disappointed that he perpetuated another myth, that in China the rhinoceros horn is treasured "not so much for its medicinal properties as for its aphrodisiac powers". I'm afraid he cannot have read my article "Bad Medicine for Wildlife" (Vol 13, No 1 pp12-14) in which, citing the painstaking investigations of Esmond Bradley Martin, I emphasised that in China rhino horn is *not* an aphrodisiac, but is used as a fever-reducing drug.

For quite a number of reasons it is very important to get it right. Think a billion Chinese people are convinced that rhino horn is good for them. We should try our damndest to disabuse them, but meantime rhinos are becoming extinct, so as an interim measure we need to propose substitutes and this is why we need to know what rhino horn is actually used for it is no use recommending, say, ginseng, when what they want is something for quite a different sort of fever. To try to fight a superstition it is necessary to understand it. I would add that it is a significant fact of itself that rhino horn is part of the Chinese traditional medicine system, as much part of it as herbs and meditation; New Agers should be forcefully reminded of this at every opportunity - it is not "natural", far from it: it involves the very destruction of nature.

I am also not too happy with Anthony's statement that "the dishonest substitution of African rhino horn" for Asian has been a good thing. It is doubtful whether it really has relieved pressure on Asian rhinos: merely, it has brought the once numerous Black and Northern White Rhinos to near extinction, a tragedy from which the three Asian species have not benefited in any way - they are still under just as much threat as they ever were.

**Colin Groves
O'Connor ACT**

Eye Strain

I enjoy nothing better on a Sunday morning than listening to *The Liars Club* (3RRR) but I have a gripe about the broadcast on Sunday, November 14.

I thought sceptics were supposed to be just that, not cynical. When the crew were exposing the people who advertised that "you could throw away your glasses" they assumed that the method advocated was valueless. That may be so but it was repeatedly stated throughout the broadcast that no meaningful scientific studies had been conducted to either prove or disprove it. This being the case I believe outright rejection of the method wasn't really justified, regardless of who was putting the proposition forward.

By all means get stuck into those people who accept unproven methods and try to profit from the gullible, but don't go to the opposite extreme in trying to expose them. I think there was some emotional clouding of the argument simply because science itself was attacked.

I also think this is why some of the statements from the scientific community were not questioned and examined more closely instead of being accepted so uncritically. I allude here in particular to one of the statements quoted by Adam Joseph. This was from an article in *The Age* written by a member of the Royal Australian College of Ophthalmology and I quote "It is impossible to devise an exercise that will allow you to throw away your glasses." This is an absolute statement and I think absolute statements are best left to religious types. I also think this one in particular assumes we know everything there is to know about the anatomy and physiology of the eye. We don't.

Further, the statement also assumes that 'muscular' exercises only are involved. There is a lot more to seeing than just the existence of the physical structure of the eye. There is recognition and processing of symbols by the brain

for a start. There are exercises in existence that may improve this recognition, not muscular exercises, but exercises such as looking closely at individual symbols and thereby building up patterns of recognition. I'm not saying they work, I'm just pointing out that they are plausible and remain legitimate if no scientific study casts serious doubt on them. In any event, I understand that the muscles that move the eye do play some part in its focusing. If so, learning to exercise and control them may indeed improve your eyesight. This also means that the statement that the eye is made entirely from collagen is misleading and ignores the accessory muscles. Not to mention the fact that the iris opens and closes through muscular action.

Later on in the program, one of the crew seemed to pooh-pooh the idea that diet could make any contribution to the health of the eye and hence its ability to see. Suffice it to say here that any dietitian would dispute this. Diet has been proven to play a major role in our general health and the health of specific organs, why not the eye? Just plain cynicism.

It was refreshing in the end to hear Dr Harry Unger of the Royal Australian College of Ophthalmology come on and display some true scientific humility and balance.

Having been critical of Adam and his crew here, I reiterate that I usually find the show entertaining and informative but I think in this instance they went over the top.

Keep up the good work everyone.

**Howard Anderson
Thornbury Victoria**

**Rush in your nomination for
the Bent Spoon Award for
1994.**

**The winner of this
unwelcome honour will be
announced at the National
Convention on
Saturday, June 11.**

Bent Spoon

I wish to nominate the Australian Skeptics for 1994's Bent Spoon Award. I am not trying to be perverse or clever - my nomination is a serious one, and it concerns the Bent Spoon Award itself.

I presume initially the Bent Spoon Award was intended to mock proponents of the paranormal, and to show the public that absurdities were not to be condoned, but to be exposed. I believed the award was to highlight the foolishness of not looking at things with a critical eye, and to get people to think more critically about paranormal claims - to suggest to them that perhaps they should think seriously about the validity of energy polarisers, channellers, clairvoyants and the like.

The Bent Spoon Award was awarded to people or organisations seriously embarking in absurd practises merely because they have thought little and researched less. The Bent Spoon embarrassed people. The MMBW, for example, were not pleased to accept the award. Nor, can I imagine, was Peter Brock.

However, it has not embarrassed some of its recipients. It has been given to those who already know what they say and do is tripe, and who engage in the paranormal to gain money from the public. This has resulted in the situation where individuals and organisations are actually vying for the Bent Spoon! It is no longer the "least sought after honour around" (Vol 11, No 3). It is no longer an embarrassment, it has become a prestigious award to win. This is great advertising for the Skeptics, but it means the Spoon's value has become cheapened.

This brings me to my reason for nominating The Skeptics for the award in 1994:

I nominate the Australian Skeptics because they have encouraged people and organisations to vie for the award. Such organisations make money by

peddling absurdities, they don't lose it. To receive the Bent Spoon Award is to be acknowledged that you are one of the best peddlars in the business. *Woman's Day* is an example. They won it and were pleased. Channel 7 wanted it. The countless phone calls during the 1993 convention indicate how much the Bent Spoon Award is coveted.

Tonight Live won it and gloated. This means to display such tripe is not a cause for embarrassment - on the contrary, it may even mean a reward, from us! Such companies may even increase the number and intensity of their absurdities in order to win it. This means the Australian Skeptics may indirectly be encouraging organisations to peddle the paranormal.

By holding a carrot for such organisations to covet and strive for, are the Skeptics not acting irresponsibly? Do we Skeptics deserve the award for allowing this to happen?

We used to express a serious message, but now our most public event may actually encourage the purveyors of rubbish. Further, we supposedly want to get away from the image of party-poopers and wowsers, yet with the Bent Spoon Award we show our disapproval of television programs, magazines and the like the same way someone writes to *The Times* to complain about "the younger generation". When we give the award we don't embarrass, we don't educate - we become a joke. In summary, because the Australian Skeptics have allowed the award to become prestigious, which as a result could prompt certain groups to increase their output of absurdities to win it, then I believe the Australian Skeptics deserve to receive their own Bent Spoon.

I cannot imagine we will actually win it in 1994, but I hope my nomination encourages more responsible voting. I hope in future the award once again becomes the least coveted award. Then perhaps it can begin to reclaim its value and serve its original purpose: as an embarrassment to its recipient, instead of the joke, or prize, it has become. If so, the Australian Skeptics may again be seen to be the centre of critical

thought, and begin to lose the image of an organisation of wowsers.

Mark Avery
Annandale NSW

If I thought we had an image as an organisation of wowsers Mark, I would run naked past the Cenotaph on Anzac Day, just to dispel the image.

I don't think *Woman's Day* were pleased to receive the Bent Spoon, they just increased their level of crap (and their sales) after they won. I don't think the award meant anything to them at all.

Tonight Live on the other hand, strove to win and subsequently went off the air. I would like to claim credit, but I suspect we had nothing to do with that fact either.

Ed

Telephones

Glen Capuano's "Cyber Sceptics" article (Vol 14, No 1) describes how to plug your computer modem into the phone line to access the world of bulletin boards. But his piggybacking the phone across the modem and connecting both to the phone line is fraught with problems. Mind you, it will work with old phones with no memory bank. Otherwise it works to start with, but after about 20 minutes you suddenly get disconnected.

Blame is then distributed among Optus, Telecom and the bulletin board, when the problem is in the phone. Phones with a memory, and particularly the new slimline Telecom ones, replenish power for the memories with 'gulps' of current every so often. When a gulp happens, you lose data and usually the call. A clear line is best of all, but then it is a matter of remembering to plug the phone back in. Sometimes one of those extension bells from Dick Smith (with no memory) can be piggybacked OK.

John Postlethwaite
Forestville NSW

Origins

Many thanks for publishing my comments on Evolution in the last issue and also for your stimulating reply. I enjoy many of the articles in the magazine and appreciate the research involved. Would you afford a little space for my final rejoinder.

I agree that the theories of evolution and the origin of life are not the same, but they are totally interdependent theories. It seems rather unfair to dismiss the belief of creationists, that life on earth emanated from an external super-intelligence as "fatuous dogma", whilst terming creation by accident as "possibilities and not certainties"; who dare dogmatically state that no intelligence whatsoever exists outside our own tiny speck in the universe?

Human scientific thinking cannot account for the origin of the governing laws of the universe, but creation by a super intelligence most certainly can. Creation and morality (very much like evolution and origin of life) are linked but not the same, we should not the one to cloud the possibility of the other.

Malcolm Edwards
Mooroolbark VIC

I am sorry if I didn't make it clear that I don't regard the hypothesis of a super-intelligent creator as fatuous dogma. It is a widely supported philosophical position, but one that leads to an infinite regression, ie if a super-intelligence created us, who or what created the super-intelligence (and so on *ad infinitum*.) As such, it does not appeal to me as an idea that leads to any particularly useful conclusions about origins of life, or of anything else much.

What I do regard as fatuous dogma is the insistence, by assorted creation 'science' organisations, that life originated (and developed) exactly as described in the religious stories adopted by certain Middle Eastern tribes of around three thousand years ago.

I don't think I even intimated, let

alone dogmatically stated, that no life could exist outside our 'speck of the universe'. To do so would indeed be silly, but that doesn't mean that one has to believe every crank who wants to waffle on about advanced civilisations from the Pleiades.

I must confess that the connection between creation and morality has escaped me.

Ed

Despair

It is with great regret I inform you there is absolutely no point in continuing with the Australian Skeptics.

May I explain: I walked across the hot coals [at Ballarat] (very nice, thank you) and returned to school, explaining to all who would listen the reason why it was very nice, thank you. Having done the full thermal-conductivity, cakes-in-ovens, rip-off routine, I finished with "So you see, it was nothing to do with mind over matter".

"But it must have been," she said, "or how else could you have walked across the hot coals?"

I hereby resign.

Lynne Kelly
Ballarat VIC

Latin

Barry says *magnum opi*. Peter says "No, no!"; *opera magna*. Or perhaps *magna opera*. "No, no-no" says Daryl!! Its *Magnum Opera*. Or maybe *Magnum Opera*.

James suggests *nil bastardi carborundum* (through declensed teeth).

Daryl wants to publish *the Skeptic* in Latin. Maybe later Daryl. After we get it right in English.

James Marchant
Richmond TAS

Names

In *the Skeptic* Vol 12, No 1, (way back in '92) I managed to persuade Barry and Harry to print an item about the "French" astrologer M Jean Rignac. Others also commented about the same time.

When I answered the advertisement, I used a fictitious (and highly improbable) name.

Imagine my surprise, therefore, when, on March 2 this year, I received from Time-Life Books advertising material promoting their series *Mysteries of the Unknown*, and offering me, free, "scientifically designed" ESP cards, plus a free quartz crystal. "Discover the mystic powers experienced by ancient civilisations" - all addressed to my fictitious alter ego!

Now I wonder how that happened!

Alan Towsey
Tahmoor NSW

A Request!!!

This magazine relies on your literary contributions and we are very grateful for all that you send! Thank you!

If we have a quibble, it is with your timing! Four weeks ago, it looked as though Vol 14, No 2 was going to be a very thin issue indeed! Then came the rush and we now have sufficient articles to make this another substantial issue with a few items left over for the next!

That is great, but if everything arrives in the last month before the deadline, then we have to enter it all and lay it out under extreme time pressure! If you wish to write an article, could you please try to get it to us in the first two months after the previous issue, rather than in the last month!

Oh! And one other thing! Would everyone please try to resist the temptation to overuse the !!!!! key? There has to be more to editing than excising excessive exclamations!

That said, we have no other complaints!

The Editors!!!!!!!!!!!!!!!!!!!!

They Want to Know

It may come as a shock to the loyal readership of *the Skeptic* but recent research has revealed that not all wisdom resides with the editorial team: it certainly came as a shock to Harry.

We sometimes get enquiries from readers about matters that leave us completely nonplussed and for this reason we have instituted this new feature which, for want of a better title, we will call "They Want to Know". It will be run separately from the traditional letters page and will feature questions or suggestions for articles from our readers.

We have no doubt that the collective wisdom of our distinguished and extremely knowledgeable circle of subscribers (*stop grovelling!*) (*OK, sorry*) encompasses the answers to any questions that could conceivably be asked.

The purpose of this section is twofold; to allow readers to find answers to questions that interest them; and to suggest topics to others who would like to contribute to *the Skeptic* but can't think of what to write about.

By an extraordinary coincidence, the journal *New Scientist* has just instituted an almost identical concept. I do not expect Skeptics to believe me, but the two decisions were arrived at totally independently.

We lead off with some queries that we have received in the past couple of months. The first several are from Alan Towsey.

BW

Marvels of mathematics

My thanks to Gerald Huber, Hans Weiler and Steven D'Aprano (Vol 14, No 1) for answering my questions about maths and physics. I am also filled with admiration for Gerald's and Hans's perfect and precise English - I wish my German were as good.

I must admit, though, that I found the demonstrations of the $\sqrt{-2}$ rather like what one of my boyhood conjuring

books called an 'arithmetical boomerang', whereby you divine a number thought of by another person by throwing the number forwards by means of addition and multiplication and then, by subtraction and division, bringing it back to the original starting point. I was also intrigued by Steven's comment that "All numbers are imaginary". This ties in with a statement by the mathematician Leopold Kroneker (quoted in John Barrow's *Pi in the Sky*, p 201) :

"Logic differs from mathematics. A logical argument may use the *reductio ad absurdum* and be in accord with a set of rules of reasoning laid down, yet not count as a piece of valid mathematics."

Taken together, these two statements explain a lot... I am greatly relieved.

Physics

No-one has yet answered my question: How do they measure a billionth or a trillionth of a second? How do they know that Pulsar PSR B1257 +12, as reported in the *Sydney Morning Herald* of April 23, rotates 160 times a second? Come on you physicists - let us into the secret.

Fire Walking

I watched the Skeptics fire-walking at the Science Show in Sydney and have read - and accept - the scientists explanations. However on Saturday, February 12, Channel 9, at 5.15 pm, I watched a documentary programme titled *Islands of the Pacific* in which I saw people walking, not quickly, but deliberately, on hot stones. Sure, I couldn't check directly the temperature of the stones, but the surrounding material looked pretty hot to me. How do you explain this?

Incidentally, an academic friend of mine, who has always seemed to me, during the many years I have known him, to be pretty level-headed and not easily fooled sort of chap, and who is an authority on Indonesia and its languages, having spent many years there, told me recently he had seen this also in Indonesia and that the ends of

the walker's trousers were not even scorched by the surrounding flames. Arthur C Clarke's *World of Strange Powers*, p 169, reports similarly. Have any of our readers seen this, and if so, what is the explanation?

Aborigines and cannibalism

Am I correct in deducing from Richard Buchhorn's article (Vol 14, No 1) that he claims that cannibalism among Australian aborigines is a myth and never actually took place?

I am no expert on this, and have no strongly held views either way, but my old professor of anthropology at Sydney University many years ago, Professor A P Elkin, is still regarded as an eminent authority on the original Australians, and in his book *The Australian Aborigines* (my copy Angus & Robertson 1979) states (p 203);

"A combat, ceremonial in nature, is a frequent feature and is usually connected with the settlement of grievances and disputes as already described. This is followed by a feast which in south-eastern Queensland used to be cannibalistic in nature; the body of the person killed in the ceremonial combat was disposed of in this way. In this region, cannibalism was a regular feature of burial ritual."

and further (p 358)

"Cannibalism, too, practised in Queensland as part of burial, was considered a most honourable rite, to be used only for persons of worth. It was incidentally a quick method of preparing the bundle, the flesh being eaten instead of dried."

I have no idea what Elkin's sources were for these assertions, but as I remember him, he was pretty scientific in his approach to his own field of expertise and not inclined to accept reports without good evidence.

Geoffrey Blainey reports similarly in his *Triumph of the Nomads* (Macmillan, 1975), remarking that:

"The theme of cannibalism in Australia is slippery with emotion and morality, and is not easily grasped.... In (the nineteenth) century cannibalism was often regarded as the greatest

depravity, the antithesis of civilisation, and was so viewed even by many who regularly took Holy Communion and believed they were thereby eating the body and drinking the blood of Christ. In fact, many aborigines ate human flesh in the same spirit, believing they thus acquired some of the strength of those who had died. In many tribal areas from the De Grey River near the Indian Ocean to headlands on the Pacific Ocean, pieces of flesh were cut from a dead enemy and eaten. There are also many records - some of them false or exaggerated - of aborigines eating flesh which they had cut from those who had died peacefully. Cannibalism probably was more often the ritual aftermath of a death than a motive for murder. On occasions, however, aborigines were deliberately killed so that their flesh could be eaten. Thus Baldwin Spencer and FJ Gillen reported from Central Australia that occasionally among the Loritja-speaking people a very young child was killed so that its flesh could be fed to an older but weaker child. The Herbert River in north Queensland, the western district in Victoria and several other districts yield convincing evidence that certain aborigines committed murders in order to eat flesh." (p 112)

Are there any anthropologists among our Skeptics who have any real evidence one way or the other?

Alan Towsey
Tahmoor NSW

* * *

Hypnosis and Hi-Fi

I often wonder whether *the Skeptic* has ever carried an article on stage hypnotists? It has been my experience that the vast majority believe that these performers are more than clever showmen and actually have control over the minds of their subjects.

I believe another good subject for discussion would be the gullibility of many 'golden eared' hi-fi enthusiasts. There seems to be an element of New Age style dogma in the completely non-technical, non-scientific rationale of followers who throw away large sums

on everything from magic mains cords to slabs of granite, designed to 'bleed away faulty vibrations from one's amplifier, tape deck or CD player.

Charles Slater
Fairy Meadow NSW

You must be psychic Charles. Your first question is partially answered in this issue.

Magnetism

Steve Colin-Thome of Moorebank, NSW has sent us a leaflet describing "Medi Magnet, The Therapy Magnet that Helps Nature". This item, sold by Zeitgeist Promotions of Narrabeen NSW, is "specially designed Strontium Ferrite magnet for Therapeutic purposes" is "colour coded -Green +ve, Red -ve (the green side is for soothing and relaxing; the red side is for strengthening and stimulating)"; "Acts on blood plasma to improve circulation, increase blood flow to an injury to promote healing, reduce spasms and relieve pain."; "can be used on aching joints, sore muscles, cuts and stiff backs [as well as for] relief from the pain suffered by your pet [and for] magnetising water". The blurb warns that "it should not be used if the patient is fitted with a pacemaker, pregnant or by children".

He also sent another blurb promoting an "Immune System Booster", a pendant that is worn next to the thymus gland. This one contains a "Neodymium (sic) Boron" magnet that "speeds up the production of RNA and DNA and adjusts the electrical conditions across the cell walls, allowing oxygen and food from the blood to pass more readily into the cells and wastes to pass out".

Steve wants to know:

"... a little about magnetic fields. Are there major differences between the magnetic fields produced by electricity and artificial or natural magnets? Is it possible for a static magnet to influence the composition of blood?"

This looks like a good topic for our biophysicist readers to sink their teeth into and let us know what are the real effects of magnetic fields on humans (if any).

About our Authors

Brant Abrahamson has spent his entire teaching career at Riverside-Brookfield High School in Chicago USA. He is a member of his local skeptic's group and has been on the education subcommittee of CSICOP.

Dr Steve Bassar is a Melbourne medical practitioner and administrator. He does not smoke except from the ears at times.

Kathy Butler is in the process of producing a little Butler (or Under Footman). She is a member of the Vic committee.

Glenn Capuano is a self-confessed computer nut. He is on the Vic committee.

Steve Colebrook, our new cartoonist, is actually a musician. He is a Vic committee member.

Harry Edwards claims to have covered over 2000km visiting the PO to send out back issues of *the Skeptic* But isn't that what National Secretaries are for?

Lindsay Ellison is a Sydney barrister. He is an Aquarian with the Gorge rising.

James Gerrand was the founding Secretary of Australian Skeptics. He is now a Life Member.

David Hagar comes from a long line of Vikings (via the USA). He is a teacher, musician and supporter of Murphy.

Peter Johnson, is a cartoonist and citizen of Adelaide, which he insists are not causally connected.

Adam Joseph, Victorian Keptics President, promises he will not strip at this year's Convention, which will come as a great relief to the National Committee.

David Lewis is a Queensland teacher. He likes a good argument, which probably denotes Welsh antecedents.

Dr James Marchant, medico, agriculturalist and scourge of the Tasmanian media, claims to be Australia's Greatest Living Plagiarist.

Tim Mendham, a frequent visitor to Loch Ness, has a long neck and several humps. He is almost certainly a prehistoric holdover.

Dr Mark Newbrook is a linguist at Monash University. If he can explain why Victorians talk funny, it will prove a boon to humanity.

Kirk Straughen is a Queensland public servant. The Treasury is seeking his help in transmuting its debt into gold.

Sir Jim R Wallaby is taking Holy Orders. He is a bartender in a seminary.

Dr Tony Wheeler is a Queensland science teacher. His bathtub is sponsored by the CSIRO.

Barry Williams recently had plastic surgery on his nose. He now looks like Brigitte Bardot (if you can picture Bardot with a large stomach and grey beard).

Dr Joe Wolfe is a physicist at UNSW, where they take bathtubs very seriously.

National Convention
Sydney, June 11 - 12