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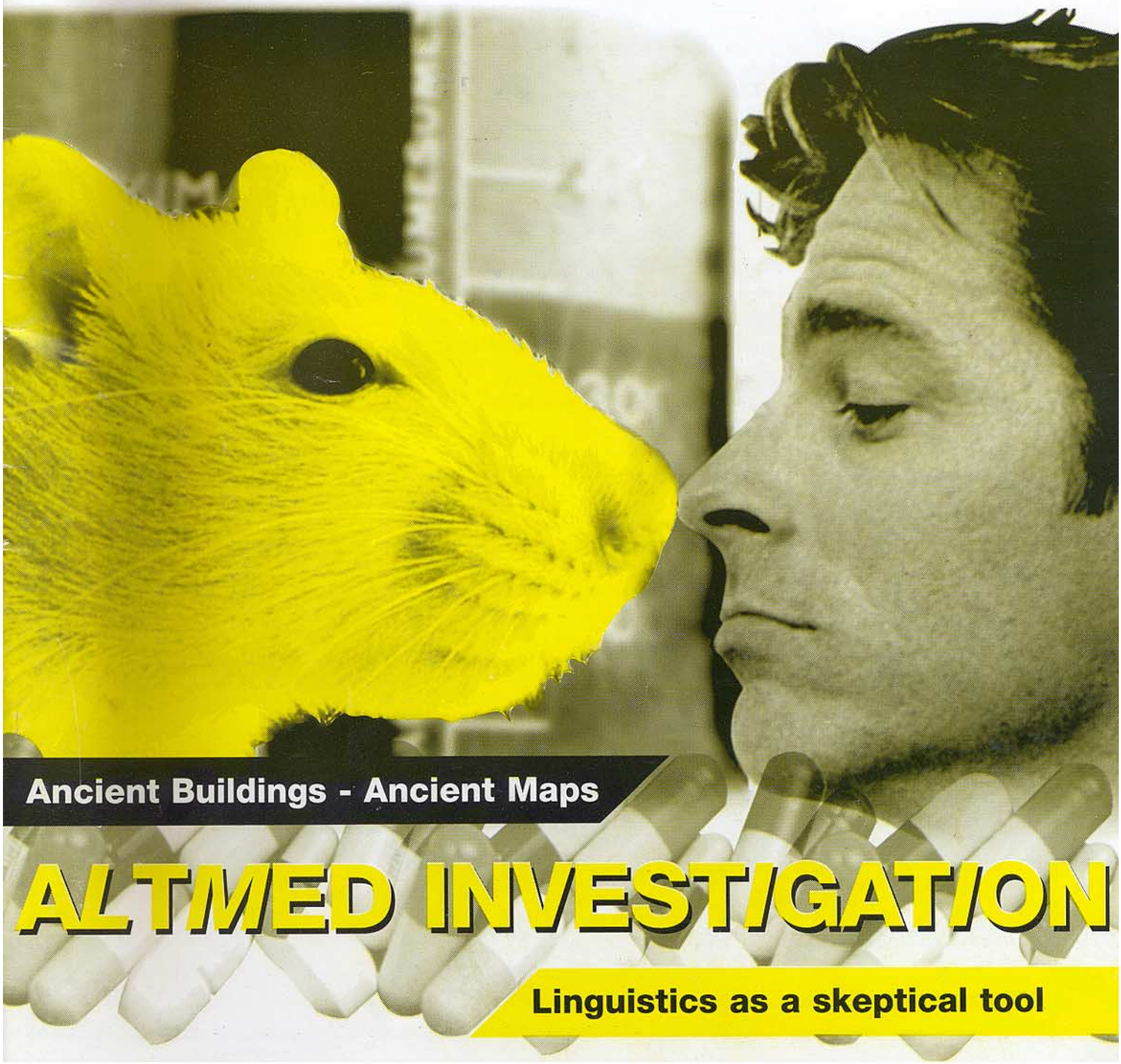

Ancient Buildings - Ancient Maps

ALTMED INVESTIGATION

Linguistics as a skeptical tool

the Skeptic

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All correspondence to:
Australian Skeptics Inc
PO Box 268
Roseville NSW 2069 Australia
Tel: (02) 9417 2071
Fax: (02) 9417 7930
e-mail:
skeptics@kasm.com.au

web pages:
Australian Skeptics
www.skeptics.com.au
No Answers in Genesis
www.onthenet.com.au/~stear/index.htm

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Skeptics around Australia

New South Wales:
Australian Skeptics Inc
PO Box 268
Roseville NSW 2069
Tel: (02) 9417 2071
Fax: (02) 9417 7930
skeptics@kasm.com.au

Hunter Skeptics:
PO Box 166
Waratah NSW 2298
Tel: (02) 4968 9666
Fax: (02) 4952 6442

ACT
Canberra Skeptics:
PO Box 555
Civic Square ACT 2608

Victoria
Australian Skeptics (Vic) Inc:
GPO Box 5166AA
Melbourne VIC 3001
Tel: (03) 9391 9101
Fax: (03) 9391 9101
contact@skeptics.com.au
http://www.skeptics.com.au

Queensland
Australian Skeptics (Qld):
PO Box 6454
Fairfield Gardens QLD 4103
Tel: (07) 3255 0499
qskeptic@uq.net.au

Gold Coast Skeptics:
PO Box 8348
GCMC Bundall QLD 4217
Tel: (07) 5527 9884
Fax: (07) 5577 4784
winckle@onthenet.com.au

South Australia
Skeptics SA:
PO Box 377
Rundle Mall SA 5000
Tel: (08) 8272 5881
Fax: (08) 8272 5881
lakes@senet.com.au

Western Australia
WA Skeptics:
PO Box 899
Morley WA 6062
Tel: (08) 9448 8458
kitkat@technologist.com

Tasmania
Australian Skeptics in Tasmania Inc:
PO Box 582
North Hobart TAS 7000.
Tel: (03) 6234 1458
thornett@netspace.net.au

Northern Territory
Darwin Skeptics:
PO Box 809
Sanderson NT 0812
Tel: (08) 8932 7552
Fax: (08) 8932 7553
dwnskeptic@taunet.net.au

News

2000 World Skeptics Congress for Sydney!

It's official

Barry Williams

Following discussions between Australian Skeptics Inc and the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) in the USA, agreement has been reached on joint sponsorship and it can now be confirmed that the third World Skeptics Congress will be held in Sydney, in a three day event planned to commence on Friday, 10 November 2000.

The first World Congress was held in 1996, in Buffalo, NY, the home of CSICOP, and the second was held in Heidelberg, Germany in 1998. Delegates from Australian Skeptics attended both events and we hope to build on their experiences to make our event the best yet.

We expect that several prominent Skeptics from the US, Asia and Europe will attend to speak at the Congress, together with a galaxy of local stars. Our trans-Tasman colleagues from the New Zealand Skeptics have already offered their very welcome support.

The programme will be formulated in association with CSICOP, and we are confident it will be designed to attract the widest possible interest from the media and the general public. In support of this, we appeal to our subscribers for their ideas on the sort of programme they would like to see to help make the Congress a success. Already our feedback suggests that the programme should be the mixture of serious discussion and lighter entertainment that is the distinctive characteristic of our Australian approach to organised Skepticism. We are already considering ways in which to add some entertainment to the programme and would welcome suggestions from our readers. A Sydney Harbour dinner cruise should be popular with overseas and interstate visitors.

As yet we have not settled on a venue for the Congress, but we are engaged in investigating a number of suitable locations, with Sydney's natural attractions in mind. We are also discussing special convention packages with airlines and accommodation providers.

This date for the Congress was selected so it would occur when Sydney had had time to recover from its Olympic hangover, but when the memory of Sydney will still be fresh in the minds of overseas Skeptics, and when commercial enterprises and the media will be striving to maintain their Olympic momentum.

This will be the biggest event ever staged by Australian Skeptics in its (by then) over 20 years of existence, and it will require a lot of hard work by a lot of people to ensure that it succeeds. Although the NSW branch will be the nominal hosts of the event, this presents a marvellous opportunity for all the branches around the country to work together in a truly national effort. All branches are requested to nominate one or more committee members to be the coordinators of their local efforts and to liaise with the NSW committee.

Nor do you have to be a member of any of the committees to participate. If you have ideas, or particular skills, that can contribute to making the World Skeptics Congress into the success it deserves to be, contact your local branch, or *the Skeptic*, and let us know. For a start, we would like to think of some other way of saying it is the "third" World Skeptics Congress without giving the impression that you can't drink the water in Sydney (perhaps that wasn't a felicitous example).

Start planning now to attend the World Congress; you'd be mad to miss it.

Around the traps

Bunyip

Recently, we received the following statement over the seal of the *ArchPresident for Life (and Thereafter, if Applicable) of the Intergalactic Skeptics Committee and Right Kidney of God, His Exquisitude, Sir Juan Antonio Wallaby*:

> We would like to lay to rest any rumours and innuendoes anyone may have heard about the process by which Skeptics SA won the rights to hold the 1999 Australian Skeptics Annual Convention. It is absolutely untrue that any member of any other branch committee has ever received from any member of the Skeptics SA Bid Committee, any financial inducements, lodgings in five star hotels, expensive firearms or other weaponry, free medical treatment, nor that any children or other relatives in any degree, of any of the aforesaid committee members have ever been offered well paying jobs in Adelaide, nor in any other parts of South Australia.
>
> It is true, however, that the wretched editor of *the Skeptic* was recently driven around Adelaide in a very expensive sports car, and we would like to assure well-wishers that his knees have recently returned to their accustomed position and his nerves have almost re-established their normal equilibrium.
>
> That is all we are prepared to say on the matter.

We have no idea what the message means.

* * *

We know from the comments people write on their subscription forms that we number communications engineers among our subscribers, and we would like to pose them a couple of questions.

1. Why is it that, when one has spent a considerable time engaged in the intricacies of conducting business by telephone, and having pushed button 0 to get to the department that lists the departments, pushed button 7 to get to the service department, pushed button 3 to get to the sub-department that handles service during alternate weeks containing a Tuesday (and having resisted the temptation to push buttons #@%$&*$#* in sequence, because one wishes to swear at someone) and is just about to push button 5 to "talk to the first available operator", the "call waiting" tone invariably intrudes at this point?

2. Why, given the technology available to them, the telecommunications suppliers cannot provide a variety of tones to inform one whether the "call waiting" is from:

a. one's mother, or some other important family member;
b. the State Lotteries Office informing one of a very big win;
c. someone actually wanting to buy something from one;
d. someone wanting to know "is Samantha there?";
e. someone wishing to "take up just a few minutes of your time to explain about our personal finance seminar that will change your whole life";
f. someone wishing to speak to "the person in your office in charge of nuclear waste disposal";

thereby removing from one the dilemma of deciding whether to risk all the advantages one has gained by being so far advanced in the interminable process listed in 1, rather than miss the call from categories of persons listed in 2. a, b, or c, or to hang on, in the likely event of it actually being from one of the categories of persons listed in 2. d, e, or f?

Surely that is not too much to ask.

* * *

Anyone who has the pleasure of being domiciled with members of our species under three years old, could hardly fail to have been exposed to a phenomenon known as *Teletubbies*. While these 'cute' little TV entities are likely to induce feelings of nausea in anyone over the age of reason, they seem to intrigue members of the nappy set.

In what might well be a foretaste of worse things to come until the millennium has passed, we have been warned, by no less an authority than the self-appointed guru of the self-described (US) "moral majority", Rev Jerry Falwell that the largest *'Tubby*, one Tinky Winky, promotes (Gasp! Wait for it) homosexuality! He bases this conclusion on the fact that TW is *purple*, a colour well known to be favoured by homosexuals (and royalty as it happens), has a *triangle* on his head (so much for Pythagoras) and *carries a handbag*!

Well that's obvious, isn't it? Anyone who has ever seen a production of *The Importance of Being Ernest* will remember the immortal exclamation of Lady Bracknell "A handbag", and that the play was written by Oscar Wilde, a notorious homosexualist.

* * *

Falwell made this fatuous observation hot on the heels of an even more egregious load of tripe that landed him in hot water with Jewish groups around the world. Giving his views on the rapidly approaching millennium, he opined that the antichrist is alive now, is Jewish and is living in Israel. He based this conclusion that it was "logical" that as Jesus was Jewish, so too should be the antichrist.

We don't wish to enter into a theological debate with the good Rev, but if it's logic he is relying on, wouldn't it be logical that if the Christ was Jewish and lived in Israel, the antichrist should be as un-Jewish, and live as far from Israel as possible?

Our advice, therefore, would be to keep an eye out for American (or Australian) Christian fundamentalist evangelists who don't wear hats, who have not been circumcised (and who preach hate).

* * *

We expect this will not be the last piece of lunacy from the fringe in the next year or two, and we will be asking the question "What the Hell Happened to Armageddon?" at the World Skeptics' Congress in Nov 2000.

We would hate to miss any, so we ask our readers to advise us of any millennial prophecies that they notice being promoted by any of the usual crackpot suspects, be they ufologists, creationists and other fundamentalists, new agers or anyone else who tries to climb on the "Scare the Pants off the Punters" bandwaggon.

We will run articles on some of the more egregious claims in following issues

Report

Arkeology: or, Look what I've found

Steve Roberts

Recently Melbourne and other places suffered a visit by Ron Wyatt, *ark*-eologist and Biblical fundamentalist. His slickly presented "Discovery Seminar" spanned three nights and was titled *The Spade Confirms the Book*. Handouts, and other media were impressive, as was the organisation of the event in a large, hired venue. In this article I describe the event itself, then outline many of Wyatt's discoveries as presented there and elsewhere, and finally consider Wyatt's place in the context of late 20th Century Biblical nutters.

Attracted by the publicity, several Victorian Skeptics felt the need to go along - if the evidence was as good as it was cracked up to be, we would not fail to see the light and thus qualify for admission to Heaven, where a special department is presumably run by St Thomas to cater for Skeptics. In any case, at $8 a head it was cheaper than other forms of entertainment ... well, most other forms ... anyway moving right along:

Ron Wyatt has discovered Noah's Ark. Now this may be the same tired old Ark that we know and love so well - that scruffy old hill in Turkey - but Ron has gone on to discover - the rocks formerly known as Sodom and Gomorrah, the site of the Red Sea crossing, the rock that Moses struck to make water gush forth, the Golden Calf, Mount Sinai (badly burned at the top), parts of a Pyramid Building Machine ... and, wait for it ... The Ark of the Covenant. But wait there's more!! He has also found the site of the Crucifixion, complete with stains of Jesus' blood.

In short, he has found everything except apple cores from the Garden of Eden and the light switch used by God on the first day of Creation. He (Wyatt, that is, not God) strongly hinted that he is about to discover the original stone tablets with the Ten Commandments written on them. Maybe he will find the third tablet made so famous in the apocryphal version "Hear ye O Israel - these fifteen commandments - woops, fumble, smash - these ten commandments ...". If so, I would not be at all surprised. Wyatt's seminar might be better titled as *The Shovel Confirms The Book*.

How come so much stuff? Well, Ark-eology is easier than you think, as this quote from Wyatt's propaganda indicates:

> Carefully following the Biblical records of Exodus, Wyatt came to Nuweiba, a large beach on the Gulf of Aqaba. When Ron and his two sons donned their diving gear to investigate, within half an hour they had found the first chariot wheel! A few minutes later, Ron found another one...

So some of us attended two of the three nights of the seminar. About 300 people were present, luckily mostly elderly folk - I shudder to think of the young being exposed to this sort of stuff. The evening had an opening talk by Ron's geological sidekick, then Ron appeared and spouted on about not only his discoveries, but most other things too. The content started off as laughable, and as you will see it went downhill from there, but the audience remained passive and even agreed on the most preposterous points. I felt as if I had strayed into a colour remake of the film *Triumf des Vollens* (1934).

There were a couple of breaks for songs, some by cute little children shepherded onto the stage. And the inevitable collection - Wyatt apologetically said his audiences expect there to be a collection and will complain if there isn't one. So everyone chipped in ... at least this was done with little baskets - Benny Hinn has to use plastic buckets and Armaguard vans for his.

Questions were welcomed at the end, people being made to wait in a queue for this purpose. An assistant held up a microphone for questioners to speak into, which was a good idea since it could then magically disappear during any follow-on comments or subsidiary questions. This procedure was intended to prevent long-winded or multiple questions - however it did not prevent long-winded and multiple answers, Wyatt rabbiting on at some length and feeling the need to preach several sermons on topics irrelevant to the questions. However, in fairness, sufficient time was allowed for questions, and most were answered politely if not factually, although when a question was asked about Wyatt's belief that all theories were fiction and his claim to work only with facts, Wyatt became antagonised and responded with nonsense, and the questioner was ordered to sit down, to the cheers of the crowd. Wyatt's real attitude to questions can be seen on one of his Web sites:

> As is to be expected, the discoveries Ron has made are very controversial among the scientific as well as scholarly communities. As a result, we never look to scientists or scholars to 'confirm' them.

Propaganda was sold outside the hall, but not on the scale of other creationists' meetings. The usual videos of the speaker at inflated prices, although heavily reduced to quite a high price for a set of four. Quite good drawings comparing the weathered rocks of Sodom and Gomorrah to an important road junction in downtown Sodom - convincing until you realise that the buildings are drawn from the rocks. Chemical analysis of Brimstone, as rained down by God on those sinful cities (why God needed to include contaminants of sodium, magnesium, aluminium and silicon with his sulphur is not clear - perhaps he was saving the high-grade stuff for incinerations yet to come). Bible study guides, some over 100 years old. And a 30-page tirade against "the evils of coffee and all other brown liquids".

Finally we were given a free newspaper *The Sunday Law Times* which was full of anti-papist propaganda, vicious enough for comparison with Nazi publications. Did you know that the Pope's title "Vicar of the Son of God" in Latin is *VICARIUS FILII DEI* and adding up

the Roman numerals V,I,C,I,U(=V),I,L,I,I,D,I - you get 666; which proves, etc.... It appears that Wyatt and his mates - there were about 100 people managing or involved with the event - are lapsed Catholics who have decided to make hatred of the Pope a way of life.

So much for the event - but now for the content. Prepare yourselves for conversion to Christianity, Wyatt style!

* Noah' Ark, that wretched hill in Turkey which has been dowsed with a device called a "molecular frequency generator" showing the presence of the Ark. Never mind that others, including former collaborators have tried to re-dowse this and failed.
* Wyatt thinks that 1,200 animals would have been enough to regenerate all types of animal that we know today. Life was quite cosy on board the Ark - there was even room for more people. As for the chore of mucking out the pens - well, the pre-Flood animals were all vegetarian, and Wyatt's geologist thinks that the droppings of vegetarians don't smell bad - I bet he has never worked on a farm.
* The site of the crossing of the Red Sea, with a gold-plated chariot wheel which allegedly was too brittle to bring to the surface. Why the Egyptians gold-plated their wheels and how the gold surface came to be unscratched and undamaged were not mentioned.
* And coral-encrusted axles (with only about 20-30 years' worth of coral - showing God's plan for keeping it preserved). A human rib-cage, miraculously preserved after 2,600 years (we pointed out that even the less sinful people on the Titanic have all disappeared since 1912, and Wyatt referred to a *National Geographic* article showing human remains in an old shipwreck - we looked this up, it's a lie).
* A bone claimed to be a human femur, curiously shortened and forked at one end.
* Chariot wheel tracks.
* A photo of Ron standing 200 feet below the surface, the scene miraculously illuminated as if only a few feet below the surface. (Two divers who were present affirmed that 200 feet down everything is the same colour - black).
* Geologically although the Gulf of Aqaba is almost a mile deep, there is a handy land bridge where it's only 900 feet deep and this would do for a crossing site. It was claimed that God sent a highly directional, narrow blast of wind to blow across the channel, moving the waters back, and also freezing the sides to make walls. Then just as those naughty Egyptians came through, he sent along his pillar of fire and melted the ice. Might have worked in nine feet of water, except there is 900 feet of water to blow away - come on, blow harder.
* Anyway it must be the crossing site because there is a pillar of stone that says so (or said so - they took it away and it's gone now). When investigating this site Wyatt and his two sons entered Saudi Arabia deliberately and illegally, were later seized and spent 78 days in jail. Apparently his publisher saw a chance to increase book sales by making a phone call to the Arabs about American spies...
* Sodom and Gomorrah, a couple of rocks with a yellowish sulphur deposit.
* The rock that Moses struck, to make water rush out of it - there it is, on top of a hill, with erosion marks around its base and running away from it, and evidence of channels being constructed from it. (There were erosion marks on top of it, too - quite good evidence for an old earth and lengthy geological time-scales).
* Now to the pyramid-building machine. This was basically two arms that could lever at the sides of a heavy block to lift it up a step, making ramps unnecessary. Pictures of poor old Djoser's steppy pyramid; several very deep grain pits were near this, which was proof for the story of Joseph and the seven good harvests and seven famine years. Joseph was really Djoser's high official Imhotep. Wyatt's Egyptology in relation to the Exodus, Amenhotep III & IV is all way out of line, reminding one of Velikovsky.
* The Ark of the Covenant, in a cave under the site of the Crucifixion, thus getting two relics from the one site. This place must be the site of the Crucifixion because there wouldn't have been room on the Cross to put up a sign about Jesus's crime in the necessary three languages, so three big signs would have been stuck in the ground; and what Ron has found are the post holes.
* Wait there's more!! - Jesus's blood dripped down from the Cross onto the Ark and a sample on being analysed showed 23 chromosomes from his mother and a single Y chromosome, thus proving that he was only half human and the Son of God. (An interesting possibility would be to isolate this 24 chromosome and clone Gods from it).

- Now, check carefully, Shem. Is it a *Ctenocephalides canis* or is it not? The Lord was very specific about this: only two of every sort, said He.

If you think that all of this would be offensive to Christians, you should hear what Ron said about Moslems, the ancient Egyptians and other religions. Even science - the religion we all love - came in for its serve:

* People like us [Wyatt] don't trust professional scientists [but a statement by a proper professor at Karolinska Institutet, Sweden was quoted with great respect as primary evidence, twice]
* A professor of archaeology once said to me "Wyatt, your problem is that you dig and you find what is there. We professionals first decide what ought to be there, then we somehow make it happen". [Same story repeated in another context]
* Scientists cannot possibly measure the speed of light, it's too fast
* The speed of light was thought to be 186,000 miles per second but there is another value around 400,000 and this the one they used when they planned the moon shots
* There is not enough parallax even across the Earth's orbit around the Sun to be able to triangulate distances to the stars

Now I have personally measured the speed of light and seen the results of parallax determinations, not to mention a lifetime of the practice of scientific method. But I stopped short of making a scene, and fumed quietly instead.

Despite these vicious lies about science from someone who has "read all the astronomy books there are, and understood some of them", Wyatt does claim to have a scientific training - as a dental technician. When not digging up the Middle East he works in Nashville,

continued p 12...

Investigation

Newspaper reports on alternative therapies

In early January, *The Newcastle Herald* published results of an investigation of several alternative health therapies and the issues surrounding them.

The "Regulator"

In the first story, reporter Maureen Fitzhenry found an alternative health practitioner had tested Hunter people for AIDS and cancer "viruses" over the telephone, then offered treatment with a machine he sells for $1400. The claims made by *Health and Healing* magazine editor, Mr Maurice Finkel of Kingscliff, alarmed health officials and constitute an offence under the NSW Medical Practices Act, as does treatment of cancer by an unregistered person.

A Lake Macquarie woman who recently paid $1400 for Mr Finkel's machine allowed Ms Fitzhenry to be present during a telephone consultation with him. The woman, a former nurse and member of the Hunter Skeptics, does not have HIV but posed as a sufferer and bought the machine because of suspicions over his claims.

Mr Finkel told the woman he could test people over the phone using "dowsing" rods. He also said "spiritual advisers" recommended she stop taking drugs to treat HIV/AIDS and rely solely on his electronic machine. "Get off the drugs, they are only suppressing your immune system," Mr Finkel told her. Urging the woman to write a letter for publication in his magazine praising the machine's effect on HIV, he told her he was "afraid to advertise that's it's good for HIV". When the woman told Mr Finkel she had a friend suffering from hepatitis C, he ran another telephone test on the spot. "I'm getting both the Hepatitis C and cancer virus... I'm getting plenty of cancer viruses in her," he said.

The machine, called The Regulator, arrived at the woman's home with no receipt and instructions scrawled on paper ripped from a notebook. It came with a package of photocopied pages listing "frequencies" for hundreds of diseases and conditions. The machine was neither properly labelled nor listed with the Therapeutic Goods Administration. When confronted later, Mr Finkel said he wanted to do more tests before seeking listing. He admitted he had no scientific proof of the machine's efficacy, but claimed to be in the midst of research using another alternative medical device. "It's a machine that puts out an intermittent electric current set to frequencies. Ideally it's supposed to be a muscle stimulant, but we're trying to see what else it can do," he told *The Newcastle Herald*.

Yet Mr Finkel told the woman that setting the frequency to 15 "is a very powerful virus killer". A setting of 19.5 had "a very, very powerful self healing energy", while 56 could detoxify the liver. Asked about his advice to discontinue medication for HIV, Mr Finkel said he only meant for the woman to quit her drugs for a few weeks "as a test". Hunter Health communicable diseases officer, Mr Kerry Todd, said it scared him to hear such advice, since HIV could develop a resistance to effective drugs after only a few weeks without them.

Mr Finkel also claimed to test only for cancer "viruses" which he said preceded cancer and could be killed to stem disease before it began. Prof John Dwyer, a leading immunologist and head of medicine at the University of New South Wales, said he was outraged.

"Some people say these are cases of *caveat emptor* (buyer beware), but it really isn't. We're often talking about people at their most vulnerable and these people need protection because they are not in an emotional state necessarily to be rational".

Mr Finkel says he can "tune in" on the condition of anyone in the world, even astronauts in orbit. "I can check your body over the phone for negative energy and, where there is negative energy, there may be illness," he told Ms Fitzhenry when she phoned him as a *Newcastle Herald* reporter. "I could see into your aura now and see certain areas that aren't well."

Regarding the $1400 electronic device Mr Finkel recently sold a to a Lake Macquarie woman, he told Ms Fitzhenry he had to be careful about claims made for the machine, but it could "improve healing". "They have to use the instrument to heal themselves," he said. The machine created energy frequencies that could alter "negative fields" in the body, he said, claiming all diseased tissue has a negative charge. Mr Finkel said he visualised a person's "aura" over the phone and had recently seen patches corresponding to "dark" organs in one woman and a dark lung in a man.

When he visualised the reporter, he said she was being poisoned by mercury amalgam dental fillings. He also saw problems with her ovaries, liver, bowel, lungs and bronchial tubes. He then conducted a test - still over the phone - with dowsing rods and told her she had chronic fatigue "viruses", but no cancer viruses.

Through his magazine, *Health and Healing* (which he subtitles *Journal of Complementary Medicine*), Mr Finkel sells numerous health devices, books and videotapes. He has long lobbied government for changes that

This is a summary of a series of reports by Maureen Fitzhenry, published in *The Newcastle Herald* in January 1999 . It raises disturbing questions about the spread of untested alternative health therapies in the community and of the seeming unwillingness, or inability, of regulatory authorities to regulate those promoting these therapies, or to subject the therapies to the same sort of testing for efficacy that applies to orthodox medical practices. We regard this as a dereliction of their public duty.

We are grateful to Ms Fitzhenry and the publishers of *The Newcastle Herald* for their permission to summarise her reports in *the Skeptic*.

would recognise the role of complementary medicine in the health care system. He has pushed for easing of restrictions on the alternative health care industry, suggesting the federal Therapeutic Goods Administration (TGA) is biased towards pharmaceutical companies and accusing government of abandoning the public interest. He has warned readers that they would lose the freedom to choose their own health care if they did not make a fuss to politicians.

"I once suggested that we might be better off with a benevolent dictator who thinks like me," reads the editorial in the August-October, 1998 issue of his magazine. "What we need to do is to get people into politics who are intellectually honest... It should be easy to weed out the liars and the dummies."

The "Listen" machine

Maureen Fitzhenry then examined another alternative health practitioner who had been reported to authorities last year by the same member of the Hunter Skeptics.

She found that a Newcastle machine purporting to measures the body's "electromagnetic energy" to assess health is the focus of the NSW Health Care Complaints Commission for the second time in a year. In June, the Commission ruled a complaint by the Skeptic alleging false and dangerous claims against registered nurse Patricia Best was substantiated.

Ms Best operates a Life Information System Ten (LISTEN) machine at $95 per visit from the same Hunter Street office building as her husband, orthopaedic surgeon Dr Trevor Best. "The Commission is critical that Ms Best has used a LISTEN machine for testing for over 20,000 items, for imprinting water and making remedies, when there is no scientific basis for the claims made," the report stated. Ms Best told investigators her machine "measured frequencies" for thousands of items including hepatitis, allergies, illegal drugs, dental problems, cancer and AIDS, measles, vitamin levels and arthritis.

The LISTEN system involves hooking electrodes to the hands and feet which ostensibly feed information into a computer, determining what body systems are "out of balance" and whether nutritional or homoeopathic supplements would help. The machine is also claimed to be able to "imprint" vials of ordinary water with "the magnetically coded vibrational signature" of a remedy matched to the clients' problems.

Ms Best, who now uses the name Patricia Barnes, told the Commission that the machine did not diagnose or treat clients, "but balanced the body's electromagnetic fields through the meridians". The Commission ruled Ms Best be subject to disciplinary counselling by the NSW Nurses Registration Board. But in December, the Commission agreed to re-examine part of its decision after receiving an outraged letter from the head of medicine at Australia's largest university.

Prof John Dwyer of the University of New South Wales said he was disturbed that the Commission's expert reviewer had concluded there may be some scientific validity to the basic principle behind the machine - that skin conductivity can be used to determine the presence or absence of disease. "The basic premise that disease gives any sort of frequency or electrical wave that can be measured and used in diagnosis is absolute garbage," Prof Dwyer told *The Newcastle Herald*.

In his letter to the Commission, he recommended other medical experts be consulted. "As a senior immunologist, I can assure you that it is totally impossible for these machines to diagnose food intolerance or any other forms of allergies," he wrote. He also demanded stronger action be taken against Ms Best. "LISTEN devices and the like only represent the tip of a very large iceberg. There is so little protection for consumers ... in the area of health care." Commissioner Merrilyn Walton said they could not reopen the case, but would re-investigate their reviewer's conclusions.

Ms Best, who still operates her machine in Newcastle, had been criticised by the Commission for using her registered nurses' credentials to promote the machine. Yet when contacted recently by a potential client, Ms Best said she "had a medical background" and a nutritional background. When asked what medical background, she replied: "I was an RN."

During the telephone conversation, she called her machine "Chinese medicine" involving homoeopathy. Ms Best refused comment to *The Newcastle Herald*, saying only that her machine - which she called an ohmmeter device - did not measure diseases, but electromagnetic fields. Ohmmeters are instruments used for measuring electrical resistance. She referred further comment to the Sydney-based LISTEN distributor, Mr Steven Alexander, who described it in this way:

As an ohmmeter, the device allegedly measures the electrical conductivity of the skin at the acupuncture points — called "meridians" in Chinese medicine, with each meridian corresponding to a different part of the body. The theory is that if there is an inflammation or blockage of the "vital energy flow" along these meridians, electrical conductivity will be altered. "This is where Western medical doctors have trouble because they don't recognise the body's energy system," Mr Alexander said.

The computer records these conductivity readings. The machine also allegedly sends out radio-wave frequencies to see how the client's energy fields react. For example, it could send out a frequency the same as that for Hepatitis B. The computer memory is said to have frequencies stored for 20,000 different viruses, bacteria, foods and other substances. How the American software manufactures had determined each of these frequencies was "a closely guarded secret", Mr Alexander said.

Then, once a decision had been made that a certain frequency would be beneficial to a subject, the computer could somehow imprint that vibrational frequency into a medium like water as a "remedy" similar to those used in homoeopathy. Mr Alexander insisted the machine was only an information-gathering tool which did not diagnose illness any more than a thermometer diagnoses illness. He said it was up to each practitioner what they did with the information.

Live blood analysis

The Newcastle Herald reporter then looked at alternative blood tests. She found that at least three Newcastle alternative health practitioners claim they can test for ailments ranging from food allergies to environmental toxins by examining a single drop of blood.

In one procedure, called "live blood cell analysis", blood is put under a microscope connected to a television monitor and analysed in front of the client while cells are moving. The consultations, which costs between $30 and $50, have concerned Hunter haematologists, who demanded they be held up to the same stand-

ards of proof and efficacy as traditional medical pathology.

The NSW Health Care Complaints Commission has also condemned the procedure. "Medical advice stated that live blood cell analysis has no scientific validity nor is it based on objective evidence," the Commission wrote in its annual report. "At best it is anecdotal."

Dr Arno Enno and Dr Ian Kerridge, haematologists (blood specialists) with Hunter Area Pathology Service, said they had never heard of the practice before *The Newcastle Herald* brought it to their attention. "I've been looking at blood cells for 20 years and I'd have trouble seeing some of the things they say they can see," Dr Enno said. "Alternative medicine has a place and people have a right to go see anyone they like, but I don't support this and I wouldn't recommend it and I would suggest people request further information before they spend any money on it."

Mayfield naturopath Lorraine Edwards, who performs the blood test on all her clients, acknowledged haematologists consider it "a load of rubbish". "This isn't recognised by science because they have their own parameters," she said, adding she made no attempt to replace more "complicated" conventional pathology.

A magazine article Ms Edwards uses to explain the procedure suggested it could assess the vitality of immune cells, show relative cleanliness of the plasma, indicate bowel health, body inflammation and liver function. But Newcastle gastroenterologist Dr Bob Batey said there is no way he knows to detect imbalances in digestive tract flora from looking at blood.

Ms Edwards confirmed that, after analysing the blood, she was able to sell clients alternative medicines to help with the problems identified or put them on special diets. Follow-up blood tests were then used to gauge improvement.

Last year, the NSW Health Care Complaints Commission upheld two complaints against an unregistered naturopath from outside the Hunter who used live blood cell analysis to make diagnoses. In the first case, the practitioner diagnosed a digestive problem as the result of cancer causing microorganisms and suggested $275 worth of vitamins and other supplements as treatment. The second complainant was diagnosed with probably early liver cancer, chronic fatigue syndrome, lupus and liver parasites. The naturopath suggested a $1000 treatment plan of liver tonic, dietary advice and urinalysis.

The Commission referred the complaints to the NSW Medical Board, the Department of Fair Trading and the Therapeutic Goods Administration.

Herbal medicine

The Newcastle Herald then discovered that use of herbal medicine has become so prevalent that it can no longer be ignored by local hospitals.

The overdose of an intensive-care unit patient from a toxic herbal broth has led to unprecedented new guidelines on use of alternative medicine in Hunter hospitals, Ms Fitzhenry found. Dr Andy Gill, who chairs a working group on the issue, said doctors were moved to act after an incident approximately six months ago. "A patient in one of the ICU units in the region had been brought in from outside a special broth or soup containing some alternative medicine ingredients that turned out to be quite toxic," he said, declining to give further details. "That was the spark, but it's been a problem that's been floating around for some time," Dr Gill, an ethicist and director of newborn services at John Hunter Hospital, added.

The ground-breaking draft policy is now being examined by State health officials and considered for publication in the prestigious *British Medical Journal.* "This is a major ethical issue that really hadn't been addressed," Dr Ian Kerridge, a medical ethicist and haematologist at Newcastle's Mater Hospital, said. Instead of banning unorthodox medical therapies, the policy recognises their growing prevalence in Australian life - with an estimated 50% of the public using alternative medicine.

Dr John Stewart, a cancer specialist at the Mater Hospital, estimated that virtually 100% of his patients used some form of alternative therapy. A big difficulty for hospitals had been patients' reluctance to admit they were using alternative medicines, which created unknown risks and potentially dangerous interactions with conventional drugs. "There was a series of cases at the John Hunter of people who experienced side effects from complementary therapies and it became clear that there was no rational way of dealing with it," Dr Kerridge said.

The new guidelines emphasise a "neutral" position that respects patients' rights to choose their own treatment and encourage a non-threatening disclosure process. "The traditional stance that all complementary medicines are 'quackery' and should be largely ignored or denigrated is no longer tenable," policy documents state.

Education workshops for health professionals and students have been set up on alternative medicine and how to approach it. "Rather than being confrontational, we're trying to bring the two sides together," Dr Gill said. The policy encourages the creation of a database of complementary medicines to help ascertain possible risks and benefits. Dr Kerridge said it was inappropriate to simply ban or turn a blind eye to alternative medicine in hospitals, since that approach hadn't been effective.

Government regulation

At the government level, several moves have been taking place to address problems with unscrupulous alternative practitioners, *The Herald* also found.

A joint Parliamentary committee has recommended legal changes to allow public naming of unregistered health practitioners found guilty of misconduct. Alternative health-care providers such as naturopaths, herbalists and homoeopaths cannot now be disciplined, forced to refund money or named by the NSW Health Care Complaints Commission. Often, their only penalty is a nasty letter.

And that's becoming a big concern in a burgeoning Australian industry worth more than $1billion a year. "Once a complaint has been substantiated, my view is that we should at least be able to name them," Commissioner Merrilyn Walton said. "It's to the public benefit: why should I not know if a certain person has been chastised? "But right now, there is nothing we can do."

Wallsend MLA John Mills, who chairs the committee, said an inquiry into the issue was prompted by Ms Walton's repeated concerns over her inability to protect the public from unprofessional treatment by unregistered practitioners.

In the Hunter alone, there were more than 200 practitioners in 1997 listed with the Australian Traditional

Medicine Society - an organisation of trained therapist attempting to address issues of standards and ethics. However, the Society bears no legal or professional responsibility for the actions of individual members. And countless others are not listed at all.

The NSW Health Care Complaints Commission was set up five years ago to investigate public complaints against health-care providers, including those in alternative medicine. With no power to initiate disciplinary action or restrict practice, the Commission must refer substantiated complaints about doctors and nurses to their professional registration bodies. But in alternative medicine, there is no such thing.

In its final report, submitted in December, the joint committee has recommended establishment of an umbrella law that would create a generic form of registration, generic complaint and disciplinary mechanisms, a uniform code of conduct and entry criteria. "I would hope it would mean you can't call yourself something unless you've satisfied some basic criteria," Ms Walton said.

Critics worry registration risks bestowing legitimacy on health-care practises that have no proven credibility. But Mr Mills said the inquiry was never about efficacy of the treatments offered by unregistered practitioners. "Although this issue came up frequently in the course of the inquiry, the committee has been careful to focus merely on complaint handling and disciplinary issues."

Meanwhile, concern over misleading claims for many alternative therapeutic devices has led the Federal Therapeutic Goods Administration (TGA) to wash its hands of control over several types of products. "In many instances there has been no scientific basis for the performance of the device and the claims made in respect of the performance might well be regarded as misleading for consumers," a TGA bulletin reads.

The problem stemmed from the way products are listed. Unless a therapeutic device involves high risk, it is checked only for general safety and quality of manufacture - *not* whether it actually does what is claimed. Dr Leonie Hunt, director of the TGA's conformity assessment branch, said they receive thousands of applications each year for listing of therapeutic devices. And unless a device is found unsafe, the TGA has no choice but to list it. "This action lends credibility to the claims ... implying a level of endorsement by the TGA," the bulletin states.

In response, the TGA last year decided to expand the types of devices exempted from its control, leaving the Australian Competition and Consumer Commission (ACCC) to deal with them under its general powers to police false or misleading advertising.

No longer considered by the TGA to be therapeutic goods are:

> Devices that claim to emit, measure or absorb vibrations, waves, particles or energy for which health benefit claims are made, the principles of which have not been scientifically validated.
> Non-invasive locaters of or stimulators for "acupoints" or "energy meridians".
> Non-implantable devices improving comfort, enhancing relaxation, exercising, improving muscle or skin tone, easing minor aches and pains, fatigue or tiredness (due to normal ageing or day-to-day activities) or stimulating circulation (via exercise or the application of heat or massage).

If a device is listable, it must comply with the Therapeutic Goods Advertising Code which prohibits incorrect statements, unverifiable claims or design which arouses unwarranted expectations of product effectiveness. In addition, the code specifies about 80 diseases and conditions that cannot be referenced in an ad for therapeutic goods - either directly or by implication.

Summary

The Newcastle Herald series ended with the following feature story where some of the broader issues were discussed. Most of the devices mentioned were brought to the newspaper's attention by the Hunter Skeptics member.

> The devices encompass anything the human brain can imagine.
> Radio waves that heal from a distance of 12 kilometres.
> Coloured lamps using the therapeutic effects of light rays.
> Machines that create "colloidal silver" to boost immunities, herbal creams to cure skin cancer, electronic "zappers" to cleanse the blood.
> Magnetic field inducers, organic juice with "amazing" healing properties, crystal ionisers to oxygenate the body.
> Even a machine manufactured in the Hunter that eliminates "radiating frequencies" from your car engine to combat driver fatigue.
> No one mentions snake oil any more.

The explosive growth of the alternative or complementary medicine industry has Australians spending twice as much as they do on conventional drugs - more than $1billion a year according to a 1996 study by a University of Adelaide professor. The Australian Competition and Consumer Commission last year identified 195 local Internet sites offering cures for everything from cancer and AIDS to arthritis.

With the plethora of devices, treatments and techniques on the market, it is difficult for the consumer to separate the legitimate from the ludicrous. And with many desperately or chronically ill people willing to try anything, the normal rules of "buyer beware" become difficult to apply.

As government looks for a way to regulate the burgeoning industry, conventional medical doctors are beginning to point the finger of blame back at themselves. In many ways, it is the realities of modern scientific medicine - along with financial disincentives of the Medicare system - that have pushed 50% of Australians to the naturopathic side of the fence. "Our own profession has a lot to learn from what's going on: that people are responding well to others who just spend some time with them and listen to their troubles," Newcastle University medical professor Bob Batey said. "If that means wrapping them all up in red flannel with an onion, then so be it. The main point is that they're feeling better and feeling better is half the struggle in some of these diseases."

Prof Batey, a gastroenterologist, conducted clinical trials of a Chinese herbal medicine a few years ago, thinking he would disprove it once and for all. To his surprise, he found the medication seemed to improve liver enzyme production in Hepatitis C patients. The experience, he said, had left him open-minded about complementary therapies - as long as there was some credible evidence to back them up. "I'm the first to admit that we are, with our scientific approach, a long way from understanding everything that affects health

and the body and there may well be something to theories of magnetic and electronic health products for all we know," he said. "But the body is generally consistent enough in its response to things that we should be able to document these effects ... There are a lot of companies making a lot of money out of this and it's usually completely unproven devices."

Those pushing for the acceptance of complementary medicine as a legitimate component of health-care delivery are also concerned about the unscrupulous giving everyone else a bad name. "It is difficult for members of the public currently to make informed decisions," Dr Stephen Myers, a naturopath, medical doctor and director of Australia's only on-campus, full-time university degree course in natural and complementary medicine at Lismore's Southern Cross University.

Dr Myers said there was no reason complementary therapies should not be able to provide proper evidence-based research to support their claims. "There are so many techniques and therapies - some with little legitimate basis and some which may well stand the test of time," he said, adding that the public is currently better off choosing therapies with long-standing track records such as herbal medicines and nutritional therapy. While he said it was clear Australians had "voted with their feet" in favour of complementary medicine, a greater degree of accountability was now required by government on the industry - regulated standards, registration, disciplinary procedures and school accreditation.

Many in the orthodox medical world oppose such moves, worried they will only give the unscrupulous undeserved credibility. Yet with no signposts to guide them, the public faces an unbelievably disjointed mass of products and services. In addition, there are dozens of schools and colleges purporting to teach different aspects of complementary medicine, racks of magazines, oodles of books and hundreds of organisations. In the sector of traditional Chinese medicine alone, there are 23 separate professional associations in Australia.

And electrical healing devices abound. Newcastle biomedical engineer Bruce Morrison, who chairs the National Panel of Clinical Engineering, recently tested an alleged electronic healing device. What he found was a simple bog-standard square wave oscillator - with different current frequencies in two supposedly identical units. "My conclusion was I couldn't see how it could possibly do any good for anyone," he said.

Yet when his findings were published in *Electronics Australia* last year, he received angry telephone threats - not public praise. Undaunted, Mr Morrison plans to examine several more devices this year. "We're concerned that there seems to be no satisfactory method of regulating these things," Mr Morrison said. "And in the absence of weed killer, weeds grow."

Prof John Dwyer, head of medicine at the University of NSW, said some alternative medicine therapies were "nothing short of a rip-off". "The question is simple," he said. "The one thing we know in modern medicine is how to test something. If you say a machine can cure or treat something, then this is testable. Anyone can come up with an idea, but it's up to them to prove efficacy. Yet now, claims are not being challenged because no one is holding them up to any sort of standard."

... Arkeology from p 7

Tennessee as a dental anaesthetist (an anagram of which is "Send a latent atheist" - imagine what that proves.) He has no formal training in archaeology, and doesn't seem to have any informal training in it either.

So who is this Wyatt guy? He may be disdained by Skeptics, but he is positively reviled by creationists; he is getting creationism a bad name. The John Morris creationism group has "ripped him up one side and down the other" and so has Ken Ham's group Answers in Genesis; the Australian manifestation whereof, formerly the Creation Science Foundation, have had a go in the form of several articles by Dr Andrew Snelling. The CSF have their own Ark, in a different place. Snelling has left AiG, formerly the CSF, and is now with the rival organisation ICR in California. Gosh this is complicated. Strange bedfellows indeed, the Skeptics and the CSF - but when dealing with people like Ron Wyatt it becomes a strange world.

Wyatt runs a non-profit museum in southern Tennessee, in a former gas station at the Cornersville exit on I-65 S; this is said to make Baugh's Creation Evidences Museum look like the Smithsonian by comparison - and even creationists are profoundly embarrassed on visiting that latter institution.

A selection of websites, either by or about Wyatt:

www.biblerevelations.org/ronwyatt.htm
www.prophezine.com/search/database/is23.5.html
www.ronwyatt.org/mgt/index.html
www.biblerevelations.org/ronwyatt/miscella.htm
www.anchorstone.com/wyatt/about.html
www.biblerevelations.org/afewwords.htm
www.tentmaker.org/WAR/Coffin-Merling.html
www.pilgrimpromo.com/WAR/

I emailed one of these creationist sites to point out a couple of broken Web links, and got a reply:

> Thanks, I'll inform the web manager tomorrow. Haven't heard from Wyatt in some time although I get letters from his supporters damning me to hell every now and then. :-)

So popular was this talk at a hired venue that another bonus presentation was arranged at the World Vision HQ, next door, for the following Saturday. I wonder if people who have sent money to World Vision know what they are stooping to; I will cease the practice.

Politically it has been said that "these people make the other creationists look like pinko socialists". An example: Wyatt, quoting out of nowhere in particular *Revelation 16:12,*

> And the sixth angel poured out his vial upon the great river Euphrates; and the water thereof was dried up, that the way of the kings of the east might be prepared

said that with modern armies being able to cross rivers easily as if they were dry land, this indicates a forthcoming attack against Israel by the Iranians and suggested that the USA should immediately occupy or intensively bomb Iran and Iraq if we are to stay safe from the evil empire. It was not clear that he knew the difference between these two countries - he certainly didn't care. The audience, faced with a speaker looking both cute and authoritative up there on the stage and having a fireside, home-boy manner remained impressed, and nobody disagreed. So now there are a few hundred more people in Melbourne alone, more willing to nuke those poor old Arabs.

I wonder what God thinks?

Investigation

Above and beyond (credulity?)

Harry Edwards

This article is my response to Ian McRae who, on radio 2SM on 19 September 1998, invited Skeptics and nonbelievers to express their views on the *Above and Beyond* programme featuring medium Margaret Dent. Despite several hours unsuccessfully attempting to contact the programme on air, a written response remains my only option. Had I been successful in contacting the programme while on air, my observations would have been the same.

Should McRae and/or Dent disagree with my findings, then I challenge them via the medium of a mutually agreed upon test to prove the truth or falsity of Dent's claim to be able to communicate with the spirits of the deceased. In my opinion, such a demonstration would prove beyond any reasonable doubt my contention that she cannot do what she claims.

That belief in life after death is widespread is evidenced in a recent report from America posted on the *Ozemail Weekly Newsletter*. (25/9/98)

> The hardest part about the death of a loved one is the finality of it. When grieving over the loss of someone special, many wish they could communicate with that person just one last time. Some people believe they are actually given that privilege. The After Death@tv.Com site has been established by the makers of a documentary film about the experience known as After Death Communication (ADC). Over 40% of Americans have experienced some sort of contact with a dead loved one, and the documentary producers want to hear from everyone who has an opinion on the subject. Is ADC merely an extension of our grief and are we victims of our own self-deception? Or do the myriad of stories about ADC and people who claim to have experienced ADC mean there is some truth in the phenomenon? You can post your view or ADC story on the site, or just read about the ADC experiences of others who believe they have "found the link between Heaven and Earth".

What should have been added to this posting is that many self-styled mediums are cashing in on people's grief and beliefs and are finding it a lucrative business. Among them, in Australia, Margaret Dent, Ruth Wilson, Bridget Pluis and Margaret Bowman.

Many readers will be familiar with the name Margaret Dent, Australia's answer to the late Doris Stokes. Australian Skeptics first clashed with Dent (introduced on the programme as a 'psychometrist') during the recording of a Foxtel TV special about celebrities and their psychic experiences. (see *the Skeptic* 18:1, p 9-16).

Dent, a self-styled medium, claims to be able to instantly communicate with the spirits of the departed. Her technique is basically the same as that of the late Doris Stokes (exposed as a fraud, incidentally) and so pathetic in its presentation, that I find it incredible that anyone can take her seriously. Yet that many people do so is evidenced in a new radio programme *Above and Beyond*, a Saturday night feature on Sydney's 2SM. This radio station promotes the programme as one ostensibly seeking evidence of survival after death.

Dent invites listeners to call in and she supposedly solicits messages for them from their departed friends and relatives - and even their dead pets. One caller was a 14 year old girl who, after listening to Dent, now believes in the existence of a heaven where her dead pet mouse resides. Another caller was told that a spirit was haunting her washing machine.

Stand-by spirits

Dent claims in most cases that she can 'see' the spirits and in many instances alleges that they are standing next to her or are seated in the studio. Most of her pronouncements follow a general line and the alleged conversations with the departed are peppered with *ums*, *ers*, *ahs*, *goshes*, *OKs*, *you knows*, and long pauses. All enquirers are told much the same - that the spirits of their departed loved ones are looking after them, are with friends, and are happy and content in their new domain.

Personally I see an *other* world occupied by thousands of millions of spirits with nothing better to do than twiddle their thumbs a very boring place to be. I guess, for them, being on Dent's programme would be a highlight in an otherwise dull existence - perhaps that's why they hang around.

Dent's amazing faculty (so she claims) enables her, simply by knowing the given name of the caller, to establish communication with any nominated deceased friend, relative or pet. Thus when caller "Sue" asks if her late grand-dad has a message for her Dent is instantly able to contact that particular "grand-dad's spirit" out of the millions of grand-dads who have passed on, many of whom no doubt had granddaughters named Sue. In every case, the spirits apparently just hang around at the medium's beck and call at the scheduled times of the programme. There is never any attempt by Dent or the caller to authenticate the identity of the spirit, so the trite conversation has to be accepted at face value.

The following excerpts are a few examples from some of the programmes.

> **MD.** Hello James. Who are you wanting to hear from?
> **CALLER.** My mother and my sister actually. My sister died back in March and a few weeks later my mother died. My sister had cancer ...
> **MD.** OK, shut up James, let them tell me. Your sister's going to do the talking to start with ... I'm a bit overwhelmed here because of mum. Mum just loves you to bits you know, she keeps saying "I'll do it, I'll do it", she's trying to get herself together here 'cos she's all excited and your sister said "oh come off it", it reminds me a bit of Darby and Joan between these two, a deep love but the personalities clash, and they're both control freaks actually,

Dent in every instance asks the callers from whom they wish to receive a message. Rarely is she given a name, just the relationship. In the above example she seeks "James' mother and sister" and supposedly gets

them both immediately. How many James' mothers and sisters are there in the other world?

James responded with his "mum and sister" and blurted out that his sister had died from cancer. Although this would have normally drawn a sympathetic response from most people, it was completely ignored by Dent. However, as it will be seen, it provided the medium with some useful information to feed back later in the conversation.

"Mum just loves you to bits." Isn't that what you would expect and want to hear? I can't imagine any medium saying mum says "I hate your guts you little bastard" even if it was the truth. After repeated attempts to get you, as a child, to do something how many times have you heard *your* exasperated mother say *"I'll do it, I'll do it"*? And isn't there always some clash of personalities to a lesser or greater extent in *every* family?

Even James saw nothing unusual in that.

Later we have:

> **MD.** Your sister is so pleased about her hair, she said "look at my hair, tell him there's a photo of her ... you and her together actually, and it was before she got really ill, and her hair was really full, short though you know, but she wants you to remember her like that. A funny thing, you know what? She just held up a Teddy Bear, and she sighed. I don't know what that means she got a bit emotional.

Dent is talking about the sister's hair. She has assumed that as a cancer patient she would have been receiving chemotherapy and hair loss as a result. She refers to a photograph which would have been taken prior to the illness and states the obvious.

Then she says the sister held up a Teddy Bear. While the medium saw no significance in this, the caller suggested the answer.

Dent goes on to say, *"They're both emotional they're a little bit in shock too because they've actually have someone who can hear them; being me. She showed me herself standing besides that baby and the baby can see her. How old is the baby?"* The caller replies, "the boy would be about twelve months old."

Building on this information Dent says, *"there's an interesting little thing if you can do it when Daniel can talk. Bring out a photograph of his grandmother and see what he says. You can always prove these things you see when I say she's around and children's eyes are always open spiritually."*

Despite having been told the baby was a boy the "see all" "hear all" and "know all" medium had to ask *"was the baby a boy?"* and *"how old was it?"*

Now comes an intriguing point and one suggestive of prior information. Dent refers to the baby by its name - Daniel. Nowhere in the conversation with either James or the spirits is there a clue to the baby's name, and even more telling, the medium doesn't claim credit for a hit. Neither did the caller express surprise. Even more noteworthy, is the fact that McRae, always quick to praise Dent's remarkable "hits" didn't comment either. Likewise when Dent said *"and then you have two children James?"* Although this was framed as a question the intonation indicated that she knew this to be a fact (prior knowledge?) and again no credit was claimed. Dent then asked, *"who's Betty?"* then "*Elizabeth?"* The caller had no idea. This was followed by a reference to flowers. *"Your mum likes flowers, - pansies, mum's showing me pansies she's telling me you need to brighten the place up with flowers*".

The conversation then turned to a question about uniforms. "*Who's in the police force James?*" The caller responded in the negative with, *"Well no not in the police force, the eldest brother and myself are fire fighters and the other brother is an ambulance officer."* Dent wriggles out of this with *"I want the ambulance officer, his uniform looks like the police uniform doesn't it? What happened she said something about work and then showed me the uniform."*

The names Betty and Elizabeth didn't strike a chord so the subject was changed to *"your mum likes flowers"*. Does anyone know a woman who *doesn't* like flowers?

Despite the medium's ultra-keen psychic eyesight, she was unable to differentiate between a police uniform and an ambulance uniform and went on to make a few patronising comments and predictions.

It can be established from the above (and from later broadcasts) that Margaret Dent indisputably claims not only that she is conversing with the dead, but she can actually see and feel them. The former faculty is evidenced by, *"mum keeps saying" - "your sister said" - "she said to me" - "she* (mum) *just said to me" - "they* (mum and sister) *actually have someone who can hear them, being me"*, and so on. The second faculty, that the medium can also see the spirits, is evidenced by phrases such as *"she held up a Teddy Bear" - "mum's showing me pansies" - "she showed me herself standing by the baby"* (a photograph?), *"here she is* (the caller's mother) *she just smoothed out her frock and sat down in front of me"* and "(mum) *showed me the uniform*".

In other instances Dent "saw" gladiolus', a bracelet, a pack of playing cards, a scene, a bouquet of flowers, a horseshoe, highly polished shoes, a skateboard, a poker machine, coins, Bex powders, a uniform, marbles and a roast leg of lamb. A third faculty - tactile communication, was evidenced when a spirit supposedly patted Dent's cheek. The medium further claimed that spirits who have a scar, a rash, or who have been burned, manifest those signs or injuries on her person when speaking to them. Would she also lose a leg when speaking to an amputee?

Now we can ascertain from this that there is nothing wrong with Dent's clairaudience and her tactile sense, and that her "psychic" eyesight is good enough to recognise just about anything she fancies.

More misses than hits

To reiterate *verbatim* two hours of similar nonsense would be tedious to say the least, test my patience to the limit and make for boring reading. The following conversation with Brenda however, should serve as a further example of Dent's inept, inaccurate and amateurish mediumship.

> **MD.** Hello Brenda. Who are you wanting to hear from?
> **CALLER.** My brother-in-law.
> **MD.** Your brother-in-law. How long has he been gone?
> **CALLER.** Three years.
> **MD.** Now he's showing me a garage and in the garage is his things, now there's a box with his things, I don't know what he means 'things'
> **CALLER.** I've got a collection of everything he's sent me, cards and stuff.

Dent's opening gambit would fit just about anyone. Most people when they die leave something around the place, and what better than a collection of junk in a garage. However, although the caller did have a few mementos, they were not in a garage.

The conversation turned to grandparents of whom the caller had no knowledge leaving Dent on safe ground to say as she pleased.

The caller then puts Dent on the spot by asking whether her late brother-in-law had met up with a nephew who had died a year after him. When the caller exclaimed "*Oh God*" however, Dent realised that she may have hit on a sensitive subject, and was quick to sign off before she got in too deep.

A good memory is not one of the medium's faculties, she once referred to the caller's brother not her brother-in-law.

The medium waffled on about astral travel, something which the caller (obviously a believer) had no option other than to accept. She then brings up the subject of a St John's Ambulance First Aid Course. This flops and Dent twists it around to provide an answer.

Again it should be noted that despite her wonderful psychic gift Dent still has to ask a lot of questions.

Another caller, Carol, wanted to get in touch with her late mother. Dent's opening gambit was, "*Who has asthma Carol?*" The caller didn't know. Undeterred Dent said, "*I'll tell you who it is, 'cos she was there to meet your mum when she went over, it's an aunt, so it would be a great aunt of yours.*" The caller still didn't have a clue.

Dent continued with a whole host of patronising comments, followed with other spirit characters drawn in to the "conversation", none of whom were familiar to the caller.

Likewise, Shelley, who wanted to know what a late workmate had thought of his funeral, was led on a merry-go-round in which she supplied Dent with all the clues and information.

In this episode Dent slips up early in the piece by saying that the spirit was overwhelmed before the funeral. Clue followed clue as the caller disclosed that it was an unusual funeral, jazz was involved and the eulogy given in the cemetery. Dent, still not quite sure what to say next, sidesteps by saying there's something to do with a new birth. On the wrong track, the caller explains all the dead man's wife wishes to know is whether her late husband is happy. Dent provides an appropriate answer. Ignoring the next question, Dent hears the spirit singing but can't recall the title of the song but does know that the artist is dead. The caller provides the answer and Dent gets a hit. But then who wouldn't associate Johny O'Keefe with *Shout* - a song he made famous?

Incidentally, all callers are told that the spirit enquired after is happy. In ten long monotonous hours listening to this rubbish, not once have I heard Dent say that the spirit is unhappy.

Another enquirer was Bill, who wanted to hear from his mum and pop, and in this instance I have just noted some of the misses - there were no hits.

MD. What's the story about fish on Friday, what's that?
CALLER. I don't know.
MD. Who was the large lady who was close to mum?
CALLER. I don't know

Not much luck with Dianne, either, who wanted to hear from her son who died four years ago.

MD. They're (spirits of caller's sister and son) telling me that there's a big celebration coming up. Do you know about this, coming up in the next two months, a birthday or an anniversary?
CALLER No, I'm not sure about that.
MD. I'm getting the initial "L" Laurie or Lauren or something like that. I don't know whether it's a man or a woman.
CALLER. No, I don't know.

I wonder why the spirits have to resort to using single letters of the alphabet to signify a name and are so dreadfully vague at times?

Other misses included:

Barbara who didn't feel a breeze through her hair or have a dark-haired friend;
Michael who didn't recognise a bracelet or had a child relative in poor health;
Bill who wasn't moving and didn't know anybody by the name of Richard;
Susan who didn't know Alice or Peggy;
Celica who didn't know a Derek or an Eric or a dead relative who had polished shoes;
Pauline who didn't know an Edith or a Gladys;
Jan who had no plans to move;
Peta, who, (like Bill), was not familiar with a "big lady"; and
Karen whose "elderly" aunt with earrings died at the age of 38 with unpierced ears.

The same excuse was given each time for these misses - the caller was asked to think about the names throwing the burden of proof on them. If they failed to come up with the answer, then it was not the fault of the medium.

My favourite blooper consisted of the medium waffling on about a caller's dead dog. Dent's description of the deceased hound kept changing its size and breed as the medium strove for a hit, and the animal finally turned out to be a *horse*.

Investigation, second phase

Those who deceive the gullible and prey on the vulnerable are not likely to accept a challenge to prove their claims of extraordinary powers. Under these circumstances, investigators who wish to alert the public to dubious activities have few options and, to prove their point have to resort to subterfuge.

I co-opted half-a-dozen Australian Skeptics' committee members and asked them to call *Above and Beyond* with a request to contact the spirit of a departed one. They were instructed to give their correct names and to answer all questions truthfully.

The messages they wished to receive should be answers to carefully phrased questions. The answers would be known only to the deceased and the enquirer, and should confirm whether or not the medium was really communicating with the nominated person.

This proved to be a little more difficult than expected. In my case continuous rapid dialling for two hours (on five successive programmes) failed to get other than the busy tone.

During the programme, the producer, Ian McRae, invited Skeptics to call in and give their views. In view of the difficulty in raising the programme, the odds would be the same as buying a lottery ticket and winning first prize. McRae also suggested that those who could not get through could write to 2SM at PO Box 1270, North Sydney, and they would endeavour to answer questions. This to me seemed a viable option and a letter was dispatched forthwith.

I pointed out the difficulty of contacting the programme by telephone and posed the following questions:

I am writing a family history but have little or no information on my paternal grandfather apart from knowing that he was born in 1869 and was an engineer on an auxiliary sailing ship plying between England and Australia.
Perhaps you can contact the spirit of my grandfather and ask where, when and how he died.

There was no reply.

Breakthrough

In the meantime, Karen Stollznow, the only successful Skeptic to get through to Dent, provided the following account of her conversation with the medium:

On my fifth attempt I gained access to 2SM's reception and was placed in a queue of the fortunate (?) to have an audience with medium Margaret Dent. I was first asked for my Christian name, which I gave, and then asked if it would be greedy of me to request that Margaret attempt to 'contact' several deceased people that I had known. I was informed that callers are granted only one question although my other inquiries may inadvertently be dealt with in the course of the conversation. I was then asked the name of the deceased person I wished Margaret to contact. I responded; 'my aunt Leigh' who died about five years ago. Aunt Leigh was, in fact, my Uncle's girlfriend of seven years, and subsequently his fiancee and de facto for a further seven years. She was never his wife, however. I was also asked when the person had died, to which I truthfully answered 'five years ago'. Finally I was asked the name of the suburb in which I lived. Told that I was the third caller in line I was placed on hold.

During the conversation that followed, Dent referred to my aunt Leigh "*as an elderly lady, well she was elderly when she passed over*" and that "*she's showing me gladiolus, you know, the flowers gladiolus?*"

She failed to be ethereally enlightened to the fact that Leigh was not literally my aunt, nor did I ever even affectionately call her 'Aunt'. She then announced Leigh to have been *"elderly when she passed over"* when in fact Leigh died at the age of 38. Later Dent reported that aunt Leigh "*still likes earrings*". Although Leigh may have liked earrings it was never to the extent that she had her ears pierced!

Then came the usual "*does the name so and so mean anything?*" In this instance "Barry". It didn't.

Finally came the promised message from the other side, "*She* (Leigh) *says that over the last two years things have taken a turn in his* (the de facto husband) *life that she's very pleased about*".

This in fact is a gross misstatement. Unfortunately my uncle has succumbed to deep depression and personal misfortune, most specifically in the last two years.

One can ask if verbal messages can be conveyed why didn't Leigh initially interject and correct Margaret concerning her genuine titles and true relationship with my family?

They were never married. Incidentally, why would she often present images to the medium rather than speak? The meanings of mere images could be cryptic and misconstrued (and perhaps that's why they are used).

The discourse with Margaret did not elicit personal nor inside information that would categorically prove, or even suggest, that she could contact the deceased in this instance. Margaret's words were replete with advice, assumptions and comforting assurances, though no real insights nor relevant messages. The correct statements she made were few and were lucky guesses as probability was on her side. The erroneous statements she made were many, and completely opposed to the truth. It seems as if, inadvertently, Leigh did pass on a message to me and that is that Margaret Dent's 'talent' in respect of necromancy, is questionable.

Trying another tack

So much for Karen's "success". A week after writing for details of Dent's solution for those unable to get through to the programme, I received the following standard letter.

9 October, 1998
Thank you for your enquiry. Let me take this opportunity to explain my credentials.
I am a professional medium who became aware of my psychic ability at the age of three. I have spent years proving the existence of people surviving the transition called death. I do this by communicating with departed souls by a combination of visual images and hearing. These souls pass on messages of a personal nature that only family and friends would understand.
In the past many people have requested a personalised reading. As this can often take up to one and a half hours, my readings are booked up to two years in advance. What with radio and television commitments and a new book on the way, there are not enough hours in the day to satisfy everyone.
Now there is a way. Every three weeks I set aside time to record short personalised readings, whereby I answer up to five questions of your choice and record the survival evidence on a cassette for you to keep. The cost of this is $34.50 plus postage/handling.
On side two of the cassette, my radio co-host, Ian McRae, guides you through a preview of the Reunion Sessions CD. This is a very special project where Ian and I recently communicated with celebrities like Elvis Presley, Walt Disney, Princess Grace, John F Kennedy and Peter Allen. They all give survival evidence and what they say will inspire and uplift. You may wish to order now or after you have heard our preview. The choice is yours.
I hope this letter makes things clear. If you wish to go ahead, just fill out the order form together with your five questions, mail it back to me and I'll do the rest.
With love and light,

Margaret Dent

In her own words, Margaret Dent claims and advertises that she is able to communicate with "departed souls" and pass on messages from them.

Information to hand indicates that Dent's private consultations at $100 per session are booked out for two years; that a CD is available for $19.50 in which she purports to speak with J.F.K., Elvis, Princess Grace *et al;* and for $34.50 + $5 postage she will answer five questions on a cassette.

Obviously there is money to be made out of this talking to the dead business; no wonder mediums and others who make extraordinary claims shy away when challenged to prove the truth of those claims. Exposure would be bad for business.

I filled in my application for a personal reading, asking the same three questions as before relating to my grandfather - his date, place and cause of death. Three weeks later I received a cassette tape and a letter.

In her reply Dent admitted that this was *"a tough one"* but nevertheless provided certain information allegedly from my grandfather on the cassette tape. I was told, *inter alia*, that he died in a boat accident, in Plymouth in 1901. She also returned my money.

After reading the letter I concurred with Dent - yes,

it was a tough one. Questions requiring specific answers are not to your average spiritualist's liking. However, the claim to have contacted my paternal grandfather *was* quite specific.

Round and round it goes

Despite the incoherent, inarticulate and inaccurate response, we can deduce that Dent (or at least so she claims) contacted my paternal grandfather and was told that he died at the age of 32 years in 1901 at Plymouth, in an accident somehow connected with a ship's bulkhead. We were also told that around the age of 28 or 29 he was preparing to emigrate. So we did get specific answers after all, albeit all wrong. Obviously Dent is wary that these types of questions (she calls them "family tree" type questions) can make her vulnerable and, equally obviously, her response was woven around the information supplied to her. However, if after many years, to use her expression, *"souls progress upwards"* and *"communication becomes more difficult"*, to double check, perhaps Dent could try again with some more recently deceased relatives? Without a doubt the spirits of my late father and aunt (my paternal grandfather's children) should be able to provide the answers to my questions.

I wrote again thanking her for the letter and tape and again enclosed the postal note for $39.50. I provided some pertinent information regarding my late father and aunt and asked that their spirits confirm what Dent had told me.

Having been led to believe that there is no way I can check the information she has or will provide, and therefore she is free to fantasise without fear of contradiction - or so she thinks. After sending a reminder four weeks later I received a short letter from Dent asking me to contact her by telephone.

Two days later (3 Dec) I had a call from Dent. This time I was given a little additional information, but basically the same wrong conclusions had been drawn.

Significant however, were phrases such as, *"I've sat down many times with your relatives ... they are not good at dates. The thing is I've never had this problem before to be honest with you."*

"Your aunt's a chatterbox." ; "I've got to piece stuff together" and *"I'm sorry about this mess around but I can't create it."*

I must admit that after this conversation I was feeling a bit guilty. Dent seemed a nice enough person and here I was doing my best to discredit her. The feeling passed quickly, as I recalled her fantasising and guesswork, and that she charged $100 to recite this sort of nonsense to those gullible enough to believe in her so-called mediumship. Even this short conversation was replete with inaccuracies.

Far from being a chatterbox and vague about dates my aunt was a reserved woman with a head for dates and places. Her hobby was genealogy - once tracing the family-tree back to Elizabethan times. My father, too, had an excellent memory and could recite the names of every king and queen of England since William the Conqueror, including the years during which they reigned. When asking whether the date 1901 meant anything, Dent evidently forgot that she was the one who came up with that date in the first place. It also didn't register that, using her dates and the information I provided her, my father must have been born four years after his father died Her stab in the dark with "Surrey" which she "assumed" to be in England was also way out.

While I can recollect my relatives living in Kent, Sussex, Cornwall and Buckinghamshire at various stages of their lives, none ever lived in Surrey. Regarding Dent's excuse that communication becomes more difficult the longer a person has been dead, this seems rather strange given that on every programme I have listened to she has had no difficulty whatsoever talking to other grandparents no matter how long deceased, and in one instance, a great grandmother. I thought Dent's final comment was hypocritical, even blind Freddy could see what she's doing.

On 11 December I received a refund cheque in the full amount and a brief apology.

"Once again, I am sorry I could not be of more assistance to you."

What if?

Let's assume for one moment that Dent's claim to be able to communicate with the dead had some validity. Consider the ramifications. It would revolutionise crime detection around the world and provide the means to more accurately record history.

The deceased victims of violent crimes could identify their attackers. The missing (presumed dead) Beaumont children could be found, and other unsolved mysteries such as the Bogle-Chandler and the Carolyn Byrne suicide/murder cases would no longer be enigmas. Innocents wrongly accused of murder could be exonerated by contacting the deceased victim, and the fate of missing persons believed dead could be confirmed one way or the other. A mother's anxiety could be put to rest, when a child goes missing, by Dent contacting the child's guardian angel. Disputed wills could settled by the direct intervention of the benefactor. The benefits to the community at large are almost endless.

The truth about historically contentious events and personalities would, at last, be revealed, and the unknown fates of millions who have been killed or vanished from the face of the earth in endless wars and natural disasters would at last be known. Long lost cities, buried treasure and shipwrecks could no longer hide from archaeologists and explorers, and the disappearance of ancient civilisations would no longer tantalise the intellect. The locating of crashed aircraft in difficult terrain would also be simplified and the reason for the crash known by contacting the dead pilot. Religions could be examined in the light of first hand knowledge, and history books would no longer be the result of an author's biased perceptions or guesswork. Perhaps at last truth would prevail.

Surely the aforementioned would be more edifying and bring far greater comfort to far more people than being told that one's late grandmother was happy in a world hereafter. Finally this century's most persistent rumour could be laid to rest - we could ask Elvis himself.

Conclusion

Throughout the programmes, Ian McRae, the co-host, frequently referred to Dent as "marvellous", "so accurate", "wonderful", "a genius" and "a legend". McRae was quick to pick up on the hits (average 1 in 10) and either glossed over, or made excuses for, the misses. The hits in most instances were lucky guesses or comments based on generalisations.

Callers on Dent's radio programme are only required to give their first names, their relationship to the deceased person they wish Dent to contact, and approximately how long ago they died. In my case Dent was given the full names of three deceased relations together with other information. It would seem, however, that dates are a medium's Achilles' heel - something to be studiously avoided to avoid exposure. In view of the fact that we are led to believe the spirits can communicate the most mundane information on cue, it seems remarkable that they are struck dumb when it comes to remembering significant times in their lives.

It is patently obvious that given the answers to my questions, (1) Dent never contacted my paternal grandfather, father, nor aunt and (2) she used the additional information supplied her around which to weave a fanciful story on the assumption that I would be unable to check it for accuracy. Her conscience (or guilt) evidently getting the upper hand she returned my money. This also eliminates the possibility that a dissatisfied client may take legal action against her for not fulfilling a contract.

This is possibly the only time in Dent's 20 year career as a medium/necromancer that she has been put to an objective test, and she failed it comprehensively.

Dent is making what can only be perceived as false claims about her ability to communicate with the dead. By advertising those false claims in the print and electronic media, and by indulging in trade and commerce whereby she derives an income, I believe there are grounds under which the consumer protection authorities could, and should, take action .

As an aside and for those who would like to know the correct answers to my questions. My paternal grandfather died in London during the influenza pandemic of 1918. He was 49 years of age.

The response

As is my custom following an investigation, a copy of the original article was sent to Ian McRae and Margaret Dent and comments invited from them.

Instead of Dent and McRae defending their claims I received two letters with a private address from G. J. Drake BA, LlB. According to a listing in the Sydney telephone directory, G. J. Drake is the name of a Macquarie St. barrister.

Mr Drake advised that Margaret Dent had asked him to reply on her behalf.

The first letter addressed certain legal issues. The second addressed the content of the article in the spirit of debate. The legal issues raised were those of defamation, breaches of copyright and the Listening Devices Act.

My attention was also drawn to the fact that the legal system is not provided for the pursuit of private or philosophic debates between citizens about personal beliefs. (Shades of Plimer v Roberts).

The letter concluded, that it is not the intention of either Mr Drake or Margaret Dent to prevent the publishing of a critique or personal belief about what Margaret Dent does, however, there are obligations of fairness and accuracy. If there were inaccuracies in my article why wasn't my attention drawn to them in the "spirit of debate?"

Mr Drake advised that the second letter, a critique of a critic, may be published should I choose to do so. There being little in it that is relevant to the matter in hand, I will instead respond to the more germane.

Mr Drake may be well versed in the law but the same cannot be said of his debating skills.

Having accused me of writing a poorly constructed diatribe based on *ad hominem* attacks he then refers to me in such terms as: "self-congratulatory", "self-appointed defender of the gullible", "vigilante", "sensationalist, materialist reductionist", "paternalist", "self-justificatory", "arrogant", "a modern version of the Witch-finder General", "biased" and "authoritarian". He could have added "divisive, deceitful, devious, cunning and sarcastic" - all of which I admit to. Unfortunately these are the attributes one is left to work with when all else fails. Mr Drake however, contends that alerting the public to fraudulent activities is well covered in our society by Government agencies, Consumer rights advocates and the Police and there is no need for vigilantes to step in. But as readers of *the Skeptic* are well aware, despite the information and evidence of deceitful activities passed on by Australian Skeptics to the various bodies entrusted with the task of "protecting" the consumer, action is rarely, if ever, taken.

In contrast to my conclusions regarding the medium, Mr Drake sees Margaret Dent as "credible, honest, truthful and ethical". Why? This will become apparent later.

Mr Drake's second prong consists mainly of appeals to authority - Drs Raymond A. Moody and Elizabeth Kubler-Ross, Scott Peck and Stanislov Grof, David Bohm and Fritjof Capra, Paul Davies, Professor David Deutchland, Dr Fred Alan Wolf, Professor Gunter Nimtz, Johannes Kepler, Giordano Bruno, Galileo Galilei, Francis Bacon, Isaac Newton, C.G.Jung, Michel Gauquelin, Gunther Sachs, Carl Sagan, all 192 scientist signatories to the manifesto *Objections to Astrology*, uncle Tom Cobbley and all. None of whom have any bearing whatsoever on whether or not Margaret Dent can do what she claims to do. His critique contributes nothing to answering the question - does Dent's claim to be able to communicate with the dead have any validity?

My investigation was objective and conducted using the only option available and provides the answer beyond any reasonable doubt.

But Mr Drake's bias was evident from the outset. His critique begins "... *Margaret Dent is a person I am proud to consider as a friend and a person I consult professionally for her sage advice and spiritual counsel ...*" 'Nuff said?

Ooops! Sorry!

We are embarrassed to have to confess to perpetrating "The Great Skeptic Label Printing Cock-up of 1998".

Each year most of the Summer issues contain a notice to remind subscribers that it is time to renew their subscriptions. We always get a handfull of calls from subscribers with multi-year subscriptions, just to check that they are still current. Last year, to obviate this minor problem, we advised readers that if their address labels contained a [-] their subscription had run out, but if it contained [99], [00] or some other number, their sub was still current. So far, so good. Then we printed the labels and didn't check them. Each of them contained a [- -], which served to confuse everyone. In place of the handfull of calls, we have had over 100. Sorry.

As the poet once said, "the best laid plans of mice and *Skeptic* editors..."

Investigation

Magnetic pest control

Colin Keay

In 1989 Charles R Patterson and Gary E Lutz, of Ames, Iowa, were granted US patent 4,802,057 for a mains-powered gadget described as a Rodent Control Device. The patent document, amateurish because of numerous errors and inconsistencies, makes no mention of any scientific principle or published research validating its claimed purpose of having an offensive effect on rodents. The document lists three earlier patents that it purports to improve upon. Also, it makes no mention of cockroach control or repellent effects on any organisms other than rodents.

I became aware of Australian involvement with this device through an article by Jeff Corbett in the business section of the *Newcastle Herald* (*NH*) on 22 May, 1995. The article reported that a new company, Pest Free Australia P/L, had moved financially into the black through the sale of 4,000 "Pest Free" units, bearing the above patent number, at $79.95 each (plus $5.50 post, packing and insurance). Since then sales have climbed to over 140,000 units (*NH*, 7 January, 1999) including exports to a number of countries, so one would be led to imagine that the device is a success. It certainly is a marketing coup and helps improve the employment situation in Newcastle, but whether it works or not is very open to question despite many anecdotal testimonials which the company is only too happy to supply.

It so happened that in 1995 the Hunter Skeptics were preparing material for a display stand that had been offered at a forthcoming Great Australian Science Show at ANZAAS, in the Newcastle Regional Museum. We decided to draw public attention to devices of dubious worth which were on the market at the time. These included the so-called "Electronic Antenna" (see *the Skeptic* 14:1) which we convincingly demonstrated to be no more effective than a plain length of wire equal in length to its own output lead. Our search for other devices to exhibit was drawn to the attention of the above-mentioned Jeff Corbett who publicised it in his regular newspaper column (*NH*, 23 August, 1995) where he specifically mentioned the Pest Free unit. Jeff Corbett contacted the Pest Free proprietor, Mr Ray Connell, informing him that the Skeptics were prepared to test his product. In his column he wrote "I warned Mr Connell, if the Skeptics were to disclose anything about his Pest Free it would be how it didn't work rather than how it did work." Despite this clear warning Mr Connell drove out to my home with one of his devices. I accepted it on the clear understanding that, not being a biologist, I was competent only to check its physical performance and I would judge it accordingly.

Mr Connell expressed complete confidence in his device and produced two test reports from North American sources. The first, dated 3 April, 1991, by Dr R S Kramer of the American National Testing Institute of Skokie, Illinois, concluded "Our observations would indicate that the PEST FREE does cause changes in the normal behaviour pattern of mice and cockroaches. The alteration of the normal electromagnetic field by the device appeared offensive and stressful to the laboratory specimens and this device would be effective in the control of mice and cockroaches."

The other test report, by Dr D L Hopper of the Iowa State University, of Ames, Iowa, was less conclusively supportive of the "pest controller unit" and stated that a more detailed report would be forthcoming at the conclusion of the project. No further report is known. An inquiry by a member of the Newcastle University Department of Biological Science drew from Dr Hopper the response that he was "worried by the whole thing. He has learnt never to produce a preliminary report from this exercise."

My own tests revealed that the Pest Free unit operates on a switching cycle having a period of 1.28 seconds. For approximately half of its cycle it is quiescent and consumes five watts, rising to 8.6 watts during the remaining interval when its internal coil is energised. This works out at an average of seven watts, as indicated on the device itself. A green light-emitting diode pulses along with the magnetic coil to indicate that the device is operating.

When the device is drawing 8.6 watts the magnetic field from its internal coil is 3.4 times stronger than when five watts is being drawn. The magnetometer and search coil I employed were not the most sensitive, which did not matter much because the magnetic field variations produced by the Pest Free unit fade into the background magnetic fields beyond a metre or so from the unit and only a few centimetres from the power wiring leading to the unit.

At that stage I became very intrigued to know how such weak magnetic field variations could possibly, as claimed by the Pest Free company, "... send a regular low frequency pulse through the electrical wiring of your home altering the existing electromagnetic field, reaching deep into the walls, ceilings, cupboards and crevices affecting the sensitive metabolism of pests making your home a no go zone."

This claim raises a couple of serious doubts. In the first place any current drawn by the Pest Free device flows only between the mains power socket it is plugged into and the electricity supply leads at the meter box. The small variations of magnetic field produced by the device are confined to the immediate vicinity of these leads only. All other house wiring is unaffected. And the second doubt had me wondering how cockroaches could have survived the unceasing micropulsations of the Earth's magnetic field during the hundreds of millions of years they have been in existence, especially at times of high solar activity when the geomagnetic field variations are easily comparable with the fluctuations produced by the Pest Free device.

Clearly I had a lot to learn. So I began seeking the advice of experts in the field of biology and insect behaviour and contacted some pest control profession-

als. The latter scoffed at the Pest Free device saying that if it was any good they would already be using it in preference to chemical control. They also put it to me that the big international players, like Rentokil, would buy out the Pest Free company very smartly if their device worked. They predicted that Pest Free would be history within a year or two. The fact that Pest Free units are still being sold four years later says something about the Pest Free company's impressive marketing skills, which we will discuss later .

Turning to the expert biologists, they knew of nothing in the extensive literature on the effects of magnetic fields on various organisms that would even suggest how small magnetic fluctuations could be "affecting the sensitive metabolism of pests" (Pest Free advertising) whether they be cockroaches or any other insects, not to mention rodents. Then I received a big surprise. I learnt that Mr Connell had three years earlier, in 1992, contracted with The University of Newcastle Research Associates (TUNRA) to have the American model and his Australian prototype tested on various insects. He had become aware of the device during a visit to America and must have obtained rights to produce and market the patented device in this part of the world. The tests were all conspicuously negative and, for reasons of confidentiality, the researcher requested me not to publicly quote his name, an undertaking I honoured throughout the ensuing years until an investigative reporter published it in the *Newcastle Herald* this year (8 January, 1999). The researcher, Dr (now Professor) John Rodger wrote a letter to Mr Connell on 12 November, 1992, concluding that "Both the prototype and USA devices under the experimental conditions outlined have had no deleterious effects on the cockroaches, fruit flies and spiders mentioned."

In the *Newcastle Herald* story (8 January, 1999) Mr Connell claims that he wrote to Dr Rodger on 18 August, 1992, advising "...that the unit is not working satisfactorily and would request that all experimentation cease until further notice." However it is understood that all invoices from TUNRA have been paid by the Pest Free company.

Then came the next surprise. I discovered that in 1994, the year after I retired, my former colleague Dr Fred Menk, an expert on magnetic field variations, had been commissioned through TUNRA by Pest Free to test the production model of their device. Like myself, Fred was competent only to perform physical and not biological tests. His tests produced results similar to the ones I obtained a year later, as described above, giving me the confidence to assert at the Skeptics' stand at the Science Show that the magnetic effect was so small I couldn't see how it would repel insects that had evolved for millions of years under the natural fluctuating magnetic field conditions known as geomagnetic micropulsations.

The Skeptics' stand was manned for five days and I suppose it was too much to ask that it should remain trouble free. Sure enough, word quickly got back to the company that their product was under question. On 26 September, while Barry Williams and three other Skeptics members were manning the stand, two men came along and challenged the presentation concerning the Pest Free device. When I arrived a short time later one of the men identified himself as Mr Scott Connell, sales manager of the Pest Free Company and publicly accused the Skeptics of wilfully spreading false information. He claimed that he had a private detective (who may have been the unidentified man accompanying him, and who remained silent throughout the incident) observing the Skeptics' and had tape records of statements made, specifically by myself and two other named Skeptics who had been on duty on previous days.

Mr Connell challenged me to name the authority that had carried out the biological tests and he proudly informed everyone that Dr Menk at the University had also tested the device, implying that Dr Menk endorsed it. I produced a sheet showing my test results and pointed out that they confirmed those of Dr Menk. Mr Connell insisted that my tests were wrong and challenged my statement that the patent number on the Pest Free unit referred only to rodent control. When I produced a copy of the patent Mr Connell's companion tugged his elbow and nodded toward the exit. The pair then departed.

About an hour later, when I began to discuss Pest Free before a mixed audience around the stand, a well-dressed young woman inquired if the device was any good. I stated that the effect it produced was very slight and could not see how it could be as effective as its advertising claimed. The woman quite loudly asked "Well, does it work or not? Yes or no!" while she stood sideways on with her handbag aimed directly at me. This made me laugh and reply "You don't have a tape recorder in your bag by any chance?" Whereupon the woman turned away and walked briskly toward the exit.

After another hour a middle-aged man accompanied by a young woman of oriental appearance attended the stand. He remained silent until I came to mention the Pest Free device. Then he took over the presentation, stating that it was very effective, he had Pest Free in his home in Thailand and after this visit to Newcastle would be taking five units back to give to his friends. He claimed "If it will work in the tropics, it will work anywhere." He and his companion remained near the stand for some time, and each time Pest Free was mentioned he took over the presentation until eventually the woman, who been silent throughout, urged him to leave.

Shortly after noon the next day Mr Ray Connell with his son Scott came to the Skeptics' stand and publicly accused the Skeptics of wilfully spreading false information about the device marketed by the Pest Free company and accused me with making statements defaming him. In front of the public gathered around to witness the confrontation he proclaimed that 80,000 customers had purchased the device and that number of people could not be wrong. The matter of the tests was raised. I refused to disclose the name of Dr Rodger and Mr Connell senior sought to imply that no such tests had been carried out. He then mentioned Dr Menk's tests with no mention of their negative verdict. I defended my tests and actions and Mr Connell senior threatened to see his barrister and sue me if I did not retract my statements. Shortly thereafter a Museum attendant requested the group to leave on account of the disorderly proceedings. The Connells and myself, accompanied by two members of the Skeptics were allowed to continue discussions in a vacant room. With no members of the public present I disclosed the name of Dr Rodger to establish the veracity of my claim that negative biological results had been obtained by a competent authority. Soon after this disclosure the Connells left the Museum.

Three weeks later I and another Skeptics member were served notice from a leading Newcastle law firm on behalf of Mr Raymond Connell and Pest Free Australia Pty Ltd. We were each charged with defamation and required to provide an apology and retraction within seven days, with the right reserved to commence legal proceedings for damages if we failed to comply. The notice served to me contains the following paragraph: "Our client understands that your Hunter Skeptics group aspires to be a voice of reason and scientific methodology. Your actions in this case have ironically betrayed those ideals. Your attacks have fallen to the level of those you seek to criticise, being wreckless (sic) and emotional accusations unsupported by a substratum of fact or any objective and rigorous method."

While I believe we have sufficient scientific evidence to successfully defend the actions of the Skeptics (myself included) it seemed prudent to adopt a 'wait and see' approach. After all it is the consumer protection bodies which should be actively investigating the Pest Free device (now, more than four years later, it appears that this may at last be about to happen). In the meantime I decided to stay quiet and speak out publicly only whenever I had adequate legal protection. Three months later such conditions were met when *A Current Affair* (Ch 9) approached me to demonstrate the action of the Pest Free device on their programme.

In the meantime, however, there was a further development. On 24 October, 1995, a few weeks after the Museum episodes, Mr Darren Connell and Mr Peter Dewhurst of Pest Free Australia Pty Ltd unexpectedly visited Dr Fred Menk at his office in the Physics Department. In a letter dated 28 November, Dr Menk stated "First, I am glad to receive your assurance that my name or test report has not and will not be used by you as an endorsement of your product "Pest Free" or as part of your marketing strategy." Two days later Dr Menk felt compelled to issue a formal disclaimer titled "Tests on Pest Free pest repeller" stating, inter alia, "I have not seen any clear scientific evidence that the "Pest Free" device works as claimed, ie repels insect and rodent pests as a result of the power line radiation field it produces."

On 6 December, 1995, Mr Ray Connell wrote to Dr Menk stating that "I feel we are entitled to produce your report, since it was a report paid for by this company, it can be used by this company.

"I confirm that the report is only used for enquiries in relation to electro magnetic field, and for no other purpose.

"We thank you for the offer of further tests with Professor Roger (sic), however, I am so satisfied and happy with the customer response, from all around Australia, New Zealand and now Malaysia, I do not see the need for further testing as the product is obviously proving to be very effective in the field. You will be pleased to know that in Australia we have now sold over 23,000 of the units and purchase by word of mouth/referral is now a substantial source of sales."

Then Dr Menk was served notice dated 17 January, 1996, from the Pest Free solicitors that "Our client has seen a copy of your letter of 30 November, 1995 on the letterhead of The University of Newcastle...." Dr Menk was required to provide a written retraction of his disclaimer or an injunction with costs would be sought. But Dr Menk had conducted his tests for TUNRA, so he immediately took the notice to the University authorities. The University's solicitor replied appropriately, requesting that neither Dr Menk's name or that of the University be used in connection with the Pest Free device and informing that "both Dr Menk and the University would not hesitate to take steps to protect their good name and scientific integrity."

On 25 January, 1996, *A Current Affair* went to air with a segment showing a distressed woman whose kitchen had been invaded by termites, alleging that a Pest Free unit had not prevented the infestation, and another woman who claimed that a Pest Free unit had increased rather than diminished the number of cockroaches in her home. Then followed a demonstration by Dr Menk and myself of the magnetic effect of the Pest Free unit, showing that common thermostat-controlled household appliances (electric frypans, irons, etc) produce a hundred or more times as much magnetic fluctuation in the vicinity of household wiring.

During the preliminaries *A Current Affair* had been provided with the American NTI report. They tried to contact the NTI without success. My biologist colleagues had no success at the time either. A more recent (1999) net search again failed to find any trace of the NTI but did locate Dr Richard Kramer. He is the director of research, education and technical resources for the National Pest Control Association (NPCA) and interestingly I located him through Ozane, Inc., in New Jersey. Besides "providing quality pest control and extermination services" this firm promotes the Ozane Air Purification System "which creates ozone and ions that purify the air. It removes and controls pollen, mould, mildew, bacteria, smoke, chemical gases, static electricity, pet and new carpet odors." For some odd reason the obvious rest room application is not mentioned. But that's another story.

The NPCA is, as its name implies, an association of pest control companies. It is based in Dunn Loring, Virginia , and appears to focus on standard chemical, gas and physical barrier methods of pest control. I found no mention of electromagnetic field methods. It has proved difficult to obtain much information about them but my search has not been exhaustive. Life's too short.

About two years ago Professor Robert Park, of the University of Maryland, in a regular newsletter to members of the American Physical Society commented on the subject of electromagnetic pest control. I contacted him with my experiences and mentioned that I had been threatened with legal action over it. He sent back a terse e-mail "I'm not under legal restraint. It's bullshit."

In the three years since *A Current Affair* drew the Pest Free Device to national TV attention, its sales have topped the six-figure mark (over ten million dollars at market price), no doubt helped by a total lack of interest by government agencies that are supposed to protect consumers. This neglect has allowed Pest Free's intensive marketing campaign to succeed. A succession of TV ads showing positive testimony by satisfied customers appears to rely on anecdotal evidence rather than any test results. One ad, showing an army sergeant, in front of a squad of soldiers, berating a harassed-looking private for using chemicals to clean out insects rather than non-chemical Pest Free, implies that the armed services endorse its use. Frequent advertisements in newspapers, magazines and mail-order catalogues keep the device in the public eye.

Pest Free has won a number of business awards (*NH* 24 August, 1995 and *Newcastle Star*, 24 September, 1997 for example) with exports reported to a number of countries. With business humming along nicely, Mr Ray

Connell has turned his company over to his son Scott (Jeff Corbett, *NH*, 14 April, 1998) and has turned to marketing "Juice Plus" tablets, wafers and powders that give the equivalent of "17 fruits and vegetables a day" (*loc cit*) to maintain good health.

Returning to Pest Free, it seems that at long last officialdom is showing an interest. The Hunter Public Health Unit has demanded scientific proof of claims for the device. This has led to the publication of two interesting articles in the *Newcastle Herald* (7 and 8 January, 1999) by investigative journalist Maureen Fitzhenry. Much of what follows is taken verbatim from her *Herald* articles.

Maureen Fitzhenry discovered that Dr Craig Dalton, of the Health Unit, asked for scientific evidence because he had received inquiries from the public. His concern was heightened because:

> Some restaurants were using the device to rectify pest-control violations.
>
> Company manager Mr Scott Connell said new scientific research conducted by an undisclosed university in NSW showed the device worked. .... (He) could not name the university or provide full details of the research because of business competition reasons, but said he could provide ... a summary....
>
> Mr Connell allowed a reporter to read a brief summary printed on Pest Free letterhead and to see photographs of the research site. He said the researchers had insisted on confidentiality as part of the contract. The summary, apparently of a field test done on rats, showed that those exposed to Pest free consumed less food. It said the device had value as a pest deterrent because it modified the rats' normal behaviour.
>
> He (Mr Connell) said the final stage of ... research (on cockroaches) - commissioned after *A Current Affair* (Ch 9) cast doubt on the product in 1996 - was not yet complete due to the death of a researcher.

The second of the *Newcastle Herald*'s articles revealed that the Australian Competition and Consumer Commission has opened a preliminary investigation into claims made by Pest Free. If the Commission does its public duty and demands rigorous scientific tests of the Pest Free unit, the device will either be exposed as fraudulent or an entirely new chapter in biological science will have been opened up. The latter alternative would surely bring forth a rush of scientists eager for a slice of the action and with sights set on a Nobel Prize.

The astonishing success of Pest Free reveals an effectiveness of anecdotal testimony over countervailing scientific evidence which I suppose is not surprising in the current climate of postmodernist relativism. On her visit to the Pest Free offices, Maureen Fitzhenry was bombarded with literally hundreds of customer testimonials asserting that the device really works. Much time was taken reciting them to her. Furthermore, during her visit "Pest Free received several calls from loyal customers expressing their faith in the product." (*NH* 8 January, 1999).

Indeed, in a concurrent radio talk-back session on radio 2NUR-FM, eighty percent of callers testified that Pest Free works as advertised.

There is some very interesting psychology at work here. To admit that Pest Free does not work is an admission that one's home contains vermin. To claim that it does work implies freedom from vermin, a much happier state of affairs. On a somewhat similar note, commercial firms that abandon the device do not want their infestation problem or their misjudgment made public.

Poesy

Lamentations of Eve, the first scientist

Rosemary Sceats

That Eve, she was a curious wench
She had a thirst she couldn't quench
Eve thirsted greedily after knowledge
She really should have been in college.

As for Adam, what a wimp!
He would have made a damned good pimp
Sponging off his wife's audacity
With his meagre cerebral capacity.

It's Eve we have to thank for science
For she believed not in reliance
On glib instructions from the Lord
Unthinking dogma she abhorred.

When God said "Ignorance is bliss"
Eve said "I'll have none of this"
With all her "How, what, where, when, why?"
The good Lord's patience she did try.

By yielding to the snake's temptation
She heralded mankind's damnation
When she tasted the forbidden fruit
The seeds of misery there took root.

Eve finally had her wicked way
And Adam thus was led astray.
Driven from the cushy garden
From then on, life began to harden.

For Adam thence, just sweat and toil
To eke a living from the soil
Forced to earn his daily bread
There's little more that can be said.

What lesson Eve's experience doth bring?
A little knowledge is a dangerous thing
A lot of knowledge, even worse
It's education that's the curse!

... from previous column

To conclude, Pest Free is now marketed by chemist shops and chain stores such as Retravision. The latest version is sold with an accompanying instruction manual which conveys excellent advice on measures that should be adopted to inhibit pests (leave no food out overnight, keep garbage in close-fitting lid containers, scrape residue off benches, etc). The inquiring mind might wonder why such advice is necessary if the Pest Free unit operates as advertised.

The conclusions of the scientific tests demanded by the Hunter Public Health Unit and the Australian Competition and Consumer Commission are awaited with interest. Whatever the final verdict, remember: Skeptics were the first to publicly challenge the efficacy of Pest Free. To smell a rat, as it were.

Book extract

On astrology

Richard Dawkins

On 27 December, 1997, one of Britain's largest circulation national newspapers, the *Daily Mail*, devoted its main front-page story to astrology under the banner headline "1998: The Dawn of Aquarius". One feels almost grateful when the article goes on to concede that the Hale Bopp comet was not the *direct* cause of Princess Diana's death. The paper's highly paid astrologer tells us that 'slow-moving, powerful Neptune' is about to join 'forces' with the equally powerful Uranus as it moves into Aquarius. This will have dramatic consequences:

> . . . the Sun is rising. And the comet has come to remind us that this Sun is not a physical sun but a spiritual, psychic, inner sun. It does not, therefore, have to obey the law of gravity. It can come over the horizon more swiftly if enough people rise to greet and encourage it. And it can dispel the darkness the moment it appears.

Richard Dawkins' latest book *Unweaving the Rainbow* (Penguin Books, 1998) is reviewed elsewhere in this issue It contains, among much else of value, his considered views on the subject of astrology. We are grateful to Professor Dawkins and his publishers for his permission to publish this extract from the book here.

How can people find this meaningless pap appealing, especially in the face of the real universe as revealed by astronomy? On a moonless night when 'the stars look very cold about the sky', and the only clouds to be seen are the glowing smudges of the Milky Way, go out to a place far from street light pollution, lie on the grass and gaze up at the sky. Superficially you notice constellations, but a constellation's pattern means no more than a patch of damp on the bathroom ceiling. Note, accordingly, how little it means to say something like 'Neptune moves into Aquarius'. Aquarius is a miscellaneous set of stars all at different distances from us which are unconnected with each other except that they constitute a (meaningless) pattern when seen from a certain (not particularly special) place in the galaxy (here). A constellation is not an entity at all, and so not the kind of thing that Neptune, or anything else, can sensibly be said to 'move into'. The shape of a constellation, moreover, is ephemeral. A million years ago our *Homo erectus* ancestors gazed out nightly (no light pollution then, unless it came from that species' brilliant innovation, the camp fire) at a set of very different constellations. A million years hence, our descendants will see yet other shapes in the sky and we already know exactly how these will look. This is the sort of detailed prediction that astronomers, but not astrologers, can make. And - again by contrast with astrological predictions - it will be correct. Because of light's finite speed, when you look at the great galaxy in Andromeda you are seeing it as it was 2.3 million years ago and *Australopithecus* stalked the high veldt. You are looking back in time. Shift your eyes a few degrees to the nearest bright star in the constellation of Andromeda and you see Mirach, but much more recently, as it was when Wall Street crashed. The sun, when you witness its colour and shape, is only eight minutes ago. But point a large telescope at the Sombrero galaxy and you behold a trillion suns as they were when your tailed ancestors peered shyly through the canopy and India collided with Asia to raise the Himalayas. A collision on a larger scale, between two galaxies in Stephan's Quintet, is shown to us at a time when on earth dinosaurs were dawning and the trilobites fresh dead.

Name any event in history and you will find a star out there whose light gives you a glimpse of something happening during the year of that event. Provided you are not a very young child, somewhere up in the night sky you can find your personal birth star. Its light is a thermonuclear glow that heralds the year of your birth. Indeed, you can find quite a few such stars (about 40 if you are 40; about 70 if you are 50; about 175 if you are 80 years old). When you look at one of your birth year stars, your telescope is a time machine letting you witness thermonuclear events that are actually taking place during the year you were born. A pleasing conceit, but that is all. Your birth star will not deign to tell anything about your personality, your future or your sexual compatibilities. The stars have larger agendas in which the preoccupations of human pettiness do not figure. Your birth star, of course, is yours for only this year. Next year you must look to the surface of a larger sphere one light year more distant. Think of this expanding sphere as a radius of good news, the news of your birth broadcast steadily outwards. In the Einsteinian universe in which most physicists now think we live, nothing can in principle travel faster than light. So, if you are 50 years old, you have a personal news bubble of 50 light years' radius. Within that sphere (of a little more than a thousand stars) it is in principle possible (although obviously not in practice) for news of your existence to have permeated. Outside that sphere you might as well not exist; in an Einsteinian sense you do not exist. Older people have larger existence spheres than younger people, but nobody's existence extends to more than a tiny fraction of the universe. The birth of Jesus may seem an ancient and momentous event to us as we reach his second millenary. But the news is so recent on this scale that, even in the most ideal circumstances, it could in principle have been proclaimed to less than one 200 million millionth of the stars in the universe. Many, if not most, of the stars out there will be orbited by planets. The numbers are so vast that probably some of them have life forms, some have evolved intelligence and technology. Yet the distances and times that separate us are so great that thousands of life forms could independently evolve and go extinct without it being possible for any to know of the existence of any other.

In order to make my calculations about numbers of birth stars, I assumed that the stars are spaced, on average, about 7.6 light years apart. This is approximately true of our local region of the Milky Way galaxy. It seems an astonishingly low density (about 440 cubic light years per star), but it is actually high by comparison with the density of stars in the universe as a whole, where space lies empty between the galaxies. Isaac Asimov has a dramatic illustration: it is as if all the matter of the universe were a single grain of sand, set in the middle of an empty room 20 miles long, 20 miles wide and 20 miles high. Yet, at the same time, it is as if that single grain of sand were pulverized into a thousand million million million fragments, for that is approximately the number of stars in the universe. These are some of the sobering facts of astronomy, and you can see that they are beautiful.

Astrology, by comparison, is an aesthetic affront. Its pre-Copernican dabblings demean and cheapen astronomy, like using Beethoven for commercial jingles. It is also an insult to the science of psychology and the richness of human personality. I am talking about the facile and potentially damaging way in which astrologers divide humans into 12 categories. Scorpios are cheerful, outgoing types, while Leos, with their methodical personalities, go well with Libras (or whatever it is). My wife Lalla Ward recalls an occasion when an American starlet approached the director of the film they were both working on with a "Gee, Mr Preminger, what sign are you?" and received the immortal rebuff, in a thick Austrian accent, "I am a Do Not Disturrrb sign."

Personality is a real phenomenon and psychologists have had some success in developing mathematical models to handle its variation in many dimensions. The initially large number of dimensions can be mathematically collapsed into fewer dimensions with measurable, and for some purposes conscionable, loss in predictive power. These fewer derived dimensions sometimes correspond to the dimensions that we intuitively think we recognize - aggressiveness, obstinacy, affectionateness and so on. Summarizing an individual's personality as a point in multidimensional space is a serviceable approximation whose limitations can be stated. It is a far cry from any mutually exclusive categorization, and certainly far from the preposterous fiction of newspaper astrology's 12 dumpbins. It is based upon genuinely relevant data about people themselves, not their birthdays. The psychologist's multidimensional scaling can be useful in deciding whether a person is suited to a particular career, or a proposed couple to each other. The astrologer's 12 pigeonholes are, if nothing worse, a costly and irrelevant distraction.

Moreover, they sit oddly with our current strong taboos, and laws, against discrimination. Newspaper readers are schooled to regard themselves and their friends and colleagues as Scorpios or Libras or one of the other 10 mythic 'signs'. If you think about it for a moment, isn't this a form of discriminatory labelling rather like the cultural stereotypes which many of us nowadays find objectionable? I can imagine a Monty Python sketch in which a newspaper publishes a daily column something like this:

> Germans: It is in your nature to be hard-working and methodical, which should serve you well at work today. In your personal relationships, especially this evening, you will need to curb your natural tendency to obey orders.
>
> Spaniards: Your Latin hot blood may get the better of you, so beware of doing something you might regret. And lay off the garlic at lunch if you have romantic aspirations in the evening.
>
> Chinese: Inscrutability has many advantages, but it may be your undoing today . . .
>
> British: Your stiff upper lip may serve you well in business dealings, but try to relax and let yourself go in your social life.

And so on through 12 national stereotypes. No doubt the astrology columns are less offensive than this, but we should ask ourselves exactly where the difference lies. Both are guilty of facile discrimination, dividing humanity up into exclusive groups based upon no evidence. Even if there were evidence of some slight statistical effects, both kinds of discrimination encourage prejudiced handling of people as types rather than as individuals. You can already see advertisements in lonely hearts columns that include phrases like 'No Scorpios' or 'Tauruses need not apply'. Of course this is not as bad as the infamous 'No blacks' or 'No Irish' notices, because astrological prejudice doesn't consistently pick on some star signs more than others, but the principle of discriminatory stereotyping - as opposed to accepting people as individuals - remains.

There could even be sad human consequences. The whole point of advertising in lonely hearts columns is to increase the catchment area for meeting sexual partners (and indeed the circle provided by the workplace and by friends of friends is often meagre and needs enriching). Lonely people, whose life might be transformed by a longed-for compatible friendship, are encouraged to throw away wantonly and pointlessly up to eleven twelfths of the available population. There are some vulnerable people out there and they should be pitied, not deliberately misled.

On an apocryphal occasion a few years ago, a newspaper hack who had drawn the short straw and been told to make up the day's astrological advice relieved his boredom by writing under one star sign the following portentous lines: 'All the sorrows of yesteryear are as nothing compared to what will befall you today.' He was fired after the switchboard was jammed with panic-stricken readers, pathetic testimony to the simple trust people can place in astrology.

In addition to anti-discrimination legislation, we have laws designed to protect us from manufacturers making false claims for their products. The law is not invoked in defence of simple truth about the natural world. If it were, astrologers would provide as good a test case as could be desired. They make claims to forecast the future and divine personal foibles, and they take payment for this, as well as for professional advice to individuals on important decisions. A pharmaceuticals manufacturer who marketed a birth control pill that had not the slightest demonstrable effect upon fertility would be prosecuted under the Trade Descriptions Act, and sued by customers who found themselves pregnant. Once again it feels like overreaction, but I cannot actually work out why professional astrologers are not arrested for fraud as well as for incitement to discrimination.

The London *Daily Telegraph* of 18 November, 1997 reported that a self-styled exorcist who had persuaded a gullible teenage girl to have sex with him on the pretext of driving evil spirits from her body had been jailed for 18 months the day before. The man had shown the young woman some books on palmistry and magic, then told her that she was 'jinxed: someone had put

bad luck on her'. In order to exorcise her, he explained, he needed to anoint her all over with special oils. She agreed to take all her clothes off for this purpose. Finally, she copulated with the man when he told her that this was necessary 'to get rid of the spirits'. Now, it seems to me that society cannot have it both ways. If it was right to jail this man for exploiting a gullible young woman (she was above the legal age of consent), why do we not similarly prosecute astrologers who take money off equally gullible people; or 'psychic' diviners who con oil companies into parting with shareholders' money for expensive 'consultations' on where to drill? Conversely, if it be protested that fools should be free to hand over their money to charlatans if they choose, why shouldn't the sexual 'exorcist' claim a similar defence, invoking the young woman's freedom to give her body for the sake of a ritual ceremony in which, at the time, she genuinely believed?

There is no known physical mechanism whereby the position of distant heavenly bodies at the moment of your birth could exert any causal influence on your nature or your destiny. This does not rule out the possibility of some unknown physical influence. But we need bother to think about such a physical influence only if somebody can produce any evidence that the movements of planets against the backdrop of constellations actually has the slightest influence on human affairs. No such evidence has ever stood up to proper investigation. The vast majority of scientific studies of astrology have yielded no positive results whatever. A (very) few studies have suggested (weakly) a statistical correlation between star 'sign' and character. These few positive results turned out to have an interesting explanation. Many people are so well versed in star sign lore that they know which characteristics are expected of them. They then have a small tendency to live up to these expectations - not much, but enough to produce the very slight statistical effects observed.

A minimal test that any reputable method of diagnosis or divining ought to pass is that of reliability. This is not a test of whether it actually works, merely a test of whether different practitioners confronted with the same evidence (or the same practitioner confronted with the same evidence twice) agree. Although I don't think astrology works, I really would have expected high reliability scores in this sense of self-consistency. Different astrologers, after all, presumably have access to the same books. Even if their verdicts are wrong, you'd think their methods would be systematic enough at least to agree in producing the same wrong verdicts! Alas, as shown in a study by G. Dean and colleagues, they don't even achieve this minimal and easy benchmark. For comparison, when different assessors judged people on their performance in structured interviews, the correlation coefficient was greater than 0.8 (a correlation coefficient of 1.0 would represent perfect agreement, -l.0 would represent perfect disagreement, 0.0 would represent complete randomness or lack of association; 0.8 is pretty good). Against this, in the same study, the reliability coefficient for astrology was a pitiable 0.l, comparable to the figure for palmistry (0.11), and indicating near total randomness. However wrong astrologers may be, you'd think that they would have got their act together to the extent of at least being consistent. Apparently not. Graphology (handwriting analysis) and Rorschach (inkblot) analyses aren't much better.

The job of astrologer requires so little training or skill that it is often handed out to any junior reporter with time on his hands. The journalist Jan Moir relates in the *Guardian* on 6 October, 1994 that, 'My very first job in journalism was writing horoscopes for a stable of women's magazines. It was the office task always given to the newest recruit because it was so stupid and so easy that even a wet-eared geek like me could do it.' Similarly, when he was a young man the conjuror and rationalist James Randi took a job, under the pseudonym Zo-ran, as astrologer on a Montreal news paper. Randi's method of working was to take old astrology magazines, cut out their forecasts with scissors, stir them around in a hat, paste them at random under the 12 'signs', then publish them as his own 'forecasts'. He describes how he overheard a pair of office workers in their lunch break in a cafe eagerly scanning 'Zo-ran's' column in the paper.

> They squealed with delight on seeing their future so well laid out, and in response to my query said that Zo-ran had been 'right smack on' last week. I did not identify myself as Zo-ran . . . Reaction in the mail to the column had been quite interesting, too, and sufficient for me to decide that many people will accept and rationalize almost any pronouncement made by someone they believe to be an authority with mystic powers. At this point, Zo-ran hung up his scissors, put away the paste pot, and went out of business. *Flim-Flam* (I992)

There is evidence from questionnaire research that many people who read daily horoscopes don't really believe them. They state that they read them only as 'entertainment' (their taste in what constitutes entertaining fiction is evidently different from mine). But significant numbers of people really do believe and act upon them including, according to alarming and apparently authentic reports, Ronald Reagan during his time as president. Why is anybody impressed by horoscopes?

First, the forecasts, or character-readings, are so bland, vague and general that they fit almost anybody and any circumstance. People normally read only their own horoscope in the newspaper. If they forced themselves to read the other 11 they'd be far less impressed with the accuracy of their own. Second, people remember the hits and overlook the misses. If there is one sentence in a paragraph-long horoscope which seems to strike home, you notice that particular sentence while your eye skims unseeingly over all the other sentences. Even if people do notice a strikingly wrong forecast, it is quite likely to be chalked up as an interesting exception or anomaly rather than as an indication that the whole thing might be baloney. Thus David Bellamy, a popular television scientist (and genuine conservationist hero), confided in *Radio Times* (that once-respected organ of the BBC) that he has the 'Capricorn caution' over certain things, but mostly he puts his head down and charges like a real goat. Isn't that interesting? Well, I do declare, it just bears out what I always say: it's the exception that proves the rule! Bellamy himself presumably knew better, and was just going along with the common tendency among educated people to indulge astrology as a bit of harmless entertainment. I doubt if it is harmless, and I wonder whether people who describe it as entertaining have ever actually been entertained by it.

Article

'Imaginography': sensational pseudo-discoveries

W. A. R. Richardson

The latter half of the 20th Century has witnessed a veritable spate of reports in the press about the finding of historical artifacts concerning whose significance sensational claims have been made.

In Australia, the most persistent of these, periodically revived from the last century, is the so-called 'Mahogany Ship' at Warrnambool. Despite its sighting a century and a half ago, even a vast reward offered by the Victorian government has failed to bring it to light for examination. It therefore provides plenty of scope for its romantic identification as a 16th Century Portuguese or Spanish vessel, and is an excellent bait to draw tourists to the Warrnambool maritime museum. Again from the last century are the 'Geelong Keys', but they also have conveniently vanished. Then there are the 'Portuguese' 16th Century cannon which rather inconveniently survived, for metallurgical investigation showed them to be 18th Century SE Asian copies, probably left on the Western Australian coast by Macassan trepang fishermen. Kenneth McIntyre's Bittangabee 'fort' turned out to be the remains of a never completed building erected by the Imlay brothers in the 1830s or 1840s.

Several years ago there was a report of the discovery of 'Portuguese' coins by an Italian migrant fisherman off the South Australian coast. However, he returned to Italy with them before they could be reliably examined. Nearly two years ago, an old 'Portuguese' coin was reportedly found on the Victorian coast by someone who declined to properly identify himself, and it was suggested that his find was 'proof' that a 16th Century Portuguese vessel had been responsible for leaving it there. However, its coats of arms were undoubtedly Spanish, not Portuguese. Analysis has shown it to be made from a low silver alloy, and therefore it is almost certainly a copy of a Spanish coin of the reign of Philip II, probably from a Spanish American mint. The anonymity of the finder makes one suspicious of its origin and the supposed circumstances of its finding. Some enthusiasts are not averse to planting 'evidence'.

Carl von Brandenstein has claimed that some Western Australian aboriginal languages contained words of Portuguese origin. Even if this should prove true, it could well be explained by aboriginal contact with Macassan trepang fishermen who were long in contact with the Portuguese. Nevertheless, he has also been quoted by the Portuguese language press as claiming that the Portuguese had a colony on the West Australian coast for some 70 years in the 16th Century, together with African slaves.

Similar, though in many ways more extravagant sorts of claims have been made, both in North and South America, by Barry Fell, for example, and in Australia by Rex Gilroy. Most recently, a New Zealander, Ross Wiseman, has cashed in on the apparently boundless market for historical sensations, attaching romantic, speculative significance to a helmet, a stone bird, rats, a Tamil bell, etc, thereby asserting claims that Arabs, Phoenicians and others reached New Zealand long before the Maoris.

Map 'interpretation'

Map 'interpretation' has produced some of the most astonishing conjectural claims, all based on perceived similarities between coastlines on old maps and imagined 'corresponding' coastlines on modern maps.

Three Argentine authors, Dick Edgar Ibarra Grasso, Paul Gallez and Enrique de Gandía have stated that what appears to be an extra, nonexistent, SE Asian peninsula, on world maps of c. 1489 by the German cartographer Henricus Martellus is really a representation of South America, dating from before Columbus. This claim is presented as proven fact by the Colombian, Gustavo Vargas Martínez, yet the inscriptions clearly disprove its validity. Another Argentine, Demetrio Charalambous, has recently claimed that two river systems, in North and South America, on one world map of 1527 by the Portuguese cartographer, Diogo Ribeiro, are so accurately depicted that they must have been the result of centuries of exploration. As no such maps were produced by native American civilizations, he claims that Ribeiro must have somehow laid hands on Phoenician maps which were removed from King Solomon's library in Jerusalem and later taken to Portugal by the Templars. An American, Mark A. McMenamin, has recently claimed that minute maps including America are depicted on some Carthaginian coins. Charles Hapgood's claims in connection with the Piri Reis map of 1513 are well known. So also are those maintaining that the southern 'continent' on Oronce Fine's world map of 1531 is such an accurate depiction of the outline of the underlying land mass of Antarctica that it must have been copied from a map or maps made during the times of 'the ancient sea kings' before it was covered by ice.

So far as supposedly early maps of Australia and New Zealand are concerned, there was George Collingridge's pioneering book (1895), followed in the last quarter of this century by the publications of Kenneth McIntyre (1977), Roger Hervé (1982), Lawrence FitzGerald (1984) and Eric Whitehouse (1994). There have been numerous articles from well before Collingridge's time. The two most recent books of this genre are those by Ross Wiseman (1996 and 1998), understandably concerned mainly with New Zealand. His claim of a discovery of New Zealand by Juan Fernández in 1567 is based mainly on an imaginative interpretation of part of a book by the Chilean author, J. T. Medina, which he apparently had to have translated from the Spanish.

Europeans in Australia

The first reliably documented evidence of the presence of Europeans on the Australian coast is the arrival of the Dutch vessel, the *Duyfken*, under the command of Willem Janszoon, on the west coast of the Cape York Peninsula in 1606. The same year, Torres passed through the strait that bears his name between Cape York and New Guinea. If he did see the tip of Cape York, it would merely have appeared to be yet another island. Also in 1606, Pedro Fernandes de Queirós discovered land which he named *la Austrialia del Espíritu Santo*, in punning homage to Philip III of Spain, who was of the House of *Austria*. During the last century, Cardinal Moran, utterly disregarding Queirós's own statement regarding the latitude of his discovery, proclaimed it to be Australia, and managed to get this 'fact' into school textbooks of the time. It was actually the island of Espíritu Santo in what is now Vanuatu. Yet such is the influence of Cardinal Moran that a Spanish migrant association here has called itself 'The Brotherhood of the Land of the Holy Spirit'.

The Portuguese appear to have got to Timor, some 450 kilometres from the north-west coast of Australia, in 1516. This proximity has suggested to some that they must have discovered at least that bit of Australia. However, since exploration was only of interest to them if it had prospects of commercial profit, there was no conceivable motive for their having come here, even supposing they learned about it from the Timorese.

Suggested strategic motivation is unconvincing conjecture. There is not a single surviving map or document of Portuguese origin that gives any evidence that substantiates their early arrival here. There was not even any Portuguese claim to have been the first Europeans here until well after the British hydrographer Alexander Dalrymple implied it in 1776, six years after Captain Cook's voyage along Australia's east coast.

The most apparently convincing claims about the supposed arrival of Europeans in Australia before the Dutch are based on the so-called Dieppe maps, made in France in the mid-16th Century. However, before examining their 'evidence', two other commonly accepted misconceptions regarding supposed early depictions of Australia should be briefly mentioned. One concerns the land mass bearing an admittedly remarkable resemblance to Western Australia that figures on Heinrich Bünting's world map of 1581. In view of the appallingly bad depiction of the then known world, it is utterly illogical to maintain that the only 'accurately mapped' part of the world at that time was Australia's west coast.

The second misconception concerns that part of Mercator's southern continent south of Indonesia. It has been known for well over a century that Mercator's *Locach*, *Beach*, *Java Minor* ,etc, have nothing whatsoever to do with Australia, but are his imaginative representations of places in SE Asia which, owing to printers' errors in Latin editions of Marco Polo's *Travels* published in 1532, appeared to be south of Java, rather than south of Champa (Central Vietnam), as they were originally correctly described.

Wishful thinking

Eric Whitehouse makes claims concerning many maps, including the Dieppe ones, but his book is the most extreme example of uninformed wishful thinking on the subject. It abounds in misprints and erratic dating. Any attempt to correct the plethora of misinformation provided would require an article of substantial length. The most obviously incredible feature of the book is the author's ability to 'see' Australia on dozens of early maps, utterly ignoring all the inscriptions. He just superimposes Australian names wherever his imagination suggests. For example, he interprets what is clearly identified as Java on several maps as Arnhem Land, while several versions of Ptolemy's *Taprobana* (Sri Lanka) are presented as Australia. The whole length of Mercator's southern continent, in several different versions, is identified as parts of Australia's coastline, despite the fact that it has long been known that all of it is fictitious, except for the north coast of Tierra del Fuego, the inscriptions on which Whitehouse ignores. His 'Toscanelli map' of 'Australia' is actually a vast enlargement of one minute part of the 'Genoese' world map of 1457. The identification of 'Australia' is sheer fantasy. The attribution of the map to Toscanelli is almost undoubtedly false, and the date given, 1474, is definitely wrong, owing to the author's careless misreading of his source text. Ross Wiseman actually reproduces this figment of Whitehouse's imagination, presenting him as an authority, a clear case of the visionary leading the visionary.

Jave-la-Grande

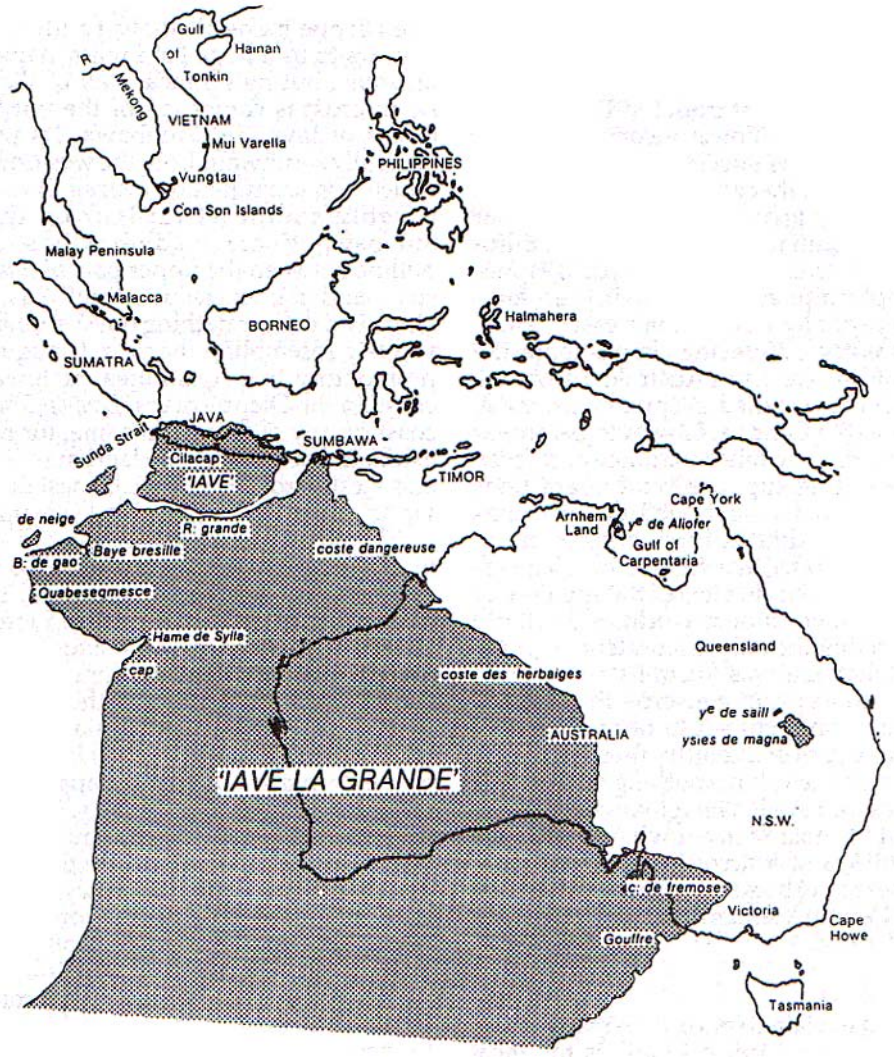
The Dieppe maps all show, south of Indonesia, what appears to be a large land mass, named *Jave-la-Grande* on some, but by no means all of them (see map). Its north coast is composed of the north, east and west coasts of Java and Sumbawa. Its west coast trends generally southward from the western end of Java, from which it is separated by a strait. Its east coast extends roughly southeastwards from the east coast of Sumbawa. There is admittedly some similarity in outline between the upper part of *Jave-la-Grande*'s east coast and the 'corresponding' Australian coastline. However, there is nothing on Australia's east coast even vaguely resembling the vast, triangular *cap de fremose* promontory that constitutes the lower section of that coast on the Dieppe maps. *Jave-la-Grande* has no south coast on any of them, but some, for reasons which are explained below, join the land mass up, both eastward and westwards, to the north coast of Tierra del Fuego, via an obviously hypothetical coastline.

The names on the north coast of what is perceived by many as being Australia are those of places on the north coasts of Java and Sumbawa. The names on the east and west coasts are either in French, Portuguese, Gallicised Portuguese, or in a few cases, are not in any immediately identifiable language. Since Portuguese ships were almost certainly the first European vessels to reach SE Asia and Indonesia, it seemed self-evident to Dalrymple that *Jave-la-Grande* was Australia, charted by the Portuguese before the appearance of the Dieppe maps in the mid-16th Century. Since his day, a sometimes heated debate has continued between the 'believers' in the Portuguese priority theory and the sceptics. The 'believers' have had to try to explain why what they maintain is Australia is some 25° too far west, so far, in fact that Timor appears off its NE coast, several degrees too far north, and why it is 'merged' into Java and Sumbawa. They suggest that French cartographers obtained a Portuguese map of Australia and, in trying to incorporate it on a world map, confused Arnhem Land and Cape York with Java and Sumbawa.

No less than four different 'solutions' have been proposed by the 'believers', in their attempts to explain away the inconvenient anomaly of the huge *cap de fremose*

triangle. Roger Hervé, in 1955, suggested that it was the southern tip of Tasmania misplaced, but in 1982 changed his mind, and opted for the East Cape of New Zealand's North Island. Lawrence FitzGerald suggested the NE part of Tasmania. Ian McKiggan and Kenneth McIntyre, though for different reasons, declared it to be Cape Howe, on the border between Victoria and New South Wales. Ross Wiseman, being a New Zealander, has followed Hervé's second option, though elaborating upon it in inventive detail. This interesting lack of consensus demonstrates clearly the active imaginations and wishful thinking of the 'believers'.

Kenneth McIntyre's book has undoubtedly been the most influential one, for he succeeded in getting its revised, paperback edition set as a history text in Victorian secondary schools for a number of years, no serious countervailing evidence being provided for students. His identification of *cap de fremose* as Cape Howe and SE Australia required some ingenious explanation, because the angle of the former significantly failed to correspond to that of the latter. So he invented, and dogmatically propounded a made-to-measure explanation. He maintained that Portuguese cartographers used to place all new information initially on globes. Then, he states, to make their charts, they peeled off the individual gores, laid them flat, and 'vamped in freehand links' to join up any coastlines broken in the process. McIntyre applied this method, which he astonishingly stated, on no authority whatsoever, had had 'a long and honoured place in the history of cartography', to one part of the world, and one part only, namely the base of the problematic *cap de fremose* triangle. To his own satisfaction, he succeeded in making the angles of *cap de fremose* and SE Australia more or less coincide. It seems incredible that his readers can have fallen for this explanation. Does he, do they, really believe that Portuguese cartographers can have been so stupid? Three of the foremost historians of cartography whom I have consulted unanimously state that they do not know of one single map or chart that can be shown to have been constructed in this ridiculous manner. McIntyre's 'explanation' is utterly fictitious, manufactured to explain away a problem which confounded his proposed identification. He traded on the trusting nature of his readers, and by no means only in this case.



The outline of *Jave-la-Grande* and offshore islands on the Dauphin (Harleian) map superimposed on the modern outline of SE Asia and Australia, assuming that the north coasts of Java and Sumbawa should coincide on both. This inevitably entails the assumption that the latitude scales on both maps are the same. They are not. The headland of *cap de fremose* on the Dauphin map is some 9° further south than it appears in this superimposition. (Courtesy of Jens Smith).

Map

My map (previous page) superimposing *Jave-la-Grande* on the modern map is based on the need to assume that one coast which the two maps are known to have in common are on the same scale, namely the north coasts of Java and Sumbawa. This inevitably entails the presumption that the latitude scales of both are also the same. In fact, they are not. On the superimposition, Cape Howe and *cap de fremose* appear to be nearly in the same latitude. They are not. *Cap de fremose* on the Dieppe maps is actually some 9° further south than Cape Howe. In the early 16th Century Portuguese navigators could measure latitude to within one degree, yet McIntyre, citing a 7° difference, cursorily glosses over even that huge discrepancy as 'a tolerable error'[1]

Two specious explanations are frequently cited for the lack of any hard evidence to justify the claim of Portuguese priority in the 'discovery' of Australia. One is the destruction of the *Casa da India* records in the Lisbon earthquake of 1755. Since there is not one iota of proof that any such evidence had existed there prior to the earthquake, that excuse is obviously invalid. The other supposed explanation is the Portuguese government's policy of secrecy. Significant numbers of 16th Century Portuguese charts and sailing directions covering the coasts of Brazil, Africa and Asia have survived to this day. If the policy was so conspicuously unsuccessful on such strategically and economically important routes, it is hardly logical to claim its complete success in 'Australian' waters. In any case, many foreign sailors worked on Portuguese ships, diplomats succeeded in acquiring such 'top secret' information as the 'Cantino' world map of 1502, while the Dutchman, Jan Huygen van Linschoten, actually published Portuguese pilots' sailing directions which he presumably obtained by bribery. What is more, a number of Portuguese cartographers went abroad to work for foreign governments, especially in Spain and France.

Any hypothesis, such as the assumption that the land mass of *Jave-la-Grande* is Australia, should be tested by honest, creditworthy scholarship. Sensationalism, wishful thinking, circular argumentation, fabricated or doctored evidence, and the ignoring or suppression of contrary evidence will not do.

The identification of enigmatic coastlines on early maps is not reliably achieved by an examination of coastal outlines alone. Many were extremely inaccurate, many misplaced, and a number fictitious. Only a critical examination of the inscriptions can hope to establish what the cartographers involved were depicting, or thought they were depicting. Such an examination demands of the researcher expertise in two specific fields, a knowledge of palaeography and the historical linguistics of the languages concerned. With one or two naive exceptions, all the 'believers' in the *Jave-la-Grande* = Australia equation ignored the inscriptions. Kenneth McIntyre went so far as to specifically dismiss place-name evidence as being too difficult, both for himself and for his readers! If the inscriptions cannot be read correctly, or cases of copyists' errors identified, the potential evidence cannot be detected. Palaeographic expertise is needed even in the case of early printed maps, for many contain errors due to the printers' inability to decipher their manuscript copy. The transference of lower case letters to capitals was a significant cause of error. Detailed knowledge of the historical development of the languages involved is necessary because most have changed enormously over the years, not least in spelling, which until very recently was notoriously erratic. There are other vital requirements. One is a close acquaintance with potential manuscript and printed sources, such as travel literature and sailing directions, from which the cartographers may have derived information. Variant versions need to be examined, and all read in the original languages. Furthermore, one always has to bear in mind that such information was frequently highly dubious, if not actually fictitious. Very few early maps were surveyed as we understand the term, and many were the cartographers' imaginative, graphic interpretations of written descriptions.

The west coast of *Jave-la-Grande* was identified as being part of SW Java, from coastal similarities alone, by Edward Heawood in 1899, and by Andrew Sharp in 1963, but neither attempted to make sense of the corrupt inscriptions that unquestionably validate that identification. Neither of their suggestions regarding the true identity of *Jave-la-Grande*'s east coast, nor the superficially more convincing one made by G. R. Crone in 1972, are supported by the inscriptions. On the other hand, the identification of the puzzling *cap de fremose* promontory and the coast north of it as being the Mekong delta and Vietnam is confirmed by the evidence of the inscriptions.

The ignorant and careless manuscript copying of unfamiliar material from one early chart to another inevitably led to the most astonishing transformations. The material was frequently in a language foreign to the copyist, at a time when no language had a standard spelling, and the handwriting was often difficult to decipher. A copyist would happily render an unfamiliar foreign word by one in his own language which 'looked' like, or was perceived to 'sound' like it. Examples are legion.

The *Jave-la-Grande* inscriptions have been examined in detail elsewhere.* A few brief examples may suffice here. The spellings vary from map to map. I have selected here those on the so-called Dauphin, or Harleian map. There are three features on the west coast which identify it. One is the word *gao* attached to a bay. It is a variant spelling of the Portuguese word *jao* 'Javanese'. Another is what appears to read *Quabesequiesce*, though Kenneth McIntyre read it as *Quabesegmesce*. This 'name', as it stands, bears no resemblance to any word in French or Portuguese, nor to any place-name in Java or anywhere else in the vicinity, so at first sight it appears to be nonsense. However, the first six letters appear in an Elizabethan English translation of Linschoten's *Itinerario* in the 1590s, in which he published not only supposedly secret Portuguese sailing directions, but also details of the spice trade. In the Dutch original it appeared as *quabeb*. It is the name of a now rather obscure spice, *cubeb* in English, which was obtainable exclusively in Sunda, the western third of Java. The rest of the 'word', miscopied by the French, must have been the Portuguese words *aqui esta* 'is here'. Several early Portuguese charts, including the 'Cantino', identified the sources of desirable products. The other west coast inscription is not *Hame de Sylla*, as misread by McIntyre, but *Haure* [ie *havre*] *de Sylla* 'harbour of Sylla'. This, together with the apparent 'word' *cap*, just below it, attached to a nameless cape, identifies the only significant port on the south coast of Java, now spelled Cilacap. Such ignorant joining of adjacent words, or division of long ones was remarkably common.

The miscopied names on the east coast, and those

of islands offshore are somewhat more complicated to explain; three may suffice here. Off the NE coast of *Jave-la-Grande* is the *ye de Aliofer*. This is a slightly miscopied version of the Portuguese word *aljofar* 'seed pearl', which was attached to the island of Hainan on numerous Portuguese maps, and later, in very corrupt forms, on Dutch ones, because they were plentiful there. *Coste dangereuse* 'dangerous coast' is derived from the Portuguese inscription *costa dauarela* (ie *costa da varela*), *varela* then being the name of the most easterly cape on the coast of Vietnam. Evidently the Portuguese manuscript letters *u* and *l* were misread as *n* and the old long letter *s*, thus suggesting to the French their word *dangereuse*, so 'dangerous coast'. One Dieppe map put *perilleuse*, a synonym, instead. The frequently made assertion that this identifies the Great Barrier Reef coast is sheer wishful thinking. That coast is not the only dangerous coast in the world. *Coste des herbaiges* 'coast of grass lands' is a French rendering of the Portuguese inscription *costa de champa* 'coast of champa'. Champa was a kingdom in central Vietnam. The French apparently thought that the word *champa* was a miscopying of their word *champs* 'fields', but transcribed it by a near synonym, *herbaiges* 'grass lands'.

A few years ago, in a letter to *The Bulletin*, I was accused of demonstrating 'one of the worst traits of intellectual snobbery - that is, bending the facts to suit [my] beliefs'. The writer was evidently unaware that my research into the place-names on *Jave-la-Grande* was initially undertaken in 1980, in an attempt to substantiate the *Jave-la-Grande* = Australia theory, and that I was somewhat disappointed when the evidence failed to do so. One wonders whether the author of the letter would have approved of my 'bending the facts' if, by so doing, I had managed to confirm his beliefs! He clearly knew nothing of early charts, nothing of palaeography, and nothing of the changes undergone by place names over the years.

The only effective, convincing counter to my two coastal identifications would be if someone could not merely demolish my place-name interpretations one by one, but also replace them by more convincing interpretations indicating their association with Australia instead. So far no one has done so.

Even such an outstanding scholar as Dr Helen Wallis has not always paid adequate attention to map inscriptions. She could declare my place-name interpretations 'ingenious', but did not attempt to rebut them. She just stated that my concept of *Jave-la-Grande* 'as a composite of southern Java and Indo-China' was in her view 'far-fetched and not proven'. Her own theory, however, which disregarded inscriptions, was certainly not proven. It relied very heavily on her own assessment of the supposed 'accuracy' of the Dieppe maps, especially those of Jean Rotz. Yet the mere appearance of an *Islonde of ye giants* in the Indian Ocean on a Rotz hemisphere map casts serious doubts upon her claim of his supposed accuracy. The size and shape of that island alone show that it is not, as she suggested, Amsterdam Island. It is a fictitious representation of the Marco Polo derived Zanzibar which appeared on numerous early maps from 1492 onwards, some three decades before Amsterdam Island was discovered. The Dauphin (Harleian) map actually portrays it as Zanzibar/*Ysle des Geantz:* Cartographers who could accept fictitious islands could certainly be misled by unidentified coastlines.

The inscriptions on the west and east coasts of *Jave-la-Grande* clearly identify them as being copies of very early Portuguese sketch charts of the coasts of SW Java and Vietnam, the latter probably dating from about 1516. The French evidently believed that they were genuine, but failed to recognise them, either from their outlines, or from their inscriptions. The originals cannot have had scales, orientation, or latitude marked on them. Their positioning south of Java and Sumbawa was almost certainly due to three factors. Firstly, since trade in Java was restricted to the north coast, nearly all surviving Portuguese 16th Century charts left the south coasts of both of those islands blank, as no information about them seems to have reached cartographers in Portugal. Secondly, at the time, there was current a widespread, popular belief in the necessary existence of a vast southern continent to counterbalance the land mass in the northern hemisphere. Mercator had first placed his land mass of *Beach* etc, part of his southern continent, south of Indonesia on his globe gores of 1541. It would have been logical in the circumstances for the Dieppe cartographers to place charts of unidentified coastlines which were considered genuine in that same area, and join them up, as some Dieppe cartographers did, to the north coast of Tierra del Fuego which, discovered by Magellan in 1521, was believed to be part of the Great South Land. Thirdly, if, as seems highly probable, the sketch chart of SW Java had on it the inscription *Jaua Maior*, to identify it, that would have provided a further motive for the French positioning of it. That name for Java was widely adopted from the somewhat illogical Arabic usage by Marco Polo, and passed on by him, in contradistinction to *Jaua Menor* or *Minor*, by which they, and he, meant Sumatra. Confusion reigned for centuries over the use of these two names, but when the Portuguese used the name *Jaua Maior*, of which *Jave-la-Grande* is a French translation, they always, with the exception of the hopelessly confused Manuel Godinho de Erédia, meant Java. *Jaua Menor* was variously taken to mean Bali, Sumbawa or even Borneo. Mercator and the Italian cartographer Gastaldi actually invented an island of that name south of Indonesia.

The varied, imaginative 'interpretations' of the coastlines of *Jave-la-Grande* by the 'believers', and their manipulation of the outlines to make them more closely resemble what they would like them to be, may continue to deceive their readers. The evidence of the place-names, however, is conclusive. The Portuguese may have reached Australia in the 16th Century, but none of the supposed evidence so far produced is valid.

It is a regrettable fact that sensational claims make headlines, and lend themselves to televised 're-enactments', while their reasoned demolition is usually relegated to the back pages, or to journals which the general public seldom sets eyes on.

Notes *

1. W. A. R. Richardson, The Portuguese Discovery of Australia: Fact or Fiction?, Canberra, National Library of Australia, 1989 (Occasional Lecture Series, no 3).
2. idem. '*Jave-la-Grande*: a case study of place-name corruption', International Cartographic Association, 12th International Conference, Perth, W. A., 1984, Technical Papers, vol 2, 221-248; repr. in *The Globe* (Journal of the Australian Map Circle), 22 (1984), 9-32.
3. idem. 'A critique of Spanish and Portuguese claims to have discovered Australia', *Investigator* (Magazine of the Geelong Historical Society), 30:3 (Sept, 1995), 83-107, and 30:4 (Dec, 1995), 131-147.

Article

The urge to build

Barry Williams

The depth of passion aroused in certain breasts when a Skeptic challenges firmly held beliefs, is really quite astonishing. Of course, any one of us is likely to rush to the defence of our not necessarily rationally-held religious or political prejudices - but it is more than a little puzzling as to why this should apply to subjects that would appear, to a disinterested observer, to be of purely intellectual interest. Ancient history is just such a field.

In this instance my bemusement quotient was stimulated by the strength of the verbal assaults, some bordering on the fanatical, directed at articles I had written on the construction of the Egyptian pyramids[1,2]. In these articles I make no secret of the fact that I regard the evidence and opinions presented by professionals in the field as being far more plausible than are those of amateurs whose expertise seems to derive purely from feelings of personal incredulity. Call me a crusty old conservative if you will, but I am convinced that a clear lesson of history is that paradigms are rarely overturned by amateurs who are totally ignorant of the nature of the prevailing paradigm. Yet this appears to be the position of many of those whose poorly-informed prognostications are displayed in all their gaudy glory in bookshops, and who are doggedly defended by acolytes in print and, latterly, on the internet.

Let me initially mount a defence of ancient historians who, just like scientists, should be guided by evidence and not by wild flights of fancy. Studying ancient history is a little like a doing a jigsaw puzzle in which most of the pieces are missing. With a lot of hard work, and a deal of luck, it might just be possible to build up a picture, albeit an incomplete one, and thereby draw some educated conclusions about what the original looked like.

The first task of the historian is to explore the ways in which the study of ancient history can be conducted, and to determine the best way of finding out, in the light of often patchy evidence, about things we do not now know. The historian or archaeologist seeking to unlock the secrets of the past, may call on the skills of a range of specialists from many diverse fields: anatomy, anthropology, astronomy, biology, botany, chemistry, climatology, geology, linguistics, metallurgy and pathology, being but a few of the most obvious ones. Even the research of physicists has a part to play in the search, through the applications of their findings to useful new technologies and instruments (radiometric dating techniques and ground mapping radar, being ready examples). While any, or all, of these disciplines may play a part, none of them, on its own, can provide sufficient evidence to give us the whole story. It is left to the historian to draw together all the threads and to merge them into a plausible and coherent picture of a past civilisation, within the limitations of the available evidence.

In the grey areas outside these limitations the field is wide open to amateurs from other (usually unrelated) fields to speculate and to spin their fantasies far and wide, without any of the constraints that apply to professional and serious amateur historians. Too often we find it is the case that writers of popular books, seeking to decry the consensus views of professional historians, seem aware only of the surface picture. They remain ignorant of the genuine and serious scholarship that underlies that surface. This superficial understanding of the prevailing level of knowledge rarely takes into account (or even shows an awareness of) all the evidence that has led the professionals to reach their conclusions.

As is the case with science, an historian's findings are always subject to revision, even rejection, in the light of further or better evidence. In fact, the historian's task is often more difficult than that of the scientist. While the latter might be able to design an experiment which, if successful, might lead to a high degree of confidence in a particular description of reality, it is far more difficult for the former to ever reach such conclusive findings in their subject. And even more so if the history being investigated is especially ancient, or comes from a pre-literate culture. But while an historian's conclusions might generally remain more tentative than those of a scientist, that is not to say that they can be discarded at will by those who wish to paint a more fanciful picture of our past.

Let us trace just one thread that weaves throughout the fabric of history. It is one that will, with a small amount of research, show just how far from the evidence the proponents of 'alternative scenarios' have strayed in their fanciful and ill-informed interpretations of past events.

Even before our ancestors organised themselves into living in cities (became "civilised") they managed to stand large stones on end and to place other stones on top of them. There are many testaments in Europe, Asia, Africa and the Americas to the urge felt by neolithic peoples to build things out of stone. Most popular knowledge of past civilisations derives from the remains of large structures that have survived until the present. In many cases these constructions represent the religious architecture of the civilisation in question. This is hardly surprising, given that until very recently, the urge to build large things "To the Glory of God" (whichever god happened to be appropriate) has been a primary motivation of most cultures. It is only quite late in history that a more secular impulse began to motivate those who wished to build really big things, and the reasons for this may well be as much technological as philosophical, as I shall seek to demonstrate.

The ancient world

Where better to start this search than with a very early civilization whose monumental remnants are among the most widely recognised structures on Earth? And

whose history is subject to more traducement than all others combined? Egypt. which, together with Sumer in southern Iraq, are among the oldest civilisations of which we have any knowledge. While Sumer, and its successors in Mesopotamia may have contributed more to our culture (writing, the wheel, commerce, etc) than did Egypt, it is the contributions the latter made in the field of monumental construction, that interests us here.

Compared with most ancient civilisations, the Egyptians had it easy. They inhabited a narrow and extremely fertile strip of land along the lower reaches of the world's longest river and its extensive delta. Agriculture could hardly have been easier for the Egyptians. The annual flooding of the Nile deposited new quantities of fertile silt , and it was possible to grow and harvest two or three crops per year. As a measure of the fertility of the Nile Valley, when it was finally incorporated into the Roman Empire, Egypt became the "breadbasket" of the Mediterranean region; and all from a land area little more than half the size of Tasmania[2]. Egypt was also lucky in that the harsh deserts that surrounded it on almost every side protected it from invasion; its weather was usually warm; rainfall was minimal; transport throughout the land was simplified by the water highway of the great river. But more than this, the annual Inundation, lasting for around four months, left an idle labour force whose energies could be harnessed into public works and nation building.

We tend to think of the Egyptians as being obsessed with death, given that much of what remains is associated with funerary practices and tombs. A more realistic interpretation would be to see them as being obsessed with life, so much so that they fully intended to go on living for ever, even after obvious signs of life had departed their bodies. This comes through clearly from their extremely complex religion and their burial customs, all of which were dedicated to surviving death. (It is tempting to believe that the popular Australian saying "I wouldn't be dead for quids" referred equally well to the Egyptians.)

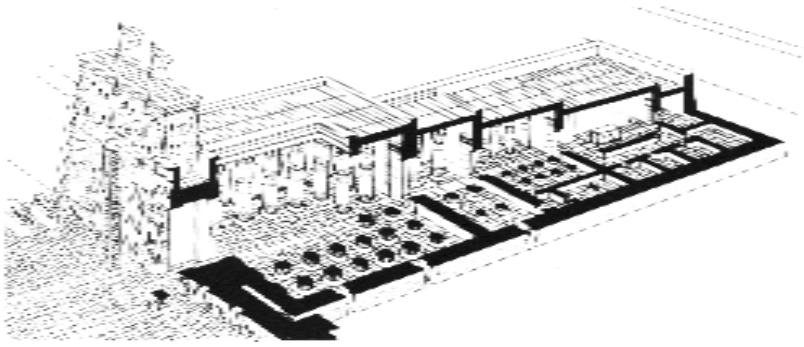
By contrast, the Mesopotamian civilisations did not have the benefit of isolation behind desert barriers, nor were their rivers as reliable as the Nile. They were almost constantly at war, both internally, and with invaders from the Asian hinterland. One city after another was overthrown and sacked, with one succeeding another as the main power in the land. As a result their religions were far more pessimistic and martial than that of Egypt. Their citizens, both high and low, were buried in simple graves, without the use of vast monuments like those of the Egyptians. Death, to the Mesopotamians, was the end of everything. The Egyptians were, with reason, optimists. The Mesopotamians were, with equally good reason, pessimists (or, perhaps, realists).

Building in Egypt and Mesopotamia

There could hardly be anyone on Earth with access to any form of media, who wouldn't instantly recognise a picture of the pyramids on the Giza plateau, with the Great Sphinx crouching nearby. To many people that image alone represents ancient Egypt, yet there are many more buildings than these to testify to the construction techniques of the Egyptians. While the Giza group represents the high-point of pyramid building in the country, these are only three of more than 90 pyramids, in various states of preservation, still existing in Egypt. More numerous still are the remains of temples, statues, tombs and other structures scattered along the banks of the Nile, many of them most impressive in their own right.

This evidence gives us some very clear insights into the engineering and building techniques of that remarkable people, and we can't help but be impressed by what they achieved, given the limited tools at their disposal. However, impressive though they might be in their magnitude and craftsmanship, as structures go they are really quite simple.

For their domestic architecture the Egyptians used the available resources, sun dried mud brick and woven matting walls, with columns made from bundles of papyrus reeds. (If there was anything that Egypt had plenty of it was mud: they made it into bricks and dried them in the sun - in the low prevailing rainfall of the Nile Valley they did the job adequately for a limited life-span on Earth.) Because there were not many trees in Egypt, they didn't use a great deal of wood, and what wood they used had to be imported, mainly from what is now Lebanon.



Cutaway view of an Egyptian temple. Columns everywhere.

However, for the great monuments that were to be their homes for eternity, important Egyptians of the early dynastic period turned to an eternal material, stone, and their architecture reflected what they knew; stone columns were carved to represent bundles of papyrus, and tomb walls were faced with tiles representing woven matting. Certainly the working of stone didn't just suddenly occur with the construction of the first large stone building on Earth, the Step Pyramid of King Djoser of the IIIrd Dynasty (c 2650). Recent discoveries in the region show that predecessors of the dynastic Egyptians had been working in this material for thousands of years before the Egyptians coalesced into the world's first nation state.

By contrast, the Mesopotamian civilisations had a different perspective on life. Their buildings, domestic and public, were made of brick, which they fired in kilns and great use was made of glazed mosaic tiles for decoration. The weather was not so mild in Sumer and sun-dried bricks would not have lasted. These were buildings designed to serve the living in the here-and-now, not for those living in the here-eternally-after.

It is tempting for us to think that these two civilisations were united in one idea, the building of tall, massive structures (pyramids in Egypt; ziggurats in Mesopotamia) but this is true only at a very superficial level.

In reality these structures served entirely different purposes, and this too reflected the different religious outlooks of the people involved. The pyramids were designed as eternal homes for the god-kings. They were all located on the desert fringes on the opposite (western) bank of the river from the cities of the living, and were usually accompanied by the necropolises of lesser mortals. They were constructed, at least in the early stages of pyramid construction (Dyn III and IV), entirely of stone, but it is clear that the architects and builders were learning as they went along. No two of these pyramids are built in the same way [3], and the arrangement and alignment of the burial chambers changed also, suggesting that this factor was of more importance than the actual structure of the pyramid itself. The first shows them learning new skills through experience, the latter is evidence of a revolution in religious belief and practice, from stellar-centred to sun-centred, which was to last throughout their history. Once the mortal remains were interred in the tomb they were sealed, ideally, for ever. These tombs were cemeteries, but much more than cemeteries.

A classical Greek temple. Still lots of columns.

The ziggurats of Mesopotamia served an entirely different function and were constructed on a very different model. They consisted of a series of superimposed mud brick rectangular platforms of decreasing size, with staircases leading upwards to the topmost platform upon which was built the temple of the local god. These were structures that performed a service for the living, located at the centre of the living city, surrounded by the important public buildings, and were the focus of the lives of the citizens. They were centres of worship, but more than just that, they were centres of daily life. Incidentally, if the Meso-American pyramids superficially resemble those of Egypt in form, in function they are much more closely related to the ziggurat.

Egyptian architecture consisted of verticals and horizontals, with huge columns (or posts) thrusting skywards, where their large capitals and massive lintels leave an impression of rectangles of awesome bulk, and with interiors consisting as much of columns as they did of space.

Greeks bearing loads

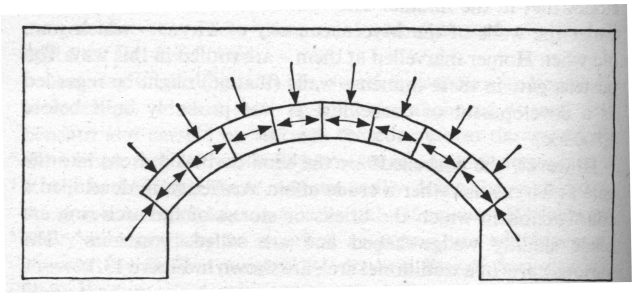
Most histories of European civilisation begin with the Greeks, though it is clear that the various Greek civilisations learned a lot from their earlier neighbours in Asia and Egypt. Before the period we know as "Classical" Greece, substantial civilisations existed around the Aegean. One of the earliest of these is the Minoan, a culture that arose in the neolithic and which was centred in Crete, and the one of later was the mainland Mycenean civilisation, which was contemporary with the Egyptian Late Kingdom (c 1500). We know that there was trade between these Aegean cities and Egypt and they used construction methods that were similar.

When classical Greece came into prominence (after c 600) both the Mesopotamian and Egyptian civilisations were in decline and had either been, or were in the process of being, incorporated into the Persian Empire. Much of the history of Greece after this time centred around conflict with the expansionist Persians, until, with the advent of the Macedonian kings Philip and his son, Alexander, we saw the full flowering of Greek imperialism, and the incorporation of the Persian and Egyptian states into a Hellenistic world. However it is not politics, but architecture, that concerns us here.

The Greeks, like the Egyptians, relied on columns and lintels of stone, though the way they used them may be, to our eyes, more aesthetically pleasing than those of Egypt. They are far more delicate in appearance and do not overwhelm us with their sheer bulk, but they are similar in their basic techniques. There is also an environmental aspect to this story. Whereas the Egyptians lived in a fertile river valley, with few trees, the Greeks lived in a mountainous and not so fertile land, further depleted by continuous agriculture over centuries. That it had trees in early times, and that early Greek construction was based on wood, is shown by examples of Greek architecture where stone structures have stylised versions of the wooden pegs used in earlier timber construction, but which serve no useful purpose in masonry.

Some thoughts on architecture

Some trends are evident in architecture up to this stage and it might be useful here to have a look at the thread that is beginning to develop. Both the Egyptians and the Greeks used stone to make their most impressive structures, and stone, for all its difficulty in working, is an almost ideal structural material for such works. It wears well and resists compression to a remarkable degree (it has been calculated that a straight sided stone tower could be built to more than two kilometres in height before it would start to fracture under its own weight). But compressive stress is only one thing to consider when designing large buildings, the other side of the coin is tension, and stone is a virtually useless material if tensile loads are to be applied. Wood is far to be preferred for taking tension, but wood doesn't have the durability of stone, and it was not readily available in quantity to either the Egyptians or the classical Greeks. So they both developed an expertise in constructing massive items of stone that has hardly been bettered since.



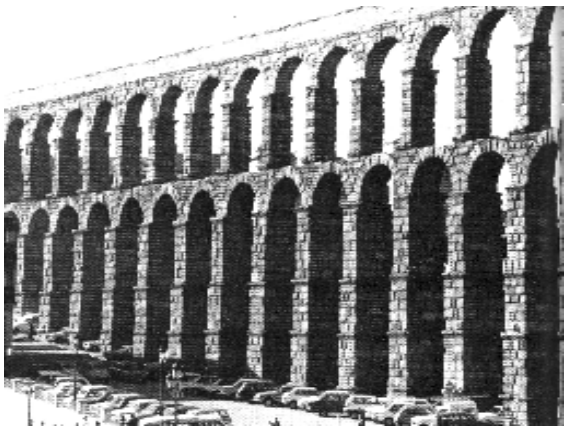
Lines of thrust in an arch

But the arch is a better method for spanning larger distances, and both the Greeks and the Egyptians knew how to do it, while the Mesopotamian civilisations used

it to a much larger degree than either of them. The earliest known use of the arch and barrel vault (which is just an arch extended along one of its dimensions) comes from Mesopotamia in the fourth millennium.

In a lintel, the gravitational forces bear straight downwards and are translated through the depth of the beam as compression on the upper surface and tension on the lower face, with dangerous results if the span is too wide. The maximum gap one can expect a stone lintel to span before tension causes it to crack (usually disastrously) on its lower surface, is about 2.5 metres, which is why all the extant Egyptian and Greek temples have huge numbers of columns, just to hold the roof up.

The arch is a method by which the forces are deflected around the form of the arch, so that both faces of the masonry are kept in compression, an ideal circumstance if you want to build in stone or brick. But the arch, too, has its own problems. The line of thrust that is deflected around the periphery of the arch is not some sort of semicircular natural force that just popped into being with the invention of the arch (there aren't any semicircular forces in nature, all forces act in straight lines), it is made up of downwards and sideways forces, which, combined, give the effect of acting around the arch. The resistance to the downward thrust in an arch comes from the way the component pieces (voussoirs in the jargon - the top one is called the keystone) are made, they are narrower on the inner side than they are on the outer (obviously, or you wouldn't get an arch) and what the downward force is trying to do is force the wider side through the narrower gap, which is not easy to do with a stiff substance like stone (a rubber arch wouldn't work). But you also have to account for the sideways forces, or you're still in trouble. If you erect two free-standing columns and put a heavy stone arch over the top, the sideways forces will cause the columns to topple. Somewhere along the line the sideways forces have to be redirected downwards, as gravity intended, and if that does not happen within the structure, you have a problem. The reasons why the Greeks and Egyptians did not make greater use of this technology is cause for much speculation; it may have been aesthetic, it was almost certainly religious, or it may simply have been that the arch just doesn't look as stable as the lintel and it may have been rejected on those grounds alone - we just don't know. But this problem was addressed, to very great effect, by the next civilisation to achieve superpower status.



1st Century Roman aqueduct in Segovia, Spain.
The cars are of later vintage

Marching arches and Roman domes

The Romans, as is the way of such things, began their ascent to world power, just as the Greeks were going into decline. Where the Greeks tended towards the philosophical, the Romans were far more pragmatic, and their architecture reflects this. While a great many Roman temples remain, so too do their great secular works, and here we can see the flowering of the arch as a very useful and stable structure. The Romans had the added advantage that within their territory they had ready access to volcanic ash and limestone, and it was discovered that if you treated these substances correctly and mixed them with water, you came up with a very useful mortar (cement) and that with mortar you could build large structures from small pieces of masonry and, unlike their predecessors, didn't need to use very large stone blocks - the saving in skilled labour alone must have been considerable. The purpose of mortar, incidentally, is not to stick the bricks together, but to spread the load evenly over the whole surface; any adhesion you get from mortar is a bonus and should not be relied upon. Then someone else discovered that if you mixed bits of sand, gravel or other solid particles with cement, you had an even more useful substance, which we call concrete. With these inventions, and a knowledge of the arch they had inherited from the Etruscans, the Romans were on their way to revolutionising architecture.

Previous civilisations had built large, solid, but not particularly spacious, enclosures. This was of no serious disadvantage to them, because the interiors of these temples were the exclusive preserve of the priesthoods and acolytes of their state religions, and were not intended for public access. They also tended to be dim places, as it is not easy to admit a lot of light into that sort of building, but, given the sunny climate of these countries, that was probably no disadvantage either, and dimness and lots of columns only served to enhance the mystery.

But the Romans were different; they wanted to enclose large spaces for all sorts of civic activities, and it's pretty hard to do that if you have a column every 2.5 metres. So they developed the arch, the vault and the dome (Just as a barrel vault is an arch extended in one direction, so a dome is an arch rotated through 360° around its centreline) to unprecedented levels of importance.

The Romans put all their new technologies to good effect, with ranks of arches being used to make bridges, viaducts and aqueducts; some of these are still standing and still being used for their original purposes today, 2000 years after they were built. And they knew what to do about those sideways forces mentioned earlier. If you have arches side by side, the sideways force of one arch is counteracted by an equal but opposite sideways force from the next one, so the net force is, again, downwards. All you have to worry about is one side each of the first and last arch, and you build abutments at the ends to take care of that.

Domes have a similar problem, with the weight of the dome tending to spread out in all directions at once, but as long as the line of thrust can be kept within the structure, your dome will stay up.

The emperor Hadrian (117 - 138CE), one of the greatest of the Roman builders, showed this to great effect with the construction of the Pantheon, a huge dome of 43.4m in diameter, made from concrete panels and weighing around 5,000 tonnes. The drum on which this dome rests is 6.1m thick and incorporates vaults

and arches whose main purpose is to relieve and redirect the stresses of the structure. This was the largest dome built up to its day, and remained so for centuries afterwards. (It is 0.5 metres wider than the dome of St Peters, which was built 1400 years later.)

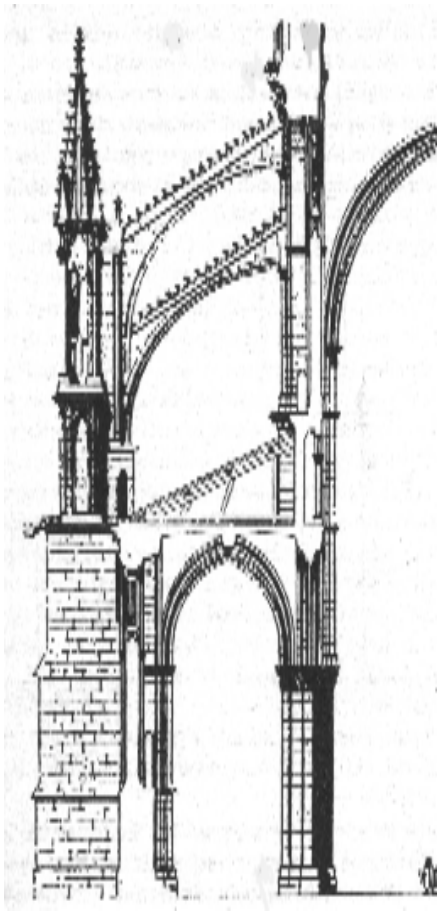
So the Romans, using these technologies, built public baths, basilicas (colonnaded public buildings), triumphal arches, the mighty Flavian Amphitheatre (Colosseum) and much more, and they did it remarkably well.

Then, by the end of the Fourth Century, the Roman Empire in the west collapsed and most of Europe lost its remarkable architectural technologies for hundreds of years. The translation of the Roman Empire to Constantinople continued to advance architecture, but the influences of that were felt more in eastern Asia than in western Europe.

Churches, cathedrals and the flying buttress

After a brief but glorious flowering of civic architecture in Rome, religious (Christian) buildings once again became the main focus of architects throughout Europe, until they reached their pinnacle in the next great breakthrough, the Gothic period, beginning in the 12th Century.

Some fine example of churches and castles had been built during the Middle Ages, but they all followed the Roman tradition of having very thick walls. While thick walls are advantageous in a castle with its defensive role, in houses of worship they lead to dim interiors, which was not at all the sort of thing the bishops wanted. This was more so in northern Europe, where the days tend to be dimmer than those on sunny Mediterranean shores, anyway. Unlike its predecessors, Christianity was an inclusive religion and the public were expected to attend the places of worship. What was needed were more windows (in the fashionable new stained glass) to let in more light, but it's not much use putting windows in very thick walls; they tend to look like tunnels. Of course, you can make the walls thinner and still sustain the weight of the roof, as long as you place buttresses along the outside walls, but lots of buttresses still leave the windows in shadow. And the trend here was to make tall buildings (to the Glory, naturally enough, of God) and once you achieved sufficient altitude, you started running into another force - the wind. Wind doesn't pose much of a problem for something solid like a pyramid, but for something built like a Gothic cathedral, tall and narrow, it poses significant problems. Then someone had a brainwave - why not build the buttress away from the wall, and span the gap with a half-arch - and so they did - and it worked. Thus was born the flying buttress, a salient feature of all the great Gothic cathedrals of Europe.



A flying buttress.
The spire on the top is more than decoration, it helps align the thrust downwards

We have now covered, albeit very briefly, some four and a half millennia of recorded history in which people have been piling up masonry into large structures (and at least as long again, prior to their recording it). What we see now, of course, are the successful attempts; the buildings that were constructed properly and which stayed up. What we don't see many of are the "errors" from which the ancients learned their valuable lessons. There are a few examples of these still around; Snefru's ruined pyramid at Meidum is probably the earliest extant example of a building that went wrong, though we are not quite sure what happened; and the famous case of the cathedral at Beauvais, an attempt to push the Gothic technique beyond the permissible envelope, resulting in a couple of disastrous collapses. There are also other example of cathedrals where the design changed in mid-construction, showing that the masons were continuing to learn all the time.

Our ancestors were skilled at the craft of building in stone, a skill they refined over millennia, but they did not have what we would now call a theoretical or scientific understanding of the materials they used nor of how structures held together. Nor would they have for some centuries to come.

Science takes a hand

Our old friend Galileo was among the first to dabble in the theory of materials and structures (possibly figuring that it was a lot safer, politically, than messing about with the universe), but the first to seriously look at it in a scientific way was Robert Hooke (1635-1702), a contemporary (and bitter rival) of Isaac Newton. Newton had proposed his law that every force has an equal and opposite force, but it was Hooke who transposed this principle into asking the question "Why don't we fall through the floor?" It might seem to us to be glaringly obvious that we *don't* (normally) fall through the floor, just as it was to our earliest ancestors, but until Hooke put his mind to it, there was no real answer as to the mechanism. The first part of the answer, from Newton, is that if we exert a downward force of 100kg by standing on the floor, then the floor must exert a 100kg force upward on our feet to keep the system in equilibrium (too little and we would sink through, too much and we'd be hurled into the air). But Hooke went further than that and asked how was it that an inanimate object like a floor "knew" how much "equal and opposite" force to apply. His part of the answer lies within a certain characteristic of all materials. Hooke determined that every solid object changes shape when a mechanical force is applied to it, and it is this that causes it to "push back" as it seeks to return to its original shape. In fact he found that the *strain* in the object is proportional to the *stress* applied to it, and that is what the law of physics that bears Hooke's name says, though he didn't put it in those terms. And until Hooke proposed that law, our ancestors, though they might have applied its lessons learnt through bitter experience, did not have the intellectual tools to allow them to understand why they did it.

But it wasn't simply a case of "OK, now we've got Hooke's law, let's start designing all sorts of wonderful structures". It was well over a century after Hooke's death before others seriously sought to analyse and understand the applications of his broad principle. Thomas Young (1773-1829), in England and Augustin Cauchy (1789-1857), in France, investigated what stress and strain were all about and how they applied to every material. As a result Young gave us one of the most useful tools any structural engineer can have, "Young's modulus of elasticity", which enables us to determine the elasticity (or stiffness) of any solid material and thus allows us to determine beforehand what is the best material for any given structural task. Even then we didn't know *why* materials behaved the way they do, merely that they generally did. The why question only got answered within the past century, with the development of molecular and atomic theory. (All of this is covered in much greater detail in two fascinating and hugely entertaining books[4, 5] written by J E Gordon, and listed in the Refs at the end of the article. I cannot recommend these books too highly to anyone who is interested in the topic.)

Over the centuries, we learnt very well the skills of building large structures out of masonry, and we still use those skills quite widely in our buildings and homes of brick, but when we want to build very large structures today we use different materials entirely. Our abilities to make and use these materials is the result of scientific and technological advances that are still in their infancy compared with our long history of using stone. The big break came with our ability to mass-produce large quantities of useful structural metals, which only happened in the 19th Century. The main metal in this context is, of course, steel and it is the subject of the second stream in our investigation.

A little irony

Our ancestors have known about metals for as far back as we can trace civilisation; the one we most commonly associate with early civilisations is gold. But gold doesn't have any properties that would have made it *useful* to our ancestors (though it was certainly *valuable* to them, as it remains today). Far more useful was copper, and its alloy bronze (we have named an entire "age" after it) from which were made the tools that allowed the Egyptians to do all that stone work and, of course, weapons which allowed them to protect and project their power. Bronze was important, but not as a building material.

Then there is iron which, though much harder to fashion than copper, eventually made much better weapons and tools. It was harder and held an edge better, and thus became the metal of choice for the discerning potential world-conqueror.

In our world, iron and steel have been very useful metals indeed, because iron and steel are what allowed the Industrial Revolution to happen; allowed us to mass-produce machinery, especially machinery that made use of a new energy resource, steam; to build huge ships and tall buildings that dwarf even the largest of those of our ancestors. They are the materials, more than any others, that set us apart from all civilisations that preceded ours up until the 18th Century. And the main reason for this is their versatility and malleability; that, and our new scientific understanding which allows us to make them with consistent properties, every time.

Steel is a material that can accept loads both in compression and in tension, and that is something masonry, however well constructed, could never do.

But iron was in use as long ago as the time of the Ancient Egyptians (a fine iron dagger was found among the treasures in Tutankhamen's tomb), and all subsequent civilisations used it, so why wasn't it used more in construction? Well it was, to some extent. The Greeks, recognising the qualities iron had that were not inherent in stone, attempted on occasion to improve the tensile strength of stone lintels by grooving the stone, inserting iron bars and plastering over the groove. The Romans invented reinforced concrete, by putting iron bars into the mix. These methods worked to a degree, but they were not capable of doing what we can now do with steel or reinforced concrete.

Part of the problem lay with the first important tool our species harnessed to its benefit - fire. Bronze can be smelted at a temperature (depending on the alloy) of 900°-1000°, but smelting iron requires a temperature of 1535°. The highest temperature obtainable from a wood fire, using the best techniques available to the ancients, was less than 1000°, about right for bronze, but far too cool to melt iron ore. However, iron has one characteristic that allowed the ancients to make use of it - if carbon is added, the melting point drops to about 1150°, and one by-product a wood fire produces plenty of is carbon. Although this temperature was still too high to be attained by a wood fire, it did result in the production, in small quantities, of iron "bloom" a spongy compound with a very high carbon content and including pieces of slag. Unfortunately a high carbon content and slag makes iron very brittle, no better really than stone for building things, but with a great deal of working much of the carbon and slag can be hammered out of the metal, and the rest distributed more evenly. Thus the ancients had a very useful material - wrought iron. But they could never make much at a time, and so it was used for tools and weapons, and occasionally for decoration, but rarely for building materials.

That was in Europe, but the Chinese, who had learned how to achieve higher furnace temperatures, were producing cast iron (ie molten and slag-free), as early as the second century BCE, 17 centuries before this was possible in Europe. High quality steel was also produced in India centuries earlier than it was in Europe, by techniques that are only slightly understood. The history of our use of iron is fragmented and complex, and the social and technological causes and consequences of its use deserve their own story, but it is not particularly relevant here.

Eventually, all of the advances in iron founding reached their apotheosis in England in the 18th Century, when a new and appropriate fuel (coke) was tried by Abraham Darby, an iron founder in Shropshire. He got the idea from the use of coke in curing hops for the beer brewing industry, evidence, if any is needed, that beer is good for you. At last it became possible to mass-produce iron and steel. Social and political conditions, the advance of science and technology had all come together in one place and time. The Industrial Revolution began, and our world would never be the same again.

For the first time we could construct tall buildings that did not rely on the forces of gravity acting only in compression; we could construct towers with steel

frames and glass and concrete skins and architects could let their hair down.

Summary

Generally, the history of masonry construction is one of glacially slow change, a story of people learning their skills by trial and error and experience. But it is also a story of occasional rapid improvements in techniques and technologies.

The history of iron production is similar. The time between when Djoser started building the first pyramid, until Khufu's architect had completed the ultimate expression of that technology, was little more than a century;. The time between when iron was first mass-produced, until Gustave Eiffel built his Tower, the apotheosis of thelatter-day Iron Age, was almost exactly the same. Incidentally, the Eiffel Tower (300m) was the first structure built on Earth that was taller than Khufu's pyramid (147m). But the story of iron ends differently, because it is also a story of people devising an intellectual tool (science) which finally allowed them to comprehend how the universe really works. This enabled them to design construction materials to suit the job, rather than simply fashioning what was already around.

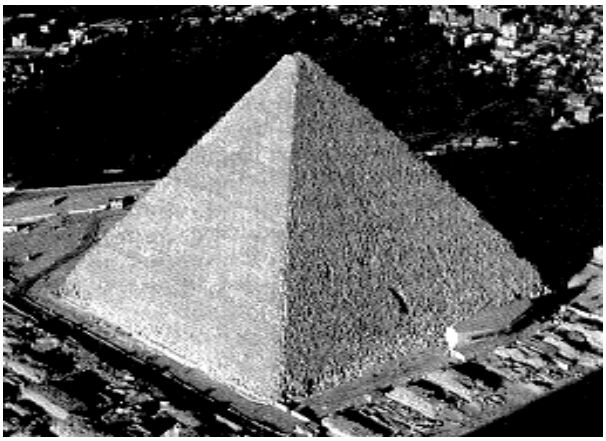
This is a story of different communities and cultures devising different (but sometimes very similar) solutions to common problems. It contains examples of ancient cultures making discoveries that eluded others for many centuries and of their failure to exploit them. The Chinese were smelting iron at about the same time as the Greeks learned how to drive a mechanism by steam. The Chinese used their skill to make farming hand tools - the Greeks used theirs to make a toy. Had they somehow been able to form a joint venture, the Industrial Revolution could have happened two millennia before it actually did, with consequences that are unimaginable.

The story of how we learned to build large structures is one to which historians, and all the specialists in the many fields mentioned at the beginning of this article, have contributed. It is a very human story of how our species learned to come to grips with our environment and impose our will on it.

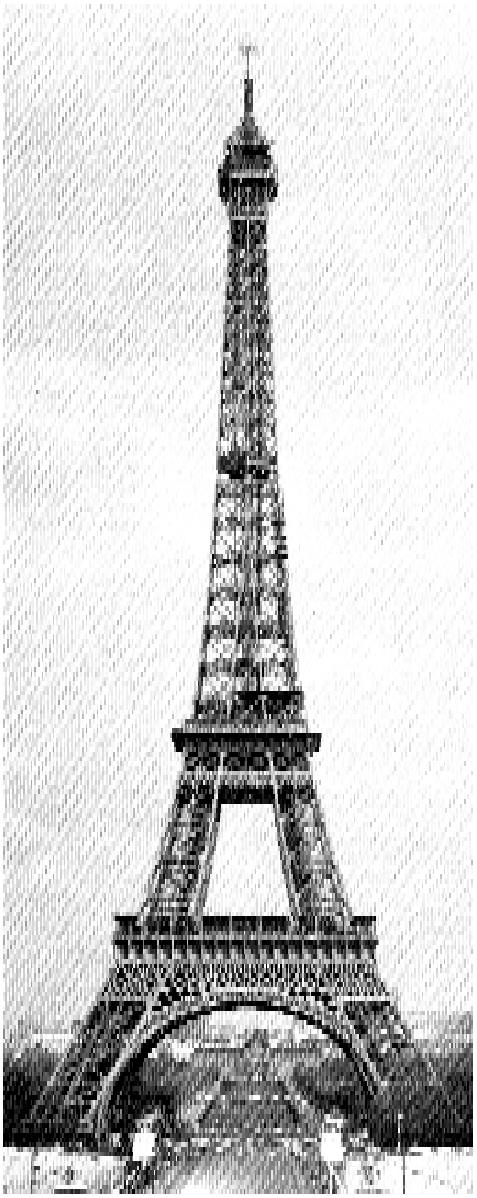
There is nothing in this story that calls for interference from aliens in space ships, nor from the survivors of pre-existing high-technology civilisations. It can all be explained in the terms of what historical scholarship has gleaned through a great deal of hard work.

However, let *us* allow our imaginations to run rife and to look for some point that *could* be explained by outside influences instructing our species in amazing new technologies. Perhaps we might suspect that the recipients had been the Chinese iron founders, or the Roman cement makers? Even Galileo, Newton, Hooke or one of the other giants of the scientific revolution? Good candidates? Well it's only harmless speculation.

One of the last places we would surely look would be at the vast edifice on the Giza Plateau. For all its impressive bulk and craftsmanship, Khufu's Great Pyramid is, at base, merely a fine example of the human skill of placing one rock on top of another. And that, history shouts at us, is one of the things our species has always been very, very good at.



Khufu's pyramid and Eiffel's tower.
Pinnacles of their respective ages.



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Article

Skeptical linguistics

Mark Newbrook

Introduction

This paper is in part a survey of a surprisingly large field of actual and potential research, and in part an invitation to interested linguists and others to participate in research into some little-known areas of linguistics. Together with my colleague Jane Curtain and others, I am working on a book on this theme. I hope that other interested researchers will be moved to participate, or at least will find something of interest in this area to work on. If they do, they will have the satisfaction of knowing that (as well as adding to their own publication lists) they are contributing to the maintenance of a high standard of argumentation and rigour in an area which should be of considerable public concern.

I am sometimes asked what a linguist, *qua* linguist, can contribute to Skeptical activity; and indeed the areas where linguistics and Skepticism collide are not in general among the issues which have come to vast public prominence (though there are often aspects of more salient issues which *do* involve language). And it is certainly true that there are few researchers who are both linguists and Skeptics, and still fewer who actually work on topics such as those listed here. This latter is, no doubt, partly because these topics may be perceived as academically of no account, unrespectable or the like. But, before his tragic early death in 1988, the celebrated linguist and polymath Don Laycock functioned as the Skeptics' 'pet linguist'; and, while in no way in Laycock's league, I myself have recently been occupying, as best I can, a similar role - latterly assisted very ably by Jane Curtain.

And there are in fact numerous areas of 'fringe' thought involving language or linguistics in which a sceptical approach may be relevant or helpful. This paper deals with some of these specific areas, reporting older and more recent research/thinking and indicating directions for further research. Some topics are covered in more depth than others. The paper also mentions (briefly) some aspects of mainstream linguistics in respect of which scepticism might also appear reasonable.

Readers who would like to know more about linguistics *per se* should consult a standard introductory textbook; a good choice would be Finegan, Blair & Collins (1997) *Language: Its Structure And Use*, second edition (Harcourt Brace, Sydney). I will be happy to answer any questions or to direct enquirers to other texts. I will also provide references for sections of this paper; for some of the issues listed there is a great deal of reading available.

'Fringe' thought on language

The first ten (alleged) phenomena discussed here will feature heavily in the forthcoming book.

1. Glossolalia

This phenomenon involves people (usually members of fundamentalist Christian denominations or the like) producing strings of utterances in what appears *prima facie* to be a natural language, albeit not (one of) the language(s) which they normally speak in everyday life.

The context is most typically during and shortly after lively services of worship in which the procedure is encouraged and perceived as normal (although outsiders may perceive the performer as, eg, drunk and incoherent). Spiritualist mediums have also been known to give glossolalic performances (see below on their other activities); but the overtly religious context is the most typical.

The usual rationale for the belief in glossolalia relates to incidents in the Christian scriptures where devotees are described as speaking 'other' languages when 'filled with the spirit' (etc). The 'language' used may be recognised by others present as a known human language (which the speaker apparently has never learned, or at least is never known to use in other situations); or it may be regarded as an unidentified language (perhaps as a human language which might be recognised by/known to others, perhaps as a language associated with spiritual entities such as angels or, more recently, with intelligent extraterrestrial entities).

In the case of allegedly angelic languages and the like, other congregation members often claim the ability to interpret the utterances and sometimes offer interpretations, although they are unable or unwilling to provide analyses of the 'other' language or information about its structure. Examination of cases of glossolalia reveals that there are a number of distinct types of linguistic entity involved, viz.

(a) elements of an identifiable human language not normally used by the speaker;
(b) sequences of what appears, structurally speaking, to be a genuine natural language (with - to all appearances - the usual arrangements of phonemes, morphemes, etc), but one which cannot be identified;
(c) 'babbling' (ie, a quasi-random sequence of syllables not resembling a string in a natural language; typically confined to the syllabic patterns of the speaker's first language, etc).

Cases firmly identified as type (c) appear of some psychological interest but not of any great importance for Skeptics. In cases of type (a), the suggestion may sometimes be made that the speaker has in fact acquired elements of the language in question (perhaps subconsciously, by overhearing; compare Section 5 below). This is particularly plausible in cases where the speaker's repertoire in the 'other' language is apparently restricted to certain sentences (etc) and/or where the speaker produces characteristic learner's errors.

Where (if) this cannot reasonably be asserted of a type (a) case, or where the case genuinely appears to be of type (b), some dramatic explanation would seem

to be required (if not necessarily that proposed by 'believers').

It is not normally possible to try to engage a glossolalic speaker in a conversation in the 'other' language, owing to the circumstances of the 'performance' and the speaker's accompanying mental state. However, analysis of glossolalic performances is possible, and the various hypotheses as to the nature of the material can be examined. This aspect of 'fringe' linguistics has been relatively fully examined; two important linguistically informed sources are Mills (1986) and Samarin (1972), and there is a considerable amount of literature on the subject in French. It has been suggested by Samarin that some types of glossolalia, at least, represent learned behaviour patterns.

2. Automatic writing

This phenomenon is to some degree an equivalent to glossolalia in the written mode (although there are also other differences).

One very salient early case involved the 'spirit language' Enochian, which was allegedly channelled (see Section 3 below) to the Elizabethan mystic John Dee via the 'automotist' Edward Kelley (see Laycock 1984 for a very careful analysis of this material by that accomplished linguist and Skeptic). Automatic writing was very commonly reported in the nineteenth century, chiefly but not exclusively as a salient aspect of some of the performances of spiritualist mediums (then very popular and widely accepted as genuine).

Although automatic writing is less often reported today, there are still alleged cases from time to time. The writing is said to be generated not by the medium (the automotist) who physically performs it but by another living person (by means of telepathy or the like), by the spirit of a deceased person or by a supernatural or extraterrestrial being.

The material produced may be in a language normally used by the medium, or in a language which he/she has apparently never learned (sometimes, as with glossolalia, a completely unknown one). Where in a known language, the messages are mostly moral or religious texts, accounts of life after death or historical romances purportedly dictated by those who participated in the events of the relevant time during their earthly lives. In literary as well as linguistic terms, these narratives often appear to require skills surpassing the known skills of the automotist herself. In some cases complex and impressive artwork may also be produced, though the medium herself supposedly has no artistic leanings or ability.

The phenomenon was 'adopted' by followers of Mesmer and at one stage was intensively investigated by various psychical research societies. Automatic writing has been less studied by linguists than glossolalia; but a major focus of linguistic attention would involve the degree to which messages supposedly produced by characters from earlier periods appeared authentic in respect of linguistic form (see also Section 3 below). Stylistic analysis could also be performed with a view to determining the likelihood that material produced in this way really might be associated with deceased persons whose written work was available for comparison.

3. Channelling

Some people (including both spiritualist mediums (and the like) and others with very different world-views) claim to be transmitting or 'channelling' the words and/or ideas of a disembodied, deceased or otherwise paranormal entity, which at times 'takes over' their personality (the parallel with automatic writing is obvious).

I have referred in Section 2 above to Dee's 16th Century 'language' Enochian; and a celebrated case of a century ago involved the Swiss medium 'Hélène Smith', who allegedly channelled the spirit of a deceased human boy, now living on Mars and speaking 'Martian' with local entities and with her (see Flournoy 1991, 1994; also Section 4 below). In the last few decades, with 'New Age' ideas of this kind becoming fashionable, there have been many celebrated channellers, including Knight (channelling 'Ramtha', a 35,000 year old warrior from the supposedly lost continent of Atlantis), Purcel (channelling 'Lazaris', a non-physical entity, and also a seventeenth century Irish doctor), King (channelling various members and agents of 'The Interplanetary Parliament', notably 'The Master Aetherius' from Mars and at times Jesus Christ, who supposedly lives on Venus), etc. Recent cases prominent in Australia have involved the channelling of 'Ptaah', an entity from the Pleiades star cluster, and of 'Kryon' from the 'Grand Central Sun'.

The ideas channelled nowadays typically involve rather platitudinous moralising, quasi-religious notions or undemonstrable claims about the history of the Earth or other parts of the universe at remote periods. Attendance at many channelling sessions is expensive, and fraud is obviously to be suspected in some cases.

When the Aetherius material became prominent in the UK during the 1960s, the astronomer Patrick Moore exposed some of the linguistic pretensions of King/Aetherius; it was claimed that the latter could speak all human languages, but the monoglot channeller was unable to respond to very simple questions in languages as familiar as French and Norwegian. However, claims of this kind continue to be made, and linguists could help in exposing them as fraudulent.

In addition, descriptions and samples may be given of the language varieties and supposed languages said to be 'normally' used by the channelled entities. Assessment of linguistic material is, of course, difficult where the language is said to be that of a prehistoric period or of another planet; but such material can still be assessed in the same way as glossolalic performances in terms of how far it resembles output in a natural language (one can, of course, consider in addition relevant non-linguistic issues such as the extreme unlikelihood of there having been such a place as Atlantis!). In some other cases, where the usage is said to relate to a known variety at a well-documented period, more specific assessments can be made.

Some such studies have been commissioned from dialectologists by Skeptical groups; the resulting judgement has usually been to the effect that the material appears largely erroneous and is probably faked. Channellers often try to 'escape' from crises associated with possible exposure in respect of language use by declaring that the entity will speak in modern English (or whatever language the channeller knows best) for the benefit of the audience. One way of countering this is to offer to use another language for a short time only (as did Moore with King). Understandably, audiences containing people who know a range of 'other' languages are not sought by channellers and, if encountered, are not popular.

4. Extraterrestrial languages

The 'Smith' case analysed by Flournoy (1991, 1994) and briefly discussed in Section 3 above involved an allegedly extraterrestrial (Martian) language. This language embodied many inconsistencies and - as might be expected if it had in fact been invented by a non-linguist - its phonology and grammar were remarkably akin to those of Smith's near-native French (though the vocabulary was mostly unfamiliar or at least not French).

More recently, many other such languages have been reported. Following on from his work on the Aetherius Society, Moore unearthed several apparently sincere individuals who believed they were in contact (by means of telepathy, by known means of communication or by physical contact) with intelligent aliens and had learned to speak their languages. This pattern continues to the present day. One person has claimed knowledge of 17 such extraterrestrial languages.

Some of the relevant aliens (etc), like Smith's boy-spirit, supposedly come from or reside on other planets of the Solar System - which appears highly unlikely, given our current state of knowledge. One person, for example, claimed to be in contact with beings on Pluto and to speak 'Plutonian'. Others are from other solar systems, which is more plausible, at least in principle; one such language was 'Krugerian', used by inhabitants of the planet of a nearby red dwarf star.

Some of these languages are also said to be known in written form (in otherwise unknown scripts, of course); often, samples are available of both speech and writing. Most of those claiming this sort of knowledge are not schooled in linguistics; but a few are sophisticated enough to offer rudimentary accounts of the structures of these languages, notably of the broad nature of the articulatory phonetics (which, understandably, is often said to be highly exotic).

While such claims may appear so absurd as not to merit serious attention, linguists could, again, address the question of how far the 'languages' presented appear structurally plausible and potentially genuine (making allowance for their alleged highly exotic origins).

Molly, a habitual tea leaf reader, could barely contain her excitement when she met the man who actually wrote them.

5. Xenoglossia

Xenoglossia (or xenoglossy) is superficially similar to glossolalia, but involves people speaking (and/or writing) in known natural languages which they have not, as it seems, learned in any normal way, not as part of a religion-related performance or in a trance when acting as a medium, but rather in an apparently normal state of mind and while performing everyday activities.

Most usually, but not always, people who produce xenoglossic performances manifest what might be deemed secondary personalities, which typically begin to emerge from time to time at a certain stage (often when the person is still young, but not always), and sometimes end up by being present for large proportions of the person's waking life. The secondary personality often appears unaware of the person's 'normal' personality and *vice versa*.

As in the case of glossolalia, the 'other' language spoken is sometimes fragmentary or consists only of a limited range of expressions, or else exhibits learner's errors; but in some other cases it is - allegedly - highly developed and native-like. In these latter cases, because of the everyday situations obtaining, the speaker can be engaged in conversation in the 'other' language if a suitable speaker is available.

The 'paranormal' explanation most usually advanced for the phenomenon is the reincarnation of a deceased person as the secondary personality; this is said to be supported by the narratives of the secondary personalities, who may or may not realise that their original bearer has died but who frequently describe a previous life at an earlier date (often, naturally, at a remote location).

Of course, even if some cases of xenoglossia should prove to be genuinely mysterious or interesting, it does not follow that this explanation is the correct one; there may be other, less spectacular explanations, perhaps still of a 'paranormal' kind (such as 'possession', telepathy, etc). Many cases of xenoglossia have emerged under hypnosis (thus, this phenomenon is liable to the suspicions surrounding 'false memories' associated with other phenomena heavily reported in that setting, such as memories of UFO abductions and of childhood sexual abuse/involvement in Satanic rituals, etc).

In many cases, moreover, it has been shown that the person had in fact learned some elements of the language in question; in some cases subjects had done this without realising it, as when a subject had lived next door to a language teacher as a child and had heard through the thin wall - and memorised - Russian phrases being taught, without knowing their meaning.

Where the supposed secondary personality is monoglot, exposure of such cases requires finding a fluent speaker of the language in question, which is not always easy. The potential role of linguists in examining such cases is obvious. Occasionally what passes for an unidentifiable language is produced in these circumstances (in which case the issue resembles those dis-

cussed earlier). The main scholarly writer to accept some cases of xenoglossia as potentially genuine is Stevenson (1974, etc).

6. Reverse Speech

Jane Curtain and I have been working - see for instance *the Skeptic* (17:3); see also Newbrook & Curtain 1998 - on a claim made by David Oates, to the effect that, during fluent speech, brief intelligible messages (normally in the same language) are always generated in reverse, at approximately 15 second intervals (the frequency varies with the style). This claim appears utterly bizarre, but Oates has been able to develop a commercial enterprise in California based upon it. This and similar claims form an obvious focus of sceptical linguistic interest. For the founder's account of the Reverse Speech theory, see especially Oates (1996).

7. Non-standard philology

Another major area of 'fringe' activity involving languages and linguistics involves the development of non-standard and often poorly supported theories about the relationships between different natural languages and language families (both genetic relationships and links involving subsequent contact between groups of speakers).

The writers in question are typically unversed in the methods of historical linguistics (or use methods long ago discredited); the evidence for their claims is usually much weaker than they imagine. Naturally, the theories in question mostly relate to events in the remote past, before the existence of reliable records and in some cases before the existence of written language (or presumably so). The views in question may be self-motivated (the ideas of 'fringe' linguists *per se*) or may form parts of larger belief systems involving the rewriting of early history (eg, the theories of von Däniken; see also Section 8 below).

Sometimes the linguistic ideas (despite their own flimsy basis) are advanced as support for theories relating mainly to other disciplines. The belief systems involved run all the way from: (a) sheer philological lunacy (eg, the British Israelite view that the word *Saxons* is derived from the modern English expression *Isaac's sons*), through (b) the wild philological speculations of Temple (1976) in support of his theory about the astronomical knowledge enshrined in the traditions of the Dogon, or (c) the increasingly bizarre theories of the origin and development of languages espoused by the Soviet 'linguist' Marr, to (d) the looser and wilder versions of glottochronology as offered by Swadesh (who was, at least, a respected linguist) towards the end of his career (Swadesh 1967).

The latter end of the continuum, in turn, fades into merely contentious views within academic philology, such as the view that an earlier ancestor language for Indo-European and other language families can be identified (Nostratic). For some more details of this area, I refer readers to my article in *the Skeptic* (14:2).

Associated with belief systems of this kind are the at times rather confused theorisings of amateur linguists and philologists, for example some discussions of the dating and relationship of Avestan and Sanskrit which have come to my attention of late. There is also continuing amateur speculation on the ultimate origins of human language, which is not usually informed by the (now rather substantial) body of scholarly work on this still somewhat intractable subject.

8. Non-standard epigraphic studies, etc

An associated area is provided by claims regarding 'lost scripts' and inscriptions written in historically/geographically anomalous scripts. Some of the former supposedly derive from vanished continents such as Atlantis, Mu and the like.

More plausibly in principle, but often still very dubiously, other inscriptions (or 'inscriptions'; some such features may in fact be natural in origin) are identified by 'rogue' linguists such as Gordon (1972) and by many other writers such as Fell (1976, 1980, 1982), Childress (1992, etc), Wiseman (1998), Schildmann (websites), etc, as evidence of early seaborne contact between Europeans/ Africans/Asians and the Americas or Australasia.

Obviously, these linguistic claims are again associated with larger belief systems involving the rewriting of early history; accordingly, ruins and artifacts are often implicated, and archaeologists have criticised such views extensively. While there has been some discussion of the associated linguistic claims, linguists could do more than they have hitherto done by way of assistance.

As with the material discussed in Section 7, this area too shades into legitimate - if at times highly contentious - theorising, this time about the identity, affiliations and origins of, eg, the languages written in the Linear A script or in the Easter Island character system. Some aspects of this set of issues are connected with the matters discussed in Richardson's article in this issue of *the Skeptic* on the alleged Portuguese 'discovery' of Australia and associated matters concerning the interpretation of medieval and early modern maps.

Atlantis is often invoked here, the implication being that the Atlanteans - whose home may have been in a relatively ice-free Antarctica - made the originals of the maps in ancient times. The 'guru' of the 'ancient sea-kings' movement is Hapgood (1966), but there is a wealth of recent material on this theme, including various books by Graham Hancock and his associates (the 'new von Dänikens') and other works such as Flem-Ath & Flem-Ath (1995). This last book in particular also includes some highly dubious comment on the nature of the Andean language Aymara, with the implication that it is very ancient and may have been used in 'Atlantean' times (etc).

9. 'Fringe' philosophy of language, logic etc

A number of novel and/or non-standard theories have been proposed in areas of philosophical concern close to linguistics, including, notably, aspects of logic and of its links with the world and with the structures of natural languages.

For instance, I have corresponded with John Trotter, a very serious but marginalised thinker with novel and - if correct - highly significant views on the status of fundamental entities in symbolic logic and on some technical aspects of the basics of linguistic theory (details on request). Trotter has also put forward some proposals more closely related to the forms and functions of natural languages; for instance, he has a scheme which appears to be designed for the improvement of machine translation and which is based in part on some of his more abstract claims but inevitably involves some attention to the nature of human language. Such views might conceivably become mainstream, at least in part;

but if they are instead confirmed as being much less securely founded or much less plausible than their originator would maintain, a useful role could be played by sceptical linguists in explaining this.

There may, of course, be other more abstract issues where sceptical linguists might again have a very useful contribution to make. It is not unknown, for instance, even for mainstream philosophers of language to discuss linguistic phenomena without a sound grasp of the relevant facts and issues as understood by practitioners of empirical linguistics. This applies especially to cross-linguistic or typological points involving linguistic diversity and its upshots; many philosophers know only languages of one particular genetic family. (Naturally, many linguists also have much to learn from philosophers of language in the same way.)

10. Issues surrounding 'postmodernism'

It is possible that linguists might have a considerable amount to contribute to discussions in this area from a sceptical viewpoint.

Notably, the views of language espoused by some philosophers, such as the postmodernist 'guru' Derrida, and those of literature scholars and others influenced by Derrida and other such thinkers, can readily be challenged by those with expertise in the empirical and theoretical study of human languages - as they have already been by scientists and mathematicians such as Sokal (1996, 1998) and by other defenders of science and analytical philosophy. I myself make a few points of this nature in my articles in *the Skeptic* - firstly in (16:3) and (16:4) (mainly on historical issues) and again in my recent response to Salter-Duke's piece in (18:3).

Certainly any linguist with an interest in the status of statements and theories (couched as these often are, in whole or part, in natural language) could well direct some critical attention (not necessarily hostile attention, I should add) towards theoretical discourse of this kind - and some have done so. The influence of the ideas in question has been very far-reaching across a wide range of academic disciplines; hence the relevance of such criticisms to the contemporary intellectual scene is considerable. Even those who might regard some of the earlier areas of sceptical linguistics as too 'fringe' to attract their academic interest will surely appreciate the significance of a set of viewpoints which has virtually overturned large areas of intellectual debate and has effectively created an entire range of new subjects ('Cultural Studies' and the like). Whether or not the linguistic aspects of the grounds for such a large movement are, as it turns out, seriously dubious, it is clearly important and useful for experts in the subject to formulate and make plain their opinions on this front.

Other relevant (alleged) phenomena

I am compiling a list of other relevant (alleged) phenomena. Some of these are listed below. Where indicated, some investigation has been conducted, is proceeding or is planned. The literature on all these and other phenomena, with the results of any such investigations, will be discussed in the forthcoming book.

11. Neurolinguistic Programming (investigation planned);
12. Facilitated Communication;
13. The Bible Code, etc;
14. Numerology and Numerophonology (investigation of latter conducted) and similar theories;
l5. Bio-acoustics/Signature Sounds;
16. SoundTherapy;
17. SleepTalk;
18. Electronic Voice Phenomena and similar theories;
19. Some interesting claims about accents;
20. Graphology (character analysis based on hand-writing)
21. Claims about the alleged language of mammals, birds and even plants (and rocks!)
22. Some other odd 'theories' concerning language.

Features of mainstream linguistics requiring sceptical attention

As noted, there are also a number of features of mainstream linguistics which have been rather readily accepted (at least by many linguists) despite obvious implausibilities or problems which they incorporate, and which may thus be felt to require sceptical attention. These include:

1. the degree to which mutually incompatible theories are developed in vast detail in ways that relate mainly to theory-internal concepts, instead of seeking to evaluate the basic theories one against another or all against data (analysed using as little theory as possible, and, if possible, theory which is generally agreed upon) and thus to stand more chance of real progress (if that is possible);
2. the issue of how far there can be genuine, valid general linguistic theories (as opposed to:
i) careful descriptions &
ii) general non-linguistic theories of the human mind etc)
- particularly at some linguistic 'levels' of analysis, notably semantics;
3. the extent to which some theories are so abstract that their advocates simply ignore (almost with impunity) phonetic facts, historical facts, etc which conflict with them;
4. the tendency in areas such as sociolinguistics to treat concepts which clearly appear to be only operational as if they were or should be precise theoretical notions (eg 'speech community');
5. the arguably excessive use of and reliance upon speakers' intuitions in linguistic theorising;
6. the scientific status of linguistics, more generally;
7. terminological and notational anomalies;
8. some other more specific issues of interest.

One early example of work along these lines is a paper which should be better known than it is, namely Hammarstrom (1971), which illustrates how the published views of very eminent linguists may appear ludicrous when looked at in a different (more realistic, more common sense?) way.

It should be said, however, that the level of critical thinking among professional linguists is obviously much higher than among 'fringe' linguists. But in the human sciences it is easy for scholars to be tempted to go beyond what the evidence and reasoning will bear, especially where they have theoretical axes to grind or where they are ideologically motivated. A renewed dose of scepticism can often be of great value here.

Conclusion

I have hinted here at the range of phenomena and issues towards which a linguist's sceptical attention might usefully be turned. No doubt there are (or will be) more such areas of interest. I shall be happy to discuss any of these topics with anyone who might be moved to carry out some research in the relevant area, and thus to help further the Skeptical enterprise.

Mark.Newbrook@arts.monash.edu.au

Article

The Lead Balloon

Richard Lead

Tuliptel.com

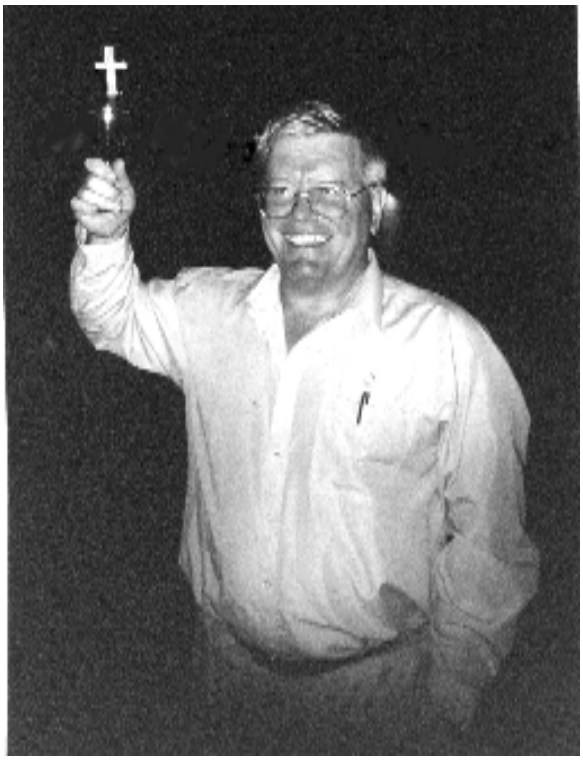
Is the past a guide to the present? Does one generation learn from ancestral wisdom and ancestral stupidity?

Tulips are believed to have originated in ancient Persia, shortly after the waters of Noah's Flood receded. Cultivated tulips were brought to Holland in the late 16th century by Carolus Clusius, the director of the Botanical Garden at the University of Leiden. Clusius experimented extensively with tulip cross breeding, particularly for medicinal applications, and his experiments produced many new breeds of tulip. To the Dutch, these new and exotic flowers became a symbol of wealth and influence.

In the early 17th century, a virus attacked some tulip bulbs. Rather than harming them, this 'mosaic virus' produced a variegated flower of brilliant colours and stripes. The mosaic virus affected mainly the *Semper Augustus* bulbs, and as a result those bulbs became highly prized and a collector's item for the wealthy.

From around 1620, a speculative bubble started. Bulbs infected with the mosaic virus began trading for ever increasing prices. The 'middle class' saw the sums the wealthy were spending on tulip bulbs, and more importantly, the profits they were making on reselling them. They could see a foolproof get-rich-quick opportunity. To quote Charles Mackay, in his 1841 book *Extraordinary Popular Delusions and the Madness of Crowds*: "nobles, citizens, farmers, mechanics, seamen, footmen, maidservants, even chimney sweeps and old clotheswomen dabbled in bulbs." The normal industry of the country virtually stopped as everyone sought their fortune speculating.

People quit their jobs to plant tulip bulbs. All they had to do to get rich was to wait for the harvest. The euphoria spread to all tulip bulbs, not just those 'improved' by the disease. A modern derivatives market developed, with 'tulip futures' on crops not yet grown actively traded. This leverage effect fuelled price rises. In 1637, at the height of the frenzy, tulip traders were making the equivalent of $60,000 per month. Quite ordinary tulip bulbs were selling for $70,000 per handful. In the month of February 1637, prices increased twentyfold.



Our Balloonaut finds salvation in a glass of red.
(Richard Lead was photographed by Harry Edwards during a visit to the Gold Coast Skeptics late last year. The cross in the background decorates a local church.)

And then it all collapsed.

Traders held mock auctions to try to salvage their lost fortunes, and government officials assured the public prices would recover, but to no avail. In the three months following February 1637, tulip bulbs lost 95% of their values. This was not the temporary perturbation of a passing comet - the *Semper Augustus* bulb traded for (in 1999 values) $100,000 in February 1637 and less than $1 in 1737. They were only ever worth $1. It took the Dutch economy decades to recover from the ensuing economic depression.

This could never happen again, could it?

At the time of writing (late February 1999), the three letters T-E-L in a company's name guarantee a soaring Australian stock market debut. Never mind the fundamentals. On Wall Street, anything to do with Internet stocks sets that market soaring. Never mind the fundamentals. Companies which have never earned a dollar's profit are trading for hundreds of dollars per share, flying without feathers. Speculative share traders are making a fortune, using modern low-cost share trading facilities to engage in what is called 'day trading,' and many people have quit their jobs to devote their efforts full time to this endeavour.

"People quit their jobs to plant tulip bulbs." And if you don't believe history repeats, when did you last see an old clotheswoman at work?

In the US in 1997, Montgomery Securities polled its equity investors and asked the annual rate of return they expected for their portfolios over the following ten years. The average of their replies was *34%*! To put this into some kind of perspective, over the past five boom years in Australia, only one listed share has achieved a compound annual price growth of 34% (Westfield Holdings, 34.3%). Despite the boom, only 25% of listed shares have returned compound growth of 10% or better.

My trusty Hewlett-Packard tells me today's Dow Jones, increased by 34% per year over the next ten years, will exceed 160,000 in 2009.

Should you know any such investors who have quit their jobs to invest full time, or who are expecting 34%

compound portfolio growth in the next decade, for goodness sake don't use the expression 'tears before bedtime' in their presence. We don't want to spoil the surprise, do we?

From Charles Mackay again: "Men think in herds; it will be seen that they go mad in herds, while they only recover their senses slowly, and one by one."

As Warren Buffett, the world's most successful investor says, "the dumbest reason in the world to buy a stock is because it's going up."

But enough of being negative - let's see if we can make some money using history as our guide.

The chart at the foot of this article records the returns of six investment sectors over the last ten years. Each is an 'accumulation' index and assumes all interest and dividends are reinvested in the same sector each year. Our task is to find an investment strategy which would have maximised our returns over this period. I am assuming we can switch our investments on the first day of a financial year, based on the results of the previous year. This is a simplistic assumption - there is a modest cost incurred when switching investment sectors, and more importantly, the profits so realised stand naked before Her Majesty's tax gatherers. But these objections are irrelevant to this exercise.

The bottom line shows the growth of $10,000 invested for nine years (note: not ten years) from 1 July 1989. The best growth was international shares, with our original $10,000 yielding a profit of some $22,000 by 30 June 1998. The poorest growth was cash (90 day bank bills) which yielded less than a third of this. All investments comfortably exceeded inflation, providing the unneeded proof that having money is better than not having it. So what strategies will we test? On 1 July 1989 we can simply spread our investments equally over the six sectors and then doze for nine years - on 30 June 1998 we will have $27,558. Passive Strategy 1 is deadly boring.

Active Strategy 1 is to swap sectors each 1 July and invest in the best performing sector of the previous year. So as cash (90 day bank bills) was the top performer in the year to 30 June 1989, on 1 July 1989 we invest in that sector. By so swapping year upon year we end up with $34,114 on 30 June 1998. This is higher than any single sector yielded over the same period.

Active Strategy 2 employs a contrary approach. Each 1 July we swap our portfolio to the worst performing sector of the previous year. This produces a final balance of $24,654, below the average.

So we have found a winning strategy. But have we? What's so special about a nine year investment period? If you examine the above schedules you will see Active Strategy 2 is ahead after 7 years.

Of course, we can always try Passive Strategy 2, which involves paying $50 to our suburban clairvoyant, astrologer, or psychic for our annual selection. Many people don't realise Microsoft Excel has an excellent 'ask a clairvoyant' function although, with an uncharacteristic lack of imagination, Microsoft christened it with the lifeless 'random-number generator.' We can choose any one of our six sectors each July by the electronic throw of a die. Excel's random-number generator was duly charged with this task and 1,000 trials recorded (I know, and I'm trying to get out a bit more). Theoretically, the average of these trials should approximate the average end-balance of $27,558 and sure enough, at $27,593 it is spot on. The best result was $55,092, the worst $14,084. For sadness or euphoria, trust your clairvoyant with your retirement funds.

I invite readers to interrogate the sectors' investment results over the past decade and advise *the Skeptic* of their winning strategies. But before you start you may care to examine the following annual stock movements:

Year	Market 1	Market 2
	%	%
1990	4.1	(17.52)
1991	5.9	34.24
1992	13.3	(2.31)
1993	9.9	45.36

The first stock market produced a safe and stable yield. The second stock market probably reminds the reader of her first husband's mood swings. Which two stock markets produced these wildly differing investment returns? The Australian Stock Market.

The first column is for the financial years ended 30 June. The second, for the calendar years ended 31 December. Neither date has any logical significance for the investor. Pick any significant date in the calendar (and Barry Williams' birthday instantly fails to spring to mind) and you can manipulate your own investment yields over any selected period.

Using the investment yields for a 31 December year end, the Active Strategy 1 and 2 comparisons were run for a 14-year period. Strategy 2 (switching to the previous year's worst sector) achieved three times the result of Strategy 1, proving absolutely nothing.

The Lead Balloon is firmly convinced that trading strategies to 'beat the market' can logically never be systematically successful.

Be sceptical of all investment triumphs touted by the investment industry.

	Active Strategy 1			Active Strategy 2		
	Balance	Yield	Sector	Balance	Yield	Sector
1989	l0,000			10,000		
1990	11,610	16.1	90 Day Bank Bills	11,530	15.3	Listed Property
1991	12,968	11.7	90 Day Bank Bills	13,110	13.7	Int'l Gov't Bonds
1992	15,821	22.0	Aust Gov't Bonds	14,171	8.1	Int'l Shares
1993	19,729	24.7	Int'l Gov't Bonds	15,008	5.9	90 Day Bank Bills
1994	19,867	0.7	Int'l Shares	15,743	4.9	90 Day Bank Bills
1995	21,000	5.7	Aust Shares	18,167	15.4	Int'l Gov't Bonds
1996	18,963	(9.7)	Int'l Gov't Bonds	21,038	15.8	Aust Shares
1997	24,007	26.6	Aust Shares	23,457	11.5	Int'l Gov't Bonds
1998	34,114	42.1	Int'l Shares	24,654	5.1	90 Day Bank Bills

Political hoax

A number of Skeptics who attended the 1998 National Convention in Canberra received a strange Xmas present in the form of a begging letter.

This letter - unsigned, anonymous, and partly handwritten - solicited a $5 donation to form a political party. The infantile name and acronym of the political party, and the general tackiness of the correspondence, alerted

most recipients to its bogus source. Because my name and contact details were used, I fielded a number of phone calls from Skeptics questioning my sanity (always a prudent question).

I can take a practical joke as well as the next person, but being seen to hustle a lousy $5 from my fellow Skeptics fills me with an incandescent rage. I am hardly short of a dollar. Readers can sleep soundly in their beds tonight, confident that should I ever join the Dark Side of the Force, the attempted rip-off will be for a damned sight more than their parking meter money.

Scam File

Profound thanks to those readers who drowned the official Skeptics' post box with examples of scams following my Convention Paper in *the Skeptic* 18:4. Many of these have now been forwarded to the appropriate government authorities, have been dutifully acknowledged, and ignored. But let's keep this reporting going. Most of these scams have been around for yonks, but occasionally something new evolves. If you come across something which doesn't pass the sniff test, feel free to forward it to Skeptics Central at PO Box 268 Roseville NSW 2069. Overseas readers are especially invited to contribute.

The scam operating under the religious umbrella of the Ecclesiastical State of Melchizedek (see 18:4) is now touring Asia, offering unemployed Chinese well-paid jobs on the mythical Pacific island of the same name. For US$5,000 cash (up front, of course) these unemployed and desperate victims of the Asian crisis are promised work. Readers are invited to dig out a bible and read *Genesis* 14 and *Hebrews* 7 to see where the scam originated.

Black Crows

The risque responses from our readers' to this paradox (18:4) were read with glee, but as *the Skeptic* is a family publication, must remain unpublished.

To recap: in our office we wish to identify any unmarried typists with red hair. There are two methods - we can approach all redheads and ask if they own a husband, or we can use a list of all unmarried women and simply look at their hair. Each method is the logical equivalent of the other.

We wish to confirm the hypothesis that all crows are black. There are two methods - we can examine crows and look at the colour of their feathers. Each black crow is a confirming instance of our hypothesis. Or we can examine objects that are not black. Every such not-black object which is not a crow is also a confirming instance of our hypothesis.

Despite the impeccable logic, we know intuitively that this is nonsense.

The business of the typists uses 'argument by false analogy' and acts as a distraction. No matter how large the office, the agreeable task of identifying the unmarried redheads can be achieved in a reasonable time. The number of not-black not-crows on Earth is effectively infinite and examining such objects adds nothing to our knowledge of crows. But it gets worse. Change the hypothesis to 'all crows are white.' Finding a not-white not-crow is a confirming instance of our hypothesis.

It is sobering to find such examples of our deductive reasoning leading us astray. The catch-cry of the Australian Skeptics - 'seek the evidence,' should never be forgotten.

Annual % Performance of Investment Sectors

Year Ending	Aust Shares	Int'l Shares	Listed Prop	Aust Gov't Bonds	Int'l Gov't Bonds	90 day Bank Bills	Average	Aust Inflation
1989	3.5	18.7	(1.1)	5.3	9.9	13.6	8.3	7.6
1990	4.1	2.6	15.3	16.0	1.8	16.1	9.3	7.7
1991	5.9	(0.8)	7.7	22.3	13.7	11.7	10.1	3.4
1992	13.3	8.1	14.7	22.0	23.4	7.7	14.9	1.2
1993	9.9	32.1	17.1	13.6	24.7	5.9	17.2	1.2
1994	18.5	0.7	9.8	(2.0)	(4.1)	4.9	4.6	1.4
1995	5.7	15.0	7.9	11.9	15.4	7.1	10.5	3.9
1996	15.8	7.2	3.6	9.9	(9 7)	7.7	5.8	3.1
1997	26.6	29.0	28.5	16.8	11.5	6.8	19.9	0.3
1998	1.6	42.1	10.0	11.3	26.2	5.1	16.1	0.7
Average	10.5	15.5	11.4	12.7	11.3	8.7	11.7	3.1
$10,000 invested I July 1989	**24,601**	**32,236**	**25,097**	**26,556**	**24,603**	**17,303**	**25,209**	**11,618**

Article

Metaphysics

William Grey

As a philosopher it often saddens me to survey the books which are regularly allocated to the sections of bookshops devoted to Philosophy. Since many New Age authors have misappropriated the vocabulary of serious philosophical inquiry this misallocation is quite intelligible.

The misappropriation of the vocabulary of philosophy has another unfortunate consequence. It brings into disrepute legitimate fields of inquiry. It distresses me for example to see the word "metaphysics" (or "metaphysical") repeatedly bracketed with "occult" and "New Age" by various sceptical writers with whom I mostly agree.

Metaphysics examines the fundamental assumptions which we employ when we set about trying to make sense of the world, and as such is a legitimate and venerable field of philosophical inquiry. Metaphysics is the attempt to delineate the nature, constitution and structure of reality at a very general level, and as such it addresses issues which lie beyond science, but which scientific inquiry presupposes. For example, what do we mean when we say that physical objects (or numbers) exist, or that every event has a cause?

A professional interest of mine is the metaphysics of time. Just to illustrate that it's not just philosophers who wrestle with metaphysics, here's a quote from a scientist on the nature of time (with which, it so happens, I disagree) which is more metaphysical than empirical:

> Our experience of time lies closest to our perception of reality, and any attempt to build a 'real world' must come to grips with the paradoxes of time. The most profound puzzle of all is the fact that whatever we may experience mentally, time does not pass, nor does there exist a past, present and future. (Paul Davies, 1980. *Other Worlds*_. Penguin, pp. 14-15.)

This is a metaphysical claim because there is no way that conclusions about whether there is any such thing as a past, present and future can be settled by observation and experiment. What makes Davies' claim metaphysical is that it is a claim about the sort of framework which is most suitable for formulating and explaining the results of observation and experiment.

While I would not have the temerity to challenge Davies authority on a point of physics, when he strays into metaphysical territory (as he has every right to) he becomes fair philosophical game.

Metaphysical assumptions underlie every serious (and indeed spurious) theoretical speculation, though when there is agreement little purpose may be served by dwelling upon the metaphysical foundations of a particular field of inquiry. At times of disciplinary crisis however they characteristically become matters of great concern. We have learned to live with and internalised Newtonian metaphysics, but the metaphysics of quantum reality are problematic and unsettling.

- No, I haven't read that palm yet. I might borrow it next time, if it's not out on loan.

Metaphysical claims are not empirically testable, and for this reason the subject has notoriously had its detractors. But the arguments marshalled by positivists (and others) to bury metaphysics have never been decisive. Generally, the supposition that metaphysics is meaningless turns out to be itself a fundamental assumption that is itself metaphysical in character.

The verificationist claim that statements must be empirically testable in order to be meaningful, for example, is not itself a testable claim, and thus rules itself out as meaningless. And the great scourge of metaphysics, the methodological assumption known as "Ockham's Razor" is itself a product of metaphysical inquiry!

Let it not be thought that I wish to defend all the garbage that goes under the heading "metaphysics". I don't. But "metaphysics" is a label for a robust area of inquiry which has persisted for more than two millennia, and which continues to fascinate those with a particular disposition for abstract reflection. It is an honourable word which I would be loath to give up lightly to the charlatans and shysters.

Review

The hoaxing of Margaret Mead

James Gerrand

***The Fateful Hoaxing of Margaret Mead - A Historical Analysis of Her Samoan Research* , Derek Freeman. Westview Press. 379pp. 1998 hbk $46.95**

Anthropology is at the end of the scientific spectrum where conclusions cannot be experimentally tested, unlike those on the opposite end, such as physics, chemistry, biology. Thus the correctness of any of its conclusions must be assessed on the validity of the evidence advanced and on how a conclusion fits in with other accepted understandings. In these untestable sciences, wrong conclusions can often be made when a researcher has a belief or an aim that consciously or unconsciously favours collection of evidence that supports the belief or aim, and overlooks evidence opposed to the belief or aim.

Derek Freeman in his book *Margaret Mead and Samoa - the making and unmaking of an anthropological myth* when published in 1983 put forward convincing evidence how Margaret Mead had been misled in her conclusions, published in her 1928 best seller *Coming of Age in Samoa*, most particularly that Samoan adolescents did not pass through difficult periods of adjustment experienced in other cultures such as her American one. This absence of adolescent difficulty was due particularly to what Mead claimed as their sexual freedom. Mead's conclusion was very much in line with her belief in cultural determinism, as advanced by her professor, Franz Boas. In Boas' Kantian/anti-evolutionary words " not only our knowledge but our emotions are the result of the form of our social life and the history of the people to whom we belong".

Freeman's book caused an eruption in anthropological circles and the general community for whom Mead had become a scientific icon, the most celebrated scientist in America. Freeman was judged to be an heretic, one who was not a true believer. Freeman accepted this title and changed the title of his book in later editions to *Margaret Mead and the Heretic*. David Williamson saw the dramatic qualities of the controversy in writing his play *The Heretic* (1996). The meaning of "heretic" has subtly changed from "one who holds an unorthodox opinion" to "one who makes a personal choice".

It has now been found that a human's capacity to make a personal choice is one that is unique to the species and the source for this facility is located in the human's frontal lobe of the brain.

Skeptics are heretics

New Zealander Freeman started his anthropological research in 1940 in Western Samoa (then a NZ trusteeship) acceptive of Mead's conclusions based on her five months research in American Samoa. Freeman was then also a cultural determinist, influenced by his professor, Ernest Beaglehole.

However, after two years of his Samoan study, during which he lived amongst the Samoans, became fluent in their language and an adopted son of a talking chief, and had been conferred a chiefly title, Freeman was convinced that Mead's conclusions about American Samoan society did not apply to Western Samoa. On being told by his Samoan friends that life in the two Samoas were essentially alike and after a further year of Samoan life Freeman decided that one focus of his research had to be the objective testing of Mead's depiction of Samoan culture. To refute Mead's Samoan findings would require extensive research.

This research began in 1946 examining manuscripts in the Sydney Mitchell Library and in England the Samoan archives of the London Missionary Society. (The LMS missionaries introduced their Protestant Christianity into the Samoan culture following their arrival in the 1840s.)

The research continued for three years when Freeman returned to Samoa in 1966 as a highly qualified anthropologist. He completed his research for the above mentioned book in 1981 when he finally gained access to the archives of the High Court of American Samoa for the 1920s.

Freeman's further book, the subject of this review, is based on further research carried out since 1987, following Freeman's meeting one of the two Samoan girls, who, now 86 years old, officially admitted that she and her friend had played a joke on Margaret Mead. In response to Mead's persistent questioning as regards sex, they claimed they had a promiscuous sex life, frequently spending nights with boys. Freeman was also able to obtain in 1990 copies of the correspondence of 1925-26 between Boas and Mead, and material about Mead's research from the archives of the US National Research Council and from the US Library of Congress.

From this research Freeman convincingly proves that Mead came to Samoa to carry out "A study in Heredity and Environment based on an Investigation of the Phenomena of Adolescence among primitive and civilised people" whilst having a firm belief in cultural determinism - behaviour is relentlessly shaped and moulded by cultural patterns.

But Freeman also found that Mead had an additional aim that she did not reveal to her research supervisor Boas who had told her not to waste time on it. This was to carry out an ethnological study into Samoan customs and culture on behalf of the Honolulu Bishop Museum with a promise of

publication of her results in the Museum bulletin.

As reported by Freeman, Mead spent most of her short time in Samoa - only five months (with three weeks lost due to a hurricane) of what was a twelve months assignment - on this ethnological research. She lived in an American naval residence rather than in the Samoan community and no doubt found it difficult, particularly with limited facility with the Samoan language, to discuss with Samoan adolescent girls their

private sexual activities. Mead indicated this difficulty to Boas in a letter to him after her first two months of research, asking "If I simply write conclusions and

use my cases as illustrative material will it be acceptable?" Boas' reply was that it would be up to Mead to decide. After a further two months Mead was able to advise that "my problem is practically completed". This was after she spent ten days of this period doing ethnological research at another Samoan island accompanied by two Samoan friends. It was during this excursion that Mead was hoaxed by these two friends. Mead seized on these revelations to conclude her research a month earlier than planned. Mead was also longing "to escape from that tiny island" (where she was doing her research) "and the society of the tiny white colony on it" and looking forward to a holiday in France, England and Italy.

Freeman's conclusion is that "no systematic, firsthand investigation of the sexual behaviour of her sample of adolescent girls was ever to be undertaken".

One curious feature of Mead's book *Coming of Age in Samoa* is that it only deals with adolescent girls, yet boys also come of age. Of course we now know through scientific investigation that the prime factor in "coming of age" in adolescents is the release of the hormone oestrogen in adolescent

females and the hormone testosterone in adolescent males. So the biological factor takes precedence over any local culture when we come of age.

Another Mead conclusion I had difficulty in accepting is her criticism of adolescent behaviour in her USA in comparison with that of the Samoans. No doubt there were some difficult areas in the USA at the time but I have not thought the life of American adolescents of these pre-depression times were unusually difficult. Mead's autocratic father might have had some influence here. Then "the noble savage myth" might have played a part. This myth has now been effectively disproved. For example it has been revealed that the "savages" of Papua/New Guinea, like other such tribes, led a very fearful life - at the mercy of attacks from neighbouring tribes and of nature - fire, flood, drought, earthquakes, volcanic eruptions.

As regards the nature/nurture debate there has been overwhelming evidence in recent years from many areas, particularly from the research carried out by a Minnesota institute on identical twins that on average about 70% of our behaviour is due to heredity, our genes, as against 30% due to our culture, our environment.

Freeman's book is an outstanding example of how truth will win out even though in this case it took years of intensive research and great perseverance battling against an established understanding.

Review

One you must read

Richard Gordon

***Alternative, Complementary, Holistic & Spiritual Healing. An examination of non-traditional healthcare systems*. Harry Edwards. Published by Australian Skeptics 1999. pp452 $22**

Another excellent, well researched book from our intrepid investigator Harry Edwards. This will be a good companion for Harry's previous books especially complementing his *A Skeptics Guide to the New Age*. Between them these two books cover most of the crazy and unusual things people believe in.

Professor Nikolai Bogduk - Professor of Anatomy and Musculo-Skeletal Medicine at the University of Newcastle School of Medicine - opens the book with a Foreword which is typically punchy and full of thought provoking messages. Harry's Preface and Introduction set the stage for chapter one (289 pages) containing comprehensive, alphabetically arranged descriptions of most of the popular alternative therapies - 89 of them in all. Each summary covers the history, theory, practice and an assessment, all of which are designed to give the reader a concise picture of what is offered.

The next four chapters deal in detail with - "Miscellaneous techniques and therapies","The Placebo effect", "Gizmos, gadgets and potions" and "Quackery". The final chapter is taken from an article previously printed in *the Skeptic*. Here Harry and co-investigator and "dummy patient" Karen Stollznow describe their investigation involving consultations with alternative practitioners. The book concludes with the bibliographies and a beaut description of "alternative anatomy".

The common catch-cry of those promoting alternative therapies is that consumers have the right to make a choice about their health care, and who could seriously disagree with the sentiment. However, the catch-cry is missing one vital word; it should read "informed" choice. This is an area in which a medical practitioner is at somewhat of a disadvantage - the technical language of medicine is not always amenable to easy translation into lay language, but it should nevertheless be incumbent on doctors to try to explain their procedures to their patients. The same constraints do not necessarily apply to practitioners of alternative treatments, the language of which, all too often, owe more to marketing than they do to science.

This book is an important, and long needed, source of information for those who wish to make "informed" choices about their health care. It cuts through much of the hype surrounding many of the alternative practices on offer in the market place, and places them within their correct historical and scientific contexts.

Anyone familiar with Harry Edwards' writings in *the Skeptic* will know that he expresses strong opinions, and this book is no different. But Harry does not expect people to accept his opinions alone and the comprehensive 47 pages of bibliography invites them to do their own research. The book is clearly and concisely set out: a must for every Skeptic's library.

Review

Mirrors and smokescreens:
lawyers voodoo and the art of concealment

Ben Clarke

***The Cartel :Lawyers and their nine magic tricks*, Evan Whitton ; Herwick Pty Ltd 1998, Glebe NSW**

The Cartel is an innovative exploration of the common law civil and criminal justice system. It contends that lawyers use "nine magic tricks" or rules of evidence to obscure the truth and allow a disproportionate number of guilty persons to 'get off'.

At first glance the reader may well consign *The Cartel* to the "So many lawyers, so few bullets" shelf. As an defence advocate and Australian Skeptic I was interested to see whether the book offered any practical ideas to improve or revolutionise the system (and perhaps a few new 'techniques in the art of persuasion' which I may find useful in my own practise.)

My first surprise was to find that *The Cartel*''s author (unlike us mere mortals) knows the mind of God. His sources enable him to tell us what proportion of accused are guilty but escape justice and are wrongly acquitted. (p162) Armed with these divine powers it is clear where Whitton is headed. The common law system and its rules of evidence are in for a hammering.

Whitton identifies Nine Magic Tricks:

1. The Unimportance (and concealment) of the Truth
2. A Defective Jury System
3. The Adversarial System: How Defence Captured the Common Law
4. The Right to Silence Protects the Innocent Only
5. The Rule Against Patterns (Similar Facts)
6. The Rule Against Hearsay
7. A Confusing Formula for the Standard of Proof
8. The Christie Discretion: How to Conceal Virtually all Evidence
9. Tom Clark's Exclusionary Rule (the exclusion of unlawfully obtained evidence)

A proper analysis of Whitton's views on all nine of these 'tricks' goes beyond the limits of this review. However I will address one, the similar fact rule of evidence. Without the rule that evidence can be excluded by a judge if its prejudicial effect outweighs its probative value, unsafe and satisfactory convictions will undoubtedly follow.

Example - An innocent bypasser is apprehended in a shopping centre around the time that a victim is raped. The suspect has been previously convicted of raping a person in a shopping centre car park. If this similar fact evidence is admitted and there is no other forensic evidence linking the suspect to the rape, a wrongful conviction could result. The persuasive power of similar fact evidence on the minds of jurors is something which common law judges have rightly been mindful of. The inclusion of such evidence in all cases would undermine an accused's right to a fair trial.

Fairness to the accused is clearly not Whitton's guiding preoccupation in this work.

Abolition of the nine tricks

Any innocent person who stands charged with a serious criminal offence should shudder at Whitton's suggested abolition of a number of key rules of evidence which protect their right to a fair trial. Where a prosecution case relies purely upon circumstantial evidence Whitton's proposals are particularly alarming.

Whitton's Solutions

A separate education system for judges, dismantling of *The Cartel* (self interested lawyers, ignorant judges who obstruct reform and maintain a illustrious place in the social and financial sun), putting jurors on the bench, put lay judges on appeal courts, changing the standard of proof so that the judge and jury " must be thoroughly convinced", abolition of the rules of concealing evidence.

The Problem with the Whitton Solution

The rules of evidence have evolved over time as courts have grappled with a wide range of factual and evidentiary situations. The abolition of the nine magic tricks, as Whitton calls then would require their replacement with a fundamentally different system of justice. To get there, there would need to be more senate inquiries, government reviews, royal commissions and referenda than men like Whitton may be prepared for the public to fund.

While Whitton may have embarked on a predetermined exercise of seeking out or utilised examples and anecdotes which bolstered his thesis on the nine magic tricks, he does provide examples of cases where failure to apply these rules of evidence has wrought injustice. It may be argued that he doesn't have to because he is not a lawyer. Merely a question poser. However, simplistic and incomplete assessments lead to inconclusive contentions.

Whitton tantalises the reader with headings such as: How Many Guilty Get Off? (a question that can only be answered accurately by God) and How The Innocent Go To The Chair (a question which no longer has application in Australia). However he ignores other important questions such as how many persons charged with offences plead guilty?

Neither is Whitton rigorous in his analysis of the application of legal principles. For example his approach to the rule of precedent which "tends to bind judges to the rulings of earlier judges who may have been wrong ....or had a secret agenda" (p65)

Dworkins speaks of the system of precedents offering judges a seamless web in which answers to difficult cases can be found in previously decided cases.

While Whitton notes potential pitfalls in applying precedents to fresh cases, he fails to note that courts can also distinguish and overturn prior cases on the basis that they deal with a slightly different question or are in the light of advances in technology or changes by lawmakers (the legislature), no longer good law.

The Cartel focuses on how the common law justice system has traditionally operated while failing to acknowledge its strengths and generally accepted aspects of the

system. Whitton ignores efforts to make the common law justice system more efficient and provide incentives to non litigious resolution of disputes via the use of ADRs.

The book largely ignores efforts by lawyers and law-makers to improve the efficiency of the system. It does not acknowledge the following initiatives:

1. Compulsory mediation in certain family law matters,and provision for family plans (agreements)
2. Incentives for guilty offenders to enter early pleas of guilty.

These incentives include:

- credit on sentence for:
  - early pleas,
  - cooperation with the authorities by admissions to police,
  - police informants,

Other improvements to the justice system which are not acknowledged are:

- conferencing for juvenile offenders with provision for apologies to victims, reparation to victims by voluntary work or repairs of damage.
- community justice initiatives which allow Aboriginal elders who are also JPs to deal with certain offences within their own communities
- increased provision for summary determination of criminal offences, and
- fast track procedures for civil litigation, aimed at speeding up the determination of civil cases

Whitton also fails to acknowledge that around 90% of persons charged with criminal offences plead guilty, and are punished within a few weeks of being charged by police.

While it may be argued that *The Cartel* is about faults in the system not innovations to improve it, Whitton devotes a number of chapters to solutions in civil and criminal matters. Clearly there have been substantial efforts to improve various branches of the Australian legal system. These initiatives could have been explored and acknowledged by Whitton.

Tabloid journalism or objective critical analysis?

The Cartel is by no means an intellectual work, however it is more than tabloid fodder or a collection of anecdotal evidence and sensational 'hard cases'. It raises important issues including:

1. the extent to which an accused should be able to maintain their right to silence,
2. Does the common law system have more to do with what the prosecution can prove than uncovering the truth in court? and
3. Is an inquisitorial system of justice is superior to the adversarial system?

The book also provides some illuminating examples on the operation of the legal systems of a number of other countries, and the extent if at all the "nine magic tricks" can be relied upon in those jurisdictions.

Overall *The Cartel* gets the thumbs up as an interesting and thought provoking work for the general reader. It is a fresh and interesting book with clever cartoons by Patrick Cook. However it gets the thumbs down from the defence lawyer. Clearly, if Whitton's ideas were adopted, the foundations of the presumption of innocence would be demolished. Ultimately many of Whiton's ideas must be rejected to ensure that innocent people are not convicted in circumstances which are unsafe and unsatisfactory. In a world of intense media scrutiny of sentencing, fascination with jury deliberations and verdicts, *The Cartel* will provide a useful reference for those who are dissatisfied with the criminal justice system and are looking for radical reform.

Review

Hoodwink'd with faery fancy

Richard Lead

***Unweaving the Rainbow. Science, Delusion and the Appetite for Wonder*; Richard Dawkins: Allen Lane The Penguin Press 1998 $39.95**

It is rare writer who grabs the reader from the first sentence of his Preface. Rarer still, a science writer with this gift. But Prof Richard Dawkins is no ordinary science writer. His first sentence starts:

> A foreign publisher of my first book confessed that he could not sleep for three nights after reading it, ..

and this reviewer nodded with delighted agreement- *The Selfish Gene* had that effect on me as well. The excitement of discovering our underlying humanity was palpable. But then his first sentence continued:

> so troubled was he by what he saw as its cold, bleak message.

And thus religion evolved.

Unweaving the Rainbow is Prof Dawkins' first book not to be focussed on biology and evolution, and his roving mind explores issues of particular concern to Skeptics. He is both passionate about the glories of science and scathing of those whose agendas denigrate it. To quote his Preface again:

> My title is from Keats, who believed that Newton had destroyed all the poetry of the rainbow by reducing it to the prismatic colours. Keats could hardly have been more wrong, and my aim is to guide all who are tempted by a similar view towards the opposite conclusion.

We who endured a stultifying high-school science education find it hard to comprehend science as poetry. Perhaps this explains the ease with which the purveyors of the paranormal hijack our sense of wonder for their personal profit. Dawkins patiently, logically, and comprehensively exposes the usual suspects in the world of the paranormal - the astrologers, the spoon benders, the ufonuts - and contrasts their greyness with the glories of real science.

Does the reader know how Uri Geller stops viewers' watches on a television programme? Does the reader know the difference between type 1 and type 2 DNA fingerprinting errors? Is the reader aware that only one battered wife in a thousand is murdered by her husband - and that this misleading statistic is used to deceive juries? Does the reader understand the physics of the rainbow? Why it curves? That a drowning surfer and a rainbow have something in common?

Read the book, and be humbled.

But some practical advice - fill the refrigerator with beer and frozen pizza. Give the family a weekend leave pass, and take the phone off the hook. Don't open *Unweaving the Rainbow* until a Saturday morning.

Report

Hands off Santa

Jane M Curtain

Skepticism and controversial issues such as Father Christmas

Skeptics require good evidence before they accept an unproven claim, but remain open to any hypothesis, however unusual, as long as it can be supported by unambiguous and repeatable evidence. This, however, does not mean that Skeptics necessarily agree about all matters. In fact, many Skeptics vehemently disagree about certain issues. For example:

- Some Skeptics believe that smoking and passive smoking are hazardous to one's health, while others believe that the health risks attributed to smoking are highly exaggerated;
- Some Skeptics believe that community immunisation is essential for the whole community's wellbeing, and that any personal risks associated with it are minimal by comparison, while others object to community immunisation because they believe that the personal risks are greater than the community benefits;
- Some Skeptics appear to believe that science is the only respectable way of investigating issues, while others believe that there are some issues which cannot be adequately investigated by science; and
- Some Skeptics believe in God, while others are self-professed atheists.

There are, of course, many other controversial issues within Skeptical circles - some of which tend not to be discussed in a serious manner. For example, many Skeptics are totally opposed to the western practice of encouraging small children to believe in Father Christmas or Santa Claus. These Skeptics claim that adults should always be truthful to children, and that encouraging children to believe in Father Christmas is a totally dishonest thing to do. Some Skeptics claim that this practice can inhibit a child's enquiring and scientific mind, and some even claim that believing in Santa can be harmful for children in that it can potentially cause emotional and psychological problems.

I must confess that I am quite amazed at some of these claims - not least because there is little or no evidence which supports them. In my opinion, the practice of encouraging small children to believe in Father Christmas is perfectly reasonable and harmless. In fact, I prefer to describe this practice as inviting children to participate in an annual cultural fantasy. And this fantasy is no more misleading or dishonest than teaching children to sing whimsical nursery rhymes (such as Hey Diddle Diddle, which is about cows jumping over the moon and dishes physically running away with spoons). I will not accept that the Santa fantasy, which is definitely an integral part of the Australian, European and American Christmas culture, is harmful for children unless I see good evidence to this effect.

Correction and apology

In the last issue we ran an article by Jane Curtain under the heading "Santa: harmless or a threat". Regrettably, during the final production of that issue we suffered a serious software crash, requiring a complete re-layout of the whole issue. As a result, in the resurrected copy, Jane's article suffered from a major curtailment of the beginning and end of her article, which we didn't pick up in the final, rushed, proof reading. This led to the removal of most of Jane's argument and her conclusion and gave a false impression of what she was saying in her piece.

In fairness to Jane we have published here her complete article, as it should have appeared in 18:4, and tender our sincere apologies to her for making her work appear to begin and end so abruptly.

The fact that she has nice things to say about a "big jolly man with a long white beard" had nothing to do with our decision. Ed

A personal anecdote

Many of my happiest memories from early childhood are those to do with Christmas and Santa Claus. In my opinion, very little can compare to the magical feeling of going off to bed on Christmas Eve with the expectation of a big jolly man with a long white beard and a red suit about to arrive delivering long-awaited presents to deserving children. I participated in this fantasy with gusto: I was convinced that I could hear sleigh bells during the night, I worried about the reindeers' fatigue, and I hoped Santa remembered to pack my presents. I imagined he would be feeling very hot and tired by the time he reached Australia, clad in those warm clothes, so I always made sure he had a bottle of beer (admittedly, I never considered drink-driving issues) and a couple of shortbreads waiting for him.

Naturally, however, at a certain age one starts to doubt the existence of Father Christmas, and for me this was at around the age of six or seven. Things just did not seem to make sense: I started questioning how Santa managed to get around the whole world in a single night, how he managed to carry so many presents in such a small sack and on such a small sleigh, and how he was able to monitor the behaviour of so many children over the course of the year. I also wondered how he was able to have a drink (often alcoholic) and a snack at almost every house he visited, how he knew that I really wanted a particular doll for Christmas the year before, how he knew that our chimney was unusable due to the gas heater which had recently been installed in the fireplace, and why arctic explorers had never managed to find Santa's cottage or workshop in the North Pole. Explanations of magic, etc just were

not plausible enough for developing sceptical mind. In short, I was growing up.

Eventually (if not reluctantly), assisted by the sought-after and much revered opinions of peers, older siblings and parents, I was forced to admit to myself that Father Christmas was simply a fantasy. What a blow! I was extremely disappointed - not because I believed that my parents had lied to me - but because I had always had such a lovely time participating in the Father Christmas fantasy, and I really wanted to keep up this harmless pretence for a little longer. Christmas would never quite be the same for me again. However, despite my own initial disappointment, I willingly made a concerted effort to ensure that my younger sisters continued to believe in Santa for as long as possible. I did not want them to miss out on all the fun by being faced with the cold faced reality quite so soon, and I thoroughly enjoyed helping them participate in this delightful Christmas pretence.

Responses to claims made by anti-Santa lobbyists

So why do some Skeptics believe this fantasy is harmful? I must admit, I simply do not know. I think that most of their claims are totally unsupported and highly exaggerated. There appears to be absolutely no evidence that the Santa fantasy is harmful for children.

First of all, this issue must remain separate from religious or New Age issues. Although there are many adults who believe in God, and there are also many adults who believe in clairvoyancy and numerology, I am not aware of any adults who believe in Santa Claus. The reason for this is perfectly simple: Father Christmas is a fantasy reserved only for the very young. There are many other fantasies - most of which are deemed educational by teachers and the like - which are also reserved for the very young. For example, healthy adults do not normally believe that huge bananas dressed in pyjamas regularly stroll down staircases, or that Dorothy the Dinosaur is really a good friend of the Wiggles. These delightful, entertaining and educational fantasies are reserved only for small children, and small children have the tendency of growing up. When they reach a certain age, children work out for themselves the difference between fantasy and reality, and they are usually able to do this without much overt intervention from parents and/or other adults.

Imaginative young children are imaginative young children for a very short time. But they normally grow up to be adults for a very long time. Until they reach the age of self-achieved reality, is it really harmful to let children sip pretend-tea from pretend-cups and pretend-burn their lips? Is it harmful to let them pretend-drive to pretend-doctors in pretend-cars and have pretend-operations? Is it harmful to allow them to pretend-breast-feed their pretend-babies? Is it harmful to let them visit pretend-fairies at the bottom of the garden? Is it really harmful to allow children to believe in Father Christmas, the Easter Bunny and the Tooth Fairy? If it is, where is the evidence? Show me the evidence and I will consider changing my mind.

For all those Skeptics who oppose Father Christmas, what is next? Are you going to boycott all nursery rhymes and fairy tales. After all, many of these are equally unrealistic. Little golden-haired girls, for example, do not normally enter bears' houses uninvited and devour their porridge. In fact, to my knowledge, bears do not normally live in brick veneer houses, and they certainly do not normally eat porridge. Similarly, I am not aware of any wolves who are in the habit of dressing up as grandmothers with the intention of conning little red-cloaked girls. Furthermore, train engines are not in the habit of having animated and lengthy conversations with each other, and I have never seen a banana wearing blue and white striped pyjamas.

While the anti-Santa lobbyists are at it, perhaps they would like to ban all fictitious stories and songs - even those which could conceivably be true?

Incidentally, I believe that it is perfectly possible to simultaneously encourage an enquiring mind and nurture the Father Christmas fantasy without any conflict of interest. Most of the under-fives I know - almost all of whom still believe in Santa - can explain in graphic detail how babies are conceived and born (Biology); most of them ask repeated and intelligent questions about the mechanics of machines and gadgetry, such as videos and computers (Physics); and most of them are fascinated by cooking (Chemistry). In fact, it is highly conceivable that a child who is originally encouraged to believe in Father Christmas, but who eventually questions his existence (as they all do), is demonstrating a very sophisticated critical mind, which questions its world and does not accept things arbitrarily.

Perhaps the most serious (albeit unsupported) claim by the anti-Santa lobbyists is that believing in Father Christmas can potentially cause emotional and/or psychological problems. In order to support this claim, these lobbyists must produce strong evidence or persuasive arguments from expert witnesses such as child psychologists. Until they do this, their claims cannot be taken seriously. In fact, I have informally consulted a few psychologists, probationary psychologists and child counsellors, and none of these professionally trained experts suggest that participating in the Santa fantasy is harmful for a child's emotional or psychological development.

Furthermore, I have recently perused the *1998 Santa School Training Manual* used by consultants from Western Staff Services to train the Myer/Grace Brothers Santa Clauses. I was very pleased to note that these Santas have a strict and sensible procedure which they must follow if children ask emotionally-charged questions. For example, if a child whose parent(s) is/are dead says "I want my mummy/daddy to come back from heaven" or something similar, the Myer/Grace Brothers Santas must always respond with something like "There are some things Santa can do and some things Santa can't do" (*Santa School*, 1998: 7). If a child from a divorced or separated family asks "Why won't Mummy/Daddy come home", the Santas must always respond with something like "That's for Mummy and Daddy to work out" (*Santa School*, 1998: 7). In fact, the Santas are told that they must deal only with toys - not births, deaths, separations or animals (*Santa School*, 1998: 5). In other words, they should always direct the child's attention back to toys, and leave grievance (or similar) counselling to suitably qualified professionals. Surely this is a sensible and professional way to behave? The Santa fantasy cannot be held responsible for causing or even contributing to a child's grief. Deaths, separations and divorce are problems which many children have to face, regardless of whether or not they believe in Father Christmas, and Santa cannot be expected to solve these problems.

Another anti-Santa argument is that the Father Christmas fantasy contributes to the gross commercial-

ism of Christmas. This claim is, of course, more difficult to refute. It cannot be denied that Christmas is a hugely commercial operation, and for atheists like me it denotes little more than family, friends, food, fantasy, presents and culture. However, it must be noted that many of the anti-Santa lobbyists participate in other Christmas traditions and festivities, such as in the exchange of material gifts with friends and family members. This, in my view, is nearing hypocrisy. The purchasing of Christmas paraphernalia and/or gifts must be viewed as contributing to the commercialism of Christmas. If the anti-Santa lobbyists were strictly against such commercialism, surely they would abstain from any sort of Christmas present buying?

The investigation

In order to investigate whether reasonably intelligent and critically-thinking people in the Monash University community support the Father Christmas fantasy, I decided to conduct a small and relatively informal survey. Sixty seven adults were surveyed, and with the exception of three people, most of the participants were completely naive as to the purpose of the survey (the three who were not naive were colleagues with whom I had discussed the matter).

The participants were asked to respond to a number a of questions designed to assess their attitudes towards the Santa Claus cultural fantasy. The questions and responses are set out below:

Results of Father Christmas/Santa Claus Survey (N = 67)

Variable	**n**	*%*
Age		
18-25	56	83.6%
26-35	3	4.5%
31-45	5	7.5%
46-60	2	3.0%
61-75	1	1.5%
Sex		
Male	10	14.9%
Female	57	85.1%
Nationality		
Australian	46	68.7%
British	4	6.0%
Oth Europ	8	11.9%
Asian	9	13.4%
Religion		
None	27	40.3%
Christian (unspec)	12	17.9%
Catholic	12	17.9%
Anglican	4	6.0%
Protestant	3	4.5%
Baptist	1	1.5%
Lutheran	1	1.5%
Seventh Day Adv	1	1.5%
Greek Orthodox.	2	3.0%
Jewish	2	3.0%
Buddhist	2	3.0%

Q1. As a child did you believe in Father Christmas/ Santa Claus?

Yes	58	86.6%
No	8	11.9%
Forgotten	1	1.5%

Q2. Do you still believe in Father Christmas/Santa Claus?

Yes	1	1.5%
No	58	86.6%
N/A	8	11.9%

It should be noted that the one person who claimed that she still believed in Father Christmas qualified this by stating that she thinks it is important to support the culture of believing in Father Christmas.

Q3. How old were you when you stopped believing in Father Christmas/Santa Claus?

4-5	6	9.0%
6-7	17	25.4%
8-9	16	23.9%
10-11	10	14.9%
12	4	6.0%
Forgotten	5	7.5%
NA	9	13.4%

Ignoring the participants who had forgotten or for whom this question was inapplicable, I must admit that I was surprised that four participants claimed that they did not stop believing in Santa until the age of 12. Prior to this survey, I speculated that most children start doubting the Santa fantasy at about the age of seven. If these results are representative of the larger population, it is now clear that I underestimated the relevant age for most children.

Q4. What made you doubt his existence?

Older Siblings	4	6.0%
Friends	10	14.9%
Parents	4	6.0%
Self	33	49.3%
Forgot	7	10.4%
N/A	9	13.4%

Overwhelmingly, most believing participants (33/58 = 57%) had been able to work out for themselves that Father Christmas is a cultural fantasy. In fact, many of the participants whose parents, friends or siblings had informed them of the reality claimed that they had been having strong doubts anyway, and had simply asked their parents, friends or siblings for confirmation.

Q5. Do you feel that you were harmed in some way from believing in Father Christmas/Santa Claus? (If Yes, please elaborate)

Yes	1	1.5%
No	58	86.6%
N/A	8	11.9%

It should be noted that the one participant who claimed that he had been harmed in some way from

believing in Father Christmas explained that he did not stop believing until the age of 12. In fact, his mother was forced to make a deliberate and overt effort to inform him once and for all that Santa was a cultural myth - particularly as this boy had taken no notice of obvious hints or of the opinions of his peers. It should also be noted that this particular participant also claims to believe in Oates' theory of Reverse Speech. Highly suggestible (or even gullible) perhaps? To my relief, he does not believe in Santa now - at the age of 22.

Q6. Do you feel that you were harmed in some way when you stopped believing in Father Christmas/ Santa Claus? (If Yes, please elaborate)

Yes	10	14.9%
No	49	73.1%
N/A	8	11.9%

It must be stressed that nine out of the ten participants who claimed that they had been harmed in some way when they stopped believing in Santa all explained that they felt disappointed because Christmas was no longer as much fun. This, I would suggest, is not the sort of harm that the anti-Santa lobbyists are referring to. The remaining participant who felt he had been harmed was mentioned in Q5. He claimed that he has never forgiven his parents for lying to him.

Q7. Do you have children of your own?

Yes	4	6%
No	63	94%

Q8. Do/did your children believe in Father Christmas/ Santa Claus?

Yes	4	6%
No	0	0%
N/A	63	94%

Q9. If you had children (either now or in the future), would you encourage them to believe in Father Christmas/Santa Claus? Please explain your answer?

Yes	51	76.1%
No	12	17.9%
Do not know	3	4.5%
No response	1	1.5%

The responses to this question are more complex than the figures suggest. Two participants who were from cultural backgrounds which do not have a history of encouraging children to believe in Father Christmas (and/or had never believed themselves) claimed that they would very much like their own children to participate in this fantasy. They explained that, in their view, it is important to adopt the positive traditions of the community in which they live.

The 12 negative and three unsure responses were from participants who were from cultural backgrounds which do not have a history of encouraging children to believe in Father Christmas, who had never believed themselves, or who offered no explanation as to why they would not encourage their children to believe.

Most of the 51 participants who responded positively to this question claimed that the whole Santa fantasy is nothing more than harmless fun. Many claimed that Christmas would be boring without little children believing in Santa, and some claimed that the tradition is a simple, effective, painless and positive form of encouraging good behaviour from small children.

Q10. As a small child, did you believe in the Easter Bunny?

Yes	50	74.6%
No	17	25.4%

Qll. As a small child, did you believe in the Tooth Fairy?

Yes	49	73.1%
No	18	26.9%

Q12. As a small child, did you believe in the Birthday Bird?

Yes	1	1.5%
No	66	98.5%

I must confess that I was thrilled to find at least one participant who claimed to believe in the Birthday Bird (even though this participant explained that she first learnt about him through a friend at school). I had begun to think that the Birthday Bird was a fantasy in which only my family participated. Due to the fact that I have nine siblings, it is perfectly possible that my parents needed the assistance of other fictitious and fantasy figures to help amuse, entertain and monitor the behaviour of their brood.

Q13. Additional (but optional) comments from the participants:

The overwhelming response by most participants who added further comments was that the Santa Claus fantasy is nothing more than harmless fun. In fact, only three participants, all of whom were from cultural backgrounds which do not have a history of encouraging children to believe in Father Christmas (and/or had never believed themselves), claimed that the practice was dishonest.

Conclusion

The results from this survey clearly demonstrate that most intelligent people do not see any harm in the Father Christmas fantasy. I now invite the anti-Santa lobbyists to provide evidence to support their claims that it is harmful to believe in Santa.

Notice to Contributors

If you have a contribution for *the Skeptic*, if possible please send it by email, on a floppy, or as a clear hard copy to our Roseville address.

Deadline for Winter issue, May 1
Deadline for Spring issue (early - the Ed is going o/s) July 15.

Forum

Anomalies in science

Bill Moriarty in *the Skeptic* (*Letters* 18:4, p.70, feels that sciences should replace "the assumption that on-off anomalies never occur" with that they "rarely occur". I see some difficulties with this proposal.

First of all in a strict sense the claimed assumption is in fact not made in the first place and can therefore not possibly be substituted by whatever. Mr Moriarty is quite right to raise the sceptical questions; " The occasional anomalous results are normally dismissed as being due to some unnoticed error ... It is said that the anomalous result must be due to some error. I have no doubt that it often is. But must it be? Why?"

Of course it must not be. This is the reason why it is sometimes stressed by scientists, that all truths they can tell us about the world are regarded as provisional or approximate. Maybe one can argue that this not always clear to the public because of statements found in the press as well as professional journals that "science has found out this, or proved that". On the other hand be it only for readability we will surely not want any report about scientific findings stretched considerably in length by adding a ritual "... at least as far as we at the moment think we know, which might of course be too far-reaching in generalisation or even simply be a blatant error" after nearly every sentence.

I see this rather as an argument that more should be done towards making the public more familiar with science's basic principles, which are not left out of the statements because they are low in regard, but, to the contrary, rather because scientists know that this goes without saying. A business Skeptics surely should take care of.

Apart form readily admitting this basic uncertainty about Absolute Truth, however, it is difficult to see how science would be able to not insist on anomalous phenomena to be repeatable. First of all the philosophy of science is here greatly helped by statistics, which it can burden with taking responsibility of all the nitty-gritty things of grades and shades of repeatability. I guess many are familiar with the excuse of a psychic healer that his profession is one which is highly emotional, so unlike a machine he can not always produce the same output. "So what", he challenges the sceptic, "your MD also can not guarantee the success of many of his therapies. Nevertheless you do not brand them as useless."

Fair enough. However, as regular readers of this journal will know, while a 100% success rate is not required for a medical therapy, this is also not demanded from a psychic healer. He is free to state what exactly he can add to natural recovery, as long as it is anything which is:
a) specific; and
b) miraculous.
The "rules" are not different for the two groups of healers. However failure and success are.

To clarify this point further it may help to look at simple example. Let P1 denote the phenomenon that a clairvoyant can guess the way a thrown coin will come up correctly. Always and at all times. Now if someone claims he can guess it better than chance, but still not perfectly, he has to give an estimate that he is right, say at least 60% of the time. This amounts to saying, that he claims to be perfect in producing the phenomenon P2 which is defined as "doing P1 60% of the time". He still may object that he can achieve 60% only at full moon and then only every second time. No problem. This amounts to the claim P3 that ... well you probably get the idea.

Please note, that a paranormal claimant is free to specify his claim himself anyway. For example if someone should really be repeatedly successful above chance in dowsing for a hidden gold coin, serious Skeptics would be obliged to accept this as a paranormal phenomenon in its own right. It would be totally beyond the point to complain that he can not also dowse for water or for lead or is not able to produce gold out of lead. Challenges like the one by Australian Skeptics or by James Randi have always taken care if this, and have granted the claimants this freedom. So alleged paranormal phenomena which are only repeatable statistically or under certain conditions have always been within the range of this challenges.

In summary we can conclude that after a claimed phenomenon is properly formulated, then, from a philosophical perspective, we are reduced to a simply yes/no distinction as to whether it exists. Either it does or it doesn't. Either its is repeatable or its isn't. No consideration of shades of grey is necessary any more, not even for the most unstable phenomena - as long as they constitute *anything* beyond the normal at all.

Let us now get back to Mr Moriarty's proposal to accept singular reports as showing that an anomaly really did take place, and ask what difference that would actually make. On one hand he still wants science to not be obliged to really accept such a report as proof for anything of importance, but wants them to be shrugged of as something science does not deal with. So there is not much change here, but confusion could result nevertheless. At least we will now need a new word for the concept we formally described by "anomaly", maybe something like "scientific anomaly". The older term "anomaly" would convey no meaning whatsoever and be totally useless for science. Care would have to be taken that the former and the later usage of the terms do not get confused and this serves benefit at all as far as science is concerned. Such a project does not seem very desirable to me. I'd rather prefer the substitution of the English language by Esperanto.

However science is not everything and Mr Moriarty thinks that the application of the new terminology could be useful in court cases. He wants to allow that scientific evidence that someone has committed a crime is disregarded if the defence claims that this evidence did arise by a singular anomaly. We are not told whether the prosecutor is also allowed to argue that evidence in favour for the defence was also produced by a singular anomaly, or that now missing evidence against was formerly present, but has been destroyed by such an occurrence. It is hard to see how a judge could reach

any reasonable decision as to what probably happened with the obligation to take such a bunch of assumed miracles into serious consideration. On the other hand, if only the defence were allowed to resort to such arguments, I wonder how *any* claim of the prosecution could stand up against this, no matter how convincing it may seem.

"Look Ma' it wasn't really me who took the sweets away. What you saw was in fact Elvis, who was given the power to disguise himself as me by space aliens." Would this qualify as a singular anomaly?

I have very much sympathy with complaints against the use of so-called recovered memories in court. However this seems to me to be a consequence of not adhering strictly enough to scientific principles in the court, rather than putting to much faith in what science can tell us about the real world. What we have at work here is not science but mock science. This has been shown convincingly, at least to me, for example by Roby M. Dawes in his book *House of Cards* (Free Press, New York, 1994). In my opinion the most promising remedy in this sad cases seems to be quite straightforward: Throw the idiots out and - if need for expertise arises - put the real scientists in.

Gerald Huber
Schierling Germany

The ecstasy of Anthony Garrett

Dr Anthony Garrett, erstwhile Skeptics committee member, has found God in Cambridge. Consequently he has now joined those professional scientists who are faced with a conflict between their scientific life's requirement for material to be susceptible to investigation and their belief in supernatural things which are beyond Investigation - gods, mysteries and great designers.

Dr Garrett spoke on Robyn Williams' *Occam's Razor* program (Radio National 15 November, 98). In that talk he posed the question: "How then have my views changed on the hottest controversy involving science and theology: the theory of evolution?". Further Dr Garrett said: "I did not become a Christian because of logical argument. Conversion is always more personal than that. But afterwards I was faced with the problem of the differing accounts of life according to Genesis and Darwin".

With the aim of saving a lost Skeptic soul and in the hope that Dr Garrett still reads *the Skeptic* I offer my own evangelism on behalf of science:

Dr Garrett's "problem" with reconciling Genesis and Darwin is not the problem which needs addressing. The problem is to understand why some people, trained in the methods of science, are prepared to believe that there are supernatural forces or beings or what-you-will which influence natural events. Quite simply, once a supernatural thing intrudes into our natural world then that thin~ becomes a part of that world and a proper subject of scientific examination

The concept of evolution is not a theory as Dr Garrett calls it. It is simply a word we use to describe the fact that if we look at the history of anything we see chance over time. Theory only comes in in understanding the mechanism of that chance and the links between one stage and the next.

From the standpoint of science it is clear that belief in the supernatural is a natural phenomenon well worthy of study: its history and its mechanism. And the foundation of that study has been laid.

Just as Darwin collated an enormous amount of biological material to build an overwhelming case for the evolution of biological forms, so J G Frazer has done for the concept of the supernatural in his monumental study, *The Golden Bough*.

Frazer's study shows that the supernatural, in its many forms, arose from and consists of a phantasmagorical interpretation of nature in our own brains. That interpretation was undoubtedly necessary for Homo sapiens to feel that the surrounding world was understandable and, through incantations and prayers, controllable. In the earliest stages of human development there was no other basis for understanding. Only as manipulation of nature revealed its real properties and gave an increasing measure of predictable control (the beginning of science) could the supernatural forces be replaced.

So Dr Garrett's problem is not to reconcile his new found religious beliefs with science but to apply scientific understanding to his mental ghosts. He said in his talk that during his Sceptical period: "I did not involve myself, thankfully, with the ghost-busting side of things". Perhaps it is not yet too late.

The philosopher Hegel said that freedom is the recognition of necessity. If Dr Garrett can appreciate the necessity which generated the supernatural he might be freed from being held in its thrall.

Of course Anthony Garrett is not the only scientist to be troubled by the supernatural. In our own country Professor Paul Davies won a major prize in recognition of his efforts to reconcile science and religion. Professor Charles Birch has long been a propagandist (in the best sense) for the view that science can live happily with belief in the supernatural. Professor Hanbury Brown has written a book on *The Wisdom of Science -its relevance to Culture & Religion*. But none of these authors appear to have applied the evolutionary insight given by Frazer to an understanding of the supernatural and its associated religious beliefs. Their contemplations seem the poorer for that.

For me the greatest achievement of the human intellect is the recognition that everything evolves; from atoms to galaxies, from the inorganic to the organic, our societies and our thoughts. It provides a guide to our investigations and for a trained scientist to ignore it is sad indeed.

Frazer, J G, *The Golden Bough*, abridged edition, MacMillan & Co., 1957

John Warren
Annandale NSW

Postmodernism reply

Scott Campbell and Mark Newbrook provided critiques (*the Skeptic* 18:4) of my original article on postmodernism, and I'd like to reply to them in brief. If I had space and time I should have liked to have gone over both critiques in detail: some of their points I concede, and others I'd like to argue the toss about. However, I fear it would try the patience of readers to argue in depth about, for example, whether James Joyce and Adolf Hitler were or were not modernists: the authors of the critiques (or anyone else) can contact me for a debate "off air" by e-mail at the address below.

Both critique writers charge me with oversimplification. To this I plead guilty - abjectly and completely. But oversimplification is such a rare offence in postmodernist writing that I hope at least to be credited with the virtue of originality. Mr Campbell's article gives some excellent examples of some of the turgid junk that passes for postmodernist writing: it's entirely understandable that many people refuse to hack their way through the verbiage in quest of the occasional gem (which do exist - though whether they are worth the effort is, I agree, debatable).

What I aimed to do in the original article was to put forward, as briefly and intelligibly as possible, the central ideas of postmodernism: and this I seem to have done, as both Mr Campbell and Mr Newbrook have picked up the core of what I was saying. However, they express their views in a markedly different manner, and I think a comparison is illuminating.

Mr Campbell writes:

> The 'naturalistic fallacy' is the name philosophers give to the mistake of thinking that moral positions follow from facts about the natural world.... [She] makes the elementary error of failing to distinguish between science and its applications (and I'm disappointed that a reader of *the Skeptic* should make such a mistake.)

Well, I'm disappointed that Mr Campbell, who is a philosopher, should fall into an even more elementary fallacy, one which he probably warns his Philosophy 101 students against every year.

This is the fallacy of *Petitio Principii*: taking for granted a premise which is equivalent to or depends on the conclusion - in other words, begging the question. The whole point of my article was that you cannot make a clear distinction between facts and values, or between science and its applications. It is simply not good enough to wave your hands and dismiss this view as 'a mistake' - even if you dignify calling it a specially named fallacy.

Mr Newbrook, on the other hand, does not beg the question: he recognises exactly what the issue is when he writes:

> [One] crucial difference of view between most Skeptics and most postmodernists [is] that the latter would probably hold that the notion that a theory can be ideologically neutral, even to a degree, is at best naive. But most Skeptics would disagree.

Yep, that's the point - and it's one that should be discussed, rather than simply dismissed as a fallacy. We may not end up convincing each other in the end, but we can provoke each other to think in ways that would not otherwise have occurred to us.

If I can give an analogy, I believe that it is no more possible to think about the world without an ideology than it is to speak English without an accent. If we live in a community with the same ideology or accent, we don't notice it: our attention is drawn only when we mix with people with another one.

But the view that we can't think without an ideology does not lead to the view that we cannot communicate with or learn from people with a different one, any more than different accents stop people from Birmingham or Barbados talking with people from Brisbane.

I'll go further: if a theory is ideological, that does not stop it being true. Darwin's theory of evolution by natural selection is an excellent example: a child of rampant 19th century capitalism, it is nevertheless true (I think).

Another example: Pythagoras's theorem, which comes from an ideology which almost nobody these days holds, or even understands. However, we can strip away the stuff that doesn't fit with ours (such as Pythagoras's injunction against eating beans) and keep on believing that, in a right angled triangle, the square on the hypotenuse really is equal to the sum of the squares on the other two sides.

This stripping away of ideology is much harder to do with something from a similar one (like Darwin's) than it is with something from a different one (like Pythagoras's). It may even be impossible - I think that we simply cannot pull out a pure, naked theory from an ideology which we share. At the very least, it isn't possible without an understanding of different ideologies. To go back to the analogy: while a linguist may be able to analyse the sound system of his or her own accent, it is only possible by comparing it with different ones.

How much, for example, of Darwin's theory and its modern development is bound up with 19th and 20th century capitalism? I've just debated this with my (scientist) husband, after he read an earlier draft of this article. We didn't convince each other of the main point, but we did at least agree that, if Charles Darwin hadn't existed, evolutionary theory would still be much the same as it is today (we disagreed about whether atomic energy would have been the same without Einstein). We had fun, we thought more about science, and we both learned something.

To conclude: postmodernism does not mean the end of critical thinking, or of constructive dialogue. What it does require, however, like any other dialogue, is a desire to communicate rather than score points, a respect for other people's opinions even when we disagree with them, and sheer good manners.

Mr Newbrook, you demonstrated this approach admirably, and I think we could get somewhere. If you're ever in Humpty Doo, let's have a beer - and I'll buy the first round.

Linden Salter-Duke
Humpty Doo NT
e-mail: salter-duke@octa4.net.au

PoMo again

Linden Salter-Duke on postmodernism (18:3 pp44-45) equated "modernism" with the scientific method of problem solving and labelled most users of the method as WEAMs-white European American males. By

throwing into the WEAM-bag: Stalin, Auschwitz, Viagra and the hole in the ozone-layer, and claiming that some of the theories of WEAMs are wrong, Salter-Duke makes WEAM a maleficent cabal. From this there is a reaction by non-WEAMs and voila "post-modernism", which could be liberating except that it is so dense and difficult that none can explain it.

I will assume that the term "modernism" takes in the scientific method of examining nature and enhancing our control of the world and the good and bad technologies that have thus resulted. Post-modernism seems to be a rebellion against this, although such is not clear from the article. I do know that some modern philosophers, many French and most with hyphenated labels such as post-modernist, post-structuralist or post-constructivist, systematically abuse the concepts and terms coming from science and mathematics, applying them to psychology, sociology, etc, to produce nonsensical theories. For example, Jacques Lacan uses topology, the branch of mathematics around the deformation of figures and solids, as an explanation of mental disorders.

Such transference is not new of course. Darwin's theory applied only to living-beings but it was used by Bagehot in 1872 to explain the development of political societies, and recently by Lord Runciman on a social evolution theory and more recently to gold which has been demonetarised, succumbing after a 3000-year life to "financial Darwinism". At least here the original sense is kept, unlike terms such as "quantum leap" now used for big shifts, whereas scientifically it means very small energy changes.

Science, like other studies, was and will be located in a particular time and culture. It is a fact of history that the industrial revolution started in England in the 1800s and moved on to Europe and America. At the time females were treated differently than males. The WEAM club of Salter-Duke resulted from historical necessity. Any male elitism derived from the considerable scientific achievements needed for membership. It has been said that the Ninth Symphony would not have been composed unless by Beethoven, nor Ulysses written, without Joyce, whereas the Law of Gravitation would have been worked out by someone else, if not by Newton. Darwin came to his theory of the evolutionary process at the same time as Alfred Wallace and papers on this, by both, were read at a Linnean meeting in July, 1858.

Incidently the word "law" in science may cause confusion to non-scientific post-modernists by implying an immutable relationship and so allow Salter-Duke to state that the theory of gravity is wrong. Yes it is wrong for high speed subatomic particles where mass changes into energy, and also in instances of accelerated motions, in spaceships for example. If Salter-Duke were to bungy-jump over rocks, Newton's "Laws" will still give her correct terminal speed and momentum, Hooke's Law the stretch of the cord and good old Young's Modulus will decide if she lives or is bashed on the rocks. Cicero said that there is nothing so absurd that some philosopher has not said it. Isaiah Berlin on a bus overheard a woman pouring out a tale of woe to a friend who replied "my dear you must be philosophical - don't think about it".

Ken Newton
Nunawading VIC

Forum

Stolen children

As a solicitor employed by the Victorian Aboriginal Legal Service I feel obliged to reply to Mark Lawson's article on "Stolen Children" published in *the Skeptic* (18:3). I would concede the points that have been made about the Stolen Children Inquiry. The report does rely primarily on the stories of children who were taken and does not look at the story of the other side. Self selecting samples have their problems. People whose experience is negative are much more likely to write rather than those have had a reasonable time.

For the inquiry to do much more than it did was difficult. The budget was limited and the subject is a complex one. To understand the difficulty it must be remembered that prior to 1966 each state had power over the treatment of Aboriginal people and each state had its own legislation covering the area. For example in Victoria the Aborigines Protection Board had no role in taking children at all. The removal of children was carried out by the police at the request of a range of public and private organisations. In New South Wales the relevant government department had a policy of taking mixed blood children and directly supervised the policy. As is pointed out in the article social attitudes to single women raising children was different than today and there were a multitude of orphanages and set up by private and church run organisations. As social attitudes changed these orphanages have changed the nature of their operations. A lot are charitable trusts which have taken up an entirely new role. To write a history of the period and the policy of dealing with children would be an enormous task. It is a task which is made more difficult as the people who were involved in the taking of the children would have been in the 50s and 60s people who were in their 40s and 50s. Most of these people would have retired and moved on many would have died.

From reading other books about the policies to do with children at the time it is clear that Aboriginal children were not alone in suffering what they did. Recently a book has been released which outlines the treatment suffered by white children who were orphans and the children of single mothers, taken from England for a new life in Australia. These children placed in homes run by the Catholic church were given poor food, often went barefoot and were subject to arbitrary brutality.

As a lawyer who has worked for the Aboriginal Legal Service what I have to say is somewhat anecdotal. However it is clear that the policies of taking children had a tremendous effect on Aboriginal people as a community. The taking of white children was an isolated phenomenon that affected a minority of that community. Aboriginal people in the 50s and 60s were, as they are now, an impoverished part of our society. The numbers of children taken (and here again the report was a little disappointing as it could not come up with accurate numbers) was a significant proportion of Aboriginal children. The high percentage of children taken meant that Aboriginal communities responded to the threat of kids being taken. If you talk to people about that time, you will hear similar stories of how Aboriginal people would move around so that authorities could not keep track of them. That, in

border regions such as on the Murray River, they would move back and forth over the border.

The policy of taking children led to the sort of movement which worsened the marginal existence of Aboriginal People and prevented them becoming merged with other communities in country areas. It prevented them being able to get kids in school, from acquiring property and employment. It is something which meant that they were continually strangers to the white community whose fringes they dwelt on. The policy of taking the children also led to the break down in the structure and authority of families as children could not understand why parents could not protect them

Mark raises the point that a certain number of removals would have been justified as there were welfare concerns. This is in fact true. In dealing with people who were taken from their family, one of the saddest things was to recover personal files in cases in which there had been actual mistreatment. Some people who had dreadful times in orphanages and foster homes developed a belief that their families may have provided a better life for them. A better life than they had. In cases in which the evidence on the files is of incest or violence the naked facts of why children were taken has had a devastating effect on those people. The one thing that sustained them was a dream that life might have been better and when that is taken they have nothing. In our experience such cases are a minority. Running through the reports of the time is a racism that probably would not have been recognised at the time. Nowadays if the Department of Human Services do reports and opens files on children, it deals with the family and family members as people. It will list them by name and talk about their strengths and weaknesses. If family members are drunks or abuse drugs it will say so but it will itemise allegations in details. Looking at files from the time when children were taken the approach and the reports are different. They are full of broad stereotypes such as "hangs around with the worst sort of Aboriginal people" allegations are generalised and non specific.

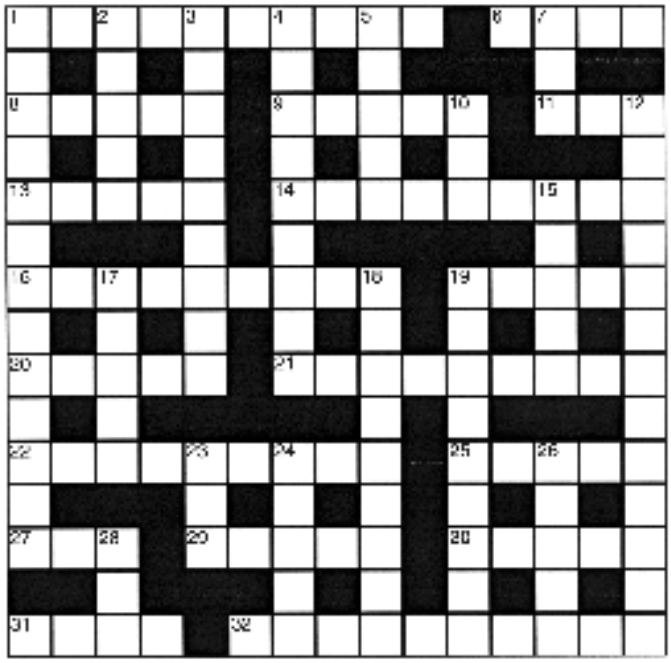
Like Mark I would welcome empirical study into the stolen generation. I would agree that public policy should not be based on anecdote or the impulse and fashion of the moment. It is my belief that a study would not only show that the policy was devastating to the children but had wider effects on the Aboriginal community who were touched indirectly.

I would like to make one last point. Mark in his letter has defended the Prime Minister's position in refusing to apologise to Aboriginal people. His reason for doing that is an argument that community values have changed since the 50s and 60s and we should not evaluate people by changed standards. Aboriginal people want an apology and they believe that it will help them. It may well. I note that lots of other groups want apologies. Japanese prisoners of war, Jewish people interned in death camps, and Japanese citizens of the US interned as enemy aliens.

Mark's suggestion that the Prime Minister should not apologise because a certain practice was seen as acceptable at the time is not strong. Slavery, the treatment of Jewish people in Europe during WWII, Apartheid were seen by the people who carried out those policies as justified. According to their values what they did was right. Yet we know that without question such policies were wrong. The perception of the time is no excuse, if something is wrong, it is wrong.

Tom Munro
Brunswick VIC

the Skeptic Cryptic Crossword No 2 Autumn 1999



Return to: Skeptic Xword, PO Box 268, Roseville 2069

Name _____

Address _____

_____

Across

1. Jimbo is a tad excited about being a magician and master debunker. (5,5)
6. Glow of a gold god. (4)
8. Test the depths of a republican plumber. (5)
9. Dissolve taxes in Paluxy River state. (5)
11. Does an eastern bookie have psychic powers? (1-1-1)
13. Suspenseful time for a verb. (5)
14. Any come on creates the future according to wine. (9)
16. Groin lies badly with mystical belief systems. (9)
19. Waterbird. (5)
20. Flawed impediment is thievery. (5)
21. Benchmark gives enclosed areas a good mark. (9)
22. Eastern mother country like ectoplasm. (9)
25. Bury where the ashes are. (5)
27. Move a hill to the right. (3)
29. Shuffle up to a learner in the side. (5)
30. Computer techheads rends terribly. (5)
31. Up to now I have been called abominable. (4)
32. Exit scenes for beings. (10)

Down

1. Planetary alignment disaster was a disaster. (7,6)
2. Bemoan the death by misadventure of you, Norm. (5)
3. Underwater vehicle joined underwater. (9)
4. Science of poor star is poor star science. (9)
5. Put 509 on supposed predictor Jeane. (5)
7. Take advantage of Fenech's fans? (3)
10. The total when mythical island's sent up. (3)
12. Crazy person moves cows up against their little sister mindfully. (13)
15. Most of a hippie town with shining clouds. (5)
17. Tarzanic transport is not applicable to 51a. (5)
18. Saint garners bad and unknown people. (9)
19. Ignorance of north eastern study. (9)
23. A secret service fool. (3)
24. A little independent, used go be. Alphabetical list, still is. (5)
26. Uralic languages woven in the rug, Richard. (5)
28. Knock over 27 across - it's rubbish! (3)

Entries will not be opened until April 30, 1999, and the first correct entry opened will be the winner. The prize will be a copy of one of the books listed inside the front cover. Solution and winner of No 1 are on page 70.

Too much quackery

It was with some interest that I viewed the production *Too Much Medicine*, screened on ABC television in late 1998. As an experienced science educator, I was profoundly disappointed in the apparent non-scientific basis to many common medical procedures. While I've always been fussy about my choice of medical practitioners, recognizing that in any profession there is a range of competence, I was almost overwhelmed by a seemingly wide-ranging ignorance of statistical evidence in relation to the effectiveness of medical treatments. Such ignorance may be understandable in patients, but in doctors it is inexcusable.

In my position as Head of Science at a rural high school in North Queensland, and as president of the district Science Teachers Association, I have worked hard to promote science "as a candle in the dark", both to teachers and students. I include critical thinking as an integral part of science teaching, and have run a seminar on pseudoscience for science teachers.

As resident sceptic, I find I am frequently called upon to (among other things) defend the science of modern medicine against all manner of unfounded alternative quackery. This duty I fulfil to the best of my ability.

I was initially relieved to hear on the program that in some medical circles, there is a push towards "evidence-based medicine". My next thoughts though, were that this term is somewhat of a tautology. Isn't all medicine evidence- based? Apparently not. (How naive of me.)

Claims unsupported by evidence are what separate pseudoscience from science.

Prescribing a treatment without sufficient statistical evidence for its effectiveness is what separates quackery from medicine. It appears that there may be as many quacks within the medical profession as there are in the field of "alternative medicine"

If the medical profession wishes to be considered as a science, and sold as such by science educators in the fight (and it is a fight), of reason against ignorance, then it's time that all doctors informed their patients of the evidence for the effectiveness of any proposed treatment. I expect and get nothing less from my own doctor.

My job of chasing out the demons and helping to create an informed, scientifically literate society is difficult enough without having to deal with balloney within the ranks.

Mike Chamberlain
Mossman State High School, Qld

Immunisation

Having only recently joined the Australian Skeptics, it gave me a lot of pleasure to attend the recent annual conference in my home city of Canberra. As well run and as interesting as it was, however, my prime intention here is not to hand out bouquets, but rather a somewhat hefty brickbat.

In thirty years of marriage, my wife and I differ on matters large or small only very rarely (belay those sceptical snorts!) Immunisation gives rise to one such difference, with the two of us holding diametrically opposing viewpoints - with me strongly in favour of, and her strongly opposed to, immunisation. Her opinion is not a whim, but rather based on extensive (some might say selective) research over a long period.

She readily acquiesced to my suggestion that she attend the Saturday afternoon forum "Immunisation - The Ghastly Truth" - and therein lies the basis of my brickbat. Professor Ada spoke well on the history of immunisation - no problems there. However, from that point things deteriorated. Speaker two asked for a show of hands from those opposed to childhood vaccination. My wife's lone hand was acknowledged with the comment that he had one person to convince. She was then told on at least three occasions over the course of the next hour that she (grouped with all those who shared her view) was stupid. What should have been continuous constructive argument, fact, and refutation of incorrect data, all to often became snide digs, sarcasm and insult, directed at all those opposed to the two speakers' points of view.

There is an immense amount of misinformation and selective publication of partial fact on this issue and this is causing immense heartache and fear to a growing number of parents who genuinely have serious, albeit misplaced, concerns.

They are seeking answers - sarcasm answers nothing. My wife is in a position where she can influence young mothers. She went to the forum with an open mind, and a golden opportunity was lost. I left regretting that I had invited her along as her beliefs could not have been altered by the poor presentation and her opinion of the Skeptics could have only been lowered.

Preaching to the converted can never be an excuse for lack of substance.

Ross Brown
Fisher ACT

Alternative health

I am devout Skeptic, an environmental scientist, an engineer and a psychology student. I have never been to a naturopath or alternative health practitioner although a number of my friends practice in this area. I read Karen Stollznow's article (18:3, p20) with disappointment and serious concern. In my opinion, Stollznow's article discredits your journal. The article is written to amuse the cynic but offers little to Skepticism. I believe it is counterproductive as it will simply alienate many people who might otherwise develop into healthy Skeptics. The article clearly is written from a biased and unscientific viewpoint. It is smug, complacent and trite. It offers degrading, sensationalist journalism typical of lightweight, commercial current affairs programs. For me, your enthusiastic use of such distorted material brings into question the credibility of the rest of your journal.

Two specific areas of her writing that offend me are firstly her cynical, sarcastic, opportunistic attitude which prejudices and distorts any honest reporting. The second area of disrepute is her inability to understand the way natural health therapies are said to work. This denies her an intellectual base from which to challenge and test them.

Her cynicism and sarcasm show throughout the article: "for the sake of balance, fairness (or comic relief) a number of alternative therapists would be interviewed..."

She condescends to describe Mr Home as an: "erstwhile hippie and subsequent graduate to the status of Sensitive New Age Guy..." She points out that he told her clearly that he was not a doctor so therefore accuses him of a lack of confidence. She notes he tells her that naturopaths work

in the area of prevention rather than cure or crisis management, but she fails to 'get' this fundamental distinction between the two approaches to health care throughout the rest of the article.

Her condescending, now xenophobic tone continues at her visit to Doctor ('not a medical practitioner') Mohan's where she is "ushered into an austere surgery boasting overseas qualifications on its walls..." Her ignorance covered yet again by arrogance she describes how he left "... my wrist and he began checking my pulse in other areas, all in the name of variety and obviously satisfied that, yes, l did possess a pulse."

Her inability to understand how these therapies work can be seen when Stollznow asserts that "... it would be unheard of for a cardiologist to also specialise in gynaecology and or dermatology or a corporate lawyer to also specialise in family or criminal law"... "although it is possible to encounter an alternative therapist who dabbles in a range of claimed practices." (Note again the lack of objectivity with such terms as 'dabble' and 'claimed practice'). Yet again she misses the point. Holistic medicine has found favour and appears to have helped many people, including doctors, precisely because it bridges the gap between a range of healing techniques, ancient wisdom and insights. Some of these are founded on empirical evidence dating back thousands of years. Compare this with the fifty to a hundred years' of western medical practice and the rapid 'U-turn' retreats from the unsatisfactory practices of the fifties and sixties. I was recently fortunate to be under the care of a 'specialist' medical practitioner who was actually a highly scientifically trained generalist. I was much helped by his capacity to a look at the whole picture, integrate all of the symptoms, identify the underlying cause and achieve resolution.

Similarly, in my own field, enormous harm has been done to the earth and the environment by narrowly educated specialists such as scientists and engineers. All were subject to tertiary and postgraduate scientific training, supported by professional membership examination and peer review of technological and scientific advance. All operated with little knowledge of the whole system and the harmful impacts of their own work. There are countless examples of the consequences of this overspecialising and 'professionalised' narrow mindedness which has denuded our soil, poisoned our land, food and our bodies with agricultural chemicals, constructed irrigation systems that turn valleys into salt pans or fed cows on diseased sheep brains leading to 'mad cow disease'.

How much mainstream medical science is funded by, and therefore skewed by, the international medical and pharmaceutical industry? Is *the Skeptic* really so naive as to believe that this vast industry does not also require a little more sceptical scrutiny than Barry Williams believes is necessary?

Naturopathy often recommends cheap or freely available or self grown herbal remedies handed down over the generations. Often it recommends dietary changes or simple lifestyle changes such as gentle exercise or drinking adequate water. ("water/walk"). How much training do medical practitioners have even now in nutrition. One hour or one week? Why so little? Home grown herbs and vegetables and a healthy lifestyle do not generate the large international profits that are made from pharmaceuticals and agribusiness to subsidise 'research'. Naturopathy is not backed by big business and cannot undertake tests on the same scale. That does not mean we should not scrutinise it or call it to account.

In conclusion I quote from a much more intelligent piece in your own journal on *The Scientific Review of Alternative Medicine* (p70):

"There is a need for objective scientific critiques of the claims of alternative or non-compensation medicine..." "... The media all too often dote on controversial and false claims but unfortunately provide few careful critical examinations of them - usually preferring to titillate, pander or entertain. Often what the public hears is anecdotal testimony of people allegedly cured, not the results of scientific research." ... "Both the public and some medical professionals seem unaware that credible scientific assessments of many "alternative" medicine claims already exist and that new evaluations based on available information are possible."

Sadly Karen Stollznow does nothing to advance these worthy aims and merely serves to discredit your journal and alienate those whom I venture to suggest would find scepticism very good for their health!

Paul Clark
Manly NSW

A cautionary tale

What you are about to read is anecdotal, and I would be deceiving you if I claimed to be objective about it. However as this sort of thing passes for evidence with the 'pro' group I feel that it is a valuable cautionary tale for the 'con' group.

My partner recently returned from an extended solo overseas holiday, which was foreshortened because she had experienced an acute form of anxiety relating to agoraphobia and an obsessive compulsive tendency. We both naively assumed that returning home would alleviate the worst of the effects and immediately went on a domestic holiday to get re-acquainted. During this time it became increasingly obvious that while the 'cause' had been removed the effects were still being felt.

As is my belief, once it had been established that there was an issue I relied upon my partner's view as to how to address it. So it was that in early November (1998) I found myself in the waiting room of the 'Canberra Centre for Medical Ecology' in Forrest . I am not dogmatic about my low regard for such services, but at the very least you would expect someone to be using the term medical in its only justifiable form ie they are a qualified practitioner of medicine. (*Concise Oxford*, 2nd Ed: "of or relating to the science of medicine in general" and, more tellingly "medical centre: a group practice, usu. offering more services than a general practice". As to the relationship of ecology to clinical medicine and how this enables an unqualified person to practice as such I remain mystified.

After two consultations and a plethora of homeopathic 'medicines', at significant cost, the net result was a deterioration in my partner's condition and an increased severity of the panic attacks which were the primary cause for concern. I additionally noted that the waiting room was well stocked with alternative therapy propaganda, most notably a warning about the dangers of dental amalgam. The obfuscation of what was being offered was continued through out by the use of pseudo-medical procedures and language.

After three trips to the emergency ward of Calvary Hospital and numerous calls to, and an eventual assessment by, the Canberra Crisis Triage Service, my partner was prescribed Normiston (a low dose sleeping tablet) and Zoloft (a relatively new neural inhibitor drug) but eventually Valium, by a qualified medical practitioner. More importantly, she was acknowledged to be suffering from an acute condition and in an 'at risk' category.

We then began a prolonged and frustrating search to find appropriate care. The crisis triage team is, appropriately, unable to offer direct referral and I resorted to the yellow pages under "Psychologists". I searched, within the restrictions of locality, (remember we are talking about

agoraphobia) and gender. It soon became apparent that there was no infrastructure, outside of the crisis triage team to deal with this type of condition as most psychologists and psychotherapists don't employ receptionists and rely on answering machines (Not much use when you need urgent advice and assistance).

After extensive effort a psychotherapist was found who was available for an immediate consultation. In two consultations it became apparent that this psychotherapist was not concentrating on patient management *the* important issue and was involved in some long term examination of the causes of the condition. This may have continued for much longer, except the psychotherapist went on holiday and to my dismay did not recommend an alternative in her absence.

So my search for appropriate treatment continued. I eventually discovered a psychologist who worked in a medical centre (so that at least a receptionist was available) and who had a suitable focus on managing the patient care aspects of the situation (the only alternative to using extensive drug therapy was to empower my partner with appropriate coping skills). This centre also had qualified medical practitioners who were able to prescribe the required medication. This situation was satisfactory, and progress was eventually made, but the lack of suitable emergency access remains a concern.

I am now no longer furious about the actions of the original 'medical ecologist' but remain shocked that such a person could: claim to have made a diagnosis (not the correct one either if that comes as a surprise); 'prescribe' and 'dispense' 'medicines' (actively promoted as homeopathic and totally ineffective) Had my partner continued with this person she would, at best, be no better, and as subsequent professional advice suggests, much worse.

The placebo effect of homeopathic remedies, much touted by those who see the activities of such people as harmless, was totally ineffective, and my partner continues to dislike the Skeptics and to advocate the use of alternative therapies (ie, is actually a true believer).

From the above you can see that such 'practitioners' are an extreme danger to public health. It is also noteworthy that appropriate care is extremely difficult to find (perhaps impossible, our final arrangements do not meet our total needs).

I would now ask readers advice on how to prevent this person from continuing dispensing 'medical' advice and what means of redress are available to me?

Name withheld by request
Kaleen ACT

Editor's comment

A number of serious professional issues raised by the correspondents to this *Forum* will, I hope, generate replies from the many medical practitioners among our subscribers. I can comment here only as a professional Skeptic and an occasional consumer of medical services.

Australian Skeptics is not a professional medical body, nor are we competent to enter into debates about the efficacy or otherwise of particular modes of treatment. Our concern is whether claims being made by people can withstand rational analysis at any level. As such, we can only applaud the trend in medical education and practice towards what is described as "evidence based" medicine. That would seem to me to be a *sine qua non* of *any* scientific undertaking.

However, I must take issue with Paul Clark. It is his prerogative whether he agrees or not with the journalistic style of any of our authors, but it is my editorial judgement that decides what goes into the magazine and I take full responsibility for it. However, the arguments he makes in support of "alternative" practices fail, comprehensively, the test of "evidence based" .

It is irrelevant to claim that "holistic" medicine "provides a bridge between a range of healing techniques, ancient wisdom and insights" unless there is some evidence to support the claim. As Karen Stollznow, Maureen FitzHenry (whose article appears in this issue) and others have found, very many practitioners of alternative treatments make specific claims to be able to diagnose and cure a wide variety of ailments by application of an equally wide range of treatments.

That may be a result of their "insights" but the evidence we have gathered shows their claims have been wildly astray, particularly in their abilities to diagnose real ailments. Several articles in recent issues have testified graphically to this lack of skill, and it poses the serious danger of people with treatable, but undiagnosed, illnesses remaining untreated while subscribing to untested therapies. The experiences of our correspondent from Kaleen (above) also provides ample support for this proposition. The suggestion that 'altmed' practitioners do little but offer useful dietary and general well-being advice is also directly contradicted by the experiences of our investigators and writers.

Ancient wisdom is all very well, and we ignore our history at our peril, but any such "wisdom", unsupported by evidence, remains superstition. I rather liked a comment from Allan Lang, of Skeptics SA, on this matter: "Isn't it surprising that while the advocates of orthodox medicine focus on the latest research findings, the advocates of alternative medicine stress the antiquity of their belief". And, of course, he is right - antiquity is only a measure of age, not of value.

Paul seems to suggest that there is some way of solving both medical and environmental problems, other than by being scientific and professional (which he seems to equate with narrow-mindedness). He also seeks to perpetuate the myth that orthodox medical practitioners are uncaring or in thrall to "the international medical and pharmaceutical industry", while alternative practitioners are somehow more user- friendly. That doesn't accord with my experience, and my position on the issue is that while being warm and caring are attractive personal qualities, if you need to get any job done, it is always better to ask someone who knows what they are doing.

I'm not sure how he came by his conclusions about what I believe to be necessary regarding the medical industry, but I'm happy to state it here. I expect my medical practitioner to be properly trained in the scientific skills, and to be aware of current state of knowledge in his profession, to base his diagnoses on tested procedures, and to be sufficiently aware of his own limitations to refer me to other skilled professionals if he is unable to solve my problem. I expect him to adhere to the ethics of his profession and to obey the laws that govern it. I must say that, in my limited experience as a consumer of medical services, my expectations in this regard have been more than adequately met.

I also expect that of the medical profession as a whole, and I expect that laws will provide that those who fail to conduct their medical practice at this level will be called to account for their failure. That is what I believe should happen, and it is what I believe (not withstanding all the flaws that are inevitable in any human enterprise) is what usually does happen.

I expect nothing less from anyone who purports to offer similar services from an "alternative" perspective, but all of our investigations and experience suggests that is not the case. Let 'altmed' practitioners provide the proper evidence for their claims, and let them be held just as responsible for their actions as are medical practitioners, and they will have nothing to fear from the Skeptics. **BW**

Banana bendings

Michael Vnuk

Please note that the Queensland Skeptics has switched its meeting venue. We still meet on the last Monday of each month, but for now meetings will be held at the Broadway Hotel, 99 Logan Rd (cnr Balaclava Rd) Woolloongabba. You are welcome to join us from around 6pm for a meal in the bistro, or just come along for the meeting at 7:30pm in the private function room.

* * *

In March we have not one, but *two* meeings planned. Colin Keay, astronomer and president of the Hunter Skeptics, will be in town and we couldn't miss the opportunity to hear him to speak. This will be at a special meeting on March 16. Colin is famous in Skeptics circles as the only member who has had an asteroid named after him.

At our regular meeting on March 29, our guest will be Barry Williams, notorious editor of *the Skeptic,* who says he will do his famous impersonation of someone who knows what he is talking about. As Barry has been intimately involved in Australian Skeptics since its inception, we are sure he will be able to tell us plenty about how the organisation began and relate some of the trials and tribulations of the past 19 years.

* * *

For our last meeting of 1998, a good turnout gathered at the Melbourne Hotel on 30 November for a meal, which was followed by two dentists speaking on the issue of fluoridation. Dr Laurie Walsh, the Australian Dental Association (Queensland)'s spokesperson on fluoridation spoke on scientific aspects, and Dr Pat Jackman, past President of the ADAQ, discussed public and political aspects. I was left with the feeling that the immense body of evidence confirms the safety and value of fluoridation. The cost and efficiency of fluoridation lead it to being a simple, equitable public-health intervention of great benefit. (Brisbane water has about 0.1 parts per million of naturally occurring fluoride. If fluoridation was introduced in Brisbane, the concentration of fluoride would be raised to 0.7 ppm.) Pat discussed how political and media behaviour has led to fluoridation becoming a contentious issue, despite endorsement by all the main dental and health authorities.

Many questions were raised at he end of the session. Some of them extended to the issue of mercury amalgam in fillings, which was another subject for which Laurie is the ADAQ's spokesperson. It seems that some of the disputes over fluoridation and amalgam have arisen due to misinterpretation of the scientific evidence. I was also surprised at the complexities and subtleties that have emerged in the studies of the numerous species of micro-organisms that can live in our mouths, although most tooth decay is caused by the bacterium *Streptococcus mutans*.

Bob Bruce received an email on fluoridation from Doug Everingham, a past Federal Health Minister, posing questions related to future health: brittle bones, osteosarcoma, fluorosis, higher infant mortality, and more. The email has been forwarded to our speakers for comment.

* * *

The first meeting of the year in late January was well attended. Our guest speaker was (Major General) Professor John Pearn who spoke on "Is First Aid of Any Use?" John is National Director of Training for St John's Ambulance and Professor of Pediatrics and Child Health at the Royal Brisbane Hospital. He is an accomplished speaker and he pitched his talk with a very sceptical approach to lead us through the many benefits, and the few risks, of learning and using first aid, both for specific groups, eg miners and timber workers, and for the general public. John's talk generated much discussion.

Among other points, John discussed research and anecdotal evidence, including for areas where he has worked directly, such as child drownings. He noted that over a third of us are likely to suffer something dramatic in a pre-hospital context where the first-aid knowledge of a bystander could be crucial. And he reminded us that first aid is not just for use on strangers, as over half the cases will involve a loved one or a work colleague.

John also commented that first aid is only strongly developed in certain countries and cultures. As one of the top medical officers in the Army, John was involved with the Army's emergency surgical efforts after the PNG tsunami. He considers that many more could have been saved from death or severe injury if there had been a tradition of giving first aid and more knowledge of simple first aid, such as clearing airways and cleaning wounds.

* * *

Harry Edwards and Richard Lead of the NSW Skeptics visited the Gold Coast with Queensland President Bob Bruce to speak to Harmony Products. The company sells expensive "energisers" which are claimed to soak up radiation, including harmful radiation from computers. Among the touted benefits, the devices can even improve attention-deficit disorder. No basis for such claims was evident.

After being alerted by Victor Hart, Bob was subsequently able to inspect an energiser at the Acacia Ridge Murri Community Centre. ("Murri" is the preferred local term for an Aboriginal person.) Although Bob took it apart, there was no evidence of any special properties. In particular, medallions from the organisation inside the box are unlikely to provide any benefits. On behalf of the Queensland Skeptics, Bob has written to the Aboriginal and Torres Strait Islanders Legal Service informing them that local Murri community centres have been targeted by Harmony Products. A submission is also in preparation to go to the Queensland Minister of Fair Trading, Judy Spence, concerning the claims made by Harmony Products.

Southerly aspect

Allan Lang

This year Skeptics SA will go all conventional. Saturday 6 and Sunday 7, November 1999 is the date for this year's Australian Skeptics National Conference. It will be held at the Adelaide Convention Centre, one of the best in the world.

We have just received confirmation that Hilda Bastian, a South Australian who is one of the world's leading health consumer advocates, will be speaking. She has headed up the Cochrane Collaboration's Consumer Network internationally since 1993, and promises to be a very interesting speaker. Also, Stephen Basser has agreed to talk on alternative medicine, and we hope to have a debate on the topic.

We are hopeful that Professor Paul Davies and Karl Kruszelnicki will attend, depending on their overseas engagements. Other topics include *Skepticism and the Internet* and *Doomsday 2000 cults*. Further speakers will be announced as they are confirmed.

There will be a dinner on the Saturday night, venue still to be decided, and the after-dinner speaker will be the world-renowned author Peter Goldsworthy. A social day is planned for Friday, 5 November to show interstate visitors some of the delights surrounding Adelaide, which will of course include wine tasting.

For further information please contact our Conference Organizer and President of Skeptics SA, Michelle Foster, by emailing michelle@timeagain.com.au or phoning 08 8232 4398. You can also contact Laurie Eddie, the Secretary of Skeptics SA, by phone or fax on 08 8272 5881. We will be putting a web site together over the next month or so, which will include details of accommodation close to the Convention centre. Look out for the announcement on www.skeptics.com.au

Hilda Bastian: "Whether it's from the makers of alternative medicine or from pharmaceutical companies, they are swooping in and filling a void that shouldn't be there. Consumers should have access to 100 per cent independent sources of information about illness and treatments."

1999: Will this be the ultimate Skeptics Conference?

* * *

Does the appearance of the Virgin and Child in a Yankalilla Church foretell the Apocalypse? A religious revival? Would you believe: an increase in tourism? Eleven months in the making, *Images of Yankalilla* will be seen on SBS on March 31 at 7:30pm (8pm not in South Australia). Featuring Father Andrew Nutter and a cast of several! Surprising special effects you might not believe! An Image that makes the Marree Man look spectacular by comparison. See for yourself what all the excitement was about? A story the world media has pretty well ignored.

* * *

Our Dinner and Discussion evenings for last year were a resounding success, with the venue comfortably packed every time. (Sometimes, as with Mike O'Leary's Astrology and Chris Kenny's Hindmarsh Island presentations we went to standing room only, but we can usually find a place for everybody. Everybody seems to have a good time and we also gain new perspectives on the topic under discussion.

At Dr Roland Byron-Scott's February Global Warming Dinner, the comment was made that the Global Warming Is Here claim bears a similarity of the Lysenkoist biology craze of the 1950s Soviet Union. I hadn't thought of it in this light, but now I can see the parallels. And the alarming thing is that it hasn't even required a secret police to enforce it.

* * *

Future Dinner and Discussion evenings

Rob Roy Hotel 106 Halifax Street 7:00pm

If you wish to attend, it is necessary that you ring me on 08 8277 6427 to confirm your booking.

7 April. Andrew Griffith will be examining the *Claims of Iridology*, and can we learn anything about ourselves from our eyes?

5 May. Special National Science Week presentation. John Foley will demonstrate that *You Won't Believe Your Eyes*: A Skeptical magic presentation.

2 June. Still under negotiation but I'm sure it will be a fascinating subject.

4 August. Fr John Fleming will attempt create a crisis of confidence for us by asking us to *Be Skeptical About Skepticism*.

Hunter gatherings

Michael Creech

Pest Free

There have been some recent developments regarding the now famous plug in pest eliminator. The Aust Consumers Assn and the Hunter Public Health Unit (HPHU) have now requested evidence from the manufacturer that his device does what he claims. HPHU became concerned when some local restaurants were using the device to rectify pest control violations. A complete history of this story has been written by Colin Keay (this issue), however Colin informs me that the ability for this machine to control pests using electrical pulses has him concerned. For four years Colin has had one of these devices in his house and he has had no roach or rodent problems. In this age of energy efficiency this is significant as well as remarkable as Colin has it stored in a drawer, not even plugged in!!

Alternative Health News

A series of articles in the *Newcastle Herald* on alternative health practitioners has raised public debate on this issue. Of the various reports we have someone who can diagnose HIV and cancer over the phone and then offers expensive remedies. The NSW Health Care Complaints Commission has investigated someone who charges $95 to treat patients using a machine which measures and emits frequencies. Along with single drop blood testing and herbal health scares, the author of these articles, Maureen FitzHenry, had rich pickings for her articles. A summary of them appears in this issue.

But the common link of pulsing energies has us in the Hunter intrigued. Have any of these medical devices been tested on roaches and rodents? Could Pest Free be dangerous to your health as well as the pests? Or could it cure HIV? Research into the relevant frequencies should prove enlightening for all concerned!

Our 1st Honorary Member

In recognition for her work in exposing many of the above issues it has been agreed that a local lady be awarded our first honorary membership. The Hunter Skeptics take this opportunity to thank her and express our appreciation for all her efforts, not to mention the risks of being an outspoken Skeptic.

Tasmanian trivia

Fred Thornett

The lovely, cuddly Hobart summer is almost over. The major cultural event, overshadowing the other summer fun like the Sydney-Hobart Yacht Race and the World Championship Axemen's Competition was, of course, the ever popular AGM of the Australian Skeptics in Tasmania on 19 February. The full details of the new committee, which bears a striking resemblance to the old committee, will be provided to all who email thornett@netspace.net.au or phone 6234 1458.

* * *

In term one of 1999 the Adult Education folk in Hobart will mount two new courses. One is *Thinking About Weird Things*, an attempt to inculcate sceptical ideas by stealth into the minds of the Tasmanian gentry. This is being done because calling a course scepticism and overtly making it seem to be 'scientific' proved to frighten off the punters last year. The other course is *Food For the Mind*, a series of mediated discussion groups. The topics for this series will be chosen by the lecturer and will include large numbers of concepts with more than a passing relevance to the Skeptic agenda. Watch this space for details of how it all went.

The Hobart University of the Third Age course, *Thinking About Weird Things* was oversubscribed. Doubtless because those folk who survive long enough to collect their superannuation and join the U3A are sceptical by nature and relish any chance to hone their skills.

* * *

As Monty Python says: and now for something completely different.

As you know, the Tasmanian Skeptics have been long doing a nice little line in dodgy doctorates in order to keep some of the business away from back-shed bible colleges in the USA. This market is close to saturation now. According we have been inspired to offer an entirely new product line. These are the highly esteemed Orders of Chivalry in the Republican Peerage. These are devised by our own ersatz college of heralds and tailored to meet your honour's specific requirements. Ever fancy being known as the Marchgrave of Melbourne, the Sultan of Suburbia, the Lord Privy of Penrith or some other nice rank, style and title more appropriate to your true worth? Now is your chance! All you have to do is contact thornett@netspace.net.au He will send you the application form and, after ascertaining the gravamen of your worship's requirements and assessing your moral probity the Tasmanian College of Skeptic Heralds will, on receipt of your financial instrument for the appropriate amount ($30 or thereabouts), send you meretricious letters patent announcing your accession to your new status. Be not deterred by the fear that a large land holding or extensive unearned income is needed to join the Republican Peerage. A demense stretching even unto fully a quarter acre is more than enough. Furthermore, as you may tell lies when submitting your application for elevation to the Republican Peerage, I am confident that you will meet all the requirements.

NSW meetings

Following on the success of our Alternative Medicine meeting at the Royal North Shore Hospital and the wildly successful (though somewhat under-catered) Skepticism and Wine Myths talk by Brian Miller at the Stamford Hotel, in 1998, the NSW branch is planning a range of meetings for subscribers during 1999.

Kicking things off for the year will be a dinner meeting at the Chatswood Club, 11 Help St, Chatswood on Saturday, April 24. It will be a buffet dinner and the speaker will be our very own financial wizard and treasurer, Richard Lead, who will speak on financial and other scams, legal and illegal, that will plague us into the new millennium. Parking is available nearby in the public car park in Macintosh St and the Club is only a short walk from Chatswood Station.

NSW subscribers will find a loose leaf flyer containing more details in this issue.

The following meeting will be a mid-week cocktail function at the Australian Museum in the second half of June. At this we will make a formal presentation of an official scroll to the Australian Skeptic of the year for 1998-89, Prof Michael Archer, the new Museum Director.

Mike has promised us a stimulating talk on his adventures as a palaeontologist and as one of our leading exposers of creationist pseudoscience, something that will be sure to please even the most critical Skeptic. Further details in the Winter issue, due out in early June.

To round out the year's schedule, we are still finalising arrangements for meetings in September and November.

Details of these meetings will be contained in future issues of *the Skeptic*.

A blatant plug

Victorian subscribers are invited to subscribe to the excellent *Victorian Skeptics Newsletter*, edited by the Steve Roberts.

A paltry $10 - only 100% up from last year - will buy you 6 copies of this eight-page rag in 1999. All Victorian events are advertised in the *Newsletter*, and local events of interest are covered. In addition there are jokes, witticisms, arcana, urban myths, spells pinched from *No Idea* magazine, sage advice about which way to jump if a polar bear charges at you, premillennial paranoia and other lighthearted stuff. All articles are short, and there are usually enough pictures to satisfy even the lexically challenged.

A sample copy is being sent to all subscribers to *the Skeptic* with a Victorian postcode, and all other Skeptics groups get a regular copy, which everyone should clamour to see. Indeed, the content is so amazing that Skeptics (and adversaries) from other states may find it worth while to subscribe! Better rush your $10 for 1999 to our Melbourne address before WWIII starts and the Earth's axis tilts.

Letters

We welcome letters from readers who wish to comment on items that have previously appeared in *the Skeptic*, or on anything else that has tickled their Skeptical fancy. We reserve the right to edit letters for the sake of clarity or conciseness.

Y2K

A letter published in *The Advertiser* (Adelaide) on 25 January, 1999, from a gentleman who claimed to be a computer analyst, suggested that disasters resulting from the malfunction of computers and other equipment due to the alleged impending millennium bug have been grossly overstated.

The author of the letter admits that there will be problems but most of them will be confined to the internal workings of business. Blackouts of cities, lack of food supplies and anything that will cause social chaos is simply not going to happen, he claims.

I am not a computer analyst but I, too, have long held the opinion that there is a fair amount of falsity in many of the claims made about the Y2K bug. For instance, I saw a gentleman, who was claimed to be a federal government expert on the subject, demonstrate the failure of a VCR. When the VCR clock ticked over to the year 00, the television that it was connected to blanked out to static. The demonstration was on a TV news program. I have tested a few VCRs and they all continued to operate in the year 00 and they all showed a 29 February for that year.

I heard no mention during the foregoing demonstration of being able to set your VCR to 1916, 1944 or 1972, which are years that all have the same calendar as 2000. Surely, your VCR will then not only continue to work but also record all your favourite programs on the correct day and date that you set. I believe that there are many other pieces of apparatus that could be fixed in the same way.

I think the following quote from the letter in *The Advertiser* states quite clearly that its writer is extremely sceptical of Y2K claims: "A couple of years ago, sociologists began warning us of a rash of weird people doing strange things as the year 2000 approaches. What they didn't tell us is that it would be the technically literate telling us a huge fairy tale. Fairy tale? Yep! I believe the Y2K problem is one of the biggest mass cons yet pulled on an unsuspecting populace. The problem is believable and real enough but too many are hyping this up to be akin to the end of the world".

In *The Advertiser* on 26 January , 1999, there was a short article reporting on a meeting organized by the International Civil Aviation Organization to discuss the problem of air safety in regard to the bug. An Asian Pacific regional officer of the ICAO, Mr John Wood, was reported as saying that although the authorities would take a few precautions on 1 January, 2000, flying would be quite safe. He was also quoted as saying, "One of the problems with Y2K is its unknown quantity".

Are there people and organizations who would prefer to keep it an unknown quantity? Has Australian Skeptics investigated the general Y2K claims regarding computer, and other equipment, failure? Are there any geniuses, or other qualified persons, among your subscribers who can make a learned contribution to the validity or falsity of the disasters that have been forecast to occur from this 'problem'?

William J. Elliott
Netley SA

Interest in interest

In "The Lead Balloon" on p31 of the Summer 1998 (18:4) edition, Richard Lead asks us to consider a paradox involving a bank account earning interest at 5% and a car loan charging interest at 7%. Richard points out the problem with the car salesman's argument and shows how a sensible comparison should have been carried out.

However, I suggest that there is another more general complaint which could have been levelled at the car salesman's argument. It tries to reach a conclusion by adding together amounts of interest which occur at different points in time. Any argument based on summing cash flows which occur at different times has the potential to lead to an erroneous conclusion. A correct analysis requires that all the cash flows involved be accumulated with correct allowance for the timing of interest payments, which is what Richard has done in his correct solution. (Note that to duplicate Richard's figures it is simplest to work in monthly steps, though he has only presented the yearly results.)

The incorrect technique is popular with some money lending institutions which enjoy demonstrating how much less interest you will pay on your home loan if you increase your repayment by a modest sum. Usually it is a good idea to increase the repayment if you can afford to do so, but summing the interest column can give an exaggerated impression of the advantage obtained.

Also, in the interests of nit-picking, I note that Richard has been inconsistent in his calculations. In his first calculation which accumulates the $30,000 bank balance at 5%, he assumes that 5%pa is an effective annual interest rate. In his second calculation where he removes monthly loan repayments from the bank balance, he appears to assume that the interest rate was a nominal annual rate of 5%pa convertible monthly. That is, he is assuming the interest rate is 5/12 of 1% per month, equivalent to an effective rate of about 5.116% pa. The different between 5%pa and 5.116%pa may appear slight, and indeed over the 4 years this example runs it is. However, let the effect accumulate a few more years and there may be potential to develop a profitable scam.

Jim Farmer
Sydney NSW

Thanks Jim. Feel free to nit-pick - I hate getting things wrong.

In fact, I believe I presented a consistent comparison. In the first chart (on page 31) a simple 5% annual compounding was used, as this is how the salesmen usually write it out in front of their targets. The annual comparison on page 34 was indeed calculated monthly by dividing 5% by 12. But this is the same way the monthly repayments (and hence interest) are calculated on the 7% bank loan - 7% divided by 12, so we are comparing apples with apples. But you are right - the interest earned in chart 1 uses a different calculation method to that used in chart 2.

The public's confusion over effective and nominal interest rates is indeed exploited by financial institutions. When a deposit interest rate is advertised we cannot normally tell which of the two rates applies. **RL**

Confession

I'd like to help you out by preempting the defamation action you can no doubt expect from the mathematical community. Roland Seidel in 18:4, p 32 described me as a mathematician. No, I just own a copy the book on Erdös.

Daryl Colquhoun
Canterbury NSW

Anomalous anomalies

I read with some astonishment the long letter from Bill Moriaty (related to the Count in the Goon Show perhaps?). He is saying that events may occur for which there is no cause, ie outside the laws of nature.

Bill himself identifies some absurd results of his hypothesis, but still does not question his logic. The giveaway should have been when he wrote "To prove that there are no anomalous events of a particular type it would be necessary to examine every occasion this type of event ever occurred." In other words his hypothesis is untestable. Which usually means (and does so in this case) of little or no explanatory power.

Others, more knowledgeable, might correct me, but my understanding is that there are no conflicts in science. When we find an apparent conflict, it means we cannot fully explain - yet - the phenomenon.

Bill's muddled view that forensic science could be improved by a legal assumption that there is not necessarily a causation for every effect is breathtaking. Is he really suggesting that Azaria Chamberlain disappeared due to an anomaly?

And the effect:cause:effect chain in "recovered memory" is pretty clear. In the US, after some therapists were successfully sued by the victims of "recovered memories", there were a lot fewer memories recovered.

Peter Evans
Epping NSW

Biblical scepticism

I read David Maddison's letter (18:4) concerning scepticism in the Bible, and although I found his comments interesting I am unable to agree with him when he suggests that the prohibitions against magic "demonstrate that the ancients just may have had an interest in things sceptical as well."

Firstly, the Israelites believed in and practised magic from very early times, and in this respect they were no different from the people of other ancient cultures:

> A multiplicity of magical notions and practices were known to the Israelites, many of which they brought with them from their past when they settled in Palestine, where they were supplemented by Canaanite, Assyro-Babylonian, and Egyptian practices. For part of later Israel, one can even speak of a magical approach to life. (G. Fohrer:*Histy of Israelite Religion*, p 34.)

As can be seen, magic was an integral part of Israelite culture, and in view of this fact the authors of Scripture can't be blamed for believing in the occult - they were the product of a prescientific society, and their views reflect the limited and inaccurate knowledge of their age. Indeed, this is evident when the Bible portrays magic as a practical means of influencing nature:

> Then Jacob took fresh rods of poplar and almond and plane, and peeled white streaks in them, exposing the white of the rods. He set the rods which he had peeled in front of the flocks in the runnels, that is, the watering troughs, where the flocks came to drink. And since they bred when they came to drink, the flocks bred in front of the rods and so the flocks brought forth striped, speckled, and spotted. (*Gen. 30:37-39.)*

Jacob employs magic to achieve the desired result - he performs an act that automatically compels the animals to produce young with similar markings to the rods that they bred in front of. However, we now know that an animal's colouration is determined by the genes it inherits from its parents, and no amount of peeled rods will influence the outcome. Secondly, when the authors of Scripture condemn magic it is not because they considered it to be superstitious nonsense. Indeed, their opinion on the matter was the exact opposite:

> The Scriptures speak of magic as something whose existence no one doubts. Here, magic is a reality. The widespread condemnation of the occult does not arise from the suspicion that its magical operations are exploited for deception, but because magic is morally and socially harmful, indulging in what is forbidden and doing violence to the divine teaching... The Mosaic religion, like the Christian, opposed magic as an illicit tampering with God's power. (K. Seligmann: *The History of Magic and the Occult*, p26.)

Dr Maddison then goes on to say that some Skeptics "may find themselves in sympathy" with some of the Biblical laws he cites. Firstly, the question is do these laws promote critical thinking or do they merely reinforce irrational beliefs? The research I have undertaken indicates that for the Israelites, magic was an undoubted fact of life. Indeed, there is nothing in the biblical quotes Dr Maddison has presented that suggests magic is a delusion, and that it should not be practised for this reason.

Secondly, some biblical laws may have contributed to irrational beliefs and cruelty. For example: "You shall not permit a sorceress to live" (*Ex. 22:18.*) Indeed, one has only to think of the 300,000 people, mostly women, who were tortured and killed during the European witchcraft craze in accordance with this Biblical injunction, to see the harm that irrational beliefs can cause.

In the final analysis, those authors of Scripture who condemn occult practices did so because they considered magic to be an extant form of evil. This is in direct contrast to most Skeptics, who would probably reject occult beliefs because there is no proof that supernatural forces exist.

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Kirk Straughen
Clontarf QLD

Issues of interest

I gained much from reading the last issue (18/4).

The very first item, Bunyip's discussion of the Jonestown massacre, reminds us of some of the serious reasons for being a Skeptic.

Mike Archer's award of Australian Skeptic of the Year 1998 (p9) is well-deserved from what I know of him. Perhaps his work and achievements could have been detailed in a longer article.

Richard Lead's paper on financial scams (p17) makes my mind boggle at the gullibility, self-delusion, inventiveness and criminality of the scamsters and the scammed. The fact that some of the same old names and scams keep cropping up suggests that the authorities are not doing enough to keep them under control. I agree with Richard that such scams are fair game for Skeptics as they rely on a lack of critical thinking for their success.

The failure of the diviners being tested (p26) was to be expected. However, I am concerned that one participant said before the test that he would still believe, even if he failed. He also noted that he had been not very successful in practice for the test. The passing comment that a high percentage of Skeptics and spectators felt the divining rods move "without apparent conscious action on their part" when they used the rods deserves further investigation.

The three doors of Monty Hall (p32) and similar puzzles should be discussed occasionally in *the Skeptic* because they represent simple cases in which "common sense", misguided thinking or a lack of critical analysis

lead to incorrect answers, and those answers can easily be shown to be wrong by theory or experiment. I was quite happy with Roland Seidel's clear theoretical analysis in 18:3 (p47), but I was intrigued that some people tested his assertion experimentally. Such examples should show to non-sceptics the powers of a sceptical and scientific approach.

Guy Curtis's article (p37), about the inflexibility of belief despite logical argument against it, is worrying. (Perhaps the diviner mentioned above is a good example.) In fact, it almost makes me want to give up raising sceptical arguments. Still, we must press on in better ways. And the article also made me think on how and why I hold some beliefs.

The two critiques of modernism (p41, p45) were well worth reading and gave me a much stronger understanding as to why postmodernism holds little water—something I'd suspected but hadn't been able to define.

Michael Vnuk
Woolloongabba Qld

Divining I

In 1954, I was an instructor at the School of Army Health at Healesville, Victoria. Captain George Evans was conducting a hygiene instructors' course with me as his assistant. There were something like 12 non commissioned officer students on the course.

Healesville is situated at the base of a section of the great dividing range. On one occasion, Captain Evans and I took the students to an area in the forest. We were going to do some water divining. We alighted from the vehicle and moved a short distance to a creek-bed-like depression. There was no evidence of water on the earth, but you could easily believe, because of the location, that there would be water underground.

Captain Evans moved to a tree - perhaps it was a willow- and cut from it a forked stick. It was about 50cm long, I should say. He trimmed it and then demonstrated how it should be held. The stick was to be held horizontally by the fork at about chest level, the knuckles of the hands facing the ground.

Students took it in turn to hold the stick as directed. Before I had my turn, I plainly saw that the stick began to bend, its end pointing towards the earth. I am not able to say how many of the group experienced the consequence that I have described, but I would certainly say that most did.

I have no doubt about my own physical experience on that experiment. The attraction on the stick was of such forcefulness that I felt obliged within a couple of seconds not to resist it. Indeed, I felt that I would not be able to do so.

In the light of that experience, a sceptic though I most certainly am, I had to think that the claims of water diviners must have some substance. And, by the way, talking of scepticism, perhaps most readers have not read this from Bertrand Russell from his *Sceptical Essays*:

> The scepticism that I advocate, amounts only to this:
> (1) that when the experts are agreed, the opposite opinion cannot be held to be certain;
> (2) that when they are not agreed, no opinion can be regarded as certain by a non-expert;
> (3) that when they all hold that no sufficient grounds for a positive opinion exist, the ordinary man would do well to suspend his judgement.

Tom Evans
Greensborough VIC

Divining II

I write with reference to your report "Divining test 1998" (18:4), the description of which was not particularly clear. However it appeared to suggest that what was to be 'divined' was a PVC tube of unspecified size containing an unspecified amount of water apparently placed in one of four sections or areas of a (wooden?) box, the insertion being shielded from the 'diviners' behind a flexible plastic screen.

Apparently the failure of the participating 'diviners' to identify the position of the tube was taken to mean that they were unable to 'divine' water and it seems curious that they both appeared to accept this assessment of the result when, in fact, all it indicated was an inability to 'divine' to a very precise degree the presence of a small amount of water in a small PVC tube.

I am not a water 'diviner' but I do have a very good friend of 90 years of age who is, and who has maintained over much more than half a century a widespread and persuasive reputation for his ability to find water. I cannot vouch for his success but only for his reputation and I am sure for his sincerity. He also claims to be able to tell if the water is fresh or salt, which way it is running and its approximate depth. For this I cannot vouch but he does tell me that there has to be a critical amount of water and it has to be running.

As your test appeared to take no consideration of these factors (and the amount of water would appear to be significant) I am forced to the view that it has contributed little to determining in the general way any truth in such claims. Indeed it seems rather pointless.

A R Hugh
Orchard Hill WA

In all such tests, we do not seek to "prove" that any claimed ability does not exist - that would be attempting to "prove a universal negative", which is close to to an impossibility. Our tests are to determine whether the claims people make can be substantiated under controlled test conditions.

As with all challenges, before the tests went ahead the claimants were asked whether they could perform under the test conditions - that it was a fair test of their claimed ability. In each case they so agreed, and in each case the diviner's equipment worked flawlessly when they knew where the container was, and worked at a level no better than chance when the container was hidden from them. One must draw one's own conclusions.

As Bob Nixon stated in his report, and as is generally agreed among Skeptics who have ever tested diviners, we have never found them to be lacking in sincerity or integrity. We have no doubt that many diviners, in the field, can successfully find water, but our experiments have led us to the conclusion that the "instruments" they use have little to do with it.

Incidentally, there is very little "running" underground water It usually accumulates in reservoirs called aquifers. **Ed**

The word

I'm enjoying reading *the Skeptic* (18:3) while on holiday in... Australia.

On p 6 in the article about the exhibitor Bereshith, your readers might want to know that *Genesis* is the English name for *Bereshith*, the Hebrew name of the 1st book of the Bible. As with papal encyclicals, the first word(s) of a document or book is the name given to the document. In this case, "bereshith" means "In the beginning..." (the root is the same as in *Rosh Hashanah*, "beginning of the year"). OK, that's about the limit of my Hebrew

Gary Goldberg
Silver Spring, Maryland, USA

Cricket critic I

I was enjoying reading the Spring 98 edition of *the Skeptic* until I came to Barry William's tribute to Don Bradman, then I almost dropped my bikkie into my cup of tea. To a magazine that is supposedly about opening curtains on the Inner Sanctum and the Holiest of Holies, what a load of gooey twaddle!

Let's put things into their proper perspective. Don Bradman is only a cricket player and cricket is only a game, (and a very boring game at that). But that is all it is, a game. Like netball is a game, and Scrabble is a game. The only difference being of course is that cricket has the aura, the hype, the karma, and the Old Boys' Club working for it, and netball hasn't. So cricket gets the big money and the facilities and prime time television and netball, despite being the most popular participant game in Australia, gets the miserable crumbs.

And it makes me angry, really, really angry, to see your editor promoting the myth about a stupid cricket test that happened fifty years ago. So Australia beat the English at cricket. Big Deal!. Australian Women Netballers have been world champions for years but no sceptic ever goes sentimental about that.

Judith O'Donnell
Upwey VIC

Cricket critic II

The esteemed Editor published some stuff on The Don. Something in that otherwise entertaining piece seems to imply that the game is larger than life. Has anyone else a feeling that a touch of scepticism is needed here?

I have never played cricket in my life. I would probably enjoy it, just as I liked almost every sport I have tried. American football scarred my then boyish features, ice hockey cost me a front tooth, wind surfing claimed another one and I broke my nose in soccer. Yet, I have never felt the urge to pay someone else to play sports on my behalf.

Like many other sports, cricket tries to be miniature life. There are deep loyalties, treachery, espionage, struggle for death, victory, defeat, rebirth and retirement- all very weepy (and marketable) stuff. It has an obligatory deity, The aforementioned Don, who features tall on cereal boxes and *the Skeptic*. It is even capable of minor miracles, such as transforming an overweight yobbo into a national sports hero. (Well, cricket is not the only sport that gives oddities a fair chance. Take basketball and dwarf-throwing for instance. They at least give aficionados some good exercise.)

Cricket is a great vehicle for nationalism. When the world's best cricketers play without national pride at stake, there is hardly a soul in the audience. (I have to rely on the TV in this matter). The masses take direct interest only when nations compete, especially during the ritual Bashing of the Poms, a rather tacky piece of chauvinism. I am not surprised that the audience gets pissed as soon as it can. I would do the same if forced to watch something so insanely boring.

I try hard to appreciate the benefits of spectator sports. I acknowledge the comforting mutuality among the supporters of a team, in a similar way fans of a pop group feel all warm and fuzzy when they scream in unison. It must also be immensely satisfying for a savant to memorise irrelevant details of the heroes' accomplishments down to the prehistory of Body Line and beyond. Yet, the costs worry me. Are we so devoid of enemies that we have to create artificial loyalties and contesting parties between cities, social groups and suburbs? Could all this energy not be used for worthier purposes? Wouldn't it be healthier, more entertaining and more social if we kicked a ball or swung a bat ourselves? I wish sharp pens among the Skeptics would look into spectator sports with some refreshing criticism.

One last point: professional sports seem to be one the major topics taught in schools. Why can I excuse my children from religious education, but not from 'footy days' and such?

Jouko Koppinen
Heidelberg Victoria

Yes, I know it was a bit of self-indulgence, but you have to remember the wise old proverb, "All work and no cricket makes Barry a dull editor". I think it was Shakespeare who said it (it might have been W G Grace) but it remains as true today as it was then.

I could go into a long rant about how cricket is more than just a sport (or "game", as Judith puts it so dismissively) and cite boring facts about how Australia had a national cricket team 30 years before we had a nation; how the fact that the colonials could beat the colonisers was a factor in the push for Federation; how the Body Line series gave rise to concerns that Australia would leave the Empire, and all that stuff, but that would be even more self-indulgent, so I won't.

However, it was not pure self-indulgence. I find from the "interests" section people fill in on the subscription form, that sport, rates up there with music, bush walking and reading, as a surprisingly widespread interest among Skeptics. And cricket is probably the best represented sport among them.

I must take issue with Judith and her implicit suggestion that there is some sort of covert sexism in the Australians' elevation of sport to a semi-religious experience. Australia does have a pantheon of sporting idols; names that most people would recognise even if they were not interested in the particular sports involved, and in this pantheon, women are very well represented.

For every Herb Elliott, Rod Laver, Ken Rosewall, Les Darcy, Victor Trumper, Hubert Opperman, Walter Lindrum, there is a Dawn Fraser, a Betty Cuthbert, a Marjorie Jackson, a Shane Gould, an Anette Kellerman, a Margaret Smith, an Evonne Goolagong. However, I do find it more than a little curious (and sad) that the only woman who so unquestionably dominated her sport to an extent similar to the way that Don Bradman did in his, is not so well remembered. Heather Blundell (McKay) did not lose a game of squash for over 15 years, which is a remarkable record in any sphere. She migrated to Canada in the end.

Just to prove how contrite I am, I will offer the following team selection (in batting order) for Australia v The Universe in the Ultimate Test Match.

Ponsford
Morris
Harvey
McCabe
Chappell (c)
Miller
Healey
Davidson
Lindwall
O'Reilly
Johnson
Taylor (12th)

And I had to leave out Brown, Simpson, Jones, Mackay, O'Neill, McDonald, McGrath, Mackenzie, Jackson, Thomson, Rackeman, Hughes, Johnston, Marsh, May, Noble and Walters. Not, as fellow cricket nuts might suppose, a rather eccentric selection from among the great cricketing names of the past, but a selection from the great names on the list of *Skeptic* subscribers. But then we also have two Popes and a couple of Parsons among our flock

Ah, well, "What's in a name?" as the immortal bard, W M Lawry, was once heard to say.

B Williams c. Koppinen, b. O'Donnell 0

Information sought

Have you observed a politician, activist, journalist or corporation, using pseudoscience to support or denigrate an environmentalist agenda? I am interested in hearing from anyone who has witnessed any abuse of science in any environmental issue. I am hoping to prepare a book on pseudoscience and the environment which has an Australian focus.

Please send correspondence to:

Dr Aaron Oakley
42/12-16 Onslow Road,
Shenton Park WA 6008
Australia
E-mail:
aaronoakley@hotmail.com

Solution to Crossword No 1

We would like to be able to claim that we were overwhelmed with entries to our Crossword Competition No 1 in the last issue, but we always try to be accurate in *the Skeptic*. We were not not exactly underwhelmed either, so we think it is safe to claim that we were whelmed.

We had a number of correct entries, as well as a couple of incorrect entries that actually fitted the grid. We also had a couple of readers who kindly pointed out that clue 14a, should have been 14d and the compiler has been suitably disciplined (visiting hours are 3pm-4pm daily).

The winner, who received a copy of Richard Dawkins' book *Climbing Mount Improbable*, was **Mr B R Wearne** of Thornleigh, NSW.

Entries for the current competition (p 59) close on April 30, so beat the brains and bag a book.

About our authors

Ben Clarke is a solicitor with a practice on the Gold Coast, and is a member of GC Skeptics. Because of his profession, we're not game to add any further remarks.

Jane Curtain is a linguist at Monash and member of Vic Skeptics. An inadvertent abridgement of her article in the last issue, tempted her to change her name to Curtail, however, good sense prevailed and she resisted the temptation.

Richard Dawkins, when he is not busy being the Charles Simonyi Professor for the Public Understanding of Science at Oxford, a leading evolutionary biologist, and widely read author, causes creationists to froth at the mouth. Unlike his other accomplishments, the last one is not too difficult.

Harry Edwards, scourge of Letters editors everywhere, is both secretary and chief investigator of NSW Skeptics. His ambition is become the writer of this column, to which the current writer has said "Over my dead body".

James Gerrand was the original secretary of Australian Skeptics, and is now a Life Member. He is a retired engineer and a fanatical AFL supporter.

Richard Gordon, president of the NSW Skeptics, is a medical practitioner. He is also widely known as the author of a series of amusing books about the medical profession. However that is an error. That is not our RG, and in fact that author's real name is not Richard Gordon, but our's is. Is that clear?

William Grey is Reader in Philosophy at the University of Queensland (who are soliciting donations so they can afford a Writer). He has been a sceptic in all of his previous incarnations.

Colin Keay, when he is not browbeating the Hunter Skeptics of which he is el Supremo, has a partiality for pestering pest prevention promoters.

Richard Lead, symbol Pb, atom no 82, is relatively cheap, has a high density, and can be hardened by the addition of arsenic or antimony. This makes him ideal for his office as treasurer of the NSW Skeptics.

Mark Newbrook, a member of Vic Skeptics, is a linguist at Monash, who originated the Don Laycock Prize (see next page). Mark denies that he speaks in tongues, claiming it is only his English accent.

Bill Richardson is a retired, though still active, academic from the University of Adelaide. His research into claims made about ancient maps converted him from a believer into a sceptic, as his article in this issue attests.

Steve Roberts, scientist, sportsman, sophisticate and serious seeker after stuff, is a contributing editor of *the Skeptic* (he is responsible for the lack of typos)and editor of the *Victorian Skeptics Newsletter.*

Rosemary Sceats, Poet Laureate (*pro tem*) of *the Skeptic*, must be a descendant of John Keats (how else can you explain the similarities in both name and style?) She neither confirmed nor denied this claim, because we didn't ask her. Why spoil a good story with facts?

Tim Mendham is a former editor of *the Skeptic*, an experience that left him so morally and physically shattered that he has been reduced to devising diabolically difficult clues for cryptic crosswords.

Ritva Voutila is an artist, illustrator and, as will be seen in this issue, an accomplished cartoonist. At present she is painting a portrait of Ian Plimer for entry in the Archibald Prize. Creationists will , no doubt, support her entry; they would love to see Ian hung.

Barry Williams is the editor of *the Skeptic* (ie he is responsible for the remaining typos) and has been voted the Man I Would Least Like to be Wrecked on a Desert Island With, on occasions without number.

Notice

The Don Laycock Memorial Prize for Skeptical Linguistics

The celebrated linguist, Skeptic and polymath, Don Laycock died on 28 December, 1988. Don was an expert on both linguistics and Skeptical issues, and combined them in his own inimitable style to become a pioneer of sceptical linguistics. His interests ranged from Melanesian languages through bawdy songs to channelling and Tarot cards. His fellow contributors to the 1989 volume *Skeptical* - who included Colin Groves and William Grey - likened him to a 'Renaissance Man'. After his death his meticulous work on the Enochian 'language' - which was allegedly channelled to an associate of the Elizabethan mystic John Dee - was turned by a colleague into one of the very few 'classics' of sceptical linguistics.

As an encouragement to research in the area of sceptical linguistics, and as a fitting tribute to Don's memory on the tenth anniversary of his death, an annual book prize worth $100 is to be offered for a student essay or research report of publishable standard on a matter of sceptical linguistic interest. Possible topics include (but of course are not restricted to) all those discussed in Mark Newbrook's articlein this issue. Some (by no means all) of the obvious topics are:

Glossolalia
Automatic Writing
Channelling and extraterrestrial languages
Xenoglossia
Reverse Speech and similar phenomena
Non-standard philological and epigraphic theories

Another group of possible topics involve linguistic ideas which are quite 'mainstream' but seem to invite sceptical scrutiny.

A panel has been formed to judge entries; it currently comprises Jane Curtain (Monash University), Alan Libert (University of Newcastle) and Mark Newbrook (Monash University).

In judging entries, the panel will be looking for:
Clear relevance of the topic to both linguistic and sceptical concerns
Clear indication of the exact issue to be discussed, and relevance of subsequent discussion to this issue
Clear and accurate exposition of background theoretical and factual points
Substantial, accurate and appropriate reference to the relevant literature
Adoption of appropriate methodology, and clear description of the methods used (for research reports)
Coherence in the development of argumentation
Explicitness
Avoidance of dogmatism or the appearance of dogmatism - either favouring or in opposition to the beliefs discussed.
Use of an appropriate academic style, and a good standard of English generally
Entries which add materially to our understanding of the topic in question will obviously be ranked especially highly.

It is proposed to publish, each year, the prize winner and all other entries which appear of suitable quality. Submission of an entry carries with it the author's permission to publish in this way. It also implies that the manuscript is an original work which is unpublished and is not awaiting publication elsewhere, and that copyright resides with the author of the manuscript. Entries may, of course, be published elsewhere later, but acknowledgement of this initial publication would be appreciated.

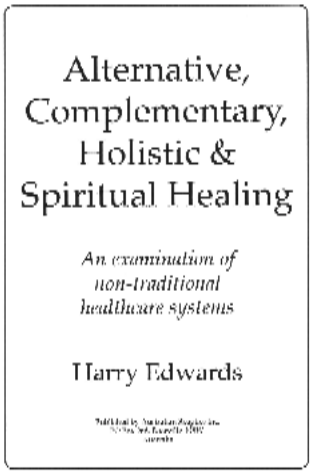
In the event that no entries of sufficient quality are received in a particular year, the panel reserves the right not to award the prize and/or not to publish any entries. Publication is not guaranteed to any entry.

Entries should be no longer than 5000 words. They should adhere to specific guidelines for presentation; details will be provided on request.

Entries should arrive by 30 September, 1999 and should be sent to:

Mark Newbrook
Dept. of Linguistics, Monash University
Clayton, Victoria 3168, Australia
(e-mail: mark.newbrook@arts.monash.edu.au;
fax: 03 9905 2294; phone: 03 9905 2290).

New book from Harry Edwards and Australian Skeptics



Australian Skeptics has just released this invaluable tool for helping people make an informed choice when confronted by a plethora of competing claims about "alternative" treatments.

A review of the book is on p 48, and details of where you can get it are inside front cover.