

THE SECOND

COMING

Skepticism

All the best from *the Skeptic*

1986 - 1990

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All the best from *the Skeptic*, 1986–1990

Skepticism

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&
Richard Saunders





Vol 6 No 1 - 1986

Skeptics Swamp Media

Mark Plummer

The Australian Skeptics media coverage reached an all-time high at the start of this year with a news item generated by the Australian Skeptics appearing somewhere in the Australian media every day for over a month.

Just after Christmas we sent out a Press Release announcing our \$1000 prize offer for the most skeptical article to appear in the Australian media during 1986. The release also contained our prediction kit for 1986 and this was run by the Melbourne *Sunday Press* and the *Canberra Times*.

On 3rd January we released our book, "*Creationism*" - *An Australian Perspective* in Brisbane and Sydney. This was covered nationally on the SBS network and throughout Queensland on commercial stations. The *Melbourne Age* gave the story front page coverage and we had numerous interviews on talk radio shows. Normally a story runs for a couple of days but the debate over the book has had continuous coverage for eight weeks and we know

of more book reviews to come.

The book swamped our second story that of composers' post-mortals works being played in the Festival of Sydney, but coverage of that story appeared in two Melbourne papers and on radio.

What amazing coverage in the mass media! A full page in Sydney's *Daily Telegraph*, lengthy articles in *The Australian*, *Canberra Times*, the Melbourne *Age*, *Sun*, Brisbane's *Daily Sun* Tasmania's *Mercury*, the Adelaide *News*.

The specialist press also picked up the story with a full page in *Omega*, and a full page in the *Queensland Teachers' Journal*.

The religious media also gave extensive, coverage but no-one more than *New Life*, Australia's leading evangelical paper, who devoted a full page editorial attacking us and gave several pages over a number of issues to the creationist viewpoints.

The book should have been enough to keep us busy but we also joined a full page examining "Astrological Birth Control" in the *Sunday Press* and a spot on *Good Morning Australia* on the claims of a faith healer to heal AIDS by laying on of hands.

The month of continuous coverage concluded with an article in the *Sydney Morning Herald* continuing our comments on the Orange UFO sightings.

At this rate we will have to set up our own Press Agency!

Although we cannot operate a press agency we have organised our information and archives in such a way as to make them accessible to the media, serious researchers and/or skeptics alike.

Jenny Smith has just completed sorting out and cataloguing our newspaper and magazine clipping collection.

Lynne and Damien Kelly have just finished a comprehensive index to *the Skeptic*.

Dr Tony Wheeler has just compiled a major bibliography of Australian published material on the paranormal.

In addition, the Australian Skeptics will further encourage skeptics to research and write up articles for the *Skeptic* or to try their hand at having them published in the print media. We know of at least 20 Skeptics who are into free-lance journalism and we would like to interest more.

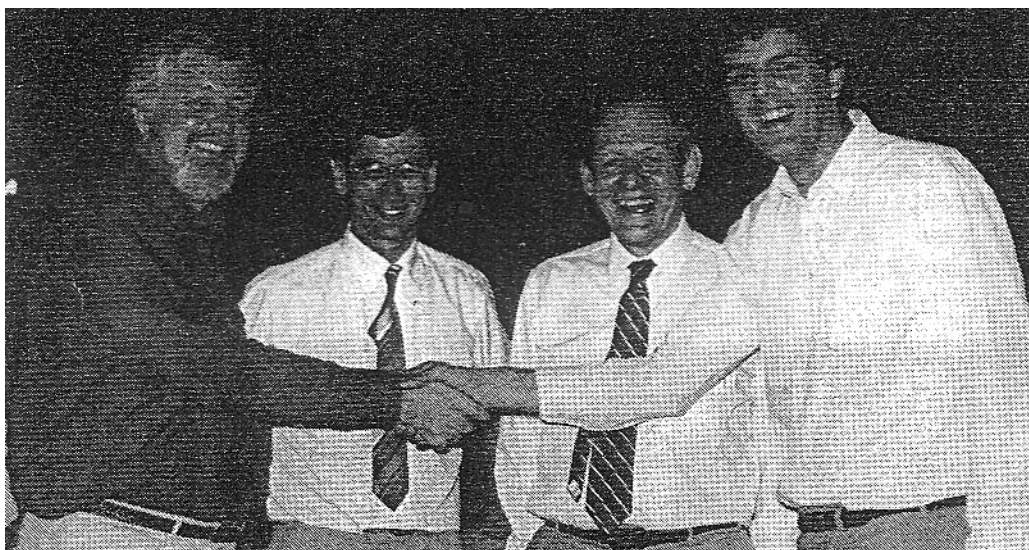
Remember a good well-written article can be just as exciting as anything served up by the Kevin Arnett's, John Pinkney's or the Gary Wiseman's of Australia.

There is no doubt that skeptics are winning the media battle in Australia. Reason, science and logic are on our side and if we keep up our efforts we can all live in a saner Australia.

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CSICOP Fellows

At the NSW Branch dinner on April 4th, Professor Paul Kurtz, chairman of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP), announced Mark Plummer and Dick Smith had been elected the first two Australian Fellows of



Barry Williams, Dick Smith, Paul Kurtz, Mark Plummer

CSICOP.

In 1980, Mark Plummer was the foundation President of the Australian Skeptics, and then National President for the following five and a half years.

He is best known for his investigative and organisational skills. It is less known that Mark has also spent a great deal of time encouraging young journalists and fellow skeptics to research pseudoscience.

Dick Smith has been a patron of the Australian Skeptics since its foundation. He sponsored the original visits of James Randi and Robert Steiner to Australia. He has also given organisational support and also vigorously promoted the Australian Skeptics even when attacked by creationists and pseudoscientists.

Mark and Dick join forty-six other international fellows including - Isaac Asimov (author), Antony Flew (philosopher), Martin Gardner (author), Stephen Jay Gould (zoologist), C.E.M. Hansel (psychologist), Paul MacCready (scientist), James Randi (magician), Carl Sagan (astronomer), B.F. Skinner (psychologist) and Robert Steiner (magician).



Skeptics of the Year

At the annual meeting of the National and State Committees on March 29th, Dr Martin Bridgestock and Dr Ken Smith were unanimously chosen as Skeptics of the Year.

They were chosen in recognition of their work as co-editors of "*Creationism*" - *An Australian Perspective*.

The book, now in its second edition, showed the Creation Science Movement in Australia to be pseudoscientific and religiously motivated.

It revealed facts about the sevenmember Creation Science Foundation they were trying to keep secret from their supporters.

The book took thousands of hours of research, writing and typesetting and the Creationists have only been able to counter with personal attacks on the authors.

Congratulations Martin Bridgestock and Ken Smith.



Vol 6 No 3 - 1986

The Distaste For Disorder

William Grey

William Grey has taught philosophy at the Australian National University and Temple University, Philadelphia. He works in the Department of Science in Canberra and is Secretary of the ACT branch of Australian Skeptics.

Astrologers say that if you're born between 20 February and 20 March you're extremely sensitive, unworldly and impractical, and always eager to try and escape from reality. These characteristics, they claim are the result, not of constitution or upbringing, but of the position of the sun at the time of your birth. Numerologists might tell you similar stories based on numbers associated with the letters of your name. Others will read your destiny or character in the palm of your hand, or even a teacup.

Many people dismiss such claims as a lot of harmless nonsense. And it's hard to deny that astrology, numerology and so forth provide a lot of innocent amusement. What's wrong, you may ask, with indulging in this sort of fantasy entertainment? Well, one worry is that for some people it can be more than entertainment; it becomes an obsession, even a form of tyranny in their lives. My aim, however, isn't to fulminate against the dangers of delusory belief systems- though the dangers are real enough. I want

rather to examine some features of the structure of paranormal belief which, I think, are both unobvious and interesting.

I'm someone who's greatly puzzled about belief in the paranormal. Claims made by psychics and astrologers about our destinies, ESP and so forth are ones which I find extraordinary and bizarre. While lots of skeptics devote a great deal of energy to the salutary business of "debunking" the claims of the battalions of clairvoyants, creationists and psychic fellow-travellers (by revealing errors of logic and of fact in their claims), it seems to me that not enough effort is devoted to the equally important business of trying to understand the underlying belief structure of the paranormal. I think there is such a framework; an underlying belief structure which is not always justified, but which is nevertheless widespread, robust and, I will suggest, actually constitutive of the way which we interpret the world.

While it's interesting to speculate on what motivates people to adopt bizarre "systems of belief, we must bear in mind that examining motives for belief has its dangers. It's all very well to point out that a particular belief is attractive because it is comforting, establishes one's position as one of the chosen amid the multitude of the damned, or cannot be easily abandoned because in so doing one would be admitting that a great deal of the intellectual and emotional investment of one's life has been wasted. One can plausibly argue for a bad motivation for holding a belief; but dubious motive does nothing to undermine the truth of a belief.

It's also worth noting that a way of interpreting the world may have no solid foundation whatever, and yet may help people to make sense of their lives. A system of belief can be quite satisfactory personally, even though it's useless for explaining what happens in the world, and may even be demonstrably false.

It's natural to focus critical attention on the content of paranormal claims; but I'm suggesting it's also important to understand the structure of paranormal belief. The powerful human propensity to accept what seem to be (and frequently are) outrageous empirical claims isn't the result of some incomprehensible perversity, but is actually a pathological manifestation of the very same abilities which enable us to develop our most important and profound insights about the world. This is why it's important to try to understand the structure (and methodologies) of pathological systems of belief, and to find out what they have in common with their more systematic and disciplined counterparts, even while dismissing their frequently perverse and deluded empirical claims.

However, before uncovering this common pattern,

I want to talk a little about a stark difference between different ways of looking at the world: a skeptical view, which is the one I adopt, and the way which is characteristically adopted by psychics and other friends of the paranormal (a very mixed bag).

In particular, it seems to me that while the world can sometimes be favourably ordered according to our designs, our best laid plans are frequently confounded by what Michael Frayn has nicely called the sheer knobbliness of things. Accident, mishap, and contingency feature centrally as uncontrollable and unpredictable factors (but not, I stress, as agencies), which perpetually dissipate the organisation and order which we try to impose upon our surroundings. The law of Murphy seems to me to capture an important feature of the way that the world resists our attempts to structure it in a systematic and organised manner.

The way that psychics and other friends of the paranormal make sense of the world is very different. Where I see chaos and mishap, they see hidden continuity and pattern. In this lies the basic difference between their world-view and my own.

Entering the belief structure of a psychic presents a difficulty for people like myself; it's a bit like attempting to fathom the thinking of a distant, foreign tribe with a wildly discrepant world-view. I'll try to illustrate this difference with the help of an example. This modest exercise in epistemological anthropology will help to clarify not just the way psychics interpret the world, and also, I believe, reveals something important about the way that we make sense of the world quite generally.

Let's suppose that someone's walking under a building and is struck by a tile that happens to fall from the roof overhead. This I say is an accident; a coincidence. Bad luck. The unfortunate event is the consequence of two independent happenings (the walk, the falling of the tile) for each of which there is very likely (at least in principle) a perfectly good causal explanation. The falling of the tile can be explained as the result of its material properties, facts about its age, weathering, and various historical vicissitudes prior to and including the moment when it broke off and fell. The walk, is (arguably) explicable in terms of the intentions and desires of the unfortunate individual whose location interrupted the tile's descent. But to ask the further question: "Why did that tile fall on that person?" is, in my view, utterly futile - it's a question for which there is, and can be, in principle, no answer.

The falling of the tile and the walk are intrinsically unrelated events. They are part of distinct and unconnected (or "decoupled") causal chains.

This sort of pattern of happenings seems to me to

exemplify much of what goes on. The history of individuals (and nations) consists largely of the fortuitous intersection of de coupled causal chains. It is for this reason that one seeks laws of historical development and similar generalisations at one's peril. And it's the same fact that makes any attempt to predict the future in any detail an utterly ludicrous exercise. There's plenty of scope for fairly general predictions, and to provide satisfactory explanations of why various things happen. But the best we can do is identify broad trends and tendencies within a single causal framework.

A great deal of what goes on is thoroughly accidental and contingent precisely because it's the result of! just such a fortuitous intersection of independent causal chains. Sometimes things work out happily, and we speak of good luck. But luck is not some mysterious force which is subtly directing our destinies (mysteriously linking the independent chains of causation); it is just the retrospective evaluation of radically contingent and unpredictable outcomes with respect to our desires and interests.

Psychics, however, see the world very differently. They agree that being struck by a tile, for example, is bad luck all right, but there are no coincidences. The walk and the falling of the tile are connected, psychics believe, not in a superficial, obvious, testable way, but in a subtle, deep and unobvious way.

Psychics differ among themselves as to the right way to uncover these underlying connections. Astrologers see such apparently unconnected events as a reflection of distant stellar configurations; numerologists see them as a reflection of harmonies which can be uncovered by grasping subtle arithmetical correlations. This is another fascinating aspect of the problem of grappling with paranormal belief structures. They are so conspicuously inconsistent with one another. Believers tend to be convinced of the truth of their own preferred enthusiasm, and to share the skeptic's incredulity about the legitimacy of other psychics' explanations.

Skeptics are thus usually in the happy position of being able to appeal to the authority of some psychic or other to denounce the particular paranormal explanation or the hidden connectedness of apparently independent events provided by other psychics.

However, I don't want to exploit the opportunities for cheap forensic triumph which psychic experts generously provide.

What I find fascinating - and what I think is largely unnoticed - is the way that psychics are engaged in that most characteristic of human enterprises the attempt to capture our chaotic and fragmentary

experiences in a network of meanings, and to discover the hidden connectedness which (we hope) underlies all the disorderly and recalcitrant happenings in the world. Despite the stark difference in approach, the belief structure of psychics has in fact much in common with scientific world-views. I'm not suggesting that science is often defended by prejudice and claims which are irrational (though that has been forcefully argued), but rather that there's a positive feature which scientific and paranormal views share. This is the urge to discover (or invent) repetitive patterns which lie hidden beneath a veneer of disorder.

Scientific understanding of the world has developed on just this heuristic assumption. Physics in particular provides us with its most profound insights by uncovering underlying and unobvious connections which link apparently disparate events in the world. Newton's triumph was precisely to provide an orderly interpretation of apparently disconnected phenomena, namely stellar and terrestrial motions. The elegant classical conceptions of Newton (which revealed an underlying system of orderly connections) eventually collapsed, however, when his successors uncovered, in the microphysical world, a disorder or randomness which underlies the classically conceived Newtonian order. The paradoxes and mysteries of the quantum world continue to provide a rich source of puzzlement and perplexity.

Randomness and disorder are difficult for the human mind to accept. They were repugnant to Einstein, for example, who hoped to find order beneath the randomness of microphysical world. His hope that some "hidden variable" theory would remove the disquieting randomness now appears, however, to have been irrevocably confounded.

I believe that psychics share Einstein's distaste for randomness and disorder. (Though alas, that seems to be just about all that they share with him.) The essential article of faith which psychics hold in common is the belief that there are no real coincidences or accidents. Accident or mishap, is always a superficial appearance, a product of our ignorance which, psychics believe, can be explained as manifestations of some hidden underlying order (astrological, or whatever). Beneath the chaotic appearances there is an underlying unity, a hidden order or meaning which they believe some psychic Rosetta Stone will uncover. That is their fundamental heuristic assumption.

This pattern of belief isn't restricted to psychics; the Austrian biologist Paul Kammerer postulated "laws of seriality" to explain the existence of pattern and connectedness independent from physical causation, but which was nevertheless, he believed, as

fundamental as physical cause. Carl Jung developed his closely similar notion of "synchronicity" to characterise causally unrelated events which were nevertheless meaningfully connected. Arthur Koestler has written at length on thinkers, including Jung and Kammerer, who've shared the view that reality is patterned, in a discoverable way, by non-causal or extra-physical principles. Jung and Kammerer believed that in addition to physical laws which govern relationships between events, there are principles by which causally unrelated events can be significantly linked together by non-causal connections. (Koestler used the oxymoron "noncausal determining factors" to describe this connection.)

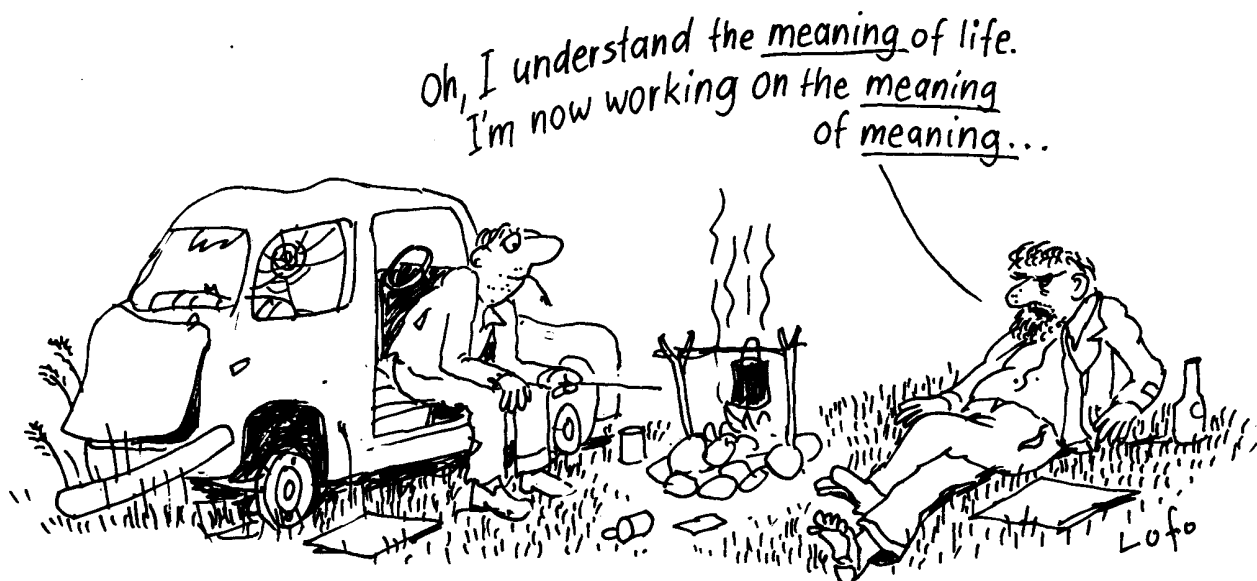
Psychics are committed to the belief that there are extra-physical ways in which happenings in the world are related; that there are hidden meanings to be deciphered through techniques and methods which transcend the limitations of empirical science. The belief is an a priori metaphysical assumption for structuring experience of the world; and it's by clinging unswervingly to this metaphysical article of faith that psychics develop their often preposterous claims about the world. Yet it's precisely the same assumption- faith in underlying order despite appearances to the contrary - which has motivated many of our most powerful theoretical innovations.

I don't deny that causally unconnected events can be significantly related. My claim is that such significance is entirely subjective - not discovered but

invented - though it need be none the worse for that. (It often tells us something important, but it is something about us not about the world.)

I'm suggesting that astrology and other psychic and paranormal belief structures share - in common with empirical science - a distaste for disorder; an urge to find a hidden underlying connectedness linking disparate events. The very same heuristic pattern-making assumption which has enabled us to develop a subtle and profound understanding of the nature of our world can, however, be profoundly misleading, and is responsible for generating much of the nonsense with which we daily grapple. Psychic explanations, at bottom, are a pathological manifestation of the very same patterns of thinking which enable us to make sense of the world.

What I'm suggesting is that in some respects the gap between profound insights and spurious nonsense is a great deal narrower than we tend to suppose. Having tried to close that gap a little, the next (very important) step is to try to identify precisely where the difference (between profound truth and arrant nonsense) lies. It's closely bound up with the way that some belief systems systematically insulate themselves from criticism, and hence from progress. At this point we enter less foreign territory: it's been explored by Karl Popper and his successors, such as Imre Lakatos and Thomas Kuhn. My concern has been to explore some parts of the epistemological landscape which are a little less familiar.



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Where In Australia Are The Charlatans?

Tony Wheeler

Why are there so many charlatans in Queensland?

This is a popular question. Is it because of Queensland's balmy climate, or idiosyncratic politics? Why is it that Australia's haven for pseudoscientists, lovers of the paranormal and charlatans is Queensland?

Is the picture of Queensland as the source of dubious enterprise and chicanery an unwarranted assumption? This, I thought, deserves a little investigation. The aim then, was to find which state branch of the Australian Skeptics has the greatest number of adversaries to match its wits against, and who our greatest adversaries are.

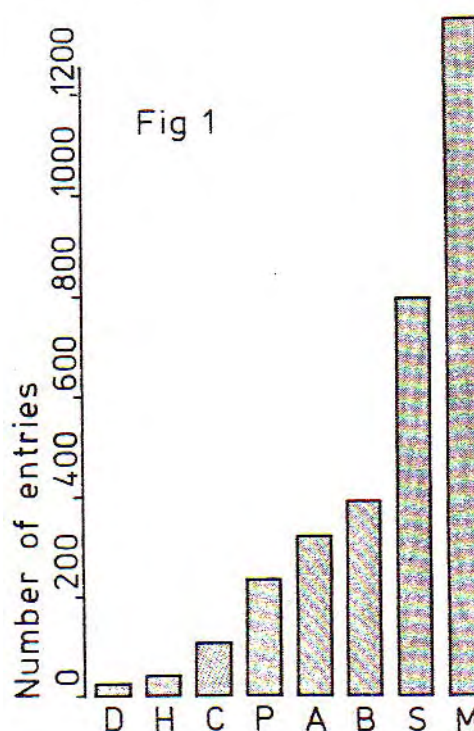
I searched the index in the front of the Yellow Pages Telephone Directory for categories of an essentially pseudoscientific nature, categories that are generally of interest to us Skeptics (Figs 5 & 6 - "Christian Science" refers to Christian Science Practitioners). You may disagree with my selection, maybe some categories should be excluded (Yoga?) or others included (weather forecasting?). After all some Skeptics are more sceptical than others.

Yellow Pages Telephone Directory entries are either basic or enlarged to Space units in the alphabetical listings. (These terms are illustrated in the back of the directory.) Some lists are partially duplicated and rearranged by suburbs in Locality Guides. Some businesses also take out Display Units in addition to their basic (or Space Unit) entry. I counted all the basic and Space Unit entries, and ignored the repetition of the Display Units and Locality Guides. My counts may be inflated by businesses buying additional entries under alternative names, trade marks or in alternative categories (for example a naturopath may be also listed as a homoeopath). I didn't try to estimate the extent of multiple listing, if any. I suspect that any effect is not so great or variable as to be important since we are dealing with large numbers of mainly small businesses with small advertising budgets.

An entry in the Yellow Pages Telephone Directory represents a clear commitment to that business. Many small businesses and part-time enterprises use "Private" (residential) telephones, costing \$120 p.a. in rental. To have an entry in the Yellow Pages necessarily requires your telephone to be re-classified

as "Business", with a greater rental of \$198. This additional \$78 p.a. ensures that when we count the entries we are including only those firmly committed to their business.

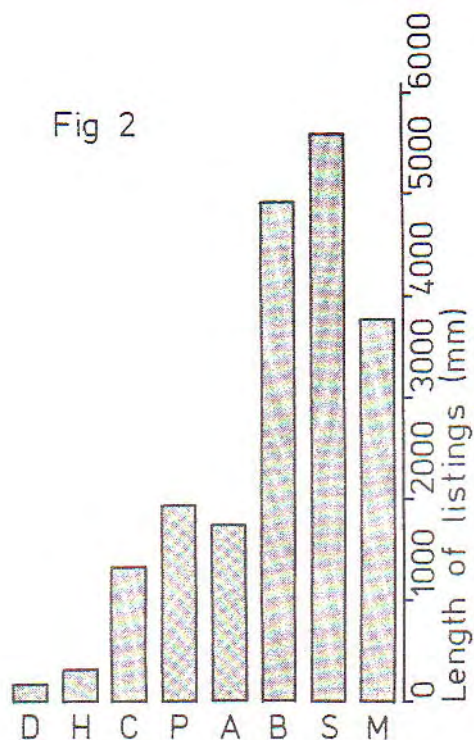
I counted the number of entries in each of my selected categories in the most recent Yellow Pages available for each capital city (Darwin, Perth, Adelaide, and Melbourne: 1985; Hobart, Canberra, Brisbane, and Sydney: 1986). Melbourne is the outright leader with 1344 charlatans (Fig 1), with Sydney a clear second (795) and Brisbane a poor third with 390 entries.



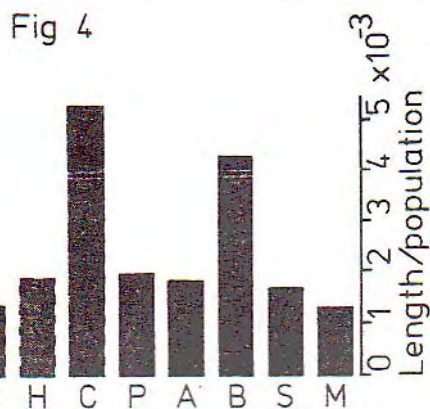
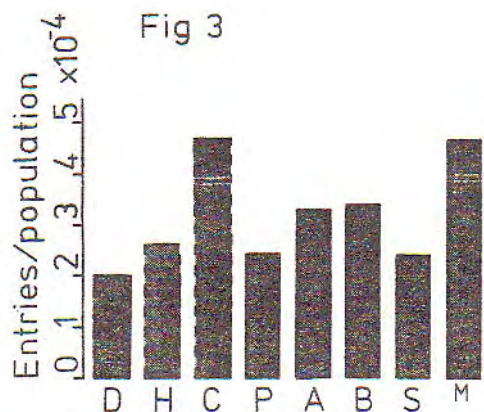
Some businesses are bigger than others. BHP and Uncle Tom's Repairs would both count in our system equally, but we ought to adjust our figures to take into account the size of the businesses. I therefore also measured the total length of the alphabetical listing in each category (again excluding Display Units and Locality Guides).

This criterion should--- encompass the additional business activity represented by additional addresses and telephone numbers within the same entry. The plot of these total lengths produced a surprising result (Fig 2). Melbourne had fallen to third behind both Brisbane and Sydney.

But is it fair to compare the cities in this way? Melbourne and Sydney have populations of about three million, Perth, Adelaide and Brisbane about one million, and Canberra, Hobart and Darwin 256,000, 174,000



and 63,000 respectively. On this basis Melbourne could be expected to have more charlatans than Darwin. To compensate we can divide the total numbers of entries and lengths of listing by the latest available corresponding population sizes (1983, Australian Bureau of Statistics; Figs 3 & 4).



The Yellow Pages Telephone Directory for Darwin actually covers the whole of the Northern Territory, and both the Hobart and Canberra directories included the surrounding non-city districts. Since I would expect a different proportion of our target businesses in rural areas compared to cities these indices may be biased, and so being less reliable they are marked with dotted lines (Figs 3 & 4). Because these three cities are so much smaller, they will be more sensitive to unidentified variables, such as a particularly charismatic homoeopath generating local publicity.

Perth, Adelaide, Brisbane, and Sydney all have between 2.4 and 3.4 entries per 10,000 residents, while Melbourne has a much greater index of 4.7 (Fig 3). This tells us that there is a greater proportion of entries in Melbourne. (Though the proviso regarding multiple listings may be important. Perhaps the Yellow Pages Telephone Directory organisation's sales staff in Melbourne work at increasing revenue by particularly encouraging this expenditure by businesses?)

Does this greater number of entries in Melbourne say anything about the people of Melbourne? Can we conclude that their high index represents a greater demand for suspect services?

When it comes to the listing lengths per population unit, Perth, Adelaide, Sydney and Melbourne all have ratios of between 1.3 and 2.0 mm per thousand, while Brisbane leads with more than double the greatest at 4.3. What is so special about Brisbane?

Are the charlatan's businesses in Brisbane few in number but larger, and so need longer listings to include their multiple addresses and telephone numbers? I Certainly didn't notice such a trend during my counting and measuring. Perhaps there is an excess of supply over demand in Brisbane generating the need for greater expenditure on advertising by way of Space Units. Perhaps the Yellow Pages organisation's Brisbane sales staff concentrate more on selling Space Units.

We may fairly conclude (with certain reservations) that while Melbourne clearly leads in both the number and proportion of charlatans, those in Brisbane are apparently the most vociferous.

Now to consider which of the pseudosciences generates the most businesses. When I added up the numbers over all the cities for each category (Fig 5) I was surprised at how few water diviners (four) and astrologers (55) there were. Presumably water diviners generally work in rural areas and so are to be found more in other directories. And water divining may be more of a spare-time activity which would not lead to an entry in the city Yellow Pages. Astrology may be a

divided industry led by a few famous personalities writing syndicated columns, together with a mass of spare-time hobby astrologers satisfying the bulk of the demand for individual horoscopes.

The pseudo-medicines clearly dominate with naturopaths and chiropractors leading. Acupuncturists are third in number but lead in the total lengths of listings.

The very large number of pseudo-medical practitioners intrigues me. Does it represent a correspondingly large demand for their services? The clients must feel that these "alternative medicine" practitioners have something real to offer them over and above that help available from the established medical professions since they are willing to pay more for it. Medicare does not cover alternative medicine practices. Why are so many people so disillusioned with the medical establishment?

This survey is by no means complete. For a start we have only considered the capital cities. A lot of Australia's pseudo-scientific activity has gone unreported here because it doesn't show up in easily identified categories in the Yellow Pages Telephone Directory. For example gullible authors of articles (Bent Spoon runner-up John Pinkney) and books (Andrew Fitzherbert's of *Psychic Sense*) are not listed as such.

Faith healing churches may be listed with other conventional churches under "Organisations - Church & Religious", and the bibliolatrous Creation Science Foundation under "Books - Retail". I'm not sure where clairvoyants such as Bent Spoon winner Tom Wards might be listed. We also haven't counted the pseudoscience components of otherwise reputable

businesses. I am thinking here of all those superfluous vitamins, herbs and other stuff sold on the basis of vague and misleading claims by chemists throughout Australia.

There is certainty, however, in our conclusion that Australian pseudo-medicines are big business. Assuming that every entry in the Yellow Pages Telephone Directory represents a full-time business, and generously allowing a reduction to two-thirds in the total number of entries to compensate for multiple listing, only one salary per business, and an income of only \$20,000 per practitioner - and we have an annual turnover for the Australian pseudomedicine industry of over \$40 million!! \$40 million each and every year paid to charlatans making bogus and misleading claims about pretend remedies for diseases. And remember this is a conservative estimate. Big business by any standards!



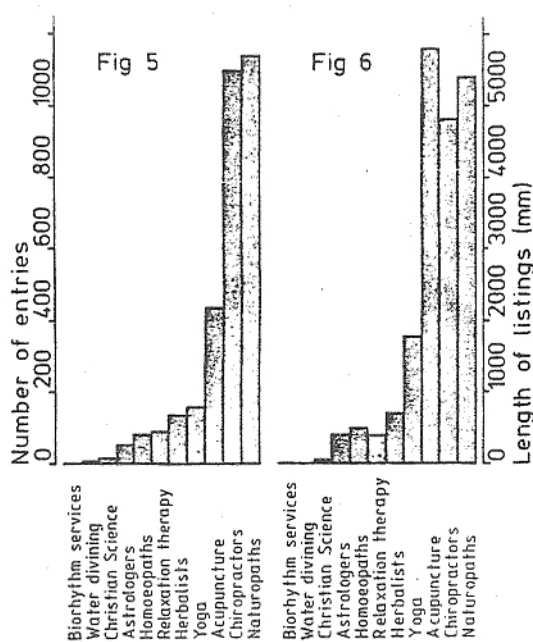
The Paranormal: Fact or Fantasy?

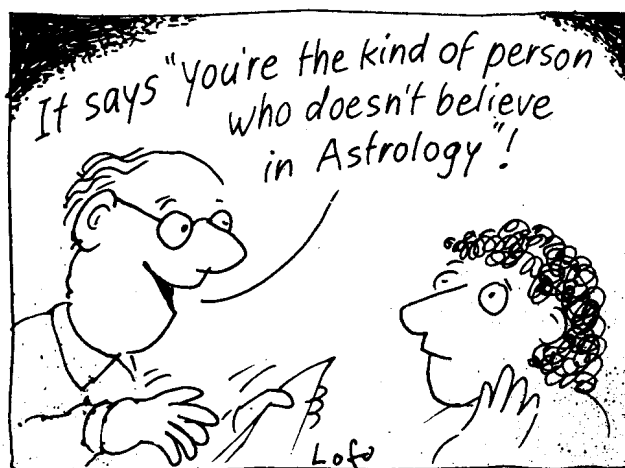
Dr Anthony Garrett

The supernatural has played a major role in human belief from time immemorial, and in "primitive" societies remains an integral part of daily life. Appeals to spirit beings for good health, successful crops and all manner of other benefits are commonplace. By comparison the growth of scientific methodology from mediaeval Europe has pushed far back the borders of credible belief. Yet the popular press of today reports copiously on all manner of paranormal phenomena - ghosts, poltergeists, astrology, UFOs and psychic surgeons all gain exposure. Must there be something in these?

In order to make a balanced judgement it is necessary to view both sides of the question, and here lies the first difficulty. Sensationalism sells newspapers and is therefore more widely available than sober reflection. Headlines which have actually appeared in one popular tabloid include "Cross Between Human Beings and Plants: Scientists on Verge of Creating Plant People" and "Alien from Space Shares Woman's Mind and Body". The same principle applies equally well in publishing, selling books in healthy quantities regardless of their accuracy.

The Bermuda Triangle is a case in point. Triangle popularizer Charles Berlitz implies in interviews and





books that fifty aeroplanes and one hundred ships disappeared in the area in the 25 months to January 1980. Cutting away masses of innuendo eventually reveals that this is just an "estimate", and that only twelve incidents are actually known to have taken place. Of these, most have been explained - one commercial airliner which suddenly lost power had its fuel boost pumps accidentally turned off, and a military plane radioed its distress in a storm shortly before it disappeared "in clear weather". The remaining unexplained cases occur no more often in the Triangle than anywhere else! Moreover if a mechanical failure should occur over terrain where wreckage can never be found, the cause is untraceable. Since whenever more information becomes available, mundane explanations always seem to become more likely, is it not more sensible to assume that the residue of undisproven cases arises not from supernatural causes but from lack of information?

A second cause of unexplained cases is difficulty in constructing an alternative explanation. For example, few people would know how to go about checking whether a medium is fraudulent, and many may have been frightened by what they have seen. Yet early in this century the escapologist and illusionist Harry Houdini visited medium after medium in the fervent hope of being put in touch with his dead mother, but never found one whose performance he could not expose as fraudulent. Here was a man who wanted to believe but whose professional training equipped him superbly to detect trickery. He never realised his hope.

As for astrology, look at this personality sketch.

"Some of your aspirations tend to be pretty unrealistic. At times you are extroverted, affable, sociable, while at other times you are introverted, wary and reserved. You have found it unwise to be too frank in revealing yourself to others. You

pride yourself on being an independent thinker and do not accept others' opinions without satisfactory proof. You prefer a certain amount of change and variety, and become dissatisfied when hemmed in by restrictions and limitations. At times you have serious doubts as to whether you have made the right decision or done the right thing. Disciplined and controlled on the outside, you tend to be worrisome and insecure on the inside. Your sexual adjustment has presented some problems for you. While you have some personality weaknesses, you are generally able to compensate for them. You have a great deal of unused capacity which you have not turned to your advantage. You have a tendency to be critical of yourself. You have a strong need for other people to like you and for them to admire you."

I expect that this fits you well. It came from a standard horoscope and was used by Bertram Forer in 1948 as a demonstration of astrological susceptibility. Forer's students were each told that the sketch was custom-made for them, and were asked to rate it for accuracy on a 0 - 5 scale. 16 out of 39 gave it a perfect 5, the average was 4.26, and only five rated it below 4. Thirty years later the results were almost identical.

This typical example of how people view themselves, together with the subtle fact that we notice coincidences but ignore non-coincidences, accounts for the popularity of astrology. Its predictive methods are not even consistent: one method is incapable of predicting the horoscope of anyone from north of a latitude near the Arctic Circle. This doesn't seem to have done the Eskimos much harm.

Two other popular systems are based respectively on the constellation and sky sector in which the sun falls at the moment of birth. They frequently lead to opposite predictions.

Despite their fascination, horoscopes and ghosts are not susceptible to testing under controlled conditions, and no serious parapsychologist would advance them

as firm evidence for the paranormal. Metal-bending and ESP, on the other hand, can certainly be tested.

So what are the results? They too reveal a consistent pattern of fraud or fog, though at a higher level. Metalbending and similar "mind-over-matter" phenomena last hit the headlines with the extravagant claims of Uri Geller. Geller was one of only very few selfclaimed paragnostists who has allowed himself to be tested under controlled conditions. Unfortunately he was always able to create an atmosphere of confusion in the laboratory, following which a fork or spoon would be found bent and Geller would proclaim his powers. What precisely happened is impossible to determine, for repeated attempts to elicit detailed protocols or the film of the testing from experimenters Harold Puthoff and Russell Targ have been ignored or evaded.

However it has emerged that whenever tighter controls were applied, Geller's results worsened, ultimately to chance levels. These facts, combined with revelations by former manager Yasha Katz about how other tricks were performed non-paranormally, discredits not only Geller but also Puthoff and Targ - former physicists who have since expanded their paranormal activities into full time research and have published several books.

Geller also refused to be tested in the presence of stage magicians. Unlike scientists, who pit themselves against nature, magicians are professionally concerned with fooling people. This strongly suggests that they should be the best people to take charge of experimental protocol. one would think that parapsychologists would be glad of expert help, but quite the opposite is usually the case.

The point was made most forcibly by "Project Alpha": the introduction of two stage magicians posing as psychics into an experiment hailed in advance as the best proving-ground yet for parapsychology. The two were able to fool the parapsychologists into believing that they could bend metal, blow a sealed fuse and communicate telepathically. Their subsequent revelations of protocol breaches, sloppy methodology and their own tricks has sent shock waves through the parapsychological community. With luck it will emerge better equipped.

ESP should be the easiest phenomenon to test, for which reason its confirmation has repeatedly been claimed as imminent. This state of affairs has now lasted over 100 years, with many of the old classic experiments discredited. If an effect exists, no matter how weak, statistical analysis of the results of repeated testing in a simple double-blind experiment (one in which the tester does not know the "hit" result in

advance, and so cannot cue the subject in to it) such as card matching, should confirm it. Instead we find modern workers inventing abstruse experiments with protocol ever harder to verify, sample spaces (the list of all possible outcomes) ever harder to evaluate, and results ever harder to interpret. This is at minimum appalling science; since parapsychology is presently seeking academic respectability, less charitable interpretations are easy to find.

CSICOP and other sceptics are frequently asked what is their point in making such a fuss? Does it really matter? Well, apart from the largest shake-up ever of science if any of this is correct, there is the importance of truth. Anyone who accepts its importance will not need to ask these questions, but by contrast look at the human consequences of alternatives - the distress caused to someone warned that their lifeline is weak, or to parents whose child runs off to join one of those alienating sects.

On the large scale, history shows that an uncritical and misinformed populace is the breeding ground for all manner of intolerant beliefs and practices. The discovery that truth has to fight for its survival is not a pleasant one, but is an essential realisation in maintaining civilisation. And in a society as open and susceptible to fraud as ours is, truth needs all the help it can get.



BORDERLANDS OF THE UNCONSCIOUS

Dr Allen J. Christophers

In an article in *the Skeptic* Vol 6 No 1 Feb '86 entitled AIPR WELCOMES DEBATE WITH SKEPTICS, Michael Hough of AIPR made the following claim in support of ESP:

ESP - type experiences are not confined to parapsychologists. . . Dr Bennelt (University of California) cites a surgeon who remarked about a woman under anaesthetic : "My God, they've dragged another beached whale onto my operating table". For several days after the operation, the woman inexplicably suffered tension and physical ailments. She suddenly recalled the insult - and the symptoms quickly vanished (Discover, Feb 1985: 13-18). These reports suggest that information can indeed be picked up outside of conscious awareness. Note that ESP is defined as "information picked up outside normal sensory channels".

This claim prompts an examination of the borderlands of the unconscious as these are happy hunting grounds for those seeking support for the paranormal.

There are a number of causes of temporary unconsciousness: deficiency of oxygen supply to the brain (cerebral anoxia), narcosis (general anaesthesia), deficiency of glucose supply to the brain (hypoglycaemic coma), epileptic fits and concussion. Cerebral anoxia and narcosis are the most common causes and the ones we know most about. The following remarks will apply to temporary unconsciousness due to these two causes; but will not necessarily apply to unconsciousness due to other causes.

NARCOSIS

For operations in modern times, a deep narcosis is always used in which consciousness is lost and muscle relaxation allows easy access to the abdomen.

However it was not always so. Ether was the first anaesthetic agent to be brought into general use (1840) and ether on its own is not a satisfactory agent because it takes a long time to achieve a deep narcosis. Consequently when it was first used a lighter narcosis was achieved where sensation of pain was lost (analgesia) as also was voluntary muscle movement (paralysis). The patient could not feel pain and he could not upset the operation by protesting; but he did not lose consciousness. This light narcosis was satisfactory for those operations that did not require opening of the abdomen.

Times have changed and patients under anaesthesia expect to be unconscious and woe betide the anaesthetist who forgets this.

The following case was reported in *Medico-Legal Briefs*, MEDICAL PRACTICE, Sep 84:

Following an operation a 50-year old woman claimed that she had been aware during the operation and could recall various statements made by staff as it proceeded.... The account given by the patient of statements made during the operation was verified and it was thus proved that there had been awareness. On this basis a settlement of £1,500 was made.

A common feature of a light narcosis is amnesia and this may be temporary only. A person on recovery from a light narcosis may fail to recall what happened even though he was obviously conscious at the time. Thus the woman who whilst anaesthetised heard herself referred to as a 'beached whale' did not recall this until several days later.

This state of impaired consciousness, occurring at a stage prior to complete loss of consciousness in which a person is completely paralysed and not able to feel pain, is well known to anaesthetists. It is not so well known that a similar state can occur as a stage in the loss of consciousness from cerebral anoxia.

CEREBRAL ANOXIA

Inability to feel pain as a stage of loss of consciousness from cerebral anoxia has not been the subject of reported experiments; but there is sufficient anecdotal evidence. Haldane and Priestly in 1935 knew that miners suffering from carbon monoxide poisoning, but not to the point of losing consciousness, were often burnt by their lamps or candles without their being aware of it at the time.

The paralysis of cerebral anoxia has likewise not been the subject of reported experiments; but is well attested by anecdotal evidence. It was known that Coxwell in his famous early balloon ascent in 1862 became completely paralysed except for his head and neck and was able to save himself only by seizing the rope to the escape valve with his teeth, thus allowing the balloon to descend. The paralysis is an ascending paralysis starting in the legs.

The amnesia of cerebral anoxia was reported by Haldane himself. After a spell in a low-pressure chamber in the course of an experiment, he was entirely unable to recall a conversation he had just had with his colleague inside the chamber.

Many of us have experienced cerebral anoxia during the common postural faint and will agree about the ascending paralysis. Our legs seem to give way beneath us.

It is not well known that hyperventilation gives rise to cerebral anoxia by constricting the blood vessels in the brain and thus restricting the blood supply to the brain. If carried to extremes, hyperventilation can result in loss of consciousness from this cause; but, before consciousness is fully lost, there is a stage of paralysis. The person may be lying on the ground completely unresponsive and therefore apparently unconscious; but still conscious as revealed by an ability to recall events that took place during this state.

It is known that hyperventilation is popular as a part of the ritual of certain cults and it could well be expected that reports could emerge from them of 'paranormal' happenings at the borderlines of the unconscious.

Vol 7 No 1 - 1987

A Haunting

Tony Wheeler

with Martin Grimmer, Barbara MoInar and Anne Wheeler

Investigating a suspected haunting raised images of long, lonely, dark night-time vigils armed with thermometers and cameras while the spirits peeked from behind doors and chuckled. Harry Price is the role-model, the premier ghost buster. He and his colleagues had examined haunted houses on behalf of the American Society for Psychical Research - were we fated to follow nervously in his footsteps?

As it happened, our problem was different altogether. The request for help came from a lady who was disturbed by unusual phenomena: was she being haunted? Was she mentally disoriented? What could she do? Would we help - *please!*

The history

The phenomena were mainly noises; loud and unexpected noises. At one period, a series of whiplike cracking noises were heard around the house every night at about 10pm. A loud knocking at the front door. A heavy bang in an unoccupied room reverberating through the house. A sudden "supercrack" noise so loud "as though the maisonette had split open" at about 1.30 to 2.00am inspired terror. Banging on the walls just before bedtime. A scratching noise near the head of the bed lasting 45 to 60 seconds, as if made with a wire brush, heard at night while in bed. This noise stopped when the light was turned on; later it was described as against and in the wall, near an electric socket. The sound of gushing water. In the daytime, a woman's moan from an unoccupied part of the house.

There were also strange visual, movement, electrical and temperature events. As the son's room was entered on one occasion, a key was clearly floating three feet above the carpeted floor; after a pause the key fell, bounced and lay still. There was the sideways movement of a heavy painting; the cornflakes packet that 'jumped' on the kitchen bench top, but not so much as to fall over.

The urn containing the father's ashes was on a cupboard top in the kitchen when, overnight, it inexplicably moved about 150mm (six inches). A curtain rod, with curtains, was violently thrown from its brackets across the room to land with a thud and

be found lying on the floor.

There was "bed tugging" - lying quietly as sleep descends and suddenly the bed clothes are being tugged away. And the raising of one corner of the mattress. And pressures on the bed as though a cat were walking across it, and at other times as though someone was seating themselves on floor.

The video machine and the house lights turned on by themselves.

The parents' room was very chilly, day and night, following the father's death.

This catalogue of the phenomena experienced does not represent a continuous repetition so much as a collection of vivid one-off occurrences (the "supercrack", mattress raising, officious knocking, failing curtains and curtain rod), or phenomena that have recurred occasionally (the whip-cracks, wall scratching) with some periods being "worse" than others.

Our account reads as quite definite: a list of unexplained phenomena that have occurred to the family (as distinct from what has not occurred, or phenomena that have been explained). But really it is a collection of memories going back ten years and encompassing three different houses - memories elaborated over the years and recalled for us over a series of telephone calls and visits.

Some incidents were considered important and discussed several times (the "super-crack" in particular); others were odd experiences mentioned in case they were relevant. If we had not made notes during every conversation, some of these would have escaped inclusion.

The effect of these phenomena on the family was rather alarming. The noises were described as "very noisy", "frightening", "violent" and "urgent". The lady in particular appeared obviously disturbed; despite her fear of publicity and ridicule, she was seeking and asking for help.

Explanations

These noises, etc, however, are not that unusual. They could be explained as natural occurrences.

As you move closer to the equator, a larger proportion of the heat in the environment is radiant heat (rather than the heat content of the air). One consequence is that the sun-lit surfaces of buildings are greatly heated compared to those parts of the structure on the shaded side. Also there are building materials used together with different coefficients of expansion with heat (wood, metal, concrete, etc).

Consequently with sunshine and heat, some components of the structure of the house expand and

move relative to others. Where fasteners temporarily constrain this movement, when it does occur it can be sudden and noisy, producing sharp, loud noises. This accounts for the 'cracking' noise characteristic of metal roofs on sunny mornings.

Night-time noises abound too. Because of the relative quietness, any little noises seem so much louder and more significant. (it would be interesting to leave an audio-tape recording when retiring to bed one night so that later we could listen to the nightly noises of our house which we usually sleep through.)

There are also noises of animals - bats screeching in the fruit trees, possums scampering across the roofs, insects flying into the window panes and fluttering against fly-screens. (One informant described the recurring distinct noise of the flickering flames of a fire emanating from within one of his walls; on investigation [involving partial demolition of the wall] a nest of active termites was revealed.)

Houses built on stumps, as the home in question is, do funny things. Their house, we know, sways and shakes inside whenever someone climbs the stairs to the front door. Other sensations can be misleading; our house (for example) is only on low stumps, yet people walking about next door in the early morning generate a noise and vibration strongly suggesting that my daughter is walking from her room along the hall and through the kitchen to me in the study. Many times I've been fooled, but the suggestion is so convincing.

Visual phenomena are my favourite. Our visual system is very trusted (the importance of eyewitness testimony), but is actually very capable of deluding us. Errors in identifying the distance of a discrete image (the key) against a bland background that is difficult to focus on (the carpet) can generate the wrong interpretation of the relative ranges (the key floating in front of/above the carpet) subsequently corrected (the key failing).

Any impression near sleep is suspect. The drowsy brain is partially dissociated from reality and visual, auditory, muscular (jerking, tugging), spatial (floating) interpretations, as well as dreamlike fantasies, can occur. Psychologists describe such experiences as 'hypnagogic' when before sleep and 'hypnopompic' when after waking.

And the movements. We too have a moving picture in our home; despite 'sticky' feet to keep it still, the picture always seems wonky on the wall, and is always being 'straightened'.

Of course, just because we have explanations for similar phenomena, it doesn't necessarily follow that these are the correct explanations in this instance. Even more so, experiencing a similar phenomenon

elsewhere doesn't prove that the cause is not supernatural. However, these corollaries do suggest that a natural explanation is more likely for all, than a special, supernatural explanation for some events.

So if all the noises, etc, are just common, normal, though unexplained, trivial phenomena, why is the family suggesting that there might be a ghostly cause?

The lady in particular was disturbed, and at various times had resorted to sleeping tablets. Her sister, who generally lives elsewhere but at the time of our involvement was visiting, did not seem worried. Her recounting of the events was more eager, more dramatic; some of us felt that the sister was enjoying the flirtation with the supernatural.

The lady's children, teenage daughter and son, were apparently concerned, though to a lesser extent; but then they had grown up with this strangeness for the last ten years.

Our conclusion was that what had started as a few odd occurrences casually explained as supernatural had become a self-reinforcing delusion, with those in the family who enjoyed the notoriety (the sister) innocently encouraging the delusion even though inadvertently distressing other members (the lady). Their expectations and perspective were being distorted.

The Investigation

The house is in a mining area, and underground disturbances and noises were a possibility. Enquiries to the State Department of Mines revealed that no underground mining was occurring, or had occurred, near the house in question.

The logical next step was to investigate the phenomena and one-by-one identify their causes, thereby establishing precisely what evidence there was for a ghost. The prospect of such an investigation was not appealing: even if every noise was satisfactorily explained, would this necessarily prove the non-existence of a ghost? Instead, we reconsidered our objective. This is our experience in responding to a request for reassurance regarding a feared haunting. Hopefully, this account will help any others faced with a similar situation.

Tony Wheeler is a physiologist and secretary of the Queensland branch of Australian Skeptics. Martin Grimmer, Barbara MoInar and Anne Wheeler are Queensland committee members.

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First Journalism Awards to Willesee and Beale

The Skeptical Journalism Award had its genesis in an idea proposed by Dick Smith. Dick felt that, while the presentation of an annual Bent Spoon Award served to highlight the "psychic" charades that were perpetrated each year and brought publicity to the work of Australian Skeptics, it was important to provide positive incentive to journalists to critically scrutinise any paranormal stories that came their way. Dick offered a prize of \$1000 for the story, judged by AS, to be the best sceptical treatment of a paranormal or pseudo-scientific topic.

The fact of the institution of the award was announced in press releases after the 1986 convention in Melbourne, and was generally treated by the media as a nonstory. This changed after an article in the *Sydney Morning Herald* (February 11, 1987) mentioned the award and the fact that there had been no entries. The story resulted in a number of media interviews for committee members and these were followed by entries from Robyn Williams (on creationism) and Norman Swann (alternative health) (both ABC radio), television reports on Channel 7 Perth (religious cults) and Channel 7 Sydney (yogic "flying"), the *Willesee* program on the 9 Network (Uri Geller), Bob Beale of the *Sydney Morning Herald* (various stories on creationism, fringe science, Uri Geller, Zanex, etc), Robyn Williams for press coverage in Omega (fringe science) and Australian Natural History (creationism), and an article from the *National Times* by Adrian Furnham on clairvoyants and fringe science.

Most of the stories entered were of a high standard and showed an encouraging scepticism about the topics covered. If there was any cause for concern displayed by the entries, it was that by far the majority of stories were from specialist science journalists, who might reasonably be expected to be sceptical of paranormal claims in the normal course of their work. Those from nonspecialist sources were far fewer in number, but the fact that there were any is, in itself, an improvement over the attitude previously displayed by the news media.

The entries were considered by the annual meeting of the national committee which preceded the 1987 annual convention. After much discussion, it was decided to award the "Skeptical Journalism Award"

and \$1000 for 1986 to Trans Media Productions' *Willesee* program for the story on Uri Geller, shown on November 6 and 7. A transcript of the program was contained in *the Skeptic*, Vol 7 No 1, and consisted of a confrontation between Geller and Ben Harris, magician and member of Australian Skeptics.

The judges decided that one other story was worthy of special mention and a special award was voted to Bob Beale, science writer of the *Sydney Morning Herald*. His story concerned the pressure being brought to bear on the sponsors of an Australian Museum exhibit train to remove references to evolution from the exhibit on human origins. Creationists sought to apply pressure to the Commonwealth Bank, a major sponsor of the exhibition, and Mr Beale's story was instrumental in giving publicity to this unsuccessful threat to intellectual freedom. Mr Beale was awarded \$500 and a special Skeptical Journalism Award for this story.

The Skeptical Journalism Awards were presented to the recipients at a cocktail party held in Sydney on May 30. It is anticipated that these awards will be an annual presentation and media organisations are invited to submit entries for 1987 to our postal address.



Conceptual Conflict Over Pseudoscience

A Case Study Involving Teacher Trainees & Their Belief in Water Divining

John C. Happs

It is apparent that, within relatively "Well educated" Western communities, many people exhibit a readiness to believe almost any pseudo-scientific claim that is made through the media.

This problem appears to be compounded by the public's general acceptance as a truism almost any article that appears in print since few members of society are likely to have the ability to recognise what constitutes acceptable scientific evidence. The result of this being that well-established theories which have greatly increased our understanding of evolution, planetary formation, plate tectonics, radiometric dating, etc, can be readily dismissed by uninformed individuals if such theories are used as counter-arguments against their belief in aspects of pseudo-science.

Children and adolescents represent groups which may be particularly vulnerable to media claims about

alleged "mysteries" such as UFOs (Bainbridge, 1978), the creation of the world (Godfrey, 1983), the Bermuda Triangle (Kusche, 1975) and the presence of mysterious monsters (Guenette and Guenette, 1975; Snyder, 1977).

Many other paranormal claims, although totally unsubstantiated, are equally likely to be believed by primary and secondary students. Such claims are those involving ESP (Marks and Kammann, 1980), metal bending by psychic power (Gardner, 1981), astrology (Jerome, 1977), psychic archaeology (Jones, 1979) and water-divining (the focus of this article).

If we make the supposition that it is our primary and secondary students who are seeking clarification on pseudo-scientific issues, then the burden of responsibility for providing objective information rests upon classroom teachers. After all, they are the ones likely to be confronted with questions from curious students with an interest in widely publicised claims about the paranormal.

The investigation reported here initially considered the views on selected aspects of the paranormal, as held by primary and secondary teacher trainees at a tertiary institution in Western Australia. These views, once identified, were compared with views held by tertiary students taking introductory science courses in two North American universities.

The central aim of this investigation was to introduce a teaching strategy which might challenge the prevalent views held by Western Australian teacher trainees about general areas of the paranormal and, more specifically, waterdivining. Additionally, students' long term perspectives, concerning such views, were monitored.

The Investigation

A survey was designed to rapidly assess teacher-trainees' views concerning nine areas of pseudo-science, these being: fortune telling; contacting the dead; horoscopes; miracles; creation; UFOs; the Loch Ness monster; ESP; and water divining (see appendix A for the questionnaire used).

Water divining was deliberately selected for inclusion in the survey since there are many individuals in Australia claiming to have the ability to detect underground water supplies using psychic powers. A number of such claimants readily acknowledge that they make a living out of their "abilities".

The opportunity came to hand for a videos to be shown to the teacher trainees and it was hoped that this would challenge any prevailing beliefs they might have concerning water divining.

Survey results -

1st year trainees

A co-educational group of first year students who had completed one semester of a six semester Diploma in Teaching (primary) program was given the survey [N = 93] on pseudo-scientific beliefs, with the option of omitting their names from the survey if they preferred anonymity.

Two additional questions were appended to the survey in order to probe the students' problem-solving skills. The outcomes from these latter questions will not be discussed within the scope of this brief article.

Questionnaire responses to "Definitely Yes" and "Yes" were combined on summation, as were responses to "Definitely No" and "No". The overall results for this first year group of teacher trainees are shown in Table 1.

Survey results -

2nd year students

A smaller co-educational group of second year teacher trainees (primary) from the same tertiary institution was also given the survey [N = 45] on pseudo-scientific beliefs. The results are shown in Table 2.

What is apparent from these two data tables is the similarity of response patterns. Two notable differences emerge however with more second year students expressing their uncertainty about miracle-performers and the Loch Ness monster, compared to first year believers in these areas.

In terms of their belief in water divining, both groups of teacher trainees contained a majority of students which accepted the claims that some people possessed a special ability that enabled them to find underground water.

Table 1: Survey results for 1st year teacher trainees (primary) N=93

	Yes	Unsure	No
01: Fortune telling	53%	27%	20%
02: Contactdead	44%	18%	38%
03: Horoscopes	24%	13%	63%
04: Miracles	75%	19%	6%
05: Creation	49%	30%	21%
06: UFOs	54%	30%	16%
07: Loch Ness	31%	39%	30%
08: Water divining	54%	32%	14%
Q9: ESP	69%	21%	10%

Table 2: Survey results for 2nd year teacher trainees (primary) N=45

	yes	Unsure	No
01: Fortune telling	58%	18%	24%
02: Contact dead	40%	22%	38%
03: Horoscopes	29%	7%	64%
04: Miracles	58%	33%	9%
05: Creation	47%	24%	29%
Q6: UFOs	67%	22%	11%
Q7: Loch Ness	29%	27%	44%
08: Water divining	51%	33%	16%
Q9: ESP	71%	20%	9%

Survey results - science background

It may be argued that primary teacher trainees have generally been exposed to little formal science education beyond year 10 at the secondary school level. Consequently, this lack of science background might result in paranormal beliefs being more prevalent among these groups.

Conversely, it might be suggested that secondary teacher trainees, possessing a more solid background in the physical and/or biological sciences, would tend to be more sceptical when considering pseudo-scientific claims since they may be more likely to recognise and better assess available evidence for such claims.

A co-educational group [N = 33] of secondary teacher trainees was selected from the same tertiary institution in Western Australia. It was established that 18 of these students held degrees in the physical or biological sciences and were completing a one-year Diploma in Teaching Program. The remaining 15 non

Table 3: Survey results for science teacher trainees (secondary) N=33

	Yes	Unsure	No
01: Fortune telling	52%	18%	30%
02: Contact dead	24%	31%	45%
03: Horoscopes	21%	9%	70%
04: Miracles	49%	18%	33%
05: Creation	33%	9%	58%
06: UFOs	46%	27%	27%
07. Loch Nest	27%	27%	46%
08: Water divining	43%	27%	30%
09: ESP	61%	21%	18%

graduate students had completed two years of formal science courses as part of their three year science-major program for secondary teacher trainees.

The results from this survey are shown in Table 3.

There appeared to be a general decrease in the tendency for secondary teacher trainees to believe in pseudo-scientific claims surveyed when results were compared with those previously obtained from the 138 first and second year primary teacher trainees.

More than 50% of the science teacher trainees rejected the notion of creation, although it still remains somewhat disturbing to find that over half of the students, from each of the three groups, were not willing to reject beliefs in fortune telling, communicating with the dead, miracles, UFOs, the Loch Ness monster, water divining and ESP; ie all of the pseudoscientific beliefs itemised in the survey with the exceptions of horoscopes and (in the case of science students) creation.

Comparison with North American findings

A comprehensive survey into tertiary students' pseudo-scientific beliefs was conducted by Feder (1985). This survey, distributed at the Central Connecticut State University, probed the views of 186 students, described as: "A random and representative subset of our student body, since students enrol in introductory courses to fulfil the basic requirements of our general education program" [Feder, 1985, p182].

It was further pointed out that these students attended introductory courses in archaeology, anthropology, biology and sociology at CCSU.

Fifty items appeared on Feder's survey although for the purpose of approximate comparison, only those statements which considered the belief domains shown in Appendix A will be discussed here.

Statements from Feder's (1985) questionnaire, relevant to this investigation, are shown with the response distribution in Table 4.

Statements from Feder's survey were selected where they approximated statements shown in Appendix A, eg statement number 1 from Feder's survey is similar to the question "many people claim the ability to predict the future, eg fortune tellers. Do you consider that any people have this ability?" (Question number 1 from the survey shown in Appendix A).

Table 1 illustrates how the Western Australian data parallel Feder's data in that the majority of both tertiary groups expressed a belief or uncertainty about fortune telling, communicating with the dead, miracles, creation by supernatural forces, UFOs, the Loch Ness monster and ESP.

Table 4: Selected data from Feder, K.L. (1985) pp. 182-183 (N=186)

	Believe	Unsure	Disbelieve
1. Some people have the ability to predict future events by psychic power.	56.9	15.1	28.0
2. Some people can read other people's thoughts by psychic power.	53.2	16.7	30.1
4. The Loch Ness monster really exists.	28.5	42.5	29.0
6. UFOs are actual spacecraft from other planets.	37.6	38.2	24.2
7. There Is a God.	76.4	14.5	9.1
12. Astrology Is an accurate prediction of people's personalities.	24.2	22.0	53.8
15. It Is possible to communicate with the dead.	17.8	33.3	49.0
28. God created the universe.	62.3	21.0	16.7

Another recent North American survey into tertiary students' paranormal beliefs was initiated by Gray (1984) at Concordia University, Montreal.

Students attending introductory psychology courses during 1981, 1982 and 1983 [N = 125] were assessed on their beliefs concerning ten paranormal phenomena: ESP (including telepathy, clairvoyance and psychokinesis); UFOs (as extraterrestrial spacecraft); astrology; ghosts; Bermuda Triangle; Von Daniken's claims; psychic healing; miracles; biorhythms; and reincarnation.

The percentage of students saying "yes", ie they believed in such pseudo-scientific claims, is shown in Table 5.

Again it will be noted that a significant number of tertiary students readily accepted as true many paranormal claims, especially those related to ESP, UFOs and reincarnation.

Student beliefs in the claims related to water divining were not investigated by Feder or Gray. This article will now specifically attend to this topic since the main focus of the investigation involved attempts to

challenge the widely-held belief that certain individuals have special powers which enable them to detect underground water sources.

Individual conceptual conflict about water divining

Twelve months following the survey of 45 primary teacher trainees (see Table 2), a group [N = 601 of similar second year students were given the same questionnaire on pseudoscientific claims. This second group was similar in that they were undertaking the same Diploma course as was the first group. The results are shown in Table 6.

Table 5: Percentage of tertiary students believing in paranormal claims N=125 [After Gray, 1984, p.249]

ESP	85	UFOs	69
Astrology	55	Ghosts	43
Bermuda Triangle	55	Von Daniken	46
Psychic healing	49	Miracles	43
Biorhythms	46	Reincarnation	69

Some clear similarities are evident between both second year teacher trainee groups (see Tables 2 and 6) in terms of their response to questions dealing with fortune telling, horoscopes, creation, UFOs, ESP and water divining.

The latter group of second year students was to be exposed to a deliberately planned teaching strategy, designed to challenge their general views about pseudo-scientific claims and, more specifically, their views concerning water divining. This "treatment" group tended to be more unsure about claims concerning communication with the dead and the Loch Ness monster, although the same group appeared to be more convinced that miracles had been or could be performed by some individuals.

Across *both* groups of second year teacher trainees [N = 105] approximately 61% believed in claims of water divining ability. Individual interviews with randomly selected "believers" produced anecdotes about relatives and/or friends who had "successfully" directed farmers to places where they should drill for water. Hearsay "evidence" was also offered as proof of some people having water divining powers.

Only 16% of students, from both second year groups,

rejected claims of water divining powers.

Following the survey of the 60 second year teacher trainees, this group was given a two hour lecture which dealt with the notion of "evidence" and what sets real evidence apart from hearsay and so-called anecdotal "evidence". Examples of erroneous and misleading newspaper articles were provided, eg the Perth *Sunday Times* article on the Mysterious Face on Mars (August 17, 1986, pp59-60). Additionally, discussion was initiated over fabricated accounts of pseudo-scientific claims, eg Chariots of the Gods (Story, 1976) and the Bermuda Triangle (Kusche, 1975).

The main thrusts of this teaching session was to demonstrate to the teacher trainees the inability of professional water diviners to locate underground water under controlled conditions which the "diviners" themselves helped to formulate.

A video was shown to the group of teacher trainees with the theme being that of testing water diviners under the scrutiny of professional magician James Randi. Strategically inserted in the film were demonstrations by Randi which showed the kinds of trickery employed by "psychics" such as Uri Geller and psychic "surgeons" similar to those practising in the Philippines.

The "cream" of Australia's water diviners were assembled and given this unique opportunity to demonstrate conclusively their abilities and a \$40,000 prize was available to any one of them who might be successful. The "diviners" assisted with every stage of the experimental design and were present for the laying down, covering and test-running of the 10 large plastic irrigation pipes which they later had to identify as carrying water or otherwise.

The irrigation pipes were laid down in parallel forms and, when covered- over with soil were then selected at random by independent judges so that water could be passed through them. The "diviners" individually (and out of sight of their colleagues) selected the pipes through which they believed they could detect the flow of water².

None of the "diviners" was successful in detecting water at better than 10% accuracy, which was the selection success that any person would have attained by chance alone. As predicted by Randi, the "diviners", having been provided with the test results, proceeded to rationalise their failures with reference to sunspot activity, residual effects in the pipes , etc.

Post-video discussion and re-survey

Discussion with the second year teacher trainees followed the video on water divining and many from the group clearly indicated their surprise at the diviners' inability to detect underground water under test conditions. One spin-off from this video was the obvious impact

Table 6: Survey results for 2nd year teacher trainees (primary) N=60

	yes	Unsure	No
01: Fortune telling	60%	12%	28%
02: Contact dead	28%	32%	40%
03: HoroscopeS	28%	12%	60%
04: Miracles	75%	12%	13%
05: Creation	52%	28%	20%
06: UFOs	58%	24%	18%
07: Loch Nest	32%	40%	28%
08: Water divining	67%	16%	17%
09: ESP	72%	16%	12%

made by James Randi's demonstration of spoon-bending and "psychic surgery". The students' initial perceptions of such pseudoscientific claims were clearly challenged and beliefs changed in a number of cases.

It was likely that, for some of the students, any changes in their belief about the paranormal might be of a short term nature only and therefore it was suspected that some regression might occur over longer periods of time.

Consequently, the survey (see Appendix A) was administered following a wait-time of three months in order to probe longer term retention of belief systems about the paranormal. Results of this post-video survey are shown in Table 7.

Summary

The majority of second year teacher trainees, monitored over a three month period, clearly demonstrated a rejection of beliefs in water divining. A further outcome was a general decline in their acceptance of all pseudo-scientific claims itemised in the survey.

Comments from several students, interviewed after the three month survey, indicated that the conflict strategy had a very real impact on their prior belief.

Such promising results, which may have experienced some reversal over more extended periods of time (Gray, 1984;Happs, 1985), should still be viewed in light of the fact that almost half of the teacher trainees involved in this investigation retained their beliefs in miracles and ESP. Additionally, more than 40% of the group retained their belief that UFOs represent visitors from outer space and that the Earth and solar system were created by a supernatural force.

If the beliefs identified in this investigation are

representative of those held by teacher trainees throughout Australia, then a situation exists whereby many of our future teachers, when asked for their professional opinions on paranormal matters, are likely to promote misconceptions in these areas. The spread of pseudo-scientific beliefs, in this way, may prove difficult to resist.

Notes

1. The author duly acknowledges the Dick Smith Organisation which kindly provided a copy of the video "James Randi in Australia" which unequivocally demonstrated how professional water diviners failed in their combined attempts to demonstrate their powers.

2. It is interesting to note that all "diviners" were able to select the correct pipe by use of divining rods when they were shown which pipe the water was running through. The opportunity to "tune-in" their rods was provided before the randomised testing commenced.

APPENDIX A

Name:

Group:

Table 7: Post-video survey results for 2nd year teacher trainees (primary) N=63

	Yes	Unsure	No
01: Fortune telling	35%	11%	54%
02: Contact dead	13%	20%	67%
03: Horoscopes	13%	14%	73%
04: Miracles	46%	24%	30%
05: Creation	43%	17%	40%
06: UFOs	40%	33%	27%
Q7: Loch Ness	16%	22%	62%
08: Water divining	22%	19%	59%
09: ESP	46%	13%	41%

.This is NOT a test.

.This is a survey to establish general viewpoints about claims of special powers and phenomena.

.There is no time limit on answering the following questions.

.Ask if you are unsure about the meaning of any questions.

.Information that you provide will be treated as confidential.

.Place a tick in the box which best suits your answer.

[Editors note: for the sake of space, the boxes which followed questions 1-9 have been deleted from this appendix, however the format was identical for each set of boxes - five horizontally joined boxes marked with "Definitely Yes" to the left of the left-most box, "Unsure" beneath the middle (third) box and "Definitely No" to the right of the right-most box.]

Q1. Many people claim the ability to predict the future, eg fortune tellers. Do you consider that any people have this ability?

Q2. Some people have appeared on television, claiming that they can communicate with the dead. Do you consider that any people have this ability?

Q3. Horoscopes appear in most newspapers and popular magazines. Are you likely to believe what your horoscope says?

Q4. We frequently hear about people who have performed or witnessed miracles in the past. Do you consider that any miracles have ever taken place?

Q5. Many people believe that the Universe, Solar System and Earth were created by a supernatural power, or God. Do you consider this to be likely?

Q6. There have been numerous reports of UFO sightings all around the world. Do you believe that other life-forms, from outer space, have ever visited the Earth?

Q7. A popular tourist attraction in Scotland is Loch Ness where regular sightings of a Loch Ness monster have been reported. Do you consider that such an animal exists?

Q8. In Australia, several people are earning a living by claiming an ability to detect (divine) underground water by using pieces of wood or metal. Do you feel that any people have such an ability?

Q9. Some individuals are said to have powers of extra-sensory perception (ESP). Such people claim to be able to read minds and transmit thoughts to others. Do you consider that any people have such power?

Q10. A manufacturer claims that their new detergent, called "Generator", will remove stubborn stains better than any other brand of detergent. Explain how you would test this claim.

Q11. A person claims the ability to bend metal objects by using mental powers only. How would you set up an experiment to test such claims?

References

- Bainbridge, W.S. (1978). Chariots of the Gullible. *The Skeptical Inquirer* 3,(2): 33-48
- Feder, K.L. (1986). The Challenges of Pseudoscience. *Journal of College Science Teaching* 15, (3) :180-186
- Gardner, M. (1981). "Science: Good, Bad and Bogus",

Prometheus Books, Buffalo, New York

Godfrey, L. (Ed.) (1983). "*Scientists Confront Creationism*", W.W. Norton, New York

Gray, T. (1984). University Course Reduces Belief in Paranormal. *The Skeptical Inquirer* 8. (3) : 247-251

Guenette, R. and Guenette, F. (1975). "*Bigfoot: The Mysterious Monster*", Sunn Classic Books, Los Angeles

Happs, J.C. (1985). Regression in Learning Outcomes: Some Examples from the Earth Sciences. *European Journal of Science Education* 7,(4):431-443

Jerome, L. (1977). "*Astrology Disproved*", Prometheus Books, Buffalo, New York

Jones, D. (1979). "*Visions of Time: Experiments in Psychic Archaeology*", The Theosophical Publishing House, Wheaton, Illinois

Kusche, L. (1975) . "*The Bermuda Triangle Mystery - Solved*", Warner Books, New York

Marks, D. and Kammann, R. (1980). "*The Psychology of the Psychic*", Prometheus Books, Buffalo, New York

Snyder, G. (1977). "*Is There a Loch Ness Monster: The Search for a Legend*", Wanderer Books, New York

Story, R. (1976). "*The Space Gods Revealed*", Harper & Row, New York

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The Meaning of Truth

Where to find it and how to avoid putting your foot in it

Mel Dickson

I shall begin by boldly stating two universal truths:

1. There are no universal truths - only personal opinions (which may be sincerely believed to be true).

2. Our experience of the world is personal and, hence, unique; we cannot assume others experience the world as we ourselves do.

It seems, therefore, that there are only individual experiences (or perceptions) and individual views of truth.

This is my view of truth, which I have come to through my own work as a scientist and my study of the work of others. You are welcome to share it, but I do not assume you will since so many other firmly held and differing views exist for you to choose or to synthesize for yourself.

Few working scientists ever take the time to consider such things, so I will not even claim that many scientists would agree with me.

It may help to go first to the dictionary for some definitions. These at least will give us an idea of the notions people have about truth and its associated idea, reality.

The following definitions are from the Shorter Oxford Dictionary:

TRUE: Consistent with fact; agreeing with reality; representing the thing as it is.

TRUTH: Conformity with fact

REAL: Having an objective existence; actually existing as a thing. In Philosophy: Whatever is regarded as having an existence in fact, and not merely in appearance, thought or language.

REALITY: The quality of being real or having an actual existence. Correspondence to fact; truth.

FACT: Something that has really occurred or is the case. Hence, a datum of experience, as distinct from conclusions.

As you can see, truth, fact and reality are defined in terms of each other. This is not very helpful.

To shorten an otherwise very long philosophical argument, let us accept the commonsense position that a real universe exists, which we are capable of experiencing.

However, we have experienced too little of the universe to be able to make "universally true" statements.

Worse, individuals experience the world differently and have great trouble explaining their experiences unambiguously. Try describing in words, as to a blind person, your experience of the colour "red". Even a person who is only blind to colour will have difficulty understanding you.

Although there is a commonsense idea that a true proposition or statement describes things or events as they really are, there seem to be many common uses of truth which surely fall far short of this ideal. For example:

1. Personal "truth": An observation you have personally made using your own senses must be closer to the truth than any secondhand report or an observation made using some extension to the senses.

2. Philosophical "truth": Although much debated, philosophers must admit truth of some sort exists as without it philosophy and philosophers cannot exist. William James said

"True ideas are those we can assimilate, validate, corroborate and verify. False ideas are those that we cannot."

[From "Pragmatism"; Longmans, Green, 1907]

Bertrand Russell said

"I do not, it is true, regard things as the object of inquiry, since I hold them to be a metaphysical delusion"

and

"The truth of basic propositions depends upon their relation to some occurrence, and the truth of other propositions depends upon their syntactical relations to basic propositions".

3. Legal "truth": All witnesses swear to tell the truth, but a large proportion must be either self-deceived or deliberately deceiving the court. Surely what judges not the truth, but the most likely events that occurred and gave rise to the evidence presented.

4. Political "truth": Politicians apply different standards to themselves and their opponents. For themselves, it is coincidental that what is true will also put them in the best light, have most appeal to the public and displease the fewest. Their opponents, of course, are said to have very elastic notions of the truth and to constantly misrepresent the facts.

5. Journalistic "truth": This has something in common with Political truth. and can be described as any event or report of an event which will interest readers. Little effort need be made to independently verify reports and retractions are seldom needed as the public memory is short.

6. Revealed "truth": This is unassailable by argument, depending on faith that one or more authorities (book, preacher, guru, politician, professor, etc.) are infallibly correct, the source of all truth. Such supreme authority can be political, religious or even scientific in nature.

7. Scientific "truth": Because of the empirical method science is supposedly based on, scientific truth is commonly thought to be the most reliable sort of truth. In practice it shares many flaws with other "truths".

I identify various impediments to determining truth. These are:

1. Physiological: Our senses mislead us. Certain events produce illusions because of the physiology of our senses.

2. Psychological: Other illusions are caused by our habit of intuitively interpreting our observations in terms of the normal or usual. Unusual objects or events are therefore wrongly interpreted. Most "magic" depends on this sort of illusion.

3. Philosophical/Political: At a higher level still, perceptions of things or events are distorted to fit in

with personal deeply held convictions.

The reception of stimuli through the senses and the subsequent processing of the information by the brain blend together in the phenomenon of PERCEPTION.

Perception can be subdivided into:

The senses *Extension of the senses*

Vision: spectrometers, microscopes, telescopes, cameras, television

Hearing: microphones, amplifiers, tape recorders, radio, telephones

Smell: gas chromatographs

Taste: mass spectrometers, gas chromatographs

Touch: pressure gauges, strain gauges

Temperature: thermometers, radiometers,

Proprioception: accelerometers, compasses

The various extensions to our senses have enabled us to observe far more than we could have without their aid. But, just as our senses can be misled even with direct observation, the various extensions can be misled and present us with sensible- seeming though unreal data.

Perception and Illusion

Our senses inform us about our surroundings. During early childhood we explore the environment with our senses, learning concepts such as near, far, high, low, dark, light, hot, cold, sweet, sour, soft, rough and so forth.

We thus become equipped with a learned model of the material world which we understand intuitively, instantaneously, without need for further thought. This model helps us survive in the world because we can quickly react appropriately to stimuli without the need for time-consuming thought. For example, we learn that distant objects seem smaller and make fainter noises. A large loud roaring thing like a crocodile or a semitrailer is no doubt a close threat and instant thoughtless avoidance is life-preserving.

But these automatic, intuitive responses can also be responsible for deceiving us when the situation is unfamiliar and unlearned. Tricks of perspective give us the illusion of distance. Tricks of light give us illusions of form. Both sorts of tricks are extensively used in representative art. Our taste perception of a food can be deceived by strong smells or flavours. If our senses can easily mislead us, can we trust them to correctly inform us about the material world? For practical purposes the answer is - yes, most of the time. After all, senses were evolved to help us cope effectively with our environment.

BUT, in unusual, unfamiliar situations we may be misled and be unaware of it. No doubt many tales of paranormal events arise from this cause.

Interpretation

Suppose we make personal observations of something and are certain our observations are free of illusion. We can then claim our knowledge are truthful only if no nonrational psychological forces intruded on the process of drawing our conclusions.

Put another way: Objective or empirical knowledge is knowledge which is unaffected by non-rational psychological forces.

BUT can knowledge EVER be completely uncontaminated by non-rational beliefs or commitments? This leads to ...

Science

Now we have taken a suitably sceptical look at truth, reality and so on, we shall look at science. What claim does science have to find truths or at least bring us closer to them? Are scientists as people exempt from error? Is science based on a philosophical system that somehow excludes error? Is science at least "done" in such a way that excludes or minimises error?

So far I have outlined the impediments that prevent us knowing truths about the real material world. My remarks are general and apply to everyone. Can I except scientists from my general comments? I think not. They are human and prone to human error. Some scientists, I fear, do talk in public as if they were infallible but this is only another human error.

Being thoughtful, they may inform themselves of sources of error and may try to avoid them, but they may also be unaware of errors that remain. A sociologist may scrupulously eliminate statistical flaws in a study yet his conclusions may be fatally flawed by his deep political feelings.

Note also that most scientists avoid study of the Philosophy of Science, which sounds useful warnings about error.

Philosophy

Is there something inherent in the philosophical foundations of science that repels error? The first modern attempt to state a philosophy of science was that of Francis Bacon, whose description of the scientific method is now called naive induction.

Observations are made at some point on the frontier between our knowledge and our ignorance. Records of data accumulate. General features begin to emerge and individuals start to formulate

general hypotheses which fit all the known facts and explain their causal relationships.

The individual scientist tries to confirm his hypothesis by finding evidence which will support it.

This seems unexceptional. It is a classical statement of how objective or empirical knowledge, based only on experience and uncontaminated with pre-existent theories or irrational beliefs, can be arrived at. However, as a prescription for obtaining objective knowledge about reality it has grave weaknesses, and no philosophers now maintain that science is done in this way.

The following are some of the problems encountered in obtaining "Objective Knowledge":

Objective knowledge is unaffected by individual peculiarities and personal idiosyncracies. But ordinary humans mostly have no chance to make acceptable scientific observations, so scientific observations are really a minority, deviant viewpoint.

Objective knowledge is knowledge corresponding to reality. BUT the fact that a theory has stood up well to testing in the past does not mean it will always stand up well. AND tests can never directly compare our knowledge with reality - we can only compare one element of our knowledge with another element of our knowledge. We are testing not for reality, but for consistency

What grounds do we have for saying that what is empirical is real? It is all in the mind! In fact we define reality in terms of what is empirical.

Nor can we define objective knowledge as value free as it is our values which define knowledge and illusion.

I have already mentioned that social and personal values permeate all our thought. It is also ineffectual to accumulate data without having some aim in mind - in fact a pre-existing hypothesis.

What if I gave you the simple instruction, "Observe!" At once you would ask "observe what, and why?" and if I told you, you already would be provided with a pre-existing hypothesis.

However it was Hume who pointed out that it is not logically justifiable to assume that because events followed a pattern in the past they would follow the same pattern in the future. Hume said, for example: "No number of singular observational statements, however large, could logically entail an unrestrictedly general statement

"We cannot validate inductive procedures but we cannot help thinking in terms of them.

"They seem to work in practice so we go along with them. "

Hume put science in a difficult position philosophically but since few scientists troubled about philosophy, science went ahead anyway.

The next thinker to advance in the field was Karl Popper, who wanted to be able to distinguish between scientific and non-scientific method. If no amount of events agreeing with a hypothesis establish it as a universal truth, how can anything be proved? Popper concluded that:

"Falsifiability is the criterion of demarcation between science and non-science. If all possible states of affairs fit in with a theory ... there is no observable difference between it being true and its being false."

"My ... thesis involves the existence of two different senses of knowledge or of thought:

1. Knowledge or thought in the subjective sense, consisting of a state of mind or of consciousness or a disposition to behave or act, and
2. Knowledge or thought in an objective sense, consisting of problems, theories and arguments as such.

Knowledge in this objective sense is totally independent of anybody's claim to know; it is also independent of anybody's belief, or disposition to assent; or to assert, or to act.

Knowledge in the objective sense is knowledge without a knower; it is knowledge without a knowing subject."

A more up-to-date and pragmatic stance is that of REALISM, described by Chalmers thus:

"The world exists independently of us as knowers, and is the way it is independently of our theoretical knowledge of it. TRUE theories correctly describe that reality." (*What is this thing called Science?* Univ. of Queensland Press, 1976.)

Experiential

Here are my impressions of how scientists "do science". At the Undergraduate level, students study the history, traditions, methodology, factual base and currently accepted theories in the broad field of their interest. At the Graduate level, students study by research of the literature, preparation of essays critical of method result and hypothesis, acquisition of methodological skills, selection with supervisor's guidance of an area for experimental study, definition of aims, conduct of experiments, presentation and

publication of results.

Finally, independent research by scientists involves study of the research literature; writing reviews; selecting a hypothesis or model to expand on, falsify, or support; testing by theoretical model, observation of events, experiments; presenting results at conferences and publishing results in journals.

Any scientist is very thoroughly steeped in the theoretical basis of his or her discipline well before any research is done. This is essential to avoid "re-inventing the wheel".

But the outcome of this is that science is never free of values. Empirical research, which is supposed to be carried out without a preexisting theory or without reference to personal values or prejudices cannot exist for this reason alone.

All scientists have cultural values, political values and often religious values. Moreover, they have devoted years to learning currently acceptable theories in their field of study.

Models

What are scientists really doing?

They cannot know the truth about the material world through observation.

They cannot establish laws that are known to apply universally.

BUT they can propound theories or make models which are intended to resemble the reality of things. The model can be used to make predictions which can be tested against natural or experimental outcomes. Models which make reliable predictions are retained and could be held to closely resemble reality. Models that are falsified by events are remodelled or discarded. A model that breaks new ground and proves valuable will doubtless give rise to sub-models which will all form a group. Such a group would, I think approximate to a paradigm in Kuhn's description of science.

Published models are fair game for anyone to criticise, test and falsify. In electronic terms, negative feedback operates. Ordinary human motives like ambition and jealousy will drive the system without need for us to invoke higher motives like seeking "truth".

Models can be mathematical, verbal, graphic, electrical, chemical, mechanical, clay, balsa wood, meccano etc.

Good models have few variables and easily observed outcomes. If the result of a test has few variables, so much the better, as it will be less ambiguous and less open to dispute and misinterpretation.

The model that the ocean tides are caused by the gravitational pull of the moon and the sun is an example of a good model. It enables the time and height of

tides to be predicted years in advance with considerable accuracy. The position of the sun and moon relative to the earth are the only two variable causes and variation of tide height with time is easy to measure unambiguously. Local geography and unusual weather cause variations but these can be taken into account and do not falsify the model.

The model that the weather is a heat engine driven by the sun's energy is a much more complex. Variables such as barometric pressure, temperature, humidity, percentage cloud cover, wind speed are easily measured and their functional relationships are well known; the movements of clouds and pressure systems are easily tracked by satellite. But there are enough variables interacting to produce short-term change that the forecast cannot be made further ahead than 4 days at most. Also it is never exactly right and one in five forecasts is mostly wrong. Even though only accurate 80 per cent of the time, the forecast is held by sailors and airmen to be vitally useful information. And meteorology is held to be a respectable science.

Econometric models seem to be very poor. Predictions about the national economy are very seldom confirmed by events, despite the eagerness with which a reliable (hence lucrative) forecast is sought. Too many variables are involved. Hard to measure factors like confidence are significant and the functional relationships among factors are mostly guessed at. The economy also sways in the unpredictable winds of politics and fashion. Finally, the economy is affected by economic forecasts in a way that the weather never is. It is probable that although economics has a scientific format, it is only superficially a science.

Since models that are poor predictors can be and are discarded (for example, phlogiston, phrenology, N-rays) the conglomerate of models that makes up science is the result of survival of the fittest.

Bright students choose models that promise most.

I suggest this is the reason that so much parasceince remains unstudied. Astrology for example is very poor at predicting anything. It only survives because knowing the future is so comforting that people would rather accept a wrong forecast than have none at all.

What are the rewards for scientists? Knowing what drives them in their work should help us understand how the scientific "system" runs.

A scientific apprentice has a lean and hungry life. Ph.D. scholarships pay a munificent \$6000 pa. Mature scientists are paid on levels comparable to middle management. Rich scientists have private means.

Most of the scientist's reward lies in job satisfaction and approval of the scientific community, which

expresses itself in different ways.

Base level - Editorial acceptance of papers submitted to journals; award of grant money for research; approval of peers.

Career level - promotion to Professor, Research Director etc; election to learned Societies; job offers from prestigious (U.S.) institutions.

Honours level - Election to National Academies of Science; awards of civil honours.

High honours level - Election to the Royal Society; award of Nobel Prize.

Quality of research is measured by the significance of the contribution. Much research only achieves the rather mundane collection of facts to support already well established models. Work is thought significant when quite new models are supported or old well established models are falsified. Dramatic examples are the evolutionary model of Darwin and Wallace and the replacement of Newtonian cosmology by Einsteinian cosmology.

Since all scientists hope to make significant contributions, there is much incentive to be innovative and challenge existing models. The overthrow of previously well supported models naturally requires striking demonstration of their falsity.

Conclusions

What do I conclude from the foregoing?

Proving realities in a material world is impossible by the ordinary logic of philosophy. It is necessary therefore to assume some position which is then a belief: for example, that a material universe exists.

BUT many beliefs exist with which their supporters are quite contented and which serve them well.

Why choose to believe that a scientific attitude is better?

I can find three reasons to justify my support of science as the best:

1. Science sets out to find general laws or models that have predictive power. There is negative feedback and selection in favour of greater predictive power. Only working models survive and reproduce.

2. Science is admittedly conservative and offers resistance to new ideas. BUT change does occur and new ideas that prove themselves are eagerly accepted. Science is capable of accepting change.

3. Scientific models have been successfully applied to improve our quality of life. Examples that apply to the past 80 years include the control of micro-organisms by antibiotics, aeronautics, and electronic communications. Science has delivered the goods.

Finally, I will conclude with a quotation from a man who lived at the time of the scientific renaissance. He

was one of the foundation members of the Royal Society, founded (but not funded) by Charles II. In his day, it seemed one could inquire into all things, and he assisted Robert Boyle in his investigations into gases, enunciated the law relating tension and extension in a spring, and wrote the first ever book on microscopy, "Micrographia"

His name was Robert Hooke, and in the introduction to *Micrographia*, published in 1664, he made some very shrewd observations, which made me think about these matters in the first place:

"... for the limits, to which our thoughts are confined, are small in respect of the vast extent of Nature itself., some parts of it are too large to be comprehended, and some too little to be perceived. And from thence it must follow, that not having a full sensation of the Object, we must be very lame and imperfect in our conceptions about it, and in all the propositions which we build upon it; hence we often take the shadow of things for the substance, small appearances for good similitudes, similitudes for definitions; and even many of those, which we think to be the most solid definitions, are rather expressions of our own misguided apprehensions than of the true nature of things themselves."

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The Carlos Hoax

Tim Mendham

During February, Sydney was visited by a fraudulent channeler. But far from being like all the other fraudulent channelers who have visited Australia, this one was different - he was a fraudulent channeler, an elaborate hoax organised by Richard Carleton of the Channel 9 *60 Minutes* program and US arch-skeptic James Randi.

Preceded by a sophisticated promotional campaign including a press-kit with totally spurious newspaper clippings, reviews and tapes of radio interviews and theatre performances, and a stunningly inane little volume called *The Thoughts of Carlos*, 'channeler'

Jose Alvarez was interviewed on three Sydney TV programs *Terry Willesee Tonight* (ch 7), the *Today Show* (ch 9) and *A Current Affair* (ch 9). There were also minor references to him on the John Tingle radio program (2GB) and the Stay in Touch column of the *Sydney Morning Herald*. The *Today Show* appearance achieved notoriety (and a front page story in the afternoon *Daily Mirror*) because Alvarez' manager, upset at continued sceptical questioning by host George Negus, threw a glass of water at him before storming off the set with his charge in tow.

The culmination of the visit was an appearance at the Drama Theatre of the Sydney Opera House on the afternoon of Sunday, February 21 - a free seminar at which the spirit channeled by Alvarez, a 170-times incarnated ex-Atlantean named Carlos, would share his wisdom. This proved to be the usual facile predictions for the future, typically New Age "be nice" pronouncements, and a selection of crystals for sale (ranging from \$5 to \$20,000 for the rare Atlantean crystal). The seminar was further covered on Channel 9 news that night and the *Today Show* next morning.

The whole point of the exercise was revealed on the *60 Minutes* program of the following Sunday, February 28, when Richard Carleton exposed the hoax, which he said was designed to show how the Australian media were inadequate in their background research. The programs could have exposed Carlos/Alvarez very simply, he said, by phoning the US to check on his credentials, all of which were total fakes created by Randi. They failed to do this, and thus allowed Alvarez a free run with the full benefits of potentially expensive promotion in Sydney's media.

At this point in the retelling it should be pointed out that Australian Skeptics had nothing to do with the hoax in any way - the national committee was only informed that it was a set-up a matter of hours before the *60 Minutes* program went to air.

It should also be stated that to a certain extent the whole hoax backfired. As an exercise to prove that the local media were somewhat lax in doing research and effective checking of claims, proved its point, but on the other hand the media were extremely cynical (if not sceptical) of Alvarez' claims, and he received no sympathetic coverage at all.

The *Today* program's hosts, Negus and Elizabeth Hayes, were particularly scathing. Terry Willesee, after screening Alvarez' first appearance on Sydney TV with a satellite interview, followed this up with an interview with Skeptics national committee member, Harry Edwards, who explained how Alvarez' number one trick, stopping his pulse while being 'possessed',



Carlos in operation at the Sydney Opera House

was achieved. And the *Current Affair* program consisted of a confrontation between Alvarez and Negus, at which Negus said it was the first time that audience phone reaction had favoured him. John Tingle's radio coverage consisted solely of an interview with Skeptics president, Barry Williams - he even refused to say where Alvarez would be performing and the *Daily Mirror* story simply factually reported the waterthrowing incident. Still, the point remains that none of the programs checked out Alvarez' background, which would have proved conclusively that he was a fake. Ironically, the TWT program did check with one authority in the US for a view on the channeler - that authority was James Randi.

On the *60 Minutes* program, it was claimed that Alvarez would not have had the audience he did at the Opera House (and the potential sales there from) had the media coverage been more aggressive (and factual). "The hall was packed" the program said, screening interviews with the credulous and deluded who had come because "they saw it on TV".

Australian Skeptics came, as we had seen it on TV too. The hall was by no means full. Our estimate put the audience at about 250-300, as opposed to the *60 Minutes*' 400-500; the Drama Theatre holds a maximum of 550. A large percentage of the audience were sceptical (if not Skeptical), with an even larger proportion thus unconvinced after the session was over. We subsequently learned of many who, having intended to attend, had been turned off by the poor performance Alvarez had given on TV.

This result compares poorly with that achieved by J. Z. Knight/Ramtha late last year (see stories this and the previous issues of *the Skeptic*). She had had very little pre-publicity - her local representative gave a number of interviews on Peter Shield's *World of*

Unexplained Mysteries program on radio 2U E late on Sunday nights and the afternoon tabloid *The Sun* ran a highly credulous story just prior to the weekend seminar. Otherwise all promotion for the visit had been through the New Age press and on the 'grapevine'. J. Z. herself refused to give any interviews at all while she was in Australia. Approximately 600 people turned up for her pontifications (twice the number achieved by Carlos) and they paid \$395 each (Carlos was free)!

Reaction

Following the revelation on *60 Minutes* that the whole affair had been a huge (and expensive estimates ranged from \$50,000 to \$200,000) set-up, there was an immediate response from the media. In fact, there was probably greater coverage for the hoax than for poor old Carlos.

Mike Carlton, 2GB morning commentator, said he had never been fooled - he had put his press-kit in the 'round filing tray'. Kevin Sadlier in *The Sun* said he did the same. Peter Robinson in *The Australian Financial Review* said "... it is really a very thin argument for such an elaborate deception. Who cares about such a ridiculously unbelievable thing?". Other TV programs replayed interviews with those at the seminar who had not been convinced by Alvarez/Carlos (including the author of this report). This was in response to the *60 Minutes* coverage, which only showed believers and failed to interview any of the known Skeptics.

One of the more interesting comments came from *The Age*'s Paul Speelman, who reviewed the program the next day in the paper's television column. He said

"Carleton's elaborate hoax paid off spectacularly and provided a valuable lesson for everybody in the media: check your facts."

This is ironic, as earlier in the column he referred to the hoax

"created by Carleton and an American cynic called Randy [sic]".

The most dramatic turn of events, however, concerned Mike Willesee and the Channel 9 head of current affairs, Peter Meakin, who was also employed by Willesee's Transmedia production company until being sacked from the latter company. Apparently Meakin was in on the scam, but did not inform Willesee who was thus led to make statements later found to be untrue, such as saying that Carlos was 'big' in the US. Willesee was in the US at the time the program went to air, and was hosting only because normal host Jana Wendt was ill. Therefore he was being fed his information from Sydney, which was then transmitted back to Australia.

In what became a regular section in the Today's People column of the *Sydney Morning Herald* (sarcastically Wed "Feud, Glorious Feud") it was reported that the *Today* program had been forced by Meakin to have Alvarez/Carlos as a guest, against the wishes of the show's hosts. At time of going to press, this was still unconfirmed, but if true would indicate a certain amount of media pushing by those in the know to achieve their ends.

The implications of the Carlos hoax are yet to be fully realised, but if nothing else was achieved it will have taught a lot of people how the media work. If it didn't show that they can be fooled as easily as the public (remember - none of the media coverage was credulous; all disbelieved that Alvarez was genuine) it at least showed that they could benefit by being a touch more sceptical - and perhaps Skeptical.



Is it Logical to Believe in the Irrational?

Barry Williams

This will not be a deeply philosophical piece, full of semantics and semiotics (whatever they might be). It will consider why, when faced with the inexplicable, human beings will frequently accept an irrational explanation, and why it is logical for them to do so. This will be done within the context of the Nullarbor

UFO incident, which serves to illustrate the point very well.

The story of the UFO incident is covered elsewhere in this issue, but to briefly describe the one basic fact - a family travelling across the Nullarbor on January 20 experienced an unusual phenomenon. All other "facts" are open to speculation, but this "fact" appears to be a fact. The alternative explanation is that the family organised a deliberate hoax. The verifiable evidence, while it cannot totally discount this explanation, makes it an extremely unlikely alternative. When the basic fact became generally known, a number of competing hypotheses were advanced to account for the reported events and none of them provided a completely satisfactory answer. The published scientific speculations involved such phenomena as atmospheric refraction, dry thunderstorm and meteorite entry, all of which can be covered by the term "natural". The alternative, or paranormal, explanation was the UFO hypothesis.

While the term UFO correctly refers to any unidentified object that is flying, and which may well be a suitable subject for investigation, the common public perception of UFO is of an artifact or craft, controlled by an intelligent entity, of extraterrestrial origin. It is this common perception that I will address. At the time of going to press, we do not know what happened to the Knowles family on the Nullarbor Plain on January 20. Perhaps we will never have sufficient evidence to know the truth. The natural speculations offered could certainly account for some of the reported events, but not for all of them. This may, at least partially, be explained by the notorious unreliability of eye-witness accounts, a point I will develop later.

The paranormal or UFO theory can account for all of the reported events, but this does not give us a reason to suppose that the UFO explanation is the best one of the competing hypotheses. It is precisely because there are no irrefutable facts known about UFOs, and no reliable evidence to their actual existence, that this paranormal explanation can fit the facts better than any other answer. If we have no facts about UFOs, then we cannot delimit their abilities. For this reason, the UFO, or any other paranormal hypotheses, can explain any conceivable set of events, however unlikely. This does not make the UFO hypothesis the best answer - it makes it a work of imagination or fantasy.

Does this then mean that UFOs, in the sense of intelligently controlled extraterrestrial artifacts, are impossible? Not at all, it merely means that, in the absence of any evidence for their existence, there is no reason to believe that they explain any event. It is

an irrational belief.

Why is it then that in cases such as the Nullarbor incident, it is quite logical that the conclusion reached by those experiencing the incident, and those reporting it, will be totally illogical?

All of the natural explanations offered rely on phenomena which may be familiar to those proposing them, but might be unfamiliar to those who report a supposedly paranormal event. This is self evident, as people are unlikely to be concerned by, or report as an unknown, something with which they are familiar. For instance, while most reported UFO sightings turn out to be planets or stars, these reports are not made by amateur or professional astronomers. Equally, the lay public would not be expected to be familiar with unusual atmospheric phenomena or the effects of a meteorite landing in the vicinity.

In contrast, for a person never to have heard of a UFO they would need to be blind and deaf or to have lived in a cave for the past 40 years. Not only has the general public heard of UFOs, but they would be familiar with the common interpretation placed on such sightings, i.e. that they were of extraterrestrial origins. It is perfectly natural for the human mind, when confronted with an occurrence which lies outside its normal range of experience, to seek to rationalise the unknown by placing it within a familiar frame of reference. It is equally normal for the human mind to elaborate upon factual information with speculation or embellishments to increase the veracity or the interest of the story.

This factor is noticeable in irreconcilable differences between various eye-witness accounts of such mundane occurrences as car accidents. It is very well documented in many of the explained UFO sightings where, for example, Venus is the actual object sighted, many eye-witnesses ascribe movements to the planet that owe nothing to celestial mechanics and everything to imagination.

We can now begin to see why it is that none of the natural explanations offered, purely as speculation, can account for all of the reported phenomena in the Nullarbor incident. It is quite likely that some of the reported phenomena did not, in fact, occur.

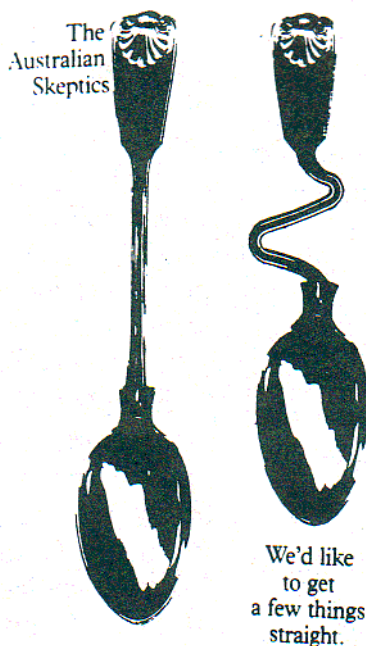
Those who reported the incident would have endeavoured to fit their unusual experience within their

known frame of reference. This frame of reference would have been preconditioned by an enormous amount of informational “static” generated by wide exposure to quite irrational explanations of UFO sightings. This in no way suggests that the people who experienced the events are deliberately seeking to obscure the facts. It merely suggests that they accepted what, to them, was the logical conclusion to draw from their experience. They would be as unaware as most people of the unconscious preconditioning of accepting the common UFO hypothesis as an established fact.

This may also account for the fact that many reported UFO sightings are by people who were previously “sceptical” of the extraterrestrial explanation. They may be sceptical on a conscious level, but most people would have read dozens of newspaper and magazine articles on the topic, and have been subjected to “documentary” and fictional treatments of the topic on radio, TV and films. They would most likely have an unconscious disposition to believe, whatever their conscious feelings might be.

This factor poses problems for the serious researcher into UFO phenomena in that it may be very difficult to determine the facts in the case. The responsible researcher can only rely on the facts that can be verified by independent sources. It is also important that the researcher does not allow his own predisposition to believe to bias his findings. Equally, the sceptic must not allow his predisposition to disbelieve to bias his views in the other direction and become dogmatic in his rejection of the extraterrestrial explanation. The sceptic should, however, always heed the good advice to err on the side of caution when dealing with something totally unknown.

The fact that a large proportion of books and articles written about the UFO phenomenon do not heed this advice and draw unwarranted conclusions from the available evidence only serves to increase the amount of “static” that infests the subject. It is quite natural for people, who are already predisposed to believe, to be convinced that the amount of evidence that exists proves their case, when what they should consider is the quality of the evidence. In UFO studies, as in everything else, one piece of good evidence outweighs a thousand pieces of bad evidence.



It is interesting to speculate about what bearing cultural influences have on the reports of such incidents. What would be the predisposition of people who have never been exposed to the intelligent extraterrestrial proposition? In medieval Europe, such incidents have been ascribed to angelic, Satanic influences or witchcraft. They had no popular exposition of ET but were certainly predisposed to believe the supernatural hypothesis.

My own view of the matter is that if this were to be a genuine extraterrestrial visitation, then the evidence would be incontrovertible. I do not subscribe to the conspiracy theory that is endemic in this field (and in many others) that governments are covering up the evidence.

Thus, while it may be illogical to believe in the irrational, it is perfectly logical to expect people to believe in it.

Barry Williams is president of Australian Skeptics, as well as being an amateur astronomer.



Do My Eyes Deceive Me?

Tony Wheeler

"I saw it, so it must be true!" must be one of the most difficult claims for the skeptic to counter when faced with the honest witness of a UFO, Bigfoot or ghost. Yet our senses can lie, and in some respects the eyewitness account is the poorest evidence of what happened. To appreciate such deception, we need to understand the physiology of our senses.

Out there is the real world; a solid, warm, moving, noisy, smelly, light world. But is what we perceive reality, or just a synthesised, altered approximation of it? To better understand perceptual errors, and a few paranormal phenomena, I would like (very briefly) to discuss the physiology of perception.

Our perceptions are based on sensory information, energy received, transformed and transmitted by sensory cells (transducers). This information is carried and processed by the networks of nerve cells appropriate to that sense, and our consciousness is presented with a simulation of reality. It is this simulation that we *know*, and it is the reception, transduction, peripheral and central processing and

presentation that makes up perception. The closer the simulation approximates to reality, the more truthful and honest our perception of our environment will be.

Hearing

To give you an example, our sense of hearing is good in that it filters out repetitive background noise so that while you still hear the noise you are not continually conscious of it unless you choose to be so. At the same time, missed small sections of conversation can be reconstructed from the meaning of the preceding and succeeding words and phrases so that you are aware of a complete, sensible message. These two processes are the means by which you can enjoy a single conversation in the midst of a noisy cocktail party (Broadbent, 1962).

This processing of the speech heard is performed in segments and takes time. This time lag between hearing and perceiving is noticeable when you are aware of hearing someone speak unexpectedly to you but fail to understand the words, and you respond with a prompt "Pardon?" just as the processed perception of the speech is presented to your consciousness leaving you listening to a repetition of what you have just 'heard'.

Sometimes the system goes wrong, as when an otherwise unimportant repetitive sound that you would not normally be aware of is annoyingly heard in an otherwise quiet environment. In such circumstances your perception of a dripping tap can be amplified until it painfully dominates your consciousness.

Touch

The sense of touch is generally more reliable, except that some parts of the body are surprisingly far less sensitive than others. While you can localise a light point stimulus to within one millimetre when applied to your lips or fingertips, the same stimulus applied to your thighs or body can only be located to within 50 or 60mm. Similarly, you cannot differentiate between single or paired stimuli when their separation is the same as, or less than, these distances. (Both of these phenomena are the basis of clinical tests for the normality of the sensory nervous system.)

Sight

We are accustomed to considering vision to be the most important sense, and usually it probably is. Nevertheless, vision certainly isn't the most reliable of senses, and indeed many books have been published on the rich array of visual illusions known (eg Robinson, 1982). When we 'see' we can only perceive that which we recognise; if a totally unfamiliar image,

or a familiar image in a very strange and unexpected environment, is presented our visual system is momentarily confused and our consciousness will be presented with the nearest familiar approximation to what we have seen. This is probably the origin of most 'sightings' of ghosts and paranormal 'fauna' (Czechura, 1984). A classic recent example is Easdown's (1985) account of a brief sight of a large animal by a truck driver being perceived as a familiar, albeit 14 foot tall, kangaroo, when in reality it was a normal-sized (but unexpected) camel.

Irregular outlines with varying colour and lighting are difficult to recognise, and in these situations the poorly understood image is left out and the consciousness is presented with the uninterrupted background (Luckiesh, 1965). This explains the effectiveness of camouflage and the surprisingly large number of collisions where a driver giving way and/or stationary at a junction has moved forward into the path of a camouflaged oncoming vehicle. In fact he had seen it, but had failed to *perceive* it. A forward view of an approaching vehicle, especially a motorcycle, is an irregular outline full of varying shapes, colours, illumination and shadows, and on a straight road is stationary against its background with only its size increasing relative to its background to alert you to its presence. It is because this perceptual error is so common and so hazardous that the use of dipped headlights by motorcyclists is now quite a common practice in many countries and 'running lights' are becoming available on safety-oriented production vehicles (eg Volvo).

Another easily demonstratable difficulty of visual perception is our severe lack of appreciation of what we cannot see. Clinically this is apparent when a patient presents himself with a reduced visual field due to degenerated retinal photoreceptors, the surprising aspect being the great extent of the damage and loss in the visual field before the patient is aware of the problem. In other words, he hadn't been aware of what he could not see.

Another (normal) aspect can be demonstrated here and now. Close your left eye and look into the room; can you identify any area *within* your visual field that you cannot see? Now, with your left eye still closed, focus your right eye on the dotted circle below and slowly bring this page closer to you from your furthest reach; between about 360 and 250mm away the cross will no longer be perceived - it will disappear!

O

X

The explanation for this is that within this distance range the image of the cross fails on your retina where the nerve axons pass through the retinal layer as the optic nerve, and where there are no photoreceptors. Although you are blind to image failing here you are normally unaware of this disability because you are unaware of your lack of visual ability outside your visual field.

A purely physiological aspect of vision in dim light is that while the class of retinal photoreceptors known as 'cones' are good for bright colour vision, and the 'rods' are better for dim black and white vision, there are only cones and no rods at the retinal fovea where the image which we are focussing at fails on the retina. For this reason, we cannot see very dim images well when looking directly at them.

To demonstrate this, the next cloud-free night traverse your gaze across the night sky and as your gaze approaches a very dim star (at a distance about equal to that of the diameter of the moon), you will 'see' that star fade toward invisibility and then return to its former brightness. An associated aspect is that in dim light, when you are relying on your rod cells, you cannot 'see' colours, a property of the less-sensitive cone cells. Consequently moonlit scenes are seen in black and white.

In dim light, paradoxically, many things are 'seen'; just look at the increases in the incidence of sightings of UFOs and thylacines at dusk presented by Molnar (1984), and the positive after-image 'seen' after a flash of light in a dim environment known as Bidwell's ghost was recognised as early as 1894 (Walker, 1985).

Other sensations

Temperature has a few quirks too, mainly because it is a purely comparative sense. As any mother running her baby's bathwater can tell you it is very difficult to judge the temperature of the water with the hand, and even the traditional elbow is only marginally better. (Similarly, you cannot reliably perceive in absolute terms how much light there is; if photographers could they wouldn't need to be lumbered with light meters.) To demonstrate this, place each hand in a bowl of water, one at 15°C and one at 40°C. After three minutes, transfer both hands together to a third bowl of water at 25°C. Of the sensations that you perceive which is 'correct'?

In the same way, our perception of ourself is often slightly different from reality. How often does the unexpected image of yourself (a reflection in a shop mirror) startle you as being someone that you feel you should recognise, but can't quite place?

The most familiar discrepancy between our self-

perception and reality occurs when pathology produces pain in one of our visceral organs; because we cannot perceive as such these parts of ourselves, the pain is referred to the periphery supplied with sensory nerves by the same spinal segment. This is peripheral pain, and is the reason that the famous pain of a heart attack is perceived in the left shoulder and arm, not in the heart itself.

Less familiar, but more dramatic, are the sensations projected to the perceived ends of irritated sensory nerves. This is particularly characteristic of amputations when, immediately following surgery, the sensations projected to where the ends of the sensory nerves used to be are so real that the amputee has difficulty believing and remembering that that part of the limb has been amputated. It is because of these phantom sensations that the recovering patient awakening from the anaesthetic is so often disbelieving when informed that some part of a limb had to be amputated. So vivid and convincing are these sensations that it is not unusual for a patient to convince an inexperienced nurse that the only way to relieve an itch is for her to retrieve the lost limb from the cold store so that it can be scratched!

It is a severe and tragic discrepancy between one's perceived obesity and reality that is part of the cause of anorexia nervosa, the condition typified by the young girl starving herself to death so as to lose a few imagined superfluous inches.

The perception of others, as opposed to their actual qualities or abilities, can be deliberately manipulated, and this is indeed a large part of a physician's 'bed-side manner'. It isn't the physician's abilities as demonstrated by any objective evidence that inspires confidence in the patient, but his perceived abilities.

Recollection

As we have seen when studied separately, we can so easily demonstrate the sophistry of our individual senses, and this unreliability is just as prevalent when examining the recollection of incidents that have just been perceived.

The eyewitness testimony of a criminal incident is commonly thought to be the most reliable form of evidence. However, numerous experiments have repeatedly shown that being present at the scene of an incident, or even actually watching an incident, does not necessarily qualify one as a good witness to what actually happened, who did what, and the later recognition of the participants (Buckhout, 1974).

Indeed, erroneous eyewitness testimony is remarkably frequent, the errors being due to subconscious elaboration and the filling in of any gaps

in the perception, the movement of the scene of the incident closer to the observer's position, and the rearrangement of events and roles according to preconceived ideas. The facts fitting the most obvious interpretation are those believed, regardless of the reality. The extent of such revision of one's recollection increases with the time elapsed since the incident. And this is even without taking into account the psychological influences encouraging the subconscious revision of one's recollection so as to agree with the evidence of other witnesses, the authorities, etc, let alone the effects of one's racial, sexual, etc, prejudices.

The commonest situation where eyewitness testimony is called for is following road traffic collisions. Unfortunately, such testimony is just as unreliable, even when obtained from experienced motorists; it is not uncommon for witnesses to be wrong about the numbers and colours of the vehicles involved and the geometry of the junction, let alone what actually happened (Carr, 1974). Indeed, in tests it is usual to find that very few observers have perceived every aspect of an incident correctly. It seems that our recollection of what we perceived, whether after witnessing a crime or a road traffic collision, unhappily bears little resemblance to what actually happened.

Character assessment

Everyone is aware of how far our perception of people's character can deviate from reality, as indicated by the commonest of the fictional, poorly dressed, inconsequential man who later is revealed to be both extremely wealthy and extraordinarily influential (see Shute, 1938 for an example). Nevertheless, how many of us have been surprised to find that a colleague whom we had long regarded as aloof, snobbish and unfriendly is in reality just unusually shy.

More important is that our perception of a politician's ability to govern is more often based on their physiognomy, mannerisms and the style of their speech rather than on any real evidence pertaining to their ability to govern. Indeed, most people can probably think of at least one politician who talks impressively while actually saying very little that is sensible. This deception is so important that even supposedly rational scientists will be irrationally concerned with the style of an applicant or candidate at employment, grant or other interview, rather than the content of what is actually said.

Conclusion

An understanding of the physiology of our senses enforces the view that our consciousness is presented with an approximate simulation of reality. In most instances, this simulation is good enough, and can even be an improvement. However, in certain environments

erroneous simulations lead to sincere belief in the sighting of a UFO, a mythological animal, or the absence of approaching traffic.

Further than this, we can often be led seriously astray by subtle misperceptions when recalling an incident or interviewing an applicant. As skeptics, we will do well to bear these limitations in mind when assessing the evidence of others, and ourselves.

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References

- Broadbent, D.E. 1962. "Attention and the Perception of Speech." *Scientific American* 206(4):143-151
- Buckhout, R. 1974. *Eyewitness Testimony." *Scientific American* 231(6):23-31.
- Carr, J. 1974. "How Good a Witness are You?" *Drive* no 30:60-64.
- Czechura, G.V. 1984. "Apparitions, UFOs and Wildlife." *The Skeptic* 4(1):14-16.
- Easdown, R. 1985. "The Fourteen-foot Kangaroo.*" *Motor Manual winter special*: 6.
- Luckiesh, M. 1965. *Visual Illusions*. New York: Dover.
- MoInar, R.E. 1984. *Reports of Thylacines and of UFOs: Similarities and Patterns." *The Skeptic* 4(4): 9 & 12-14.
- Robinson, J.O. 1972. *The Psychology of Visual Illusion*. London: Hutchinson University Library.
- Shute, N. 1938. *Ruined City*. London: Cassell.
- Walker, J. 1985. "Bidwen's Ghost and other Phenomena Associated with the Positive Afterimage." *Scientific American* 252(2):100-104.



How Can Science Educators Compete With Sensationalist Journalism

John C. Happs

Many scientific organisations such as government observatories, the CSIRO and university laboratories, continue to receive inquiries from the public with requests for specific information about paranormal claims or pseudoscience. Science teachers at the primary, secondary and tertiary levels are constantly asked for their opinions concerning these same areas which receive unwarranted attention by the media.

The terms 'pseudoscience' and 'paranormal' are not used here in reference to sloppy 'scientific' statements by the media, eg "Astronomers See Black Hole Eat Star" (*The Weekend Australian*, November

29, 1986). Neither are the terms used to denote a reporter's lack of understanding about scientific information. One notable example of this occurred when journalists made fun of an incident in which an aircraft's engine "fell off during a flight from Dallas" (*Boulder Daily Camera*, April 17, 1985). In fact, a large piece of ice struck one of the Boeing 727's three engines. The engine bolts are designed to shear off in such an event where a sudden engine seizure would create a tremendous torque or wrenching effect on the fuselage. Bartlett (1986) pointed out that, if the bolts did not have this ability to break, then this type of engine failure could severely damage the fuselage and endanger the aircraft.

The terms 'pseudoscience' and 'paranormal' are used in this article with reference to those deliberately published accounts of 'scientific' nonsense for which there is no supportive evidence.

Specific examples of pseudoscience or paranormal claims are likely to be well known to anyone who cares to read a Sunday newspaper, or 'family' magazine. Indeed, this kind of misinformation is now widely available in paperback form and tends to sell very large numbers when compared to the more rational publications which debunk pseudoscience.

Claims that ancient astronauts visited the Earth and helped shape our civilisation have been made by Erich von Däniken and challenged by Story (1976); Uri Geller, a clever Israeli stage 'magician', fooled the media in his demonstrations of 'psychic' feats but failed to impress James Randi (1978); Charles Berlitz has generated some anxiety for travellers passing through the Bermuda Triangle although the United States Coastguard and Kusche (1975) have attempted to be a little more sensible and reassuring on the matter; Gribbin and Plagemann (1974) were kind enough to warn us of a major alignment of the planets in our solar system that would occur in 1982. The so-called Jupiter Effect was to result in major earthquakes and widespread destruction. Upton (1975) and Meeus (1975) soundly refuted such claims. Many writers have discussed UFOs, 'close encounters' and government 'cover-ups', while more dispassionate analyses of UFO claims have been forthcoming from Sagan and Page (1972) and Klass (1978).

Readers can more than likely add to this list by recalling media articles on astrology (Kruglak and O'Bryan, 1977); cold readings (Hyman, 1977); Velikovsky's claims (Sagan, 1979); the Tunguska event (Ridpath, 1978); the Amityville horror (Morris, 1978); and the Loch Ness monster (Snyder, 1977).

One disturbing aspect that stems from media stories about such pseudoscience is that they tend to be

September 24, 1986

Dear Dr Happs,

Dr James Green, the director of the NSSDC, has asked me to respond to your letter of 19 August, concerning the article 'Haunting Riddle of the Face on Mars' which appeared recently in the Perth Sunday Times.

There is no basis to the article. It contains many false and groundless statements. The larger of the two pictures has little to do with the surface of Mars. It is derived from a book by B. Crowley and J.J. Hurtak. "The Face on Mars". where it is clearly stated to be a model. (In addition, I cannot resist pointing out that a single picture cannot constitute a stereo 'pair!') The central thesis - that Viking provided evidence for an ancient civilization on Mars, has no justification.

Mr Di Pietro and Mr Molenaar are not NASA employees and are not professional planetary scientists. They have pursued an interest in Mars at their own expense and on their own initiative. They have drawn attention to a number of landforms on the planet which have unusual geometries or suggest human features. I spoke with Mr Di Pietro on 12 September and he was very upset by the gross distortion of his work by the Sunday Times article, I gave him a copy of your letter and suggested that he write to you. Alternatively, you can contact him via PO Box 284, Glenn Dale, Maryland 20769.

I know of no professional planetary scientist who believes that the features publicized by Mr Di Pietro and his colleagues cannot have been produced by the natural forces which have produced all the other landforms of Mars. I would be most surprised, for instance, if any member of the Viking Science Teams or any member of the American Astronomical Society's Division for Planetary Sciences believes that the so-called 'Face of Cydonia' is anything other than a product of the same processes of impact, volcanism, tectonism and erosion that have produced the thousands of neighboring hills. Landscapes and landforms often acquire accidental resemblances to faces, animals and just about anything else you could name. A good example is the 'Man on the Moon'. This is not to dismiss out of hand the work of such independent spirits as Mr Di Pietro.

There should always be room for people to put forward reasoned challenges to the professional establishment, However, the onus should be very much on them to prove their cases. Extraordinary hypotheses require extraordinary evidence.

The Perth Sunday Times article is quite different. Distortions, false statements and nonsense should be fought wherever they appear. We will help in the fight any way we can.

Yours Sincerely,

Dr Paul S. Butterworth
NSSDC, Acquisition Scientist

Concurrence

Dr James L. Green
Head,
National Space Science Data Center

believed by many members of our ‘well-educated’ communities, yet, should any person provide evidence of having paranormal abilities, a standing \$20,000 award awaits them in Sydney.

A case study of irresponsible journalism

An article in the *Perth Sunday Times* (August 17, 1986, pp59-60) displayed the banner headline “Haunting Riddle of the Face on Mars”. The report, attributed to “Our Bureau”, included a ‘photograph’ with the caption:

“The latest computer techniques produced the pair [sic - only one photo was shown] of stereo pictures, which clearly show the human-like features of the Face in relief when seen through a stereo viewer.”

Statements within the article included:

“NASA scientists have been haunted by photographs of Mars that show a human-like face staring into space.”

“NASA photographs revealed clusters of pyramids - some more than a kilometre high; some half-finished and hollow ...”

“Two computer scientists began working on image-enhancing by computer of pictures of the Face of Cydonia and its attendant pyramids. The scientists, Vincent Di Pietro and Greg Molenaar, had been contracted to NASA at Goddard Space Flight Centre in Grennbelt, Maryland.”

“Their contribution has provided some of the most conclusive evidence to support the theory that the pyramid’s face and other features of the dead planet’s landscape may well be the relics of a long lost civilisation that was destroyed by some dreadful holocaust or through some freak of nature.”

“The official NASA file photograph confirmed the authenticity of his find.”

“They (Di Pietro and Molenaar) obtained permission to utilise the NASA equipment during off shift hours usually after midnight.”

Now this kind of newspaper article could easily be dismissed with a shrug of the shoulders and a knowing smile, my immediate response being that of recognition of media fabrication.

The following week saw my attitude towards this particular report change when a further article in the *Perth Sunday Times* (August 24, 1986, p27) revealed how several classes of primary school children had used the report, “Haunting Riddle of the Face on Mars”, to “work out their own theories on the revelation”. The *Sunday Times* reported that:

“The class ... came to the conclusion the discovery of the face and pyramids is a message for earthlings.”

Comments from Year 6 and 7 children were reported in this article and included:

“Maybe we inhabited Mars until the conditions became unsuitable.” (Natasha, Year 7)

“Earth and Mars were joined thousands of years ago, which explains why the pyramids are similar to those in Egypt.” (Michael, Year 7)

Here was a clear case of children being influenced by a newspaper article, with a subsequent article doing nothing to dispel the misconceptions that had been generated by the first report.

Competing with pseudoscientific reports

I decided, in light of the obvious influence exerted by the first *Sunday Times* article, that at least I might visit one primary school (the one mentioned in the second article) and talk to the three classes involved in the discussion of the newspaper article. I initially considered visiting the school to teach the children about aspects of the night sky while discussing topics such as space travel and related pseudoscience such as astrology and UFOs.

What I really needed however was a piece of conclusive evidence to show that the *Sunday Times* article was sheer nonsense and, to this end, I forwarded the article to NASA for comment. Within the space of two weeks, Dr Paul Butterworth, acquisition scientist at NASA, and Dr James Green, head of the National Space Science Data Centre, forwarded a joint reply (see box next page).

Feeling better equipped to convince children that sensational newspaper accounts, although exciting, often do not equate with the truth, I arranged through the good offices of the school principal to talk to the children concerned. On arriving at the school I commenced my three sessions (one with each class) with a brief (20 minute) discussion about the night sky, using a portable planetarium. I then asked the children to tell me about their prevailing views concerning the *Sunday Times* article, and it soon became evident that there were many (not all) who fully believed in the presence of pyramids and past civilizations on Mars. Viewpoints expressed included:

"I thought it was true because it was written in a newspaper." (Andrea, Year 6)

"The people in the newspaper reports were scientists." (Kim, Year 6)

"There are pyramids on Mars and pyramids on Earth. There must be a connection."
(Chris, Year 7)

"There are rumours around that Mars has aliens."
(Justin, Year 6)

A (relatively small) number of children clearly didn't believe the article:

"The picture didn't look real."
(Steven, Year 7)

"It sounded unreal - faces on Mars."
(Warren, Year 6)



The majority of children from the three classes were unsure and probably not too keen to commit themselves in front of a visitor to their school and this seemed like an excellent time to show them the letter from NASA, while directing their attention to the following points made in that letter:

"There is no basis to the article. It contains many false and groundless statements."

"Mr Di Pietro and Mr Molenar are not NASA employees and are not professional planetary scientists."

"I spoke with Mr Di Pietro on 12th September and he was very upset by the gross distortion of his work by the Sunday Times article."

"I know of no professional planetary scientist who believes that the features publicised by Mr Di Pietro and his colleagues cannot have been produced by the natural forces which have produced all the other landforms of Mars."

The impact of my opinion and (especially) that of the letter from NASA was profound, with obvious surprise and some dismay being expressed over the falsity of the newspaper article.

Summary

I forwarded a letter to the chief of staff at the *Sunday Times* inviting him to send a reporter along to my astronomy session at the primary school concerned. In this way, it was pointed out, the reporter would have objective information made available about

"the Face on Mars", such that a subsequent newspaper article might address some of the sensationalist misconceptions that had probably been generated in the minds of many children and adolescents whom I would not be able to visit in their schools. My invitation was ignored.

To combat pseudoscience as it arises in its many forms (some of which were mentioned at the beginning of this article) is a difficult task, made harder by the fact that many student teachers and practising teachers firmly believe in a number of paranormal claims (Happs, 1986, 1987). As science educators we hope to show students examples of sound evidence for scientific understanding, and ridiculous reports such as that published by the *Perth Sunday Times* make our task that much harder.

Perhaps the last word should come from the NASA letter:

"Extraordinary hypotheses require extraordinary evidence. The *Perth Sunday Times* article is quite different. Distortions, false statements and nonsense should be fought wherever they appear."

All science educators should join in this fight.

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References

Bartlett, A. A. (1986). Physics from the news: the airliner lost an engine. *The Physics Teacher*, May, 274-278.

Gribbin, J. & Plagemann, S. (1974). *"The Jupiter Effect"*. New York: Random House

Happs, J.C. (1986). Inducing conceptual conflict over pseudoscience: a case study involving teacher trainees and the belief in water-divining. A working paper of the Science Education Department, Western Australian College of Advanced Education. [1987 Reprinted in *the Skeptic*, Vol 7, No 2]

Hyman, R. (1977). *Cold reading: How to convince strangers that you know all about them*. The Zetetic (Skeptical Inquirer) Spring/Summer

Klass, P. (1978). NASA, the White house and UFOs. *The Skeptical Inquirer* Spring/Summer

Kruglak, H. and O'Bryan, M. (1977). Astrology and the astronomy classroom. *Mercury*. November/December

Kusche, L. (1975). *"The Bermuda Triangle mystery - solved."* New York: Warner Books

Meeus, J. (1975). Comments on the Jupiter Effect. *Icarus*, 26, 257.

Morris, L. (1978). A review of the Amityville horror. *The Skeptical Inquirer*, Spring/Summer.

Randi, J. (1978). New evidence in the Uri Geller matter. *The Skeptical Inquirer*, Spring/Summer.

Ridpath, I. (1978). The Siberian spaceship explosion, in *"Messages from the stars"*. New York: Harper and Row.

Sagan, C. (1979). Venus and Dr Velikovsky, in *"Broca's Brain"*. New York: Random House.

Sagan, C. and Page, T. (eds) (1972). *"UFO's: a scientific debate"* - from a symposium held by the American Association for the Advancement of Science. New York: Norton.

Snyder, G. (1977). *"Is there a Loch Ness monster: The search for a legend."* New York: Wanderer Books.

Story, R. (1976). *"The space gods revealed"*. New York: Harper and Row.

Upton, E. (1975). *The great earthquake hoax*. The Griffith Observer, January.



Hopalong Cassidy and the Age of the Universe

J.W. 'Slim' Lairraby

It could be the first signs of approaching senility, but I was recently moved to read, for the first time in 30 years, a Western. I came across a book, "Tex of the Bar 20" by Clarence E. Mulford, in a second-hand bookshop. Remembering my teenage addiction to the genre, and to the works of Mulford in particular, I acquired and re-read the book. Other readers who had similar juvenile passions, may recall Mulford as the creator of the character Hopalong Cassidy (the real one, not the wishy-washy hero of the Saturday matinees).

This is not a confession of a misspent youth; there is no point. Mulford was no Shakespeare, he was the author of popular fiction and his works reflected the popular prejudices of his time (his books were written between 1906 and 1940). There were certainly no good live Injuns in Mulford's books. He did, however, use the medium to propagate some factual, historical, geographical and climatic information about the time and the place about which he wrote.

In the book under review, I was astonished to read the following passages. To set the scene, Tex, the eponymous hero and a colleague of Cassidy, was seeking to distract the attention of the chief villain, Henry Williams (no relation to the president of Australian Skeptics), while certain plans were maturing. Now read on...

"Don't you try to fool me!" warned Tex. "Don't pretend you don't know! An' let me tell you this. You are wrong, like th' ministers an' all th' rest of th' theologians. That's th' truest hypothesis man ever postulated. It proves itself, I tell you! From th' diffused, homogeneous, gaseous state, whirlin', because of molecular attraction, into a constancy more compact, matter state, constantly becomin' more heterogeneous as pressure varies an' causes a variable temperature of th' mass. Integration an' heterogeneity! From th' cold of th' diffused gases to th' terrific heat generated by their pressure toward th' common centre of attraction. Can't you see it, man?"

Henry's mouth remained open and inarticulate.

"You won't answer, like all th' rest!" accused Tex. "An' what heat! One huge molten ball, changing th' force of th' planets nearest, shifting th' universal balance to new adjustments. 'Equilibrium!' demands Nature. An' so th' struggle goes on, ever tryin' to gain it, and' allus makin' new equilibriums necessary, like a dog chasin' a flea on th' end of his spine. Six days an' a breathin' space!" he jeered. "Six trillion years, more likely, an' no time for breathin' spaces! What you got to say to that, hey? Answer me this: What form of force does th' integration postulate? Centrifugal? Hah!" he cried. "You thought you had me there, didn't you? No, sir; not centrifugal - centripetal! Integration - centripetal! Gravity proves it. Centrifugal is th' destroyer, th' maker of satellites - not th' builder! Bah!" he grunted. "You can't disprove a word of it! Try it - just try it!"

Henry shook his head slowly, drew a deep breath, and sought a more comfortable position. "These here chairs are hard, ain't they?" he remarked, feeling that he had to say something. Surely it was safe to say that.

Tex leaped to his feet and scowled down at him. "Evadin', are you?" he demanded. Then his voice changed and he placed a kindly hand on his companion's shoulder. "There ain't no use tryin' to refute it, Hennery," he said. "It can't be done - no, sir - it can't be done. Don't you ever argue with me again about this, Hennery - it only leads us nowhere. Was it Archimedes who said he could move th' earth if he only had some place to stand? He wasn't goin' to try to lift himself by his boot

straps, was he, th' old fox? That's th' trouble, Hennerly: after all is said, we still got to find some place to stand." He glanced over Henry's head to see Doctor Horn smiling at him, and he wondered how much of his heavy lecture the physician had heard. Had he expected an educated man to be an auditor he would have been more careful. "That was th' greatest hypothesis of all - the hypothesis of Laplace - it answered th' supposedly unanswerable. Science was no longer on th' defensive, Hennerly," he summed up for the newcomer's benefit.

"Truly said!" beamed the doctor, getting a little excited. "In proof of its mechanical possibility Doctor Plateau demonstrated, with whirling water, that it was not a possibility, but a fact. The nebular hypothesis is more and more accepted as time goes by, by all thinking men who have no personal reasons strong enough to make them oppose it." He clapped the stunned Henry on the back. "Trot out your refutations and the marshal and I will knock them off their pins! Bring on your theologians, your special-creation adherents, and we'll pulverize them under the pestle of cold reason in the mortar of truth! But I never thought you were interested in such beautiful abstractions, Henry; I never dreamed that inductive and deductive reasoning, confined to purely scientific questions, appealed to you. What needless loneliness I have suffered; what opportunities I have missed; what a dearth of intellectual exercise, and all because I took for granted that no one in this town was competent to discuss either side of such subjects. But he's got you with Laplace, Henry; got you hard and fast, if you hold to the tenets of special creation. Now that there are two of us against you, I'll warrant you a rough passage, my friend.

'Come, let's e'en at it!' We'll give you the floor, Henry - and here's where I really enjoy myself for the first time in three weary, dreary years. We'll rout your generalities with specific facts; we'll refute your ambiguities with precisions; we'll destroy your mythological conceptions with rational conceptions; your symbolical conceptions with actual conceptions; your foundation of faith by showing the genesis of that faith - couch your lance, but look to yourself, for you see before your ill-sorted array a Roman legion - short swords and a flexible line. Its centurions are geology, physics, chemistry, biology, astronomy, and mathematics. Nothing taken for granted there! No pious hopes, but solid facts, proved and re-proved. Come on, Henry - proceed to your Waterloo! Special creation indeed! Comparative anatomy, single-handed, will prove it false!"

"My G-d!" muttered Henry, forgetting his mission entirely.

If you can decipher the prose, Mulford was using the popular fiction medium to support the concept of evolution. The science may be a bit dodgy, looked at from our knowledge base, 65 years on. If we remember that the book was published in 1922, during what was then considered to be the last gasp of the fundamentalists, and only a couple of years prior to the famous Scopes trial, it seems to me that Mulford was a very useful Skeptic indeed.

I suspect that, if 'Ole Hoppy' and his 'pardners' had stumbled upon a bunch of 'ornery' creationist polecats, the town would not have been big enough for both of them.

J.W. "Slim" Lairraby, marshall of Dodge City, was killed (chewed up) in the gunfight at the PK Corral. He is channelled by Sir Jim R. Wallaby.



Police Use of a "Psychic" in Tasmania

Michael White

On the morning of Sunday, October 6, 1985, Dr Nancy Gumprecht, head of the School of Social Work at the Tasmanian State Institute of Technology (TSIT), drove from her home in Legana, a small township 15km north-west of Launceston, to go bushwalking.

She was a regular Sunday walker. Although she preferred to walk with friends, she was quite prepared to go on her own when her friends were busy. On this occasion, she went on her own.

Although she sometimes went for walks along unmarked bush tracks, she preferred to use the conventional marked tracks listed in walkers' guides. On this occasion, she chose Mount Maurice - one of the 15 or so suitable listed sites within about an hour's drive from Launceston. What Nancy did not know was that the Mount Maurice track was deceptive - the track markers were difficult to see, and old logging tracks, leading off into the wilderness, could easily be confused with the walking track. Other walkers had been lost in this area before, and had only found their way out after many days.

Nancy was not dressed warmly and, if the weather turned cold, she would not be able to survive for long. As she left, she made a fateful mistake - she did not tell her husband or son where she was going.

Nancy did not return that night. Her car was located on the evening of Thursday, October 10, parked next to the large sign at the foot of the Mount Maurice

track. Despite an extensive search in the vicinity of Mount Maurice, she was never found. It is presumed that she died of exposure - for the weather at Mount Maurice had turned cold and wet a day or so after she arrived there.

There are many reasons why it took the police, assisted by scores of volunteer searchers, such a long time to find her car in such a plausible location. However, it is not the purpose of this paper to explore all of those reasons. Only one arguably contributing factor, the police use of a “psychic”, will be considered.

Two members of the TSIT staff, John Dent from Nancy’s School of Social Work, and the author, from the Division of Education, wrote to the Minister of Police (and some time Acting Premier) of Tasmania, Mr Geoff Pearsall, to express our concern about some aspects of the search for the car, and to ask him to consider directing his officers henceforth not to use “information” obtained in séances when searching for missing people.

We had hoped to settle the matter through correspondence with Mr Pearsall, without involving the media, or any other channel. However, our correspondence with the Minister proved unsatisfactory; especially with respect to the police use of the “psychic”. We would now like to open the matter to a wider audience. What follows are the texts of our letters to Mr Pearsall, and his replies to us, as they pertain to the use of the “psychic”.

In our two letters to Mr Pearsall, we drew attention to the questions we wanted him to answer by enclosing them in “boxes”. [Editor’s note: in the case of this article, the sections referred to have been printed in bold face.] Our first letter to Mr Pearsall May 9, 1986) was 11 pages long. The two pages dealing with the police use of the “psychic” are given below:

“The Police use of information from a woman claiming to have psychic powers.

On the day after Nancy disappeared Mr Gumprecht was searching for her in the vicinity of the home of an acquaintance of Nancy’s. He dropped in to inform this acquaintance that Nancy would be unable to keep an appointment. The acquaintance, who believed herself to have psychic powers, asked permission to “contact” Nancy. Mr Gumprecht agreed. A séance was held early on the Tuesday afternoon. The woman claiming to have psychic powers, another woman claiming to be a medium, and two other people were present at the séance.

Mr Gumprecht was very sceptical about the usefulness of this type of information, and had no further personal involvement with the woman.

It is our understanding that the police were not involved up to this point, but that they soon became very interested in the information supplied by the woman, and that the search for Nancy’s car was significantly influenced by that information.

Immediately after the séance, one of the woman’s acquaintances rang the Launceston Police Station and requested that two (particular) senior police officers (at least one of whom we believe was an inspector) drive the 20km to the woman’s house where they would be given important information. The two officers left immediately, and the information that they were given had an immediate impact on the search; a plane was sent to the area specified by the woman, and a number of the cars involved in the ground search were redeployed to that area. The excerpt below, from the Examiner of the following day, indicates that the woman’s information was considered to be a “new lead”. It should be noted that the woman had never been for a walk with Nancy.

‘But late yesterday [Tuesday] afternoon, police following a new lead searched an area near Sassafras, on the North-West coast. A spotter plane searched the pine plantations but the search was abandoned as light faded. Police will continue searching the area tomorrow.’

(Examiner, Wednesday October 9, 1985)

Although the car was not located in the area first specified by the woman, the police continued to pursue what they described as a “lead”. Early on Wednesday morning, the coordinator of the search provided maps for an off-duty policeman and a civilian to take (in the Superintendent’s car) to the woman, to see if more precise information could be obtained. Again, the new information had some impact on the choice of areas to be searched. But again, the car was not found in these newly specified areas.

The police involvement did not end there. On the Wednesday evening, two police officers (at least one of whom we believe was an inspector) drove to the woman’s house to listen to the tape of the séance. One of the officers took 6 pages of notes. Thirty-six copies of this set of notes were made at the Launceston Police Station for distribution to the searchers at the briefing session on the following Thursday morning. Despite the fact that all the areas specified by these notes had been searched and researched, the very distribution of the notes indicated that those areas deserved even more attention.

The car was eventually located on Thursday evening, in an area that was as far away, and as

geographically different as it could possibly be, from the area described by the woman.

This example is consistent with what we understand to be wide police experience: large scale surveys of police departments in Holland and the United States indicated that there have been NO reports of substantial help by psychics, but that, on the contrary, “investigators were sidetracked because wrong leads provided by the psychic diverted the police from concentrating on more established methods of investigation” (Guarino, R., 1975, ‘Police and Psychics’, *Psychic*, 6, 9-16). The above quotation seems particularly applicable to the search for Nancy’s car. A number of searchers have indicated that they would have spent more of their time searching to the east of the Tamar if they had not been influenced by information provided by the woman.

After the initial failure of her prediction, do you not consider it excessive of the police to have sought further information (on at least two additional occasions) from the woman claiming to have psychic powers?

The seriousness with which the information from this woman was taken was presumably, at least partly, based on the claim that she has:

‘in the past, assisted police in finding missing people with her psychic powers.’

(Examiner, Thursday October 10, 1985)

In the light of her complete failure on this occasion, the accuracy of this claim seems doubtful, yet we presume that the Launceston Police made the appropriate checks.

Exactly what was the nature of her previous successes? Who supplied this information to the Launceston Police?”

Mr Pearsall chose to ignore the second of our two questions (the one dealing with how the police substantiated the “psychic’s” claim of previous successes). His response to the first question (August 1, 1986) is given below:

“Concern:

Use by Police of persons claiming to have psychic powers.

Response:

- Police have a responsibility to check out all information provided to them during the course of an enquiry no matter what personal views or scepticisms they may hold about the weighting, which should be applied to such information.

- The dependence upon psychics by Police is not great, but neither is it ignored.

- In the incident under review, Police gave no

more attention to the information reported by the psychic than was considered appropriate.”

As we were not satisfied with Mr Pearsall’s apparent inability to distinguish between the “information” obtained in a séance and information obtained through more conventional means, and as we still wanted to know how the police substantiated the “psychics” claims of previous successes, we repeated our two questions in a second letter (September 5, 1986):

“Police use of information from a woman claiming to have psychic powers (Part one)

We are extremely dissatisfied with the extent to which Police relied on “information” from a self-proclaimed “psychic”. We urge you to reconsider your attitude towards the use of such “information”.

We could cite many instances of the scepticism with which the great majority of Psychologists and Philosophers view claims of psychic abilities. However, we assume that, you would probably consider studies with Police Departments to be more relevant. We have been able to trace only three such studies (Brink, 1960; Guarino, 1975; and Reiser *et al.*, 1979). These studies are unanimous in their conclusion that the use of “Psychics” in Police investigations is a complete waste of time. Furthermore, investigations into the claims of the world’s most famous “Psychic Sleuth” Gerard Croiset have shown them to be baseless (Hoebens, 1981 and 1981-1982). We would be very happy to supply you with copies of this material if you requested them.

We can appreciate that Police should “cheek out all information provided”. But we also believe that it is necessary to evaluate the source of the information. We cannot believe that Police indiscriminately treat all information as being equally plausible. We still consider the persistent use of the “Psychic” (who had never been for a walk with Nancy) to be quite inappropriate.

We can fully sympathise with your desire to support the previous action taken by your officers, under very difficult circumstances, in an area where we presume there to have been no clearly defined ministerial policy.

From lowest to highest ranks, Police we have spoken to consistently report a fear of ignoring assertions from people claiming psychic connections lest the assertions are at some future time found to be accurate. We acknowledge that people claiming psychic powers may sometimes have information which could have been gained from other sources and thus their reports should not be totally ignored. However we firmly are of

the opinion that police are influenced by the fear of pressure from sections of the community if they fail to exhaustively investigate psychic claims. We see a need for a statement from the highest level of the Police Department on the extent to which such “information” should be considered, so as to give police the protection they need to make objective decisions.

As you would be fully aware, your response to this letter will be considered to be a clarification of Departmental policy on this issue. We urge you to clarify this policy in such a way that the “information” gained from self deluded people in séances will never again be able to have a significant effect on the direction taken by a Police investigation.

We feel that the public would have a right to know if, in the future, important and expensive Departmental decisions were likely to be influenced by “information” gained in séances.

What are your current views on the use of “Psychics” by Police?

“Police use of information for a woman claiming to have psychic powers (Part two).”

We repeat our previous unanswered question: The seriousness with which the information from the “Psychic” was taken was presumably, at least partly, based on the claim that she has:

‘in the past, assisted police in finding missing people with her psychic powers.’

(Examiner, Thursday October 10, 1985)

In the light of her complete failure on this occasion the accuracy of this claim seems doubtful.

Exactly what was the nature of her previous successes? Who supplied this information to the Launceston Police?

If this information was no more than her own unsubstantiated claims, we would like to be informed of that fact. If, on the other hand, this information was of specific cases where she had been of assistance, we would like to know the exact cases involved so that we could check her claims in detail.”

Mr Pearsall’s reply to our second letter (December 23, 1986) was even more disconcerting than his reply to our first. Again, there was a reluctance to distinguish between

different types of “information”; and, again, there was no attempt made to answer our second question. His answer to the first question follows:

“Concern

Police use of information from a woman claiming to have psychic powers.

Response

It is the policy of the Police Department to accept information from any source. The decision as to how that information is to be used, if at all, rests with the Officer in Charge of the particular operation who will take whatever action he considers appropriate.”

Dr White, having left Tasmania, works at the South Australian Department of Transport’s Road Safety Division. The subject of police use of psychics will be a major project for Australian Skeptics this year. Comments from readers will be welcomed.

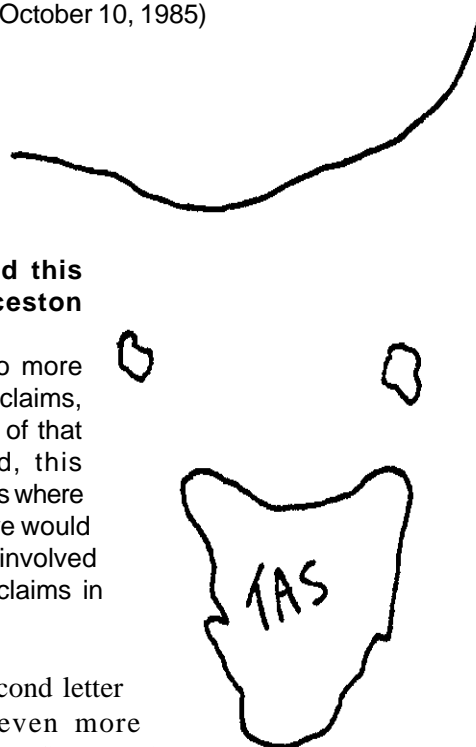
Brink, E, Jan 1960, Parapsychology and criminal investigation, International Criminal Police Review, Volume 134, pages 3-9.

Guarino, R., 1975, Police and Psychics, Psychics, Volume 6, pages 9-16.

Hoebens, P.H., Fall 1981, Gerard Croiset: Investigation of the Mozart of “Psychic Sleuths” - Part 1, The Skeptical Inquirer, Volume 6, Number 1, pages 17-28.

Hoebens, PR, Winter 1981-1982, Croiset and Professor Tenhaeff. Discrepancies in the claims of clairvoyance, The Skeptical Inquirer, Volume 6, Number 2, pages 32-40.

Reiser, M., Ludwig, L., Saxe, S., and Wagner, C., 1979. An evaluation of the use of Psychics in the investigation of major crimes, Journal of Police Science and Administration, Volume 7, Number 1, pages 18-25.”



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1988:

the Year of Living Credulously?

Tim Medham

It's one thing for the ordinary citizens of this world to believe in astrology, but when influential world leaders start espousing suspect theories one is justified in becoming more than a little concerned.

In 1940, Henry A. Wallace of the US Democratic National Committee had been lightly vilified in the press for an interest in the possible effects of the moons and planets on the weather. He responded to "Time" magazine with,

"I have argued that a belief in astrology as a guide to life would lead to a fatalism that might cause many individuals to accept hard times as the foreordination of the stars, instead of struggling to master their fates."

Almost 50 years later, we now have the admission that another US politician, one Ronald Reagan (or at least his wife, which is much the same thing) is influenced by the prognostications of a "court astrologer".

The thought of perhaps the most powerful person in the world, who not only accepts certain fundamental religious beliefs but is also under the sway of the stars, taking us into a period of detente and the razor's edge of nuclear disarmament is enough to worry even the least sceptical among us.

But that's not the end of it.

The Reagan (or Regan) revelations brought forth a whole host of "closet credulites" going public.

An article in the *Sydney Morning Herald* revealed that one Liberal backbencher consulted an astrologer to try to find out why he didn't make the front bench. We could suggest a good reason.

Further revelations in the NSW parliament involved Democrat Richard Jones, who admitted to a newspaper that "I live in the New Age" which includes having "a huge 400mm crystal in my office to radiate positive energy through Parliament House".

Of course such discernment is not restricted to the US and Australia. On the other side of the political coin, it was revealed that the Russians are not unprone to such beliefs.

It was suggested that Mr Brezhnev (now of course in the bad books in the USSR) regularly called a licensed psychic healer named Dzhuna Davitashvili to his bedside during his latter days. Dzhuna's

"Hippocratic oath" forbids her from confirming the reports.

Swapping astrology stories over the dinner table, store-front palm readers and mystical herb merchants are apparently prevalent in Moscow.

It's refreshing to add that Raisa Gorbachev said she had no interest in astrology, saying "I believe in practice and in practical things". Astrology is also described in the official Russian encyclopedia as "a false science".

This didn't stop hundreds or thousands of Californians panicking when they thought Nostradamus had predicted the demise of their state on May 8. Psychics, channelers, astrologers and other assorted seers got together to predict the demise of the Silly State, but unfortunately they were wrong, but that probably won't stop them fleecing the sheep.

Despite all this silliness, perhaps the most worrying revelations in this year of revelations are those concerning the Pentagon. In what some have termed the SDI (Spiritual Defence Initiative), a cadre of meditating militarists is concentrating its "divine light radiation" to create an impenetrable shield of peace, making the Pentagon and in fact all military bases radiate to the vibrations of peace.

When asked why the tension in Central America had built up, despite the best efforts of the Pentagon Meditation Club, a spokesman explained that the peace shield was particularly weak in that part of the world right now.

There will probably be more revelations as the year draws to a close, which would not normally surprise a sceptic were it not for the position of those the admissions concern. If one ever needed more reasons why there should be bodies like the Australian Skeptics, one need only look at the headlines.



The Carlos Hoax: a Response

James Randi

President Barry Williams has expressed a justifiable concern about the Carlos Affair for which I was largely responsible. Barry is mainly concerned with the effect on those in the media who have been supportive of the Australian Skeptics by seeking advice and opinions on matters involving psychic claims. He points out that "the very TV current affairs programs that were largely the victims of the hoax were those programs that have, in recent times, displayed more scepticism

to paranormal claims ...”. This is an important concern, and deserves much consideration from me. I hope that what follows will serve to explain my point of view and clarify my intentions.

I certainly cannot deny my rather extensive involvement in the Carlos Affair. When the producers of *60 Minutes* approached me here in the USA and asked how they could expose the channeling racket for what it was, I advised them that since these fakes offered no evidence that could be falsified, the only way to handle the problem was to create a channeler from essentially nothing, to show how easily it could be done.

It turned out that the *60 Minutes* people had already entertained that notion, and I proceeded to fill in the blanks for them. I suggested that a totally inexperienced person, one with no training as an actor or knowledge of what is expected of a “psychic”, be chosen for the part. I decided to use Mr Jose Alvarez, an artist friend, as the channeler. In addition, I suggested that a thoroughly odious, repellent manager character be created. This part was filled by Mr Jorge Grillet, a friend of Jose who is an independent real estate salesman.

Why have such an objectionable character in the cast? I wanted to prove that no matter what sort of apparently detrimental elements were presented to the media, they would nonetheless give needed exposure to the Carlos hoax. The point was that any media exposure is productive when the person or cause is attractive enough, whether or not there is any merit at all to the matter. Jorge presented himself as a loud, rude, pushy, overdressed boor who interrupted, insulted and then shamelessly cajoled those he met and dealt with. In eagerly looking past him, the media were blinded into publicising Carlos, who sat by as an innocent pawn looking for acceptance.

The exposure afforded Carlos in the media was certainly satisfying to us, resulting in a strong public interest in the whole affair. Editor Tim Mendham has correctly pointed out that the resulting attendance for the Carlo’ appearance at the Opera House “compare’ poorly with that achieved by J.Z. Knight/Ramtha in late 1987. But consider these facts: the channeler Carlos was *totally unknown* just two weeks before he made his live debut. Knight was already firmly established with the dupes for several years, and made her one-and-only appearance in Australia before an

audience who had already purchased their tickets before she arrived. These victims were obtained from her mailing list, and came in from all over the continent as well as from overseas to attend. She took no chances; she allowed no press interviews, gave out no press passes to the performance, and then quietly left Australia with \$240,000. And did anyone question her arrival or departure, or what sort of visa she used to obtain that fortune? I was unable to find any complaint from the media about her imposture *because she merely took the public’s money* rather than embarrassing the media!



Carlos with a little help from James Randi

Did the Willesees complain about her? Did the *Today* program ask about her visit: Mike Cariton of 2GB merely ignored her as he ignored Carlos, even though he had “never been fooled” and had put the press-kit in his “round filing tray”. So too did *Sun* columnist Kevin Sadlier, who proudly admitted that though he knew Carlos was a fake, he also chose to file the

matter in his waste-paper basket, thus sparing his readers the truth. If so many persons in the media knew that the public were being lied to, why did they insist upon allowing them to fall for such fakery? Could it be that it was not in their interest to offend the public’s preferred tastes?

The facts on Carlos as presented in the faked press kit were of such a nature that only the most naive reader would have failed to spot the mis-statements. Some points were subtle; theatres listed as sites of successful appearances by Carlos did not exist, nor did the streets on which they were said to be located. Other points were glaringly obvious; can anyone imagine a New York radio station with the call-letters WOOP? Careful scrutiny of the publicity photograph showing Carlos at Radio WOOP would have revealed “RKO Radio” reflected in the window behind him. And Shirley MacLaine, the intellectual giant of the New Age, was quoted as having endorsed Carlos, yet no-one troubled to check this very accessible source.

What *was* checked? With the sole exception of a researcher for the Terry Willesee office, who called me at my home in Florida to inquire about Carlos, there was not one person in the Australian media who even tried to check on this claimed wonder-worker. And I managed to avoid answering the question of that researcher, who came away with the impression that I’d said I never heard of him. The evidence shows

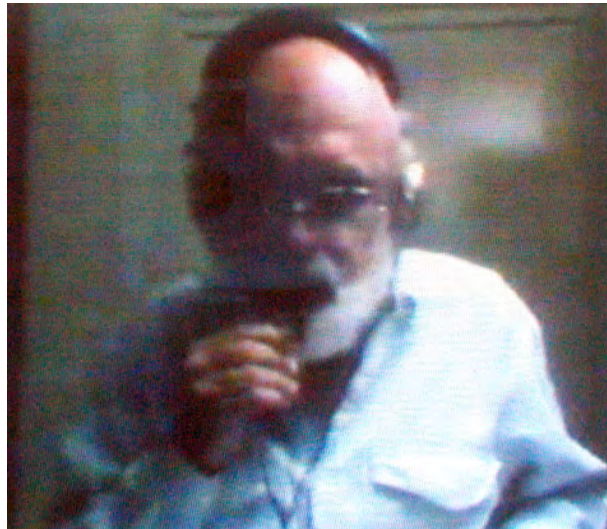
otherwise.

And what of the Australian Skeptics? Harry Edwards was called in by the *Terry Willesee* show and effectively rubbished Carlos, revealing how he was probably doing the pulse stopping trick. John Tingle, on his radio interview with Barry Williams, made no mention of the upcoming Opera House appearance by Carlos and presented an essentially negative view of the channelling claims. Meanwhile, Harry Edwards had contacted Richard Brennerman in California by mail to inquire about the fictitious Carlos Foundation. Richard promptly investigated and found no such organisation, but the information was available too late for Harry to use it. It may very well have been a case of insufficient budget for a phone call that was responsible for this failure to communicate in time. My conclusion? That the Australian Skeptics did their jobs very well, and exactly the way I might have expected. The function of such a group is to act as a source of information for the media, to offer an often opposing view of paranormal and otherwise doubtful claims, and to investigate, where possible, whatever claims are made of that nature. The ladies and gentlemen of the Australian Skeptics deserve full marks for their efforts.

Why didn't I bring the Australian Skeptics in on the stunt? There are two major reasons. First, we have found by experience that not one person who need not know, should be brought in on such a plan. Several years ago, I launched a similar proposition here in the USA and one of the confidantes innocently mentioned the matter to his wife, who had no particular interest in the matter. She, in turn, casually hinted about the plan to another person, and two days later it was down the drain. A second, more important reason for the secrecy was that this was to be a test, not only of the media, but of the Australian Skeptics, too. The media failed the test. The Skeptics did not.

I should mention one aspect of the Australian Skeptics' involvement that disturbs me. Before commencing the Carlos Affair, I called Mark Plummer, the Australian lawyer who is now serving as Executive Director of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) at the headquarters in Buffalo, New York. Before I told him anything, I swore him to secrecy. Then, to ask his advice on the general psychic activity going on in Australia, I told him of the planned Carlos Affair.

Mark gave his opinion that I should inform the Skeptics in advance, but it was my decision to go ahead as planned, though I agreed to his suggestion that key members of the Skeptics would be telephoned an hour before the *60 Minutes* broadcast revealing the hoax. Now, I hear that certain members of the Australian Skeptics have scolded Mark Plummer for failing to inform them. This is entirely unfair, since Mark was solemnly sworn to secrecy and would not under any imaginable circumstances have broken his word to me. If anyone must bear the blame for anything in the Carlos Affair, it is I alone. I resent Mark being scolded in this fashion.



James Randi, backstage, feeding lines to Carlos

I must address what is perhaps the most important problem of the Carlos Affair. I am still unsure, at this point in time, whether Peter Meakin, Channel 9's head of current affairs, actually insisted that the Today program use Carlos as a guest, and misinformed Mike Willesee while knowing that the whole thing was a hoax, thus earning the sack. I cannot imagine that Peter would actually lead his colleagues into a trap, knowing full well that it was about to be revealed. In any case, the man was in an awkward position. I await

further information on this aspect.

What the Carlos Affair demonstrated was:

1) Any kind of publicity will attract an audience, when the claims of the performers are basically silly, anyway. The sillier they are, the better copy they make - and the more eagerly they are snapped up by the faithful.

2) The media will salivate when the right bells are sounded. We supplied words ("naked", "curse" and "reincarnation") and they printed them all. They jumped every time we rang.

3) Given a good story, the media will only look into it far enough to try for additional details, but they will accept any easily checkable story so as not to lose it.

4) The Australian media is basically sceptical and generally difficult to handle, but they will still respond to what appears to be a good story.

5) The Australian Skeptics are an active and effective element serving the Australian media as a source of information and as an investigatory group.

The Australian newspapers have chortled over the fact that Channel 9 itself was taken in by the Carlos Affair. But consider this: if Channel 9 had not recognised their responsibilities toward the principles of objective, dedicated journalism, they would have

secretly informed their colleagues to ignore the Carlos Affair and waited for other media outlets to fall for it. But they stuck with their decisions, no doubt dismayed as others as adjoining desks embraced the hoax.

I must agree with others who have said that the *60 Minutes* program should have mentioned the attempt by the Terry Willesee researcher to check out the Carlos story. The people at *60 Minutes* will, I'm sure, grant me the right to that observation. Had I been in on the preparation of the script, I would have held the inclusion to be an integral part of the story. As it was, I had no input to the script or to the final broadcast format.

I must admit that I am somewhat puzzled by Tim Mendham's comment that the Alvarez performance on TV was "poor". I suggest that Tim has not studied, as I have, the performances of the "real" channeled masters such as Ramtha, Lazaris and Mofu. They are amateurish and unconvincing to any rational observer and they babble absolute rubbish. That is an accurate description of what Carlos too, offered his audience - *purposely!* We tailored his performance to match what was already established as acceptable. Carlos was "poor" by careful design.

I sincerely believe that the *60 Minutes* presentation will result in the Australian media giving a *very* difficult time to any professed psychic who arrives there with hopes of taking money from the gullible. Also, it will alert immigration authorities to the practice of entering Australia on a tourist visa and swindling the public. I honestly believe that there was literally no other way of exposing the channeling fraud for what it is, and I would welcome suggestions about more effective techniques. Concerning the channeling craze there is no evidence to refute, no data to examine and no claim that can be falsified in such New Age nonsense. We know that we cannot win over the hard-core believers but must be content with influencing others who may be on the edge of becoming dupes. Certainly, those individuals will be forced to re-think their possible acceptance of preposterous claims as a result of our operation. The cry "Remember Carlos!" will, I trust, be heard frequently among the media and the public from now on.

In closing, let me offer my sincere apologies, on behalf of Alvarez and Grillet as well, for any problems brought about by the Carlos Affair. It was designed and carried out with the best of intentions. Though some aspects necessarily had to yield to the needs of the *60 Minutes* producers who paid the expenses, it was generally satisfactory to me. I hope that in time it will prove satisfactory to all affected by it.

To make an omelette, one must break some eggs ...

James "the Amazing" Randi is a magician of international fame, as well as being an active investigator of paranormal phenomena. In 1986 he was awarded a grant from the US MacArthur Foundation to enable him to continue his

activities. He was cited for his work in exposing the fraud behind "psychic surgery" and for his campaign against television evangelists for duping their audience and the sick.

Comment by Tim Mendham: To clarify one point made by James Randi, I would agree that performances by channelers and other self-appointed mystical masters are poor and unconvincing to anyone with more than a modicum of restraint. I have seen videos of "Ramtha" and "Lazaris", and have been present at performances by some local variants. While all of them are pathetically bad actors, I would still maintain that Alvarez/Carlos was particularly awkward - but such comments are admittedly subjective and perhaps better left for journals of theatre criticism than one devoted to sceptical investigation.

Letter from Mark Plummer, Exec Dir, CSICOP

Being so far away I cannot objectively judge the effects of the Carlos Hoax in Australia. However, I would like to relate one subsequent incident.

Shortly after the hoax I was telephoned by Channel 7 TV in Perth wanting information on a US channeler currently in Perth. I was able to supply them with some information, to discuss possible approaches in the interview and urge them to involve local Skeptics as much as possible.

After the show I was sent a video and was delighted to see that the interviewer was more hard-hitting than any US interview of a channeler I have seen and that the WA branch of the Australian Skeptics was fully involved.

I doubt that the interviewer would have taken such a strong stance had it not been for the climate created by the Carlos Hoax.

On the other hand, I accept that the hoax may have disrupted for the short term the previously excellent relationship the Australian Skeptics had with Michael Willesee and one or two other TV shows. I hope good relations will soon be restored. The effects of a hoax can take some time to observe. Immediately after the Robert Steiner hoax there was a falling off in attendances at psychic and spiritualist meetings, but it was not till a year later that three people who had paid a large sum of money to a claimed psychic approached me and cited the Robert Steiner hoax as the catalyst for their re-evaluating the claims of a man they had previously believed was psychic.

It will be interesting to note if there is a falling off in attendances and support for channelers in Australia. Only time will tell.



Paranormal Belief in Australia A National Survey

Dr William Grey

SYNOPSIS: There is little data on the extent of psychic and paranormal belief in Australia. This paper presents results of the first national survey of belief in these categories. The results were obtained from the National Social Sciences Survey of the Australian National University.

Background

A few years ago, I read a report of a US Gallop Poll taken in June 1984 which revealed that belief in astrology among college students (13-18 years) increased from 40% (already surprisingly high) to a disturbing 55% over the six year period 1978-84 (Kurtz & Fraknoi 1984).

I thought it would be interesting to see if there was any evidence of a comparable trend in Australia. After making some inquiries, it emerged that there were no national data on the level of belief in psychic and paranormal ('psi') phenomena in Australia, let alone evidence of any trends.

There are some partial data. John Happs (1987) conducted a survey of the extent of belief among trainee teachers in nine areas of 'psi' related beliefs: fortune-telling, contacting the dead, horoscopes, miracles, creation, UFOs, the Loch Ness monster, ESP and water divining.

Happs concluded that while suitably constructed courses reduced the level of belief in pseudo-scientific claims among his test group of trainee teachers, overall the level of acceptance of pseudo-scientific claims - even among science teacher trainees - remained high. Of the trainee science teachers surveyed by Happs,

21% reported that they were inclined to believe horoscopes appearing in popular newspapers and magazines, and 33% accepted that the universe was created by a supernatural power.

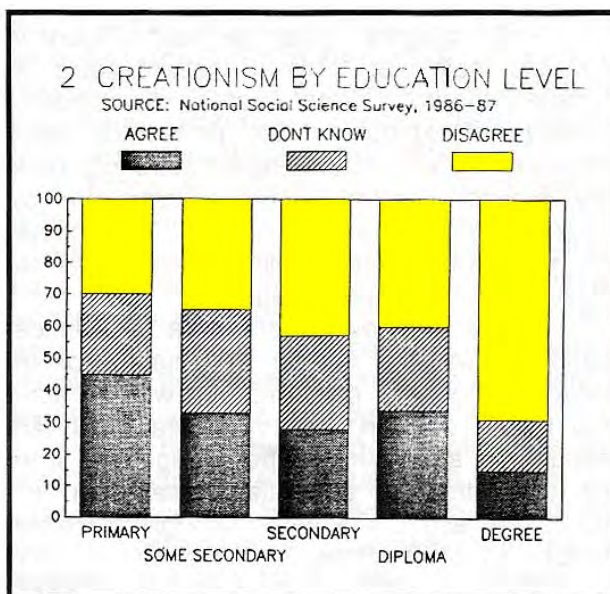
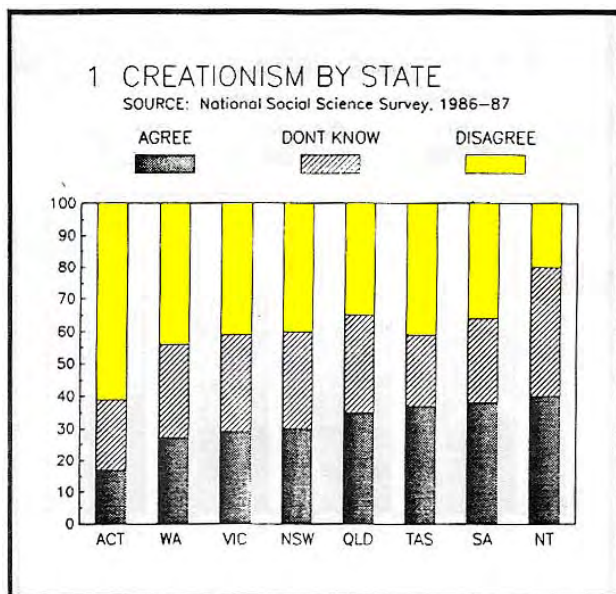
As teachers are likely to play a key role in determining the level of acceptance of paranormal claims among students, these results provide cause for concern. Are the results representative of the population at large? What is the situation nationally? We cannot provide detailed answers, but we can now provide some partial data on national trends.

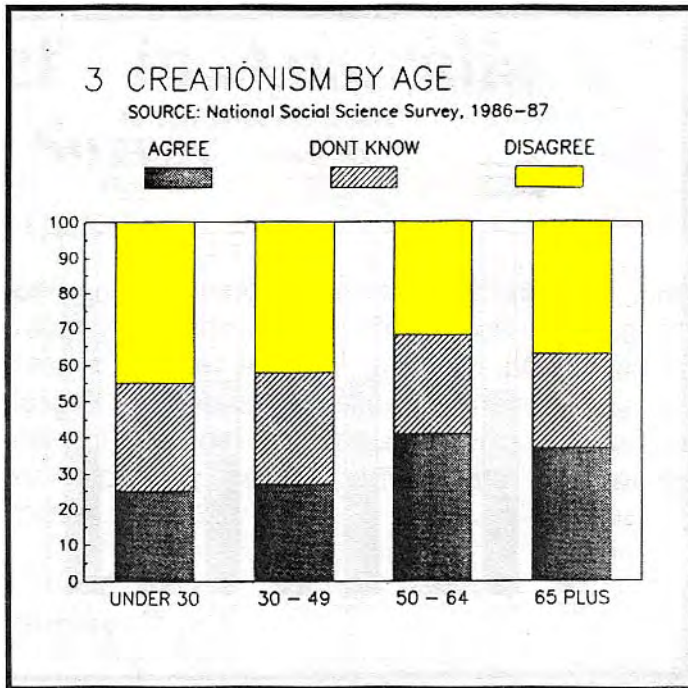
The National Social Science Survey

The most comprehensive survey of general social opinions in Australia is the National Social Science Survey (NSSS, conducted by the Research School of Social Sciences at the Australian National University. In 1986 I approached the director of NSSS, Dr Jonathan Kelley, and asked him if he could include some questions about belief in 'psi'. I suggested three areas of interest to Australian Skeptics on which we would like to get some data: clairvoyance, astrology and creationism. I suggested that (roughly) the following questions be included in the NSSS:

- * Some people can predict the future by psychic powers.
- * The stars and planets affect our lives in ways not known by science.
- * The Bible provides a better account of our origins than modern scientific theories.

On the basis of a single survey, it is of course impossible to say anything about trends. I hope that NSSS will follow up some of these issues in future surveys.





The survey

Space limitations precluded the inclusion of the clairvoyance question. However, the NSSS (1986-87: 47) sent into the field in November 1986 included two closely related questions on astrology, and one on creationism, viz:

- * The stars and planets affect our destinies in ways not understood by science.
- * I believe in astrology.
- * The Bible provides a more accurate account of our origins than the theories of modern science.

These questions were included without the benefit of a pilot survey for validation, so the results should be treated with caution. However, the two astrology questions do correlate strongly, which justifies a reasonable level of confidence in the result.

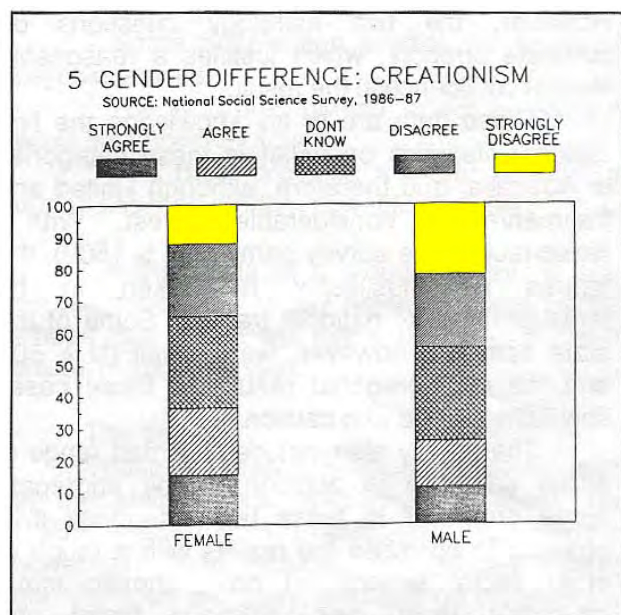
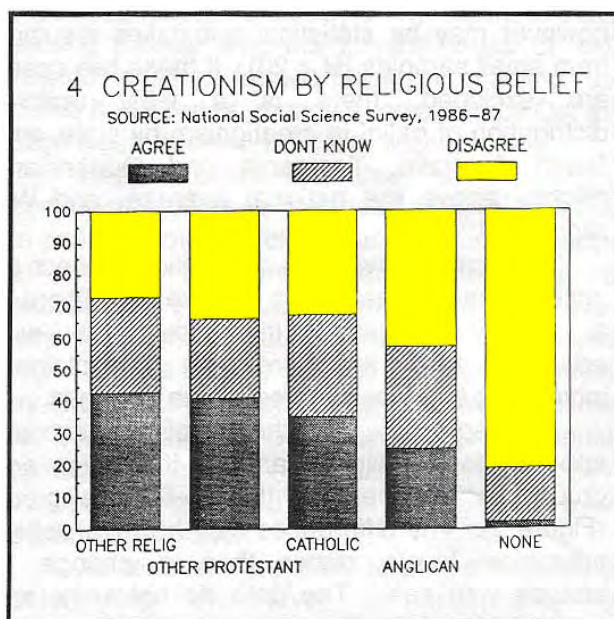
These data are to my knowledge the first national statistics on belief in these categories in Australia, and therefore, although limited and fragmentary, of considerable interest. With a reasonably large survey sample ($N > 1500$), the figures can justifiably be taken to be representative of national trends. Some of the state samples, however, were small ($N < 50$), and the disaggregated results in these cases should be treated with caution.

The survey also includes a broad range of social data, so in addition to the aggregate figure on belief in these two categories it is possible to correlate the results with a range of other social factors. I have chosen state, education level, age, religious belief and gender as factors against which to correlate the results.

Creationism

Nationally, 30% supported the biblical view of creationism, 30% are unsure and 40% prefer the scientific account.

Biblical support appears highest in the NT, SA, Tasmania and Queensland. It appears to be most strongly rejected in the ACT and WA. NSW and Victoria are right on the national average (Figure 1). The ACT and the NT however may be statistical anomalies resulting from small samples ($N < 20$). If



these two cases are excluded, there is a fairly uniform distribution of belief in creationism by state, with South Australia, Tasmania and Queensland slightly above the national average, and WA slightly below.

Education level has a significant effect on acceptance of creationism (Figure 2). There is a steady decrease in acceptance with education level, apart from an (unexplained) increase in the case of persons with diplomas.

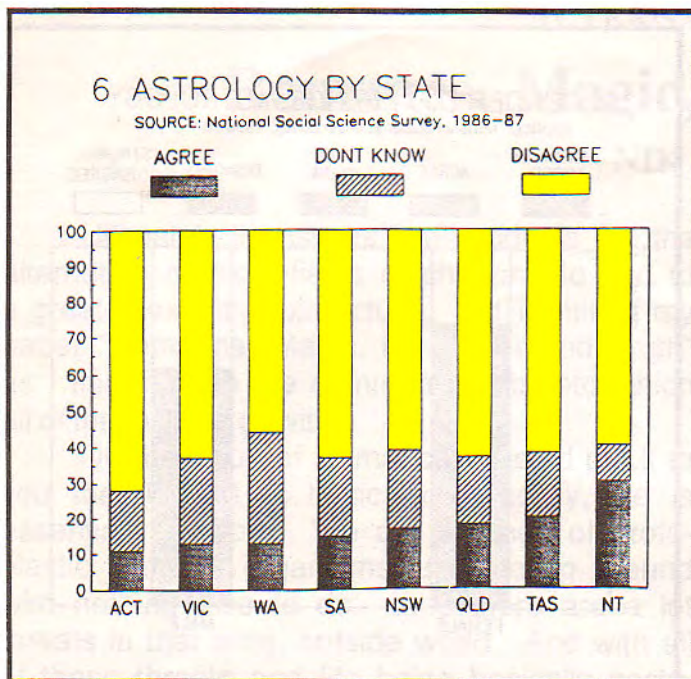
Acceptance of the biblical account appears to be higher among the older age groups, with a peak in the 50-64 age group (Figure 3). The differences may however reflect education levels rather than a change of attitude with age. The data do not show any compelling evidence of age-related differences in acceptance of the biblical account of creation.

The category “other religion” (Figure 4) consists mainly of “other Christian” sects, eg Greek Orthodox. “Other Protestant” includes a number of fundamentalist protestant sects. Atheists, as you would expect, strongly reject the biblical account. These data are too aggregated to be very illuminating; they convey no surprises. The Anglican position is the closest to the national average.

Figure 5 shows there is a pronounced gender difference in the acceptance of the biblical account of creation, with women about 5% ahead of men in strong agreement, and about 10% ahead in all other categories. It will be interesting to correlate these data with education levels, the other strongly correlated factor.

Astrology

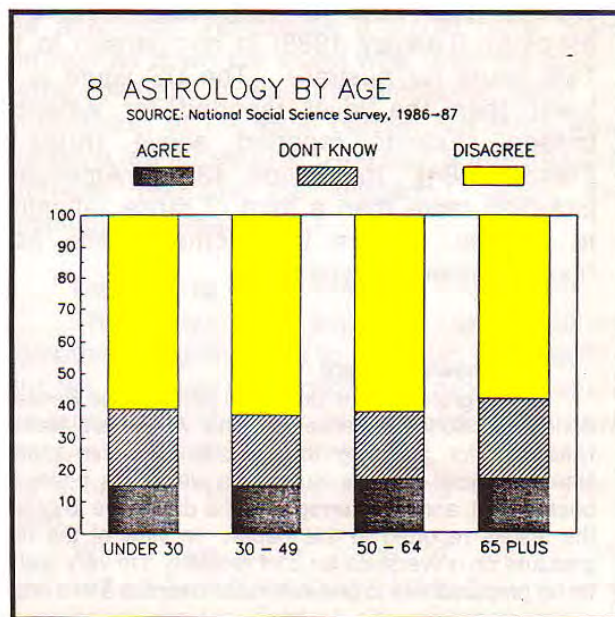
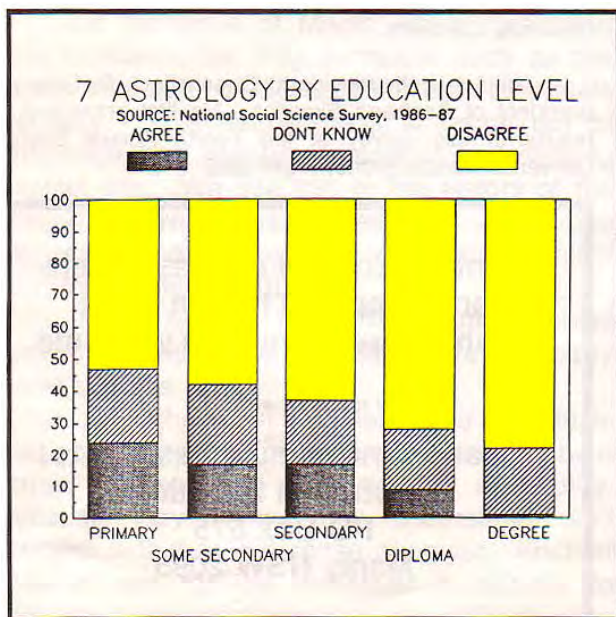
The two questions relating to astrology gave strongly similar results, and I have therefore taken the figures relating to the second question only (“I believe in astrology”). Nationally, acceptance of astrology is somewhat lower than acceptance of creationism, with about 16% accepting, 23% uncertain, and 62%

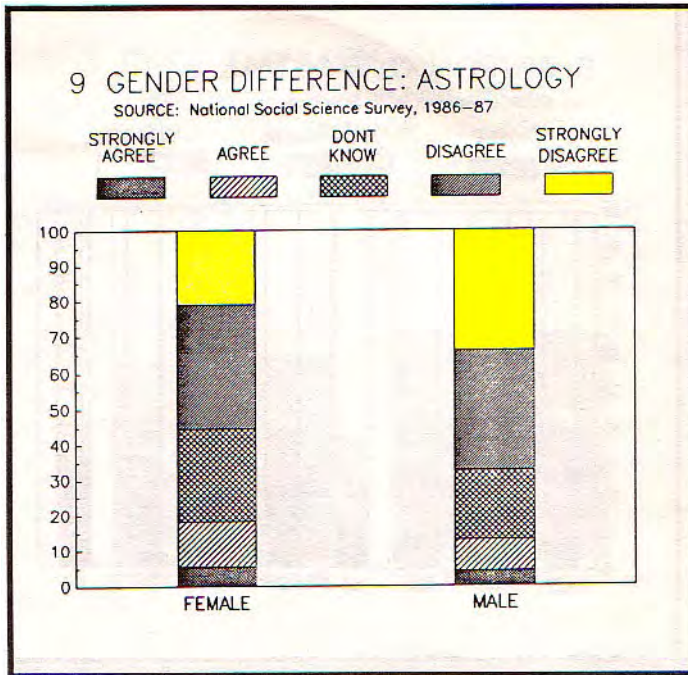


rejecting astrological claims. The 16% figure is significantly lower than Happs’ 21% level among trainee teachers.

Acceptance of astrology is fairly low overall (Figure 6). The high level of credulity in Tasmania and the NT and the high level of scepticism in the ACT may be the product of small samples ($N < 50$) and cannot be trusted as a representative figure. NSW is closest to the national average.

The data in Figure 7 show a very pronounced trend. There is a dramatic decrease in the level of acceptance of astrology correlated with level of education. The level is less than 10% for Diploma graduates and around 1% for Degree graduates. This is far lower than Happs’ reported level of 21% among trainee teachers. If Happs’ figures are representative of tertiary students, it would appear that their level of belief is





not sustained after graduation. The strong correlation between education level and the rejection of astrology suggests that education is indeed successful in developing critical capacities.

There is little apparent variation of belief in astrology with age (Figure 8). There is a slightly pronounced level of credulity in the under 30s, and a slight increase in the older age groups. However, this is probably more a result of education levels than an indication of a genuine age-related difference. Overall, there appears to be no significant age-related trend.

There is a very pronounced gender difference in the acceptance of astrology (Figure 9). It is even more significant than in the case of creationism. About 21% of women strongly reject astrology, in comparison with about 34% of men. It appears on the basis of these data that Australian men are considerably more sceptical about astrology than women.

It will be interesting to correlate these data with education levels, though it is unlikely that the difference will be sufficient to explain this gap. Looked at another way, the figures suggest a much higher level of rejection of scientific views among women. Perhaps this is a cultural fact which should be examined further. Does the scientific world view have a male gender stereotype which is repugnant to a significant number of women? This has been suggested, and that conclusion would certainly be consistent with these data.

Conclusions

These data come from a sufficiently large sample to suggest some genuine trends. The results which appear to be reasonably firm are (a) the aggregate figures which indicate the overall level of acceptance of creationism and astrology, (b) the correlation between these beliefs and education level, and (c) a

significant gender difference in the acceptance of astrology and creationism.

Postscript: some international comparisons

Since this paper was prepared, some interesting comparative data have been published. The US National Science Foundation conducts regular surveys of American attitudes, and this year has helped Japanese pollsters to measure attitudes in Japan.

On the issue of creationism, the survey reveals 42% of Americans reject the claim “human beings as we know them today developed from earlier species of animals”, in comparison to the 30% level of rejection of the scientific view in Australia. On the other hand, 45% of Americans agree with the scientific view, in comparison with the Australian figure of 40%. (The Australian “don’t know” figure of 30% is far higher than the US level of 13%.) In contrast, only 12% of the Japanese public contests the idea that humans descended from animals (Joyce 1988).

A 1985 US opinion poll of 1,989 adults showed that 23% of Americans believe in astrology (Langley 1988) in comparison to the 16% figure for Australia. The US figure is far lower than the level reported for American college students reported above (Kurtz & Fraknoi 1984). In addition, 43% of Americans, including more than a third of those “attentive” to science, believe that some people have “lucky numbers” (Joyce 1988).

Acknowledgement

I am grateful to Dr Jonathan Kelley of the Research School of Social Sciences at the Australian National University for including the questions in the 1986-87 National Social Science Survey on which this paper has been based, and for interrogating the data base to provide the results reported in this paper. In view of the fiscal pressure on universities for cost recovery, I’m very grateful for his preparedness to give Australian Skeptics a free ride.

References

- Happs, John C. 1987. “Conceptual conflict over pseudoscience.” *The Skeptic*, Vol 7, No 2, pp 21–26,28.
- Joyce, Christopher. 1988. “US and Japan ‘both losing’ technology’s cold war.” *New Scientist*, Vol 118, No 1610 (28 April), p26.
- Kurtz, Paul and Andrew Fraknoi. 1984. “Scientific tests of astrology do not support its claims.” Media release.
- Langley, Kim. 1988. “Hard times for Aries in Macquarie Street.” *Sydney Morning Herald* (11 May), p19.
- NSSS (National Social Science Survey) 1986-87. Research School of Social Sciences, Australian National University, Canberra.

Until recently moving to Queensland, Dr Grey was president of Canberra Skeptics. He first presented the results of this survey at the Fourth Annual Skeptics Convention held in Sydney, April 1988.



Predicting the Future: a Game Anyone Can Play

William Grey

A number of people claim to possess special powers to foresee the future. Each year we are subjected to predictions from these clairvoyants.

It's always interesting to check later to see how their predictions shape up. It's also interesting to see how well a sceptic can perform playing the same game. The results of my crystal ball gazing were reported in *the Skeptic* Vol 8, No 1. However, I want to provide readers with the background to this exercise, and to draw a moral.

In January 1986, a locally well-known Canberra psychic, Bridget Pluis, published the following predictions (*The Canberra Times*, January 9, 1986) which I set out together with my assessment. I have excluded predictions if they were (a) too vague to be testable, (b) too difficult to verify, or (c) if their probability was too high to make them of any interest.

1. Terrorist attack or air disaster at Orly Airport in the first half of 1986. (rating-miss; score-0)
2. President Reagan in danger from PLO in January and February. (miss, 0)
3. Mr Hawke will have trouble from nural sector who may form a new election party. (miss, 0)
4. Attempt to kidnap Prince William from school. (miss, 0)
5. Sydney Swans will do well and Wests will turn tables in Sydney Rugby League. (half right, 0.5)
6. Mr Peacocke will come back bigger and better; bad news for Mr Howard who was in the wrong place at the wrong time. (miss, 0)
7. Mr Hayden needs to watch his health, particularly to take care of his heart. (miss, 0)
8. Probably the last year in office for Sir Joh BjelkePetersen. His health will be the catalyst to bring about change in his government. (miss, 0)
9. Elton John will become a father. (miss, 0)
10. Susan Sangster-Renouf will nun into a few stormclouds on the romantic horizon. (excluded - reason [c])
11. Mr Wran will suffer setbacks both politically and in his health during May and October. (miss, 0)
12. Greece will have a major air disaster. (miss, 0)
13. Pop group WHAM! will disband and George Michael will go into films. (Hit!, 1)*
14. Mrs Thatcher's grip on her government will become lessfirm in September- October. (miss, 0)
15. One of Australiats best known horse-trainers will die. (excluded - reason [a])
16. The Pope will be hospitalised before the end of the year. (miss, 0).

After two disqualifications I rated her about 1.5 out of 14, about 10%. The only palpable hit was lucky 13! Not very impressive.

Well, you might say, predicting the future is a tricky business. Maybe we shouldn't expect our psychics to do all that well. And anyway, Bridget did score a couple of "hits". Could you as a sceptic (I was asked) do any better?

I decided to respond to this challenge. In January 1987 I made the following predictions, published in *the Skeptic* Vol 7 (1987), No 2, p17, which I set out together with my assessment and, as with Bridget, a few disqualifications.

1. Serious bushfires in New South Wales in February. (rating - hit; score - 1)
2. Floods in Victoria in August. (miss, 0)
3. Last year in office for Sir Joh Bjelke-Petersen. (hit, 1)
4. Mr Hawke will call an early election and win narrowly. (hit, 1)
5. Labor losses in New South Wales state byelections in Bankstown and Heathcote. (miss, 0)
6. President Reagan will retire on health grounds. (miss,0)
7. Mrs Thatcher will call an early election and win comfortably. (hit, 1)
8. The IRA will start a major terrorist offensive in Britain (miss, 0)
9. Iran/Iraq peace agreement will follow the death of Ayatollah Khomeini. (miss, 0)
10. Dennis Connor will win back America's Cup in February. (hit, 1)
11. Pat Cash will reach the quarter finals at Wimbledon. (hit, 1)
12. A New Zealand horse will win the Melbourne Cup. (hit,1)
13. Space shuttle flights wil resume without mishap. (miss,0)
14. Mr Keating will file his tax return on time. (excluded - reason [c])
15. It will be an indifferent year for psychic predictions. (excluded - [b])

I scored my success at about seven out of 14, about 50%. There are a couple of differences between my evaluation and the one reported in *the Skeptic*. However, these are small discrepancies which don't affect the overall result. What's beyond dispute is that I did a lot better than a professed psychic.

My predictions, of course, were not the product of psychic powers. They were the result of hunches, and (more or less) educated guesses. It's a game anyone can play.

* With all due deference to Dr Grey's knowledge of the pop music wodd, this prediction was obvious to anyone with a faint background of the group's history, and Mr Michael is yet to go into films. It should score a half.

The moral? Using your own good sense is likely to produce a much better result than consulting a psychic. And it's free!

There is no evidence that the future can be predicted on any scale or in any detail. Some events, such as eclipses, which are governed by precise physical laws, can be predicted with great confidence - though even astronomers sometimes make mistakes.

We also know that dispositions of character often make human behaviour predictable at a fairly general level. Some people seldom surprise us. But prediction in this domain is a rough and ready process; we cannot pinpoint the future vicissitudes of the unruly world of human affairs with any precision. Despite millenia of fruitless searching, there is no method for divining the future.

At time of writing this article, William Grey was president of Australian Skeptics. He has since taken up a position at Queensland University, and we predict that he will give Queensland clairvoyants as hard a time as he has those in the national capital.



Prediction Update

Keeping you up-to-date with the latest results of predictions for this year, we can happily report (shock! horror!) that JZ Knight, or at least her alter ego, Ramtha, is wrong. The financial world didn't crash in May 1988, as we reported she/he predicted in the last issue. Does this mean we can also have doubts about the likelihood of her predictions that the sea level will rise by 200 ft in four years? And how does this affect all her Ramtha-fearing followers who sold their sea-side property and moved inland - can they demand some sort of compensation?

On the sea-level rising, by the way, some of the less apocalyptic followers of channelling have suggested that Ramtha was perhaps referring to an allegorical spiritual rising, which must mean the spiritual rising will be 200' high, and we'll also have a melting of the spiritual ice-caps, a spiritual warming of the earth with spiritual crop failure and spiritual rain falling on deserts, and of course the spiritual collapse of the financial market (which didn't happen).

Tom Wards Backs Down on Challenge

Tom Wards, noted clairvoyant, recently made an appearance on Skeptics' patron Philip Adam's radio program on 2UE, following publication of our appraisal of Tom's lack of success in the previous issue of *the Skeptic*.

Mr Wards was severely questioned by Philip, who reminded Mr Wards of his professed and actual success rates - two very distinct figures. Mr Wards' response was the typical line of "never mind the results - it works". Therefore Philip, on the spot, challenged Mr Wards to come up in seven days with five clear, concise, concrete, verifiable predictions that would come true by the end of 1988. He sweetened the challenge with the promise of \$10,000 from himself, and he was sure a further \$10,000 from Dick Smith, if Tom was correct in his predictions.

So far, Tom has not come forward with the predictions - he has not even contacted the show or its producer (who, by the way, Mr Wards predicted would contract Leukaemia - the producer says he is not worried by the prediction although he is concerned at the sort of person who would make it).

To be fair, we should admit that one of Mr Wards' predictions for 1988 has come true - Ian Botham did have a stormy Sheffield Shield cricket career (although Tom didn't see how stormy). We are sure that most cricket fans are stunned by Tom's percipience.

Black politics

Sydney astrologer, Milton Black, successfully predicted a Liberal/National Party win in the NSW state elections. On particular seats, some he got right and some he got wrong. He predicted that sitting Premier Barry Unsworth would lose his seat of Rockdale (which he retained) and that Gosford would be won for the ALP (the swing against the ALP in the NSW Central Coast was one of the big surprises of the election).

Daniel Defoe and the Great Plague

Don Laycock

Everyone knows Daniel Defoe as the author of "Robinson Crusoe", but fewer people know that he counts as one of the first real journalists in the English language. His account of the bubonic plague that raged in London in 1665, the "Journal of the Plague Year", is widely regarded as a journalistic classic in that, in best newspaperman's style, it interweaves fact and speculation, and introduces 'human interest' stories along the way.

The Journal begins in 1664, when the first few plague deaths occurred, carries on to the height in August 1665 (when over 8000 persons died in a week) and through to the aftermath in 1666, culminating in the Great Fire of London in September of that year. It was written in 1722, but the standard edition is that of 1754.

Defoe was always a religious man, and his beliefs helped sustain him through the tribulations of the plague. As the following extracts show, he was particularly scathing about the astrologers and quacks who played on people's fears and superstitions. He notes, however, that few of such charlatans survived the plague themselves.

[1664: when the plague is just beginning]

But I must go back again to the beginning of this surprising time: - while the fears of the people were young, they were increased strangely by several odd accidents, which, put altogether, it was really a wonder the whole body of the people did not rise as one man, and abandon their dwellings, leaving the place as a space of ground designed by Heaven for an *Akeldama*, doomed to be destroyed from the face of the earth; and that all that would be found in it would perish with it. I shall name but a few of these things; but sure they were so many, and so many wizards and cunning people propogating them, that I have often wondered there were any (women especially) left behind.

In the first place, a blazing Star, or Comet, appeared for several months before the Plague, as there did the year after another, a little before the [Great] Fire. The old women, and the phlegmatic hypochondriac part of the other sex, whom I could almost call old women too, remarked (especially afterward, though not till both those Judgements were over,) that those two Comets passed directly over the City, and that so very

near the houses, that it was plain the Comet before the Pestilence was of a faint, dull, languid colour, and its motion was very heavy, solemn, and slow; but that the Comet before the Fire was bright and sparkling, or, as others said, flaming, and its motion swift and furious; and that, accordingly, one foretold a heavy Judgement, slow, but severe, terrible, and frightful, as was the Plague; but the other foretold a stroke, sudden, swift, and fiery, as the Conflagration was; nay, so particular some people were, that as they looked upon that Comet preceding the Fire, they fancied that they not only saw it pass swiftly and fiercely, and could perceive the motion with their eye, but even [that] they heard it; that it made a rushing mighty noise, fierce, and terrible, though at a distance, and but just perceivable.

I saw both these Stars, and I must confess, had so much of the common notion of such things in my head, that I was apt to look upon them as the forerunners and warnings of God's judgments; and especially when after the Plague had followed the first, I yet saw another of the like kind, I could not but say, God has not yet sufficiently scourged the City.

But I could not at the same time carry these things to the height that others did, knowing too, that natural causes are assigned by the astronomers for such things; and that their motions, and even their revolutions are calculated, or pretended to be calculated; so that they cannot be so perfectly called the fore-runners, or fore-tellers, much less the procurers of such events as pestilence, war, fire, and the like.

But let my thoughts, and the thoughts of the philosophers be, or have been, what they will, these things had a more than ordinary influence upon the minds of the common people, and they had almost universal melancholy apprehensions of some dreadful calamity and judgment coming upon the City; and this principally from the sight of this Comet, and of the alarm that was given in December by two people dying at St Giles's, as above.

The apprehensions of the people were likewise strangely increased by the error of the times; in which, I think, the people, from what principle I cannot imagine, were more addicted to prophecies, and astrological conjurations, dreams, and old wives' tales, than ever they were before or since. Whether this unhappy temper was originally raised by the follies of some people who got money by it, that is to say, by printing predictions and prognostications, I know not; but certain it is, books frightened them terribly; such as Lilly's Almanack, Gadbury's Astrological Predictions, Poor Robin's Almanack, and the like; also several pretended religious books; one entitled "Come out

of her, my People, lest you be partaker of her Plagues;" another called "Fair Warning"; another, "Britain's Remembrancer"; and many such; all, or most part of which, foretold, directly or covertly, the ruin of the City.

Nay, some were so enthusiastically bold as to run about the streets, with their oral predictions, pretending they were sent to preach to the city; and one, in particular, who, like Jonah to Ninevah, cried in the streets "Yet forty days and London shall be destroyed": I will not be positive whether he said, "Yet, forty days" or "Yet, a few days". Another ran about naked, except a pair of drawers about his waist, crying day and night, like a man that Josephus mentions, who cried "Woe to Jerusalem!" a little before the destruction of that city; so this poor naked Creature cried "O the Great, and the Dreadful God!" and said no more, but repeated those words continually, with a voice and countenance full of horror, a swift pace, and nobody could ever find him to stop, or rest, or take any sustenance, at least, that ever I could hear of. I met this poor Creature several times in the streets, and would have spoken to him, but he would not enter into speech with me, or any one else, but held on his dismal cries continually.

These things terrified the people to the last degree; and especially when two or three times, as I have mentioned already, they found one or two in the Bills, dead of the Plague at St Giles's.

Next to these public things were the dreams of old Women, or, I should say, the interpretation of old Women upon other people's dreams; and these put abundance of people even out of their wits. Some heard voices warning them to be gone, for that there would be such a Plague in London so that the living would not be able to bury the dead; others saw apparitions in the air; and I must be allowed to say of both, I hope without breach of charity, that they heard voices that never spake, and saw sights that never appeared: but the imagination of the people was really turned wayward and possessed; and no wonder if they who were poring continually at the Clouds saw shapes and figures, representations and appearances, which had nothing in them but air and vapour. Here, they told us they saw a flaming sword held in a hand, coming out of a cloud, with a point hanging directly over the city. There, they saw hearses and coffins in the air, carrying to be buried. And there again, heaps of dead bodies lying unburied, and the like, just as the imagination of the poor terrified people furnished them with matter to work upon....

I could fill this account with the strange Relations such people gave every day, of what they had seen; and every one was so positive of their having seen what they pretended to see, that

there was no contradicting them without breach of friendship, or being accounted rude and unmannerly on the one hand, and profane and impenetrable on the other.

One time, before the Plague was begun, (otherwise than, as I have said, in St Giles's) I think it was in March, seeing a crowd of people in the street, I joined them to satisfy my curiosity, and found them all staring up into the air, to see what a Woman told them appeared plain to her, which was "an Angel clothed in white, with a fiery sword in his hand, waving it, or brandishing it over his head". She described every part of the figure to the life; shewed them the motion, and the form and the poor people came into it so eagerly, and with so much readiness; - "Yes, I see it all plainly," says one; "there is the sword as plain as can be." Another saw the Angel. One saw his very face, and cried out, "What a glorious creature he was!" One saw one thing, and one another. I looked as earnestly as the rest, but perhaps, not with so much willingness to be imposed upon, and I said, indeed,

"That *I could see nothing* but a white cloud, bright on one side, by the shining of the sun upon the other part."

The Woman endeavoured to shew it me, but could not make me confess that I saw it, which, indeed, if I had, I must have lied. But the Woman turning upon me, looked in my face, and fancied I laughed; in which her imagination deceived her too; for I really did not laugh, but was very seriously reflecting how the poor people were terrified by the force of their own imagination. However, she turned from me, called me "profane fellow", and "a scoffer"; told me, "that it was a time of God's anger, and dreadful judgments were approaching; and that despisers, such as I, should wonder and perish".

The people about her seemed disgusted as well as she; and I found there was no persuading them that I did not laugh at them, and that I should be rather mobbed by them, than be able to undeceive them: so I left them; and this appearance passed for as real as the Blazing Star itself.

Another encounter I had, in the open day also; and this was in going through a narrow passage from Petty-France into Bishopsgate church-yard, by a row of alms-houses....

In this narrow passage stands [stood] a Man looking through between the palisadoes into the burying place; and as many people as the narrowness of the passage would admit to stop, without hindering the passing of others; and he was talking mighty eagerly to them, and pointing now to one place, and then to another, and affirming that he saw a Ghost walking upon such

a grave stone there: he described the shape, the posture, and the movement of it so exactly, that it was the greatest matter of amazement to him in the world that every body did not see it as well as he. On a sudden he would cry, "There it is - Now it comes this way"; then "Tis turned back" till at length he persuaded the people into so firm a belief of it, that one fancied he saw it, and another fancied he saw it; and thus he came every day making a strange hubbub, considering it was in so narrow a passage, till Bishopsgate clock struck eleven; and then the Ghost would seem to start, and, as if he were called away, disappear on a sudden.

I looked earnestly every way, and at the very moment that this Man directed, but could not see the least appearance of any thing; but so positive was this poor Man, that he gave the people the vapours in abundance, and sent them away trembling and frightened; till at length, few people that knew of it, cared to go through that passage, and hardly anybody by night, on any account whatever.

This Ghost, as the poor Man affirmed, made signs to the houses, and to the ground, and to the people; plainly intimating, or else they do so understanding it, that abundance of the people should come to be buried in that church year; as, indeed, happened.

But that he saw such aspects, I must acknowledge, I never believed; nor could I see any thing of it myself, though I looked most earnestly to see it, if possible.

These things serve to shew, how far the people were really overcome with delusions; and as they had a notion of the approach of a Visitation, all their predictions ran upon a most dreadful Plague, which should lay the whole City, and even the Kingdom waste; and should destroy almost all the nation, both man and beast.

To this, as I said before, the Astrologers added stories of the conjunctions of planets in a malignant manner, and with a mischievous influence; one of which conjunctions was to happen, and did happen, in October, and the other in November; and they filled the people's heads with predictions on these signs of the heavens, intimating, that those conjunctions foretold drought, famine, and pestilence. In the two first of them, however, they were entirely mistaken, for we had no droughty season, but in the beginning of the year a hard frost, which lasted from December almost to March: and after that,

moderate weather, rather warm than hot, with refreshing winds, and in short, very seasonable weather; and also several very great rains.

Some endeavours were used to suppress the printing of such books as terrified the people, and to frighten the dispersers of them, some of whom were taken up, but nothing [farther] was done in it as I am informed; the Government being unwilling to exasperate the people, who were, as I may say, all out of their wits already....

One mischief always introduces another. These terrors and apprehensions of the people led them into a thousand weak, foolish, and wicked things, which there wanted not a sort of people, really wicked, to encourage them to; and this was running about to fortune-tellers, cunning men and astrologers, to know their fortune, or, as it is vulgarly expressed, to have their fortunes told them, their nativities calculated, and the like, and this folly presently made the town swarm with a wicked generation of Pretenders to Magic, to the *Black Art*, as they called it, and I know not what; nay, to a thousand worse dealings with the Devil than they were really guilty of; and this trade grew so open, and was so generally practised, that it became common to have signs and inscriptions set up at doors; - "Here lives a Fortune-teller", - "Here lives an Astrologer" - "Here you may have your Nativity calculated" - and the like; and Friar Bacon's Brazen Head, which was the usual sign of these people's dwellings, was to be seen in almost every street, or else the sign of Mother *Shipton*, or of *Merlin's* head, and the like.

With what blind, absurd, and ridiculous stuff, these Oracles of the Devil pleased and satisfied the people I really know not; but certain it is, that innumerable attendants crowded about their doors every day: and if but a grave fellow, in a velvet jacket, a band, and a black coat, which was the habit those Quack-conjurors generally went in, was but seen in the streets, the people would follow them in crowds, and ask them questions as they went along.

I need not mention what a horrid delusion this was, or what it tended to; but there was no remedy for it, till the Plague itself put an end to it all, and I supposed cleared the town of most of those calculators themselves. One mischief was, that if the poor people asked these mock astrologers whether there would be a Plague, or no? they all



Daniel Defoe

agreed in the general to answer "Yes"; for that kept up their trade: and had the people not been kept in a fright about that, the wizards would presently have been rendered useless, and their craft had been at an end. But they always talked to them "of such and such influences of the stars, of the conjunctions of such and such planets, which must necessarily bring sickness and distempers, and consequently the Plague"; and some had the assurance to tell them, the Plague was begun already, which was true, though they that said so knew nothing of the matter...

.. the common people, ignorant and stupid in their reflections, as they were brutishly wicked and thoughtless before, were now led by their fright to extremes of folly; and as I have said before, they ran to Conjurers and Witches and all sorts of deceivers, to know what should become of them; who fed their fears, and kept them always alarmed and awake, on purpose to delude them, and pick their pockets. So, they were as mad upon running after quacks and mountebanks, and every practising old woman, for medicines and remedies; storing themselves with such multitudes of pills, potions, and preservatives, as they were called, that they not only spent their money, but even poisoned themselves beforehand, for fear of the poison of the Infection, and prepared their bodies for the Plague, instead of preserving them against it.

On the other hand, it is incredible, and scarce to be imagined, how the posts of houses and corners of streets were plastered over with Doctor's bills, and papers of ignorant Fellows quacking and tampering in physic, inviting the people to come to them for remedies; which [invitation] was generally set off with such flourishes as these, (viz.) INFALLIBLE PREVENTIVE PILLS against the Plague, NEVERFAILING PRESERVATIVES against the Infection, SOVEREIGN CORDIALS against the corruption of the air, EXACT REGULATIONS for the conduct of the body in case of an Infection, ANTIPESTILENTIAL PILLS, INCOMPARABLE DRINK against the Plague, never found out before, AN UNIVERSAL REMEDY for the Plague, THE ONLY TRUE PLAGUE WATER, the ROYAL ANTIDOTE against all kinds of Infection; and such a number more that I cannot reckon up; and if I could, it would fill a book of themselves to set them down.

Others set up bills to summon people to their Lodgings for directions and advice in the case of Infection: these had specious Titles also, such as these:

An eminent High-Dutch Physician, newly come over from Holland, where he resided during all the time of the great Plague, last year, in

Amsterdam, and cured multitudes of people that actually had the Plague upon them.

An Italian Gentlewoman, just arrived from Naples, having a choice Secret to prevent Infection, which she found out by her great experience, and did wonderful cures with it in the late Plague there, wherein there died 20,000 in one day.

An ancient Gentlewoman having practised with great success in the late Plague in this city, Anno 1636, gives her advice only to the Female sex. To be spoken with, &c.

An experienced Physician, who has long studied the Doctrine of Antidotes against all sorts of poison and infection has, after forty years practice, arrived to such skill as may, with God's blessing, direct Persons how to prevent their being touched by any contagious distemper whatsoever. He directs the Poor *gratis*.

I take notice of these by way of specimen. I could give you two or three dozen of the like, and yet have abundance left behind. 'Tis sufficient from these to apprise any one of the humour of those times; and how a set of thieves and pick-pockets not only robbed and cheated the poor people of their money, but poisoned their bodies with odious and fatal preparations; some with mercury, and some with other things as bad, perfectly remote from the thing pretended to; and rather hurtful than serviceable to the body, in case an infection followed.

I cannot omit a Subtlety of one of those quack operators, with which he gulled the poor people to crowd about him, but did nothing for them without Money. He had it seems, added to his bills, which he have about the streets, this advertisement in capital letters, viz. - HE GIVES ADVICE TO THE POOR FOR NOTHING.

Abundance of poor people came to him accordingly, to whom he made a great many fine speeches, examined them of the state of their health, and of the constitution of their bodies, and told them many good things for them to do, which were of no great moment: but the issue and conclusion of all was, that he had a Preparation, which if they took such a quantity of, every morning, he would pawn his life they should never have the Plague, - no, though they lived in the house with people that were infected. This made the people all resolve to have it; but then the price of that was so much, I think 'twas half a crown. "But sir," says one poor woman, "I am a poor almswoman, and am kept by the parish, and your bills say, you give the poor your help for nothing." "Ay, good woman," says the doctor, "so I do, as I published there: I give my advice to the poor for nothing, but not my physic!" "Alas, sir," says she, "that is a snare laid for the poor then; for you give them

your advice for nothing, that is to say, you advise them gratis, to buy your physick for their money; so does every shopkeeper with his wares." Here the woman began to give him ill words, and stood at his door all that day, telling her tale to all the people that came, till the doctor, finding she turned away his customers, was obliged to call her upstairs again, and give her his box of physic for nothing, - which, perhaps too, was *good for nothing when she had it*.

But to return to the people, whose confusions fitted them to be imposed upon by all sorts of pretenders, and by every mountebank. There is no doubt but these quacking sorts of fellows raised great gains out of the miserable people, for we daily found the crowds that ran after them were infinitely greater, and their doors were more thronged than those of Dr Brooks, Dr Upton, *Dr Hodges*, *Dr Berwick* or any, though the most famous men of the time; and I was told that some of them got five pounds a day by their physic. But there was still another madness beyond all this, which may serve to give an idea of the distracted humour of the poor people at that time; and this was their following a worse sort of deceivers than any of the above; for these petty thieves only deluded them to pick their pockets, and get their money, in which their wickedness, whatever it was, lay chiefly on the side of the deceiver's deceiving, not upon the deceived: - but in this part I am going to mention, it lay chiefly in the people deceived, or equally in both; and this was in wearing charms, philters, exorcisms, amulets, and I know not what Preparations, to fortify the body with them against the Plague; as if the Plague was not the Hand of God, but a kind of possession of an Evil spirit; and that it was to be kept off with crossings, signs of the zodiac, papers tied up with so many knots, and certain words or figures written on them, as particularly the word ABRACADABRA, formed in a triangle, or pyramid, thus: -

ABRACADABRA
ABRACADABR
ABRACADAB
ABRACADA
ABRACAD
ABRACA
ABRAC
ABRA
ABR
AB
A

Others had the Jesuits' Mark in a Cross:

I H
S

Others nothing but this Mark, thus:



I might spend a great deal of time in my exclamations against the follies, and, indeed, wickedness of these things, in a time of such danger, in a matter of such consequences as this, of a National Infection. But my memorandums of these things relate rather to take notice only of the fact, and mention only that it was so. How the poor people found the insufficiency of those things, and how many of them were afterwards carried away in the Dead-carts, and thrown into the common Graves of every parish, with these hellish charms and trumpery hanging about their necks, remains to be spoken of as we go along."

[1665: when the plague was at its height, and aftermath]

"One thing I cannot omit here, and indeed I thought it was extraordinary; at least, it seemed a remarkable hand of Divine Justice, viz. that all the predictors, astrologers, fortune-tellers, and what they called cunning men, conjurors, and the like; calculators of nativities, and dreamers of dreams, and such people, were gone and vanished, not one of them was to be found. I am verily persuaded that a great number of them fell in the heat of the calamity, having ventured to stay upon the prospect of getting great estates; and indeed their gain was but too great for a time, through the madness and folly of the people; but now they were silent, many of them went to their long home, not able to foretel their own fate, nor to calculate their own nativities. Some have been critical enough to say, that every one of them died: I dare not affirm that; but this I must own, that I never heard of one of them that ever appeared after the calamity was over."

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In Brief

Scientology was raised in the coroner's court recently over the Melbourne Queen Street massacre. Dr Alan Bartholomew a forensic psychologist, said the sect had carried out a personality test on Frank Vitkovic, the man who killed eight people in the shootings last year before dieing himself by falling from a high level window. The personality test was carried out two months before the killings.

Ms Eleanor Simpson, a former Church of Scientology volunteer who carried out the personality test on Vitkovic, told the court that he appeared to be in a very bad shape mentally. The results of the test, which were found in Vitkovic's bedroom after the shootings, said he had hit rock bottom.

After studying Vitkovic's diaries, Dr Bartholomew said he [Vitkovic] was a paranoid schizophrenic, and that there was no doubt the personality test had worsened his depression, and might have contributed to the decline in his mental state.

Dr Bartholomew said Vitkovic would have been eligible at the time of the shootings to be certified insane under the Mental Health Act. Ms Simpson told the coroner that she had not referred Vitkovic to a psychiatrist, but advised him to enrol in a course run by her church.

During a recent shooting afray between two bikie gangs in Sydney's Kings Cross, one of the innocent bystanders hit by shot-gun pellets was standing at a Tarot card reader's table. It is not recorded whether the reader warned the bystander to duck, before the shot was fired.

Zanex, the company which hired Uri Geller to pinpoint gold deposits hr them, has decided to quit its troubled Kavahambe gold operations in the Solomon Islands, blaming disappointing oexploration results and government policy. The gold discovered was of a bwer grade than expected. Apparently Geller made no predictions about the grade of the gold he daimed to have found.

The *Sydney Sun* reported on March 9, 1988, that

"Hundreds of Italians who stared at the sun expecting to receive a signal from the Virgin Mary are now being treated for eye damage, health officials say. The mass vigil occurred on a hill at Montesilvano on February 28 but there were no miraculous visions"



The New Age of Superstition

Tim Medham

Defining the New Age - a hodge podge of beliefs, philosophies, theories, superstitions and artifacts - is like trying to catch jelly, but one thing the New Age is not, is new. Most of the aspects of it are old, half-baked beliefs that have been discarded and "re-discovered" many times, without adding an ounce of evidence to support them.

What the New Age purports to be is a change of attitude to the world, a new era of "one with the cosmos", an intimacy and appreciation of the natural world that extends beyond our understanding of how the world works - an approaching age of new spirituality. As such, the New Age would be a positive attitude, if it had something positive to say. Instead it is a retrogressive step into superstitious mumbo-jumbo, shamanistic incantations and totemic idols.

What this article will attempt to do is to summarise a range of New Age beliefs. It will be impossible to cover all of them, for new ideas (or new variants of old ones) are surfacing every day, often wherever there is a dollar to be made, leaving the New Age adherent with little alternative but to accept everything in ignorant blind faith.

New Age as Religion

Basically the New Age is a religion, although that word has connotations which the New Agers would rather deny. Perhaps "philosophy" would be more pleasing, but a religion it is, drawing on Christian, Buddhist, Hindu, Taoist, Zen, atavism and whatever other religions seem appropriate at the time.

Overall, it is inward-looking, trying to find the answers to life's dilemmas (dilemmas which are as much a product of media paranoia as anything real) through personal development. Coming to terms with oneself, and eventually with one's environment, is the

basic aim of New Age faith, thus leading to the often espoused view that god (or God) is within each person. Not an omnipotent, omnipresent god, but an individual god - one of each individual's making which can be used to justify each individual's actions and attitudes. "If it feels right, it must be okay".

It is axiomatic that the New Age is a yuppie version of the 1960s hippie culture. During the 60s, the social radicals of the "student democratic movements" were feared by conservative elements as threatening to overthrow society. The hippies, on the other hand, innocuous flower children who went around preaching love, peace and eastern mysticism, were regarded as harmless if slightly smelly eccentrics. The hippies were too far "out of it" on a variety of chemical and natural substances, "tuned in, turned on and dropped out", to pose any real threat to society, unless you were in fear of your children being lead off the straight and narrow by a devil in blue jeans and love beads.

But this attitude did not allow for the 1970s, the "me generation" that was marked more by oil crises, rising inflation and growing unemployment than for any overriding concern for social reform. The 70s were, as the cliché goes, a period when everyone had to look out for Number One, to make sure oneself and the family were looked after rather than the rest of the world. And so the hippies' introspection and "self discovery" was the real winner of the 60s-turned-70s.

As crystal shop proprietor Sally McBride put it in an article on the New Age in the *Sydney Morning Herald* (May 14, 1988): "I think the whole thing about the New Age movement is that it teaches you to be honest to yourself. It's okay to think what you think and feel what you feel. In society we play a lot of games. It teaches people to get in touch with their basic self. People are very isolated from each other."

Too true! The New Age endorses selfishness, clothed in an attitude that "I'm too busy discovering my own basic self to worry about anyone else". This is particularly true of much of the "human potential", consciousness-raising courses and their associated organisations. The Hunger Project, an off-shoot of est/The Forum, claims that it is helping to conquer world hunger by alerting people to the problem - not by giving money or aid to famine victims, but by alerting those back in wealthier societies that famine exists, as if they needed any prodding. Its volunteers collect signatures as if that is going to solve anything.

Which brings in the concept of "karma" or fate. Because New Agers believe that god is within each, that each is responsible (or really to blame) for whatever happens to them, including being born in a famine-ridden area, they feel little obligation to

intercede to try and solve other's problems. In any case, those problems are probably the result of misdeeds in a past life (another favourite New Age belief) and will most likely be rectified in the next.

Greed, à la Gordon Gecko of the film "Wall Street", is therefore acceptable, as it is a way of coming to terms with one's basic self, and, of course, it's okay to be what you are and feel what you feel (which makes one wonder what there is to come to terms with if everything is okay).

New Age as Marketing

And greed is very much a part of New Age. Never, not even in the best relic selling era of the Catholic church, has there been a philosophy so devoted to selling itself. New Age T-shirts, New Age clothes, New Age books, New Age music, New Age posters, New Age food, New Age magazines, New Age seminars, New Age motivational tapes, New Age stores - you name it, it's marketed. The New Age ability to sell a range of goods around itself is very much an aspect of its times, which is one of the few sides to the New Age which is new.

New Agers proudly say that there is big money to be made from the philosophy; crystal shops spring up every week in the wealthier suburbs to satisfy the whims of a largely middle class audience.

Of course, crystals themselves are big business, from tiny chips to large specimens costing many hundreds of dollars, in all colours and formations with different mystical properties. Pyramids also abound, from small models to place on top of your head to larger versions to sit or even live inside.

New Age images normally revolve around beautiful ladies in diaphanous gowns and muscular gentlemen more suited to scenes of chivalrous knights and fighting dragons than coming to terms with the latter part of the twentieth century.

And of course there are the ubiquitous rainbow and dolphin, symbols respectively of rebirth (very much a Christian image) and the friendly side of nature (one doubts if New Agers would ever pin up a poster of a wart hog).

Nature is sold by New Agers as untainted, non-man-made, anti-technology (and this from people who celebrate pyramids). They preach a return to earlier, more primitive and natural times, when mankind lived in harmony with nature (and this from people who take courses in ancient warrior "wisdom"). They listen to natural, ambient music (played on synthesiser), attend courses on getting in touch with oneself (taught by people who used to sell encyclopaedias), undergo acupuncture treatment (with laser needles) and wonder

at energies unknown to science (as if science were suddenly a standard).

Overall, the New Age is marketed as being non-moralising (how can you judge if everything is okay); it is a safe harbour from current rigours, it is nice. It is almost purposefully vague. Do not look for profundities from the New Age. Statements like “I am me, and you are you” are about the most earthshattering you will get. In fact, the New Age specialises in philosophical argument of such breathless inanity that sitting through a New Age lecture is like listening to a reading of birthday cards.

New Age as Superstition

Most of the above would be harmless nonsense, if it wasn't so wrapped up in a sense of antagonism to the current world and an attempt to withdraw from it. Like many sects before it, New Agers have taken up a whole swag of pseudo-sciences and paranormal claims to escape to, many, as said before, that have long ago been thoroughly debunked and discarded. Astrology, spiritualism, reincarnation, firewalking, aroma therapy, alchemy, divining, UFO abductions, telepathic links with dolphins - an endless list of "what ifs", many of which are held fervently and concurrently by the same people.

In the areas of medicine and psychology, there are as many fads and fallacies. Particularly dangerous (in terms of ignoring tested remedies in preference for the untested) are miracle cures involving coloured thread, iridology, psychic healing, crystal therapy, and all-round positive thinking. Anything is possible, they say, including (believe it or not) growing new limbs.

The human potential movement mentioned earlier is particularly insidious, as it relies on amateur pop psychology, trauma therapy, rebirthing, confrontation sessions, and a host of potentially dangerous techniques to scare its clients back to their "basic self", often leaving them distraught, and in the worst cases emotionally and possibly mentally damaged.

An amazing ignorance of the real world around them is the result of this following of an imaginary world. Many of those convinced the world was coming to an end through an alignment of planets called the Jupiter Effect were also convinced that a new age was dawning through another alignment called the Harmonic Convergence (in neither of which cases were the planets aligned as they were claimed to be).

Of course, the Jupiter Effect was supposed to have had a virtually instantaneous effect. We'll have to wait another twenty, thirty or more years for the Harmonic Convergence to make itself felt (why, we're not told), giving its proponents the chance to live high on the

reputation, putting off, as soothsayers and Nostradamites always do, the fateful day when everything ends with a whimper.

The coming new age, which gives the movement its name, is closely linked with older apocalyptic or millenarian movements, which had an amazing resiliency when the world failed to end or change on a certain day as foretold. New Agers are cleverer than that; they don't pick a particular time, preferring a gradual transformation (unless you happen to be a follower of channeler J.Z. Knight and her giant wave sent, Noah-like, to correct us). Nevertheless, the year 2000 does crop up fairly regularly, which is an interesting use of a purely Christian concept by a supposedly non-Christian movement, although New Agers are nothing if not eclectic and economical.

Conclusion

Overall, it is the New Agers' lack of discernment and its inherent selfishness which are the most worrying aspects of the movement.

It is democracy and fair-mindedness gone berserk. I'm okay, you're okay, everything we do is okay, even everything we don't do is okay. Be true to yourself, whatever that is, and leave the rest of the world to fend for itself.

Victims of countless financial and emotional rip-offs, New Agers face life with an innocence and naivety that would be charming in children, but is downright terrifying in adults, especially those with responsible positions in the community (if you think astrology-believing presidents are frightening, what about Australian politicians who think you can stop war by thinking about it).

We are often told we cannot protect people from themselves, and that in most cases what New Agers are doing is pretty harmless. Both of these views are true.

But the New Age movement breeds a lack of rational thinking, not just of how the world works (which is often the case with religion), but of how they should make their day to day choices. If you can't eat your morning cereal without passing a crystal over the top of it, or decide what clothes to wear without consulting your horoscope or I-Ching, you are not likely to act dependably when called upon in a crisis. In fact, the New Age is positively and actively antirational, regarding rationality as part of the modern technological world which it inconsistently uses and rejects.

New Agers would say this is ail part of the change, part of the cosmic consciousness that will prove all our previously held beliefs as unfounded and unnecessarily aggressive (although giant destructive

waves, Californiarazing earthquakes and lack of concern for starving people is hardly an indication of a loving philosophy).

Whether anything of worth comes out of the New Age, we will have to wait and see. Certainly there are some aspects, such as a half-formulated environmental awareness, which are valuable, although this is hardly the private domain of New Age proponents.

But as long as the movement is wrapped up in a miasma of nonsense and a clutter of half-baked concepts, and is limited by a nonjudgmental philosophy which will not allow it to say "this is nonsense", it is doubtful that even the New Agers themselves could salvage anything worth keeping.



Human Potential Hypothetical

J.X. Hypo

My concern relates to the growing number of "achievement oriented" seminars and workshops currently being presented in Australia by overseas-based groups.

At costs ranging from \$300 to \$500 plus two or three days~ these mental and emotional stimulation seminars raise a number of questions:

1. How much money is being removed from Australia by these groups
2. How dangerous is it to the average person following a mental or emotional massage to financially involve themselves and often their family without a shred of business experience to a commitment based on "I can do anything".
3. What are the short, medium and long term effects on our society and economy if the phenomenon is allowed to continue uncontrolled at its current growth rate in Australia.

It is interesting but disturbing to read media accounts of the now infamous Anne Hamilton Byrnets group in Victoria, and how so many intelligent and well-meaning people were lured by the words and influence of just one person and a small band of devoted deceivers, only to admit after all those years that the milk had turned sour and the honey had become bitterness. Few would deny that in the beginning the path had looked beautiful and full of promise; what remains today appears to be shattered lives, broken



families and a reference of where the so-called New Age could lead.

But, they will cry out "Our knowledge is new ... we are the way, the truth and the light ... just shut up, pay up, and we will lead the way you must have an open mind".

Could it be that an open mind will swallow anything! I would propose the following hypothetical to see if it could work. If what follows seems far-fetched, you need only turn to the promotional literature for "consciousness raising" courses to realise that in fact such statements as these are common phrases and assertions

It's so beautiful being a hypothetical entity: you can float, fluctuate and fancify through all levels of consciousness. You are at one with yourself, both in the past and future, and there are times when all your existence, energy and power becomes "now" You are about to embark on the most glorious journey of all~ to guide the New Agers into a state of cataclysmic cohesion. But where do we start?

First, we must have access to a field of knowledge no other mind has comprehended. The "micro brain" sounds promising. It lies somewhere between and behind the eyes, so small and yet so powerful that its existence falls beyond scientific or medical comprehension.

The mind's eye ... it's like the program disk of a computer that directs all messages of the senses to the data disk or grey matter of the brain that you and I and the medical profession know exists.

"How do you know" asks one enquiring New Ager and twenty~five Skeptics attending the preview or introduction for our forthcoming two-day seminar

Well may you ask and you may well ponder, I reply, but others who teach 10% conscious and 90% subconscious seek only to find an interaction of the physical and metaphysical senses, the past and the future What we are talking about here is pure energy.

I can promise if you attend the Micro Brain course you will be in total control. Again what we are talking about here is pure energy; power not of the mind but of the universe How did you acquire this knowledge? enquires a wise old Skeptic in the audience.

I continue, lifting up my chin and looking down at my audience, but keeping up a cheesy ring of confidence (most important ... always look happy). You see how profound pondering can produce peak

★ "THE long-range or the short-range prediction?"

performance (the "P" factor).

Thank-you for the question. You have asked and are entitled as a living breathing being to know.

It occurred in the year of 1987 at the VFL grand final midway during the third quarter ... 80,000 plus people crowded into one stadium yet I alone was selected. Using my Micro Brain I will answer the question oneeveryone's lips before you have time to ask: Why was I selected?

That, folks, is Micro Brain information which is to be revealed to each and every one of you on the second day of our Grade 3 course. It's simply ... mind blowing!

What you have in the above hypothetical could well be the embryo of an idea to make a million dollars, to break up the happiness of many families and to control the minds and emotions of friends, neighbours and fellow citizens. I have little doubt that given time and effort I could pursue the Micro Brain nonsense to a point where, supported by the Magnetic BioConducting Generator, Dessicated Water and Tyres made from Emu Feathers, I could have hundreds if not thousands contributing to my wealth and prosperity.

As long as people pay \$600 with a nonrefundable deposit of \$100, I may not give a damn. I wouldn't care what their physical or emotional condition was prior to the seminar; I care little for my qualifications, but rely entirely on my ability and ego; I'll find plenty for them to contemplate and play, to fill up the two or three days - that's the easy part.

Who cares if only one partner of a marriage can attend due to financial difficulties; if the second party is weak enough they will scrimp and save to catch up at some future presentation - don't worry, we'll be back. If the marriage happens to break up in the meantime, it's a real win situation for us. Our newly acquired member will have plenty of funds after settlement to attend our subsequent courses and even advance to franchisee status.

The fear of not attending is our greatest weapon ... eat it, breath it, and use it, but most of all quietly convince one and all that the Micro Brain seminar will overcome ... fear.

If they come to our preview without a fear in the world, they'll certainly leave with one.

J.X. Hypo is, obviously, the pseudonym of a researcher in the human potential movement, who wishes his identity to remain unknown as he is still conducting investigations of a number of HPM programs. It is anticipated that we will have a closer look at a number of these courses in a future issue of *the Skeptic*.

Student Essay Competition

The Out-of-Body Experience It's All in the Mind

Simon Tobin

The following article was awarded first prize (\$500) in the 1988 Australlan Skeptics Studern Essay competition. The judges found the decision of a winner very difficult, in consequence of which the prize pool was doubled, with three more prizes issued, two of \$200 and one of \$100. This entry was considered best for Its extensive use of references and especially for its constructlon, demonstrating the attributes the judges were seeking of considering both sides of the argument. The author is twenty years old and currently enrolled In the postgraduate Diploma of Psychology at the University of Queensland, having already achleved a Bachelor of Arts degree in 1987.

Abstract

The definitions and characteristics of the out-of-body experience were examined. It was concluded that none of the various definitions are specific enough wRh regard to the idea of an actual physical split between the consciousness and the body. The experimental evidence was outlined, the weaknesses highlighted and alternative explanations were given. The out-of-body experience associated with the near-death experience was considered, and theories and explanations were reviewed. It was concluded that the best explanations of the phenomenon were those that assert that the OBE is an altered state of consciousness, the elements of which are products of the memory and imagination.

The out-of-body experience (OBE) has been defined in a number of ways, but all definitions infer some kind of physical separation between the mind and the body. For example, Irwin (1985), reviewed by Shaver (1986) defines OBEs as experiences in which the centre of consciousness temporarily appears to the experient to occupy a position spatially remote from the body. This definition is broad enough to cover a variety of experiences like astral travel, remote viewing, ESP projection and the separation of consciousness and body at death.

This essay will outline popular definitions of the out-of-body experience, critically evaluate the anecdotal and experimental evidence and draw conclusions about the actual nature of the OBE.

Blackmore (1982) asserts that an OBE occurs when one seems to perceive the world from a perspective outside the body. She describes the "typical" OBE as being experienced only in the modalities of vision and





hearing, and reports sensations of floating or flying as common. Objects, lights and colours appear unusually vivid, and often the OBEer can observe

their own body. Occasionally, a silver cord is seen linking the two bodies.

Blackmore's definition, while detailed, is inadequate for research purposes. The use of the word "seems" may imply that the experience was acknowledged as being non-real. A person may acknowledge that they "seemed" to be out of their body but not necessarily believe that to be the case. A person who experiences an OBE but recognises it as an hallucination is making a distinction between what "seems" to be and what actually "is".

Twemlow, Gabbard and Jones (1982) defined the OBE as an experience where a person feels that their mind or awareness was separated from their physical body. They asked subjects if they had had an experience of this kind. However, like Blackmore, it appears that their definition is not strict enough to distinguish between subjects who believe they were really out of the body and those who merely acknowledge a sensation of their mind being separated from their body. These false definitions encourage false positives. That is, people who have had an OBE-like experience but recognise it as "nonreal" could be misclassified as "genuine" OBEers. People may acknowledge that their mind seemed separated from their body but not believe that an actual physical split had occurred.

Rogo (1975) cites the work of Dr Robert Crookall, a geologist, who studied a large amount of anecdotal reports of OBEs. He claimed that the common ground between them is difficult to ascribe to chance, so he concluded that OBEs must be a real phenomenon. This type of research is plagued with problems. In any study based on anecdotal evidence, researchers are motivated to find confirmatory and ignore disconfirmatory evidence, whether they are aware of it or not. In the area of OBEs, the associated phenomena are well documented and researchers know what common threads to expect, so it is hardly surprising that such a large overlap of evidence exists. In addition, Crookall concludes that because the experiences are similar, they must be real. This illogical leap is entirely fallacious. It is almost like asking two people to describe a unicorn and concluding that such a creature must exist because both subjects talked of

a white horse with a single horn on its nose!

Estimates of the incidence of OBEs are wildly variable. Researchers report very different data and the definitions, controls and sampling techniques are often questionable.

Blackmore (1984) cites some results of research into the incidence of OBEs. Palmer (1979) surveyed 1000 persons and found that 25% of students and 14% of the general population reported having had an OBE. Haraldsson (1977) found 8% of affirmative responses from an Icelandic sample; Irwin (1980) in Australia found 20%, Blackmore (1982) obtained 14% in England and Kohr (1980) sampled members of a group entitled The Association for Research and Enlightenment and obtained 50% positive responses! As has been outlined earlier, the vague definition of the OBE probably accounts for these discrepancies, not to mention the biased sample Kohr used.

To illustrate the unreliability of these findings, Schmeidler (1983) reports a study in which students were surveyed before and after an induction procedure that involved a series of relaxation exercises, visual imagery exercises and finally attempts to leave the body. Before the experiment, only 4% of the subjects reported having had a prior OBE, but after the induction a striking 98% of the students reported the experience. She says these results imply that differences in exposure to direct suggestion, or to indirect cultural suggestion, can account for the differences in the groups' reports of OBEs.

Macintosh (1980) interviewed members of three Melanesian cultural groups and found a body of beliefs about OBEs that he says are broadly in agreement with one another. Sheils (1978) conducted another cross-cultural study in which the extent of belief in OBEs was assessed in 67 primitive cultures. He found that 95% of these cultures believed in OBEs and concluded that the specificity and generality of these beliefs indicate that the OBE is a genuine event. However, he produces a table (p.730) that shows the necessary conditions for an OBE to occur, and in 79% of the cultures the primary necessary condition is sleep! It is possible that the primitive cultures Sheils studied interpret many, if not all, of their dreams as OBEs. If a person dreams of wandering around the countryside, the dream may be explained in terms of something leaving the physical body during sleep and acting out the dream. Similarly, a dream about a dead relative may be taken as evidence that there is



something other than the body that survives death. Because the dreamer believes that they met and spoke to a dead person, they may believe that they encountered the dead person's spirit in some other world.

Both Sheils and Macintosh erroneously conclude that widespread belief implies truth. It is possible that a similarly high percentage of the primitive cultures they sampled believe in some sort of sun or rain god, but few people would conclude that there must be such deities from that kind of data!

Laboratory tests

Some researchers believe that an objective laboratory demonstration of separation of mind from brain is required to show evidence for OBEs being an actual physical phenomenon. One early experiment involved weighing the bodies of mice as they died to see if the release of the soul caused a corresponding weight loss in the mouse. Sadly, the recent laboratory work is not much better than this rather primitive attempt.

Charles Tart performed a series of experiments on Miss Z, a person who claimed to be able to induce an OBE state in her sleep. The idea of the experiment was for Miss Z to go to sleep in the laboratory, induce an OBE and "float" up out of her body to read a five-digit random number that was placed on a small shelf above her head. The subject was connected to a polygraph by wires that were two feet long, so it was apparently impossible to move to see the number without disconnecting the wires. Alcock (1981) points out that it was probably possible to move the box from the head of the bed.

For three nights, Miss Z was unable to read the number, but on the fourth night she awoke early in the morning and correctly reported the number; a seemingly remarkable achievement at odds of better than 100,000:1. In fact, the experiment was so loosely controlled that a number of alternative explanations are likely. Tart reports that he monitored the recording equipment throughout the night, and kept notes of whatever the subject did. As it turns out, his techniques of observation leave a lot to be desired, as he goes on to say that in some instances particular behaviours may have been missed because he occasionally dozed!

The EEG trace revealed an amount of sixty-cycle artifact which is consistent with the subject attempting to position herself to read the number. Tart acknowledges that she may have used concealed mirrors and reaching rods and read the number in this manner, but dismisses these possibilities as "unlikely". He also discovered that the number may have been

reflected in the shiny base of a clock that was positioned above the shelf, so he changed the set-up of the room for a fifth night of testing. However, "personal difficulties" forced the subject to return home to another state, and no more tests were done. Predictably, as soon as the controls were tightened, the subject was unable to repeat the performance.

Despite the high likelihood of fraud and the extreme flimsiness of the findings, this experiment is often reported by other parapsychologists, such as Rogo (1975) and Blackmore (1987), as a success.

Another reported "success" is the case of Blue Harary, again cited as evidence by Rogo. Harary was placed in a laboratory several miles from a target area and was supposed to induce an OOB state and attempt to appear to his pet cat. It was claimed that the cat became "extremely passive" at times that corresponded to those times that Blue Harary was allegedly OOB and with his pet. However, because we cannot communicate with the cat, it is impossible to tell if it actually detected Harary's presence or some other variable accounted for its passivity.

It was also claimed that Harary was detected by human subjects to whom he was trying to appear. These persons reported shadows and flashes of light at the time Harary was supposed to be out-of-body. Curiously, the subjects were told the period of time that Harary would be trying to appear to them, and they were probably motivated to search for cues that would normally be dismissed. If one is waiting for the appearance of an astral traveller, cues such as shadows and flickering light will undoubtedly be detected and reported as occurring more frequently.

An American artist called Ingo Swann was another person who claimed to be able to induce OOB states at will. Osiris and Mitchell (1977) wired him up to an EEG and compared the records when he reported being out-of-body with the EEG record for his normal state of consciousness. They found that the mean EEG amplitude recorded during the OOB condition was significantly less than during the non-OOB condition. However, one physiological measure is hardly rigorous proof that the subject was out-of-body, as a slightly flattened EEG can be attributed to many causes apart from astral projection.

In addition, there is no baseline or typical EEG reading for someone who is OOB. Without such a comparison group, it is impossible to infer that a certain type of reading implies that the subject was out-of-body.

Life after Death

OBEs are often taken as evidence that

consciousness survives death and that there is some kind of "afterlife" or non-physical existence.

Ring (1980), in his book "Life After Death", examines the near-death experience (NDE) in great detail and outlines a number of stages of what he terms the "core experience". He found that more than a third of his respondents claimed to have had an OBE while close to death, and he rules out hallucinations, expectations and pharmacological causes as alternative explanations. He favours the hypothesis that there is a genuine OBE or a separation of consciousness from the known body at the moment of death. All Ring's evidence is anecdotal and is prone to the same problems as outlined earlier with reference to Crookall's work.

Sabom (1982), cited by Heaney (1983), studied 100 hospital patients and 61 of these recalled something from their NDE. He reports three types of experience: autoscopy (26% of respondents), which is seeing one's own body from a position of height; the passage of consciousness into a foreign region or dimension (52%); and a combination of the two (22%). He rules out oxygen deprivation as an explanation because there were no olfactory experiences nor sudden feelings of despair such as those that are associated with anoxia. In addition, none of the patients were using drugs. Like Ring, Sabom's beliefs lean in the direction of a genuine OBE, but like Crookall, it is mistakenly concluded that similarity of experience implies the reality of the experience.

Other authors cited in Heaney's review explain the OBE associated with the NDE in terms of hallucinations associated with depersonalisation or dissociative experiences which are caused by the stress of being close to death. Some theorists say that the "tunnel" experience is a flashback of one's birth. Blackmore (1988) regards the latter explanation with some scepticism, and gave a questionnaire to 254 subjects, 36 of whom were born by Caesarian section. She hypothesised that the group born by Caesarian section would not report tunnel experiences. Both groups reported the same proportion of OBEs and "tunnel" experiences, and although Blackmore acknowledges that the experiences could be based on the general idea of birth, the theory is drastically weakened.

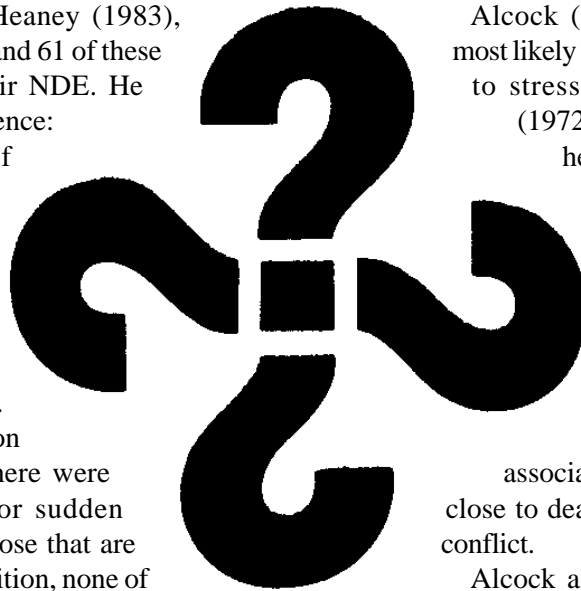
Heaney concludes that NDEs are "archetypal and symbolical experiences, deep experiences of the individual and collective psyche, combined with some ESP phenomena" (p.125). While he argues that NDEs are symbolical, he believes that they are genuine transition experiences that point to another life without disclosing its true nature. He says they may be a type of "bridge" experience.

The near-death experience seems to have a positive effect on those who experience it. People report no longer being afraid of death and being more "spiritual" (Ring, 1980). Greyson (1983) reported that NDEs foster a devaluation of conventional measures of material and social success and an increased emphasis on altruistic and spiritual concerns.

Alcock (1979) argues that OBEs are most likely a kind of psychological reaction to stress or conflict. He cites Reed (1972), who describes a process that he terms ego-splitting: "As well as feeling unnaturally calm, the subject feels as though he is actually outside one's body, at some vantage point from when one can calmly observe and hear oneself in the third person" (p.125). This theory accounts for the OBE associated with the NDE, since being close to death certainly causes stress and conflict.

Alcock also cites Palmer (1978), who asserts that in both Western and Eastern cultures, death is said to involve the separation of the soul with the physical body. He says that no matter what personal views a person may hold on the subject, they cannot help but think of this at the time of death. The stress associated with the possibility of dying may bring about such an experience. Palmer is himself a professor of parapsychology, but states that "the OBE is neither potentially nor actually a psychic phenomenon. It is an experience or mental state, like a dream or any other altered state of consciousness" (p.21).

Palmer adds that hypnagogic sleep accounts for the overwhelming majority of reported OBEs. OBEs are most likely when going to sleep or waking up, and this is when hypnagogic sleep and its relative hypnopompic sleep are most likely to occur. Alcock describes this phenomenon as a dreamlike fantasy, mixed with elements of reality, but unlike a normal dream. For example, if you have ever been in a "half-asleep" state and heard the telephone ring and got up to answer it, only to realise you were mistaken, you have experienced a



typical hypnagogic phenomenon.

Blackmore (1982) also likens flying dreams and lucid dreams to OBEs, and even admits that "... many lucid dreams fit within the experimental definition of the OBE" (p.294). She also reports three findings that the same type of people reports OBEs and vivid or lucid dreams (Palmer, 1979; Kohr, 1980; and Blackmore, 1982a cited in Blackmore, 1982).

This adds support to the theory that the OBE is an altered state of consciousness or a special kind of dream in which a certain set of experiences tend to occur together.

Blackmore concludes that a purely psychological theory is potentially the best explanation, and leans toward the view that OBEs are based on the processes of imagination and hallucination. She argues that the OBE is best seen as an altered state of consciousness, the elements of which are products of one's own memory and imagination (Alcock, 1983). This conclusion is particularly noteworthy because Blackmore became interested in OBEs after experiencing one herself, which she claimed lasted about three hours and was complete with astral travel and a silver cord (Blackmore, 1987). After many years trying to find evidence for the OBE, she has acknowledged that the experience does not involve an actual mind-body split.

Conclusion

In summary, the OBE is poorly defined and there are large discrepancies about the incidence and content of the experience. Some people may believe a dream in which one's own body is observed constitutes an OBE. Some may merely imagine their own body from a different perspective and say they have had an OBE. A strict definition emphasising the actual physical separation of consciousness and body needs to be made and used uniformly when OBEs are reported.

The experimental evidence for the OBE is loosely controlled and methodologically poor, and often conclusions are drawn from inadequate data. The psychological explanations put forward by theorists such as Palmer, Alcock and Blackmore explain the phenomenon better than theories which involve a physical separation of consciousness and body.

Finally, a comparison can be drawn between the evidence for the OBE and Tart's experiment on Miss Z. When Tart tightened the controls, Miss Z was unable to repeat her feat. When the controls are tightened by enforcing a strict definition and encouraging better experimental methodology, the effect that is thought to be the separation of consciousness and body will decrease dramatically, if not disappear altogether.

References

- Alcock, J.E. (1979) Psychology and near-death experiences. *The Skeptical Inquirer*, 4,25-41.
- Alcock, J.E. (1981) Psychology and the near-death experience. In K. Frazier (ed), "Paranormal Borderlands of Science". New York: Prometheus.
- Alcock, J.E. (1983) Psychology and the out-of-body experience. *The Skeptical Inquirer*, 8,75-77.
- Blackmore, S. (1982) Have you ever had an OBE?: The wording of the question. *Journal of the Society for Psychical Research*, 51(79),292-302.
- Blackmore, S. (1984) A postal survey of OBEs and other experiences. *Journal of the Society for Psychical Research*, 52(796),225-244.
- Blackmore, S. (1987) The elusive open mind: Ten years of negative research in parapsychology. *The Skeptical Inquirer*, 11,244-253. Blackmore, S. (1988, May) Visions from the dying brain. *NewScientist*, pp43-46.
- Greyson, B. (1983) Near-death experiences and personal values. *American Journal of Psychiatry*, 140(5),618-620.
- Heaney, J. (1983) Out of the body down under: Some cognitive characteristics of Australian students reporting OOBES. *Journal of the Society for Psychical Research*, 50(785),448-459.
- Macintosh, A.I. (1980) Beliefs about out-of-the-body experiences among the Elema, Gulf Kamea and Rigo peoples of Papua New Guinea. *Journal of the Society for Psychical Research*, 50(785),460-478.
- Osis, K. & Mitchell, J.L. (1977) Physiological correlates of reported out-of-body experiences. *Journal of the Society for Psychical Research*, 49(772),525-536.
- Ring, K. (1980) "Life at Death: A Scientific Investigation of the Near-Death Experience" New York: Coward, McCann & Geoghegan.
- Rogo, D.S. (1975) "Parapsychology". New York: Taplinger.
- Rogo, D.S. (1976) Aspects of the out-of-the-body experiences. *Journal of the Society for Psychical Research*, 48(768),329-336. Schmeidler, G.R. (1983) Interpreting reports of out-of-body experiences. *Journal of the Society for Psychical Research*, 52(794),102-104.
- Shaver, P. (1986) Consciousness without the body. *Contemporary Psychology*, 31 (9),645-647.
- Sheils, D. (1978) A cross-cultural study of beliefs in out-of-the-body experiences, waking and sleeping. *Journal of the Society for Psychical Research*, 49(775),697-741.
- Twomlow, S.W., Gabbard, G.O., & Jones, F.C. (1982) The out-of-body experience A phenomenological typology based on questionnaire responses. *American Journal of Psychiatry*, 139(4),450-455.



The Road to Endor

Tim Mendham

A letter to the editor published in the last issue of *the Skeptic* referred in passing to a book called "The Road to Endor" in reference to experiences of prisoners of war.

This got our curiosity roused, and a little investigation brought the book to light. "The Road to Endor", by Welsh army officer Lt E.H. Jones, was first published in 1919 and is described in a later publisher's blurb as "the most famous of the escape books of the First World War".

It is the escape technique in the book which is of particular interest to skeptics, as what began as a spiritualist game to amuse himself and confound his fellows in the Turkish prisoner-of-war camp of Yozgad became a convoluted and highly dangerous plan to effect the escape of two prisoners - Jones himself and Australian Lt C.W. Hill.

The plot centres on the use of a makeshift ouija-board and the fostering among their fellow prisoners and their Turkish guards of the belief that the two men were really in touch with a spirit guide. The Spook, as they called the guide (and very cantankerous it is, too), spelt out messages using the ouija technique of an upturned glass moving back and forth between letters of the alphabet. Jones and Hill were particularly impressive with the board, as they were usually blindfolded during seances (having learnt the position of the letters by memory and with the aid of some specifically placed notches - they could even perform with the board turned upside-down).

The pair succeeded in hoodwinking the Turks (and many of their comrades) and even persuaded the camp's Commandant that they could discover buried treasure for him. Their subsequent adventures in the camp included feigned madness, treks in search of Armenian gold, battles between conflicting spirits, many patient hours spent spelling out long and often hilarious "messages from beyond", and near death as they maintained their cover in the face of suspicious medical and military minds.

Eric Williams, author of that other famous POW book, *The Wooden Horse*, has said that "for sheer ingenuity, persistence and skill" *The Road to Endor* is second to none among such books, and that it is "the classic of 'escape by strategy' as opposed to 'escape by tactics'."

Throughout the book, Jones describes the increasingly sophisticated ploys used to convince their victims of the veracity of the spirit guides, including challenges from unconvinced colleagues that would

do proud a modern day sceptic. Techniques such as palming, mind reading, thought transference and possession are also used. The book is also extremely interesting for the picture it gives of the willingness of victims to fall for what is seemingly the most transparent ruse.

One passage in particular is a classic example of "cold reading", the practice whereby the "psychic" feeds back to the victim information which is received through very nonmystical ways. The passage below falls early in the book, so as not to spoil the pleasure of anyone who wishes to follow up on what is a highly recommended volume of spiritualist chicanery.

It was extremely interesting from a psychological point of view to notice how the basic idea that they were conversing with some unknown force seemed to throw men off their balance. Time and again the "Spook", under one name or another, pumped the sitter without the latter's knowledge.

It was amazing how many men gave themselves away, and themselves told the story *in their questions*, which they afterwards thought the Spook had told *in his answers*. I could quote many instances, but let one suffice. As it concerns a lady, I shall depart from my rule, and call the officier concerned "Antony", which is neither his true name or his nickname.

One night we had been spooking for some time. There was the usual little throng of spectators round the board, who came and went as the humour seized them. Our War-news Spook had occupied the stage for the early part of the evening, and had just announced his departure. We asked him to send someone else. [Footnote: "The seance that follows is incidentally an example of a conversation with a person still alive, or, in the technical language of the seance room, 'still on this side'."]

"Who are you?" said Alec [one of Jones' earlier collaborators]. As he spoke, the door opened and Antony came in, and stood close to my side.

"I am Louise," the board spelt out.

I felt Antony give a little start as he read the message. Without a pause the Spook went on:

"Hello, Tony!"

"This is interesting," said Tony. (That was giveaway No 2.) "Go on, please. Tell us something."

I now knew that somewhere Tony must have met a Louise. That was a French name. So far as I knew he had not served in France. But he had served in Egypt. One night, a month or so before, in talking of Egyptian scenery, he had mentioned a long straight road with an avenue of trees on either side that 'looked spiffing by moonlight,' and ran for miles across the desert. It had struck me

at the time that there was nothing particularly 'spiffing' about the type of scenery described; nothing, at any rate, to rouse the enthusiasm he had shown, and his roseate memory of it might have been tinged by pleasant companionship. Remembering this, I ventured to say more about Louise. Nothing could be lost by risking it.

"You remember me, Tony?" asked the Spook.

"I know two Louises," said Tony, cautiously.

"Ah! not the old one, mon vieux," said the Spook.

(Now this looks as if the Spook knew both, but a little reflection shows that, given two Louises, one was quite probably older than the other.)

Antony was delighted.

"Go on," he said. "Say something."

"Long straight road," said the Spook; "trees, moonlight."

"Where was that?" asked Tony. There was a sharpness about this questioning that showed he was hooked.

"You know, Tony! "

"France?"

"No, no, stupid! Not France! Ah, you have not forgotten, *mon cher*, riding in moonlight, trees and sand, and a straight road - and you and me and the moon."

"This is *most* interesting," said Antony. Then to the board: "Yes, I know, Egypt - Cairo."

"Bravo! You know me. Why did you leave me? I am in trouble."

This was cunning of the Spook. Tony must have left her, because he had come to Yozgad without her. But Tony did not notice. He was too interested, and his memory carried him back to another parting.

"You told me to go," said Tony. "I wanted to help" - which showed he hadn't.

"But you didn't - you didn't - you didn't!" said the Spook.

Tony ran his hand through his hair. "This is quite right as far as it goes," he said, "but I want to ask a few questions to make sure. May I?"

"Certainly," said Doc and I.

He turned to the board (it was always amusing to me to notice how men had to have something material to question, and how they never turned

to the Doc or me, but always to the board. Hence, I suppose, the necessity for 'idols' in the old days).

"Have you gone ba---". He checked himself and rubbed his chin. "No", he went on, "I won't ask that.... Where are you now?"

He had already, without knowing it, answered his own question, but he must be given time to forget it.

"Ah, Tony," said Louise, "you *were* a dear! I did love so your hair."

This was camouflage, but it pleased Tony.

"Where are you now?" Tony repeated, thinking, no doubt, of soft hands on his hair.

"Why did you not help me?" said Louise.

"Look here, I want to make sure who you are. Where are you now?"

"Are you an unbeliever, Tony? *C'est moi, Louise, qui te parle!*"

"Then tell me where you are," Tony persisted.

"Oh dear, Tony, I *told* you I was going back. I went back!"

"By Jove!" said Tony, "that settles it. Back to Paris?"

"I wish you were here," sighed poor Louise.

"The American is not nice -not nice as you, Tony."

"American?" Tony muttered. "Oh yes. I say, what's your address?"

The movement of the glass changed from a smooth glide to the 'slap-bang' style abhorred by all of us.

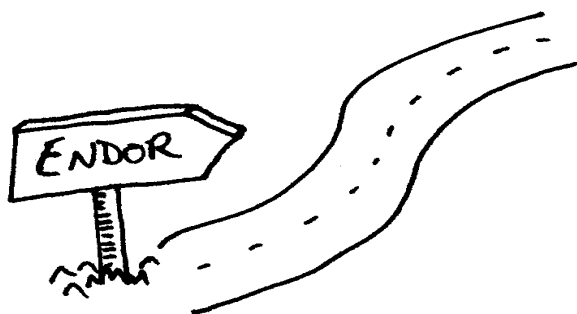
"Look here, young feller! You get off the pavement. I don't want you butting round here!" said the glass. "I'm Silas P. Warner ..."

"Go away, Silas!" "Blast you, Silas!" "Get out of this!" "We don't want to taL~c to you, we want Louise!" An angry chorus rose from Matthews, Price and the rest of the interested spectators. Silas had a nasty habit of butting in where he was not wanted (always at crucial and exciting points) and was unpopular.

But Silas would not go. He asserted Louise was in his charge. He would not tolerate these conversations with doubtful characters. Tony could go to hell for all he cared. He didn't care two whoops if it was a scientific experiment - and so forth and so on.

"One more question," pleaded poor Tony, "and if she gets this right I must believe. How does she pronounce the French word for 'yes'?"

This question, if genuine, again gave a clue to the answer. For it showed she did not pronounce it in the ordinary way. And I felt pretty certain the question was genuine. When a sinner is setting a trap, his voice usually betrays him. It is either toneless, or the sham excitement in it is exaggerated. Tony's voice was just right. So I decided quickly not to fence, but to risk an answer.



Vol 8 No 4 - 1988

Quack Attack

Harry Edwards & Tim Mendham

First of a four part series in which the abilities of astrologers, psychics, tarot readers, a palmist and the proprietor of a New Age shop selling "healing crystals" were put to the test.

After long drawn out negotiations with People magazine to include a sceptical column in the publication in an effort to redress the gross imbalance of paranormal reporting, the editor finally agreed to do a series in which a reporter would approach various well-known pseudoscientific and paranormal practitioners for readings, etc, tape the proceedings and pass on the transcripts to the Australian Skeptics for critical analysis and comments.

What was to have been a series ended up as a single article which appeared in the August 9, 1988 issue of People magazine under the heading "Quack Attack", asking its readers to be the judges; hardly a fair expectation considering the evidence placed before them, which completely omitted the very enlightening analyses of the astrologers' efforts and the omission of other important information which would have allowed for an objective assessment.

Despite good readership response, which would indicate that there are at least some who appreciate the other side of the story, the (new) editor considers it a dead issue, cozy in the knowledge that the majority of the magazine's readers fall into the category of those people "who can be fooled most of the time", with John Pinkney's unsubstantiated and uncorroborated stories of UFOs, ghosts and readers' fantasies.

While it could be said too that through this journal we are preaching to the converted, we at least present all the information necessary to enable an objective evaluation.

Astrology

Two astrologers were approached by People's reporter and given the information pertinent to drawing up a natal chart. In this case, a female, Linda Unicomb, born in Sydney on April 15, 1953.

Their fee was the same - one hundred dollars.

The first astrologer, Gordon Ballard of Manly, is a member of the Federation of Australian Astrologers and includes after his name the initials Dip. Ast.,

The most probable change would be a V for the W sound, or the W sound would be entirely omitted. There was therefore a choice of three sounds, "Ee", "Vee" and "Evee". The problem was to give the questioner, without his realising it, a choice of all three sounds in one answer - he would be sure to choose the one he was expecting.

The glass wrote "E" and paused. Tony beside me was breathing heavily. I gave him plenty of time to say "That's right," but as he didn't the glass went on -

"V-E-E." He could now choose between Vee and Evee.

"Evee!" said Tony. "That's it exactly! Ye gods, she always said it that funny way - evee, evee!" He began to talk excitedly.

After the seance, Tony took me apart and declared he had never seen anything so wonderful in his life. He told me the whole story of Louise. How they rode together along the long, straight road near Cairo; how it was full moon, and there was an avenue of lebbak trees through which the silver light filtered down; and how at the end of the ride they parted. I don't think anybody else was privileged to hear the whole story, but next day he told everybody interested that as soon as he came into the room the blessed glass said "Hello, Tony! I'm Louise." If the reader will turn back a page or two he will see this is another instance of bad observation. The Spook said, "I'm Louise," at which Antony started; and *only then* did the Spook say, "Hello, Tony!"

Eighteen months later I sat, a free man, in Ramleh Casino at Alexandria. Opposite me, at the other side of the small round table, was one of the Yozgad converts to spiritualism. I had just told him all our work had been fraudulent, and I had quoted the Tony-Louise story to show how it was done.

The Convert thought a moment.

"Granted that Tony, by his start, provided the link between 'Louise' and himself," he said, "there is still one thing to explain."

"What is that?"

"What made you connect the long, straight road, and the trees, and the moonlight, with 'Louise'?"

"Well," I said, "That, of course, was a mere shot in the dark - a guess."

The Convert smiled pityingly at me.

"You call it guessing. Do you know what I think it was?"

"No," said I.

"Unconscious telepathy - you were influenced by Antony's thoughts."

Is there any way of converting *believers*? What is a man to say?

A.C.A.Adv., and Dip. Struct. Eng. B.I.E.T. While these qualifications are quite irrelevant to the subject in hand, one could be forgiven for concluding that Mr Ballard was (as he no doubt wished his clients to assume) well qualified.

However, when given the completed natal horoscope, chart analysis and the tendencies of direction up to 1990, I found the general presentation most unprofessional - couched in poor English, replete with spelling errors, bad grammar, nonsensical phraseology and contradictory statements. Mr Ballard also included six photocopied pages of astrological and numerological information extracted from magazines as part of his "personal" assessment.

Notwithstanding that a natal chart is supposed to be a record of the past, a mirror of the present, and a peep into the future, Mr Ballard confessed "I do not actually know of her problems or what is going on, so you will have to read between the lines in the tendencies to apply them, *they are always spot on* ." [our emphasis].

In other words, the client has to try and make things fit, not difficult to do considering that the analysis was couched in ambiguous and general terms that would fit almost anyone. It was also noticed that the syntax used in the analysis was markedly different from that used in Mr Ballard's covering letter and bore a remarkable resemblance to that commonly seen in standard astrological textbooks.

The claim to be "spot on" is not borne out by a perusal of the following extracts from Mr Ballard's chart analysis.

"Generally of good health", "Talks languages", "Good at procreating"

And from "tendencies" up to 1990:

"Good relationship", "Getting married maybe", "Recognition of success", "Overseas travel", "Expectant mother", "Rich living", "Meeting some good connections", "Success through speaking" and "a Taurus partnership".

Why are we so sure that Mr Ballard is not spot on?

Because nowhere in the chart, analysis or tendencies, is there any mention of illness, disease or accident - in fact, just the opposite. Our subject is alive and well, and enjoying a healthy, prosperous, eventful and successful life, and there is certainly no suggestion that the subject of this natal horoscope would meet with a premature death at the age of eight months, as did Linda Unicomb! (Headstone can be seen in Mona Vale cemetery.)

When confronted with this horrendous gaffe, Mr Ballard beat a hasty retreat refusing to comment, and his wife became extremely abusive, yelling how

deceitful we were!

The pot calling the kettle black?

The second natal horoscope for Linda was prepared by astrologer/psychologist Joy Joyce.

The information prepared by her is vastly superior to that of Gordon Ballard in terms of its presentation - it is better typed, it is more stylistically written and it is longer. Unfortunately, when you start to read the content, the distinction disappears, and it's all down hill from then on.

Many of the assertions about the subject are similar to those of Mr Ballard, which would seem to indicate that they are using the same books - Linda will have a relationship with a Taurean, has some sort of singing ability, and could have some writing ability. Ms Joyce largely ignores the sexual and marriage aspects so popular with Mr Ballard, and concentrates on career and personal development. To do this she drags in some very dubious New Age views, such as past lives, healing powers, predestination and psychic energies - all these areas are as unproven as astrology.

She also makes the astounding statement that "Aries people are invariably tall and slim". You need only look around you to see how utterly stupid this statement is - note she says "invariably", not "most times" or even "some times" but always. It's been said that astrology is a subtler form of bigotry than racism or sexism, and this seems to prove it. Astrology pigeon holes people, and if you don't match the astrological standard, there must be something wrong With you.

We could stop there and conclude that astrology is no more a science and no more accurate than reading chickens' livers. Except that Ms Joyce continues (at length) and makes a major blunder which thoroughly puts the cap on the astrology farce - she makes predictions.

She says that the horoscope she has written is "your unique Natal Chart which becomes a blueprint of the life pattern before you" - it applies only to the subject.

She also makes many comments about the subject's career and relations with her family, such as "there appears to be an emotional conflict between you and parents" and "I see you've just experienced a year of promotion during 1987".

1987 was apparently a good year for Linda; 1988 has been a year of change; new commitments in 1990; and so it goes on until the real clincher, the line that proves beyond doubt that astrology is just guesswork and not accurate science: during 1991, "from November 27 the mighty roll of Pluto suggests that between now and September next you are to reach the half-way milestone of this life span". Remember, this is the "unique" chart for Linda Unicomb who died

eight months after birth in 1953. Yet Ms Joyce emphatically describes Linda's "life" from birth to the half-way point 39 years later.

If astrology is so accurate, how come it couldn't see Linda's early death at eight months, but rather gives her a life that is 118 times longer than it really was, complete with career and romance! Everything else - the character assessment, the comments on career and family, the judgement of someone's appearance - are useless when it is realised that as soon as astrology tries to have any semblance of detail or accuracy, it fails.

Everything else is vague guesswork, most of which can apply to anyone and is about as useful as a square wheel!

Despite her better presentation and style, Ms Joyce's natal chart is no more accurate than Mr Ballard's, and that is what the customer is paying one hundred dollars for.

When confronted with the Australian Skeptics' analysis, Ms Joyce made the following extraordinary admission (for an astrologer) - that the celestial bodies cannot predict everything.

"Astrologers cannot predict death - do the Skeptics expect the stars to stop?"

While there is little point in commenting on the question, in respect of the statement, we think the Skeptics and the public as a whole would like to know why, if according to astrologers, life is pre-ordained and the future immutable to the extent where, to use Ms Joyce's words, a natal chart is a "blueprint of the life pattern before you", the exact time of a person's death cannot also be predicted?



Student Essay *The Validity of the Paranormal*

Adrian Kelly

The following article was awarded second prize (\$200) in the 1988 Australian Skeptics Student Essay competition. This essay was commended for its grasp of theoretical and philosophical concepts of the paranormal and belief systems. The author is twenty years old and, at time of writing the essay, was a third year science student at the University of Queensland.

The old distinction between the natural and the supernatural has indeed become spurious. Once the distinction rested upon a scientific dogmatism, which supposed that everything in the way of fundamental facts and basic matters was known and that there was an obvious distinction between what was possible and what was not possible.

Today, parapsychologists and psychologists seek to explain in many ways strange phenomena that appear to exist on the fringe of present-day science.

There are four basic categories for the existence of anomalistic phenomena. Some argue that anomalistic phenomena are a case of ill-understood occurrences that, with time, will be encompassed by the scientific method and scientific understanding. Others would argue that it is not necessary to look for future scientific explanations; it is possible to explain "paranormal" phenomena in terms of known naturalistic processes.

Still others would argue that it is possible that it may be necessary to involve a new principle of nature to explain anomalistic phenomena and, in the process, revoke one or more of the basic limiting principles of the physical world. (The basic limiting principles I refer to here are the irreducible scientific axioms that govern the physical world.)

Another explanation is a spiritual explanation. This explanation is repugnant to the scientific community, but is nevertheless a logical possibility. In stating the possibility of the existence of a spiritual explanation for psi, I risk being accused of nullifying the need for scientific research into this area. Since how can one use the principles of science to study something that does not obey the "laws" of science?

I do not argue, however, that purely naturalistic explanations (known or unknown) are mutually exclusive to a spiritual explanation. It is logically possible that both can co-exist, according to the principle of parsimony, and I will discuss this in greater depth later in this paper.

So, of all these explanations for anomalistic phenomena, which can be classified as truly "paranormal"? As can be seen, to define the paranormal as merely referring to all behavioural and experimental phenomena that have traditionally seemed to constitute violations of the basic limiting principles of the physical world, needs qualification.

I shall consider in greater depth what can be regarded as truly paranormal. I shall then turn to the question of validity. Can we be sure that we are measuring what is truly paranormal, or are we merely measuring some naturalistic process? Are the four basic precedents important for valid methodology in

scientific research, as outlined by Zusne and Jones (1982), self-evident in research into the paranormal? Certainly, most parapsychological researchers do claim to use scientific methodology. However, they are harshly criticised by other scientists. On the basis of these criticisms, how should we view “evidence” for the existence of the paranormal?

In order to establish what is actually meant by the term “paranormal”, let us consider in further depth the explanations outlined above.

Firstly, any anomalistic phenomena may logically be attributed to the effects of basic limiting principles existing in the physical world. Thus, such things as the fallibility of human psychological perception, the fallibility of human judgement and the psychology of experience may seem to serve to deceive the individual into believing that he or she has experienced a truly scientifically unexplainable event no matter how genuine or sincere the motive.

Let us consider each of these explanations in turn. Can we be sure that what we see and hear is reality? Our perception of the world is highly dependent upon our past experiences. We learn to perceive things in certain ways which allow us to function appropriately in the physical world around us. As a person walks away from us, the size of the retinal image shrinks,

yet we do not see the person diminish in size.

However, learned aspects of our perception can lead to anomalies of perception. Kaufman and Rock (1962) demonstrated in a series of experiments that the “moon illusion” is in fact attributable to perceptual and cognitive processes - nothing more.

It is important to realise that we do not perceive reality directly. What we perceive is subject not only to distortion by the physical construction of the peripheral system, but also vulnerable to errors based upon the way we “learn” to perceive the world.

Quite obviously, experiences that are attributable at the fallibility of human physiological perception cannot be classed as “paranormal” - they are in every way “normal”, since the basic limiting principles of the physical world as we know it are not contravened.

The fallibility of human judgement, another possible naturalistic explanation of psi, often gives rise to three effects: faulty inferences of causality, illusions of control and the illusion of validity. I shall consider each of these before returning to the psychology of experience as an explanation for the “paranormal”.

Faulty inferences of causality can occur because of the effects of temporal contiguity. The nervous system, human or animal, is constructed so that events occurring in quick succession become associated with



each other; this is the essence of learning. The two basic kinds of learning - operant conditioning and classical conditioning - are based on temporal contiguity: on the repeated co-occurrence of two events.

When the time lapse between two events is short “learning” occurs automatically. If a person bangs on a desk and an instant later the radio comes on, it is natural to “feel” that the former caused the latter, although we “know” that it did not. Michotte (1946) found dramatic evidence for the existence of this effect. Temporal contiguity resulting from the “chance” occurrence of two non-related events is probably responsible for more belief in paranormal powers than is any other thing (Alcock, 1981). “Coincidence” is not a paranormal effect - in fact, it is not even an effect in the true sense of the word. More will be said about the role of chance later.

Biases of imaginability also result in faulty inferences of causality and may be an explanation of “psychical” phenomena. When one has no instances of a class of events in memory, one typically generates several instances and judges the probability by the ease with which the generation occurred. Biases related to retrievability of instances can also affect judgement. Recent instances are more likely to be related than those that occurred some time ago.

Tversky and Kahneman (1973) demonstrated that, indeed, some instances are easier to retrieve than others. Asymmetry in the effects of positive and negative outcomes can lead to erroneous judgement - often associations which are built up on the basis of a single or even several non-pairings. We tend to remember only those times when an emotionally salient event A was followed by another appropriate emotionally salient event B and forget the times that A occurred without B.

These explanations are natural explanations which may or may not account for anomalistic phenomena. If they do, then the associated “effect” cannot be regarded as paranormal. As a result, these processes must be ruled out of any experiment in which we aim to investigate truly paranormal phenomena. Another source of error in our interpretations of causes of anomalistic events lies in what has been referred to as the illusion of control. Langer (1975) cited evidence that the more similar a chance situation is to a skilled situation, the greater the likelihood that the individual will see himself as having control over what are, objectively, chance determined events.

The illusion of validity (Tversky and Kahneman, 1984) may also explain a so-called “paranormal

phenomenon. The amount of confidence people have in their predictions typically depends upon the extent to which the predicted outcome is representative of the inputs.

All the above explanations are naturalistic processes which often pivot upon the effects of “chance” where supposedly “amazing” coincidences occur. The above processes emphasise how erroneous conclusions can be drawn about events because the probability model used to reach this decision is inappropriate as a description of the situation.

If the “chance” model is inappropriate, the statistical decisions based on it will be in error. In the field of parapsychological research, or in any field of research for that matter, any statistical decisions one reached are based on two important assumptions: (1) that the appropriate “chance” model was employed in the analysis, and (2) that no extraneous variables have been in operation which would impair a comparison of the observed data of that model.

To assess the validity of the paranormal, it is essential that these two assumptions are met, otherwise we cannot be sure that we are measuring real effects. It is important to note that one is never certain that all extraneous variables have been eliminated, or that the experimenter will be able to specify the important factors which may make his model inappropriate.

Mystical experiences have come to be viewed as an altered state of consciousness, brought about by decreased alertness or increased motor activity (Ludwig, 1966). An altered state of consciousness may be brought about in several ways: (a) deautomatisation (Deihman, 1976); (b) biochemical changes (Ludwig, 1966); (c) cognitive labelling (Creeley, 1974); (d) the relaxation response (Benson, 1966).

I will not explain these processes in any depth, except to say that variations in physiological state may be interpreted as something beyond the realm of normal reality, as something of a transcendental nature. Such explanations cannot be classed as “paranormal” since they are consistent with what is currently known about the effects of biological changes and/or with the direction that research is pointing (Ornstein, 1976).

The mature anomalies to the current scientific paradigm which have been presented over the years by parapsychologists may well contradict the basic principles of contemporary science, but many believe that the day is coming when a new paradigm will replace the current one, and then psi phenomena will readily fit in.

According to this view, it is possible then that anomalistic phenomena that cannot be accounted for

by the above presently-known naturalistic explanations may be accounted for when a Kuhnian paradigm shift occurs (Thouless, 1972).

In the Kuhnian sense, a paradigm serves as the conceptual and methodological framework for scientists working in a particular field at a particular time. It not only determines the character and direction of research but, implicitly at least, even legislates as to what sort of entities or phenomena may or may not be said to exist.

Parapsychology could be said to be in the “preparadigm” phase of development, or arguably in a state of “crisis”, awaiting a paradigm shift - the state that heralds a scientific revolution. I may hasten to add that Rothman (1978) states that the major difficulty with the notion that parapsychology is going to produce a paradigm revolution in physics is the fact that most physicists are not unhappy with basic laws such as conservation of energy. The parapsychologists may be dissatisfied, but that does not produce a revolution on physics.

If it is the case that a paradigm shift is required, and that the current scientific world view is inadequate, then it is possible that paranormality in the true sense of the word, does exist - that is to say that certain phenomena that contravene the basic limiting principles and current scientific world view do exist. Of all the possible explanations for psi given so far, this explanation may be regarded as the first truly paranormal explanation since it does not hold as necessary and sufficient the basic limiting principles of the physical world.

I mentioned in the introduction that it is logically possible that there may be a spiritual explanation of psi phenomena, which may exist together with the known - naturalistic explanation of psychic phenomena, subject to the law of parsimony.

The possibility is avoided by scientists, and I can fully understand their reasons for doing so, as it cannot be “scientifically” proven, but neither disproven. The possibility is labelled by the sceptic as merely wishful thinking and/or a fantasy ploy adopted by occult leaders and adherents to energise a thriving market. Others reject the notion as merely the last remnants of a fanatical and magical indoctrination from the power struggles of the middle ages (as was the case with the Spanish Inquisition of the 14th Century).

However true these things are, the explanation is possible regardless. A spiritual explanation along with the case of an unknown and better suited paradigm are the only two truly paranormal explanations of anomalistic phenomena, assuming that the phenomena

cannot otherwise be explained by naturalistic processes.

In speculating, one could even suggest that these two “explanations” are in fact one and the same. However, I will not deal with this philosophical problem in the course of this paper.

In contemplating the wide range of possible naturalistic explanations for anomalistic phenomena, we have to ask ourselves: is research into the area actually measuring what it is supposed to measure? When we conduct research into psi, are we measuring a paranormal effect, or are we merely measuring one of the natural processes outlined above? This is the determinant of scientific validity.

Consider an example: suppose personnel officers within a large company are using selection tests that are irrelevant to success in the jobs being applied for. Then the selection , test being used is not measuring what it is supposed to measure. To be a valid criterion for hiring a job applicant, a selection test must be shown to be a good predictor of job performance. People who get high scores on the test should receive better on-the-job performance evaluations than those who get lower test scores.

In psychical research, experimenters should be particularly careful that they are measuring true paranormal phenomena and not just one or more of the above known psycho logical/perceptual/cogitative processes outlined in the above section. How can we be sure that we are measuring what we are supposed to be measuring? - by carefully considering the logical, theoretical and empirical relationships between the measurement operators employed and the constructs that the investigator wishes to study.

Validity of research

Let us now consider the validity of research into the paranormal. I shall do this by examining firstly the four basic precedents necessary for valid methodology, and then actually comparing criticisms and rebuttals by both believer and sceptic in the light of these precedents.

What are the four basic precepts of scientific methodology? Firstly, a claimant must demonstrate that the phenomenon to be studied is falsifiable. Falsifiability means that the negative results will be obtained if the hypothesis is not true. The problem with many paranormal claims is that they are stated in a language that no matter what the results of a particular procedure that has been used to demonstrate a phenomenon, these can be used in support of the claim. Secondly, the results must be replicable. Different researchers should be able to obtain the same results

if they use the same procedures under the same circumstances. This has always been a problem in parapsychology, which investigates paranormal claims using the experimental method. It is not as fatal a problem as the physical scientists have tried to show it to be, however, for the behaviour of organisms, unlike the behaviour of inanimate objects, is subject to so many unknown and unmeasurable variables (as highlighted in the above section on naturalistic explanations) that replicability is not always achieved even when ordinary, non-anomalous behaviour is studied.

Parapsychologists over the years (McConnell, 1977a; Pratt, Rhine, Smith, Stuart and Greenwood, 1940; Rao, 1979) have responded to this criticism by arguing whether replicability in parapsychology does exist, although not in the sense of being able to produce psi effects on demand (Rao, 1979) or that parapsychology may be dealing with a domain of nature where non repeatability and non-predictability are the rule (Pratt, 1974). McConnell said in this context: “There has been no revelation from God that all experimental phenomena must be repeatable upon demand” (1977a, p203). Of course, critics are not impressed with such attempts at rebuttal, as will be discussed later.

Thirdly, the proponent of the paranormal claim and the opponent of the paranormal agree on a procedure for verifying the claim (termed intersubjective verifiability). It is evident that unless such an agreement is reached, arguments concerning claims and counter-claims will be, in principle, insoluble.

Fourthly, the principle of parsimony must be adhered to. The principle of parsimony is a principle in science that states that of two explanations, the one consistent with the fewest assumptions is to take precedence. It does not necessarily mean that the explanation will be the simplest one, although often it is. Some explanations, although simple in their final form, are derived from exceedingly complicated reasoning and calculations. What the principle does state is that an explanation that requires many unverified assumptions is not as good as one that requires fewer such assumptions.

Replicability

Let us now consider in greater depth the problem of replicability. The late S.S. Stevens (1967) argued that even if ESP (extra-sensory perception) is real, the signal-to-noise ratio is just too low at the moment to be of interest. There are many extraneous variables involved as is outlined above which have to be carefully controlled if we are to establish the existence of such

phenomena.

If there is a single problem that is the bane of parapsychologists, it is that of the remarkable lack of replicability of experiments and demonstrations.

Ackroyd (1977) and Pratt (1981), active supporters of the existence of psi phenomena, reply to this criticism by stating that there is evidence that this requirement, along with the other requirements of scientific methodology, inhibits psi functions, and surely it should be a part of the business of science to design methods of investigation that are flexible, unbiased by preconceptions as to what is possible and even hospitable to the phenomena under investigation, without compromising scientific standards. Critics have responded to this as they have to McConnell’s argument for non-repeatability.

Other parapsychologists reply to the problem of replicability from a different angle: parapsychology has repeatability in a more general sense, and that scientific repeatability will come when we accumulate enough knowledge about phenomena so as, so to speak, fit the pieces of the jigsaw together. Parker (1978) in reply states that there is no sign that this is happening, and that, in his opinion, a high degree of replicability is essential to both the progress and the recognition of parapsychology. Parker goes on to state that “there appear to be few, if any, findings which are independent of the experimenter” (1978, p.2).

All experimental sciences have long viewed replicability as a foundation stone in the edifice of their methodology. It is not enough for a researcher to report his observations with regard to a phenomenon: he could be mistaken, or even dishonest (the existence of fraud will be discussed later). But if other people using his methodology can independently produce the same results, it is much more likely that error and dishonesty are not responsible for them.

Unreliability does limit validity. In a sense, the problem of developing a valid methodology hinges on the reliability or repeatability of measurement. Put simply, a measure that is unreliable cannot be a valid measure of anything (Evans, 1985). High reliability does not guarantee valid measurement, but it does make valid measurement possible by minimising the amount of random error in data.

While high reliability reduces the influences of random measurement error, thereby permitting valid measurement, enough systematic error may still exist to invalidate the measurement procedure. A serious problem exists for assessing the validity of the paranormal, if repeatability factors are as bad as stated.

Possibility of fraud

Without the assurance that independent replication can be achieved, the possibility of fraud becomes a strong temptation (Price, 1955). Is the validity of the paranormal immune to the high presence of fraud in research and account of personal experiences?

Believers typically respond with the response that while the medium may have resorted to cheating on occasion, most of the time he used paranormal powers. One parapsychologist of considerable repute declared: “Does not the fact that the Creery sisters sometimes cheated when they had the opportunity reduce the evidential value of those experiments in which they had no chance of cheating?” (Thouless, 1963, p.25). The answer is, of course, “Yes, it does!”

Validity is affected by fraud. In return, it is argued that fraud is not only evident in studies on extraordinary sciences (eg Klass, 1974; Randi, 1979), but it is also evident in science. There are suggestions that even the most eminent of scientists (eg Newton and Mendel) may have “fudged” some of their data (Gould, 1978). If cheating also occurs in conventional science, how can instances of fraud be used as an argument against the unusual conclusions of the extraordinary sciences?

In conventional science, the tendency seems to be towards manipulation of data in the direction of self evident conclusions that are consistent with other evidence as opposed to counter-intuitive conclusions. The difference is that such conclusions can often be supported by genuine research, although perhaps not as clearly as the scientist who judges would prefer. Cheating in extraordinary science is most often directed towards supporting ideas at variance with conventional theory and, thus, in the absence of other forms of supportive evidence, whether or not fraud has occurred becomes the central issue. Similarly, legitimate science remains so even with some finagling in its midst, because its basic findings are replicable.

Falsifiability

Another characteristic of genuine science is the concept of falsifiability, which refers to the requirement that theories be stated in such a way that they can be proved wrong. A theory that contains circular reasoning or what amounts to excuses for those observations that fail to support it is not a very useful or explanatory theory.

Advocates of parapsychology, for example, argue that if a “psychic” is caught cheating or using conjurer’s tricks, it does not mean that he or she is not genuine on other occasions, or that the presence of disbelievers spoil the atmosphere and therefore the

psychic’s abilities are impaired.

The problem with these assumptions, often included in positive presentations of parapsychology, is that they make it, impossible to test the theory that ESP does not exist. For example, if a test is conducted and it produces positive results (which will occur occasionally even if ESP does not exist, because of chance variation), advocates will claim that an extrasensory process is at work, whereas if the test fails to produce positive results, the advocate may invoke one of the previously described ideas and thereby continue to claim the reality of ESP.

To test the validity of the paranormal, we must have a working hypothesis that is falsifiable. However, all hypotheses put forth about psi are non-falsifiable: there is no way for parapsychologists to learn that psi does not exist (if it does not) since all failures to produce evidence for psi can be explained away (Alcock, 1981).

Verification

Valid methodology also demands that the proponent of the paranormal claim and the opponent must agree on a procedure for verifying the claim. Related to this concept is the characteristic of science referred to as publicness. Scientists are expected to make their research public - to allow methods, findings and conclusions to be carefully examined by other researchers for flaws and inconsistencies.

Now, the great sensitives and psychics never seem to be able to demonstrate their powers under properly controlled conditions (conditions approved not only by proponents of the paranormal, but also by the sceptics - Zusne & Jones, 1982).

A continuing problem in the area of parapsychology, for example, is the inability of the researchers sceptical of the extrasensory hypothesis to find results supportive of ESP. A condition of testing the validity of competing hypotheses is intersubjective verifiability. This appears to be a problem for assessing the validity of the paranormal.

Parsimony

Lastly, I shall consider the principle of parsimony in scientific theories: other things being equal, the simplest explanation of a phenomenon is preferred over more sophisticated accounts.

The simplest explanations are those involving the smallest number of concepts. In fact, the chief criterion of scientific understanding is being able to explain a complicated body of data by means of a single principle.

Many pseudoscientific ideas are not in themselves impossible, and yet they include such a complex and often convoluted set of assumptions that other simpler

explanations become much more reasonable and therefore probable.

For example, it is simpler to conclude that extrachance performance at ESP tasks is due to some combination of expected probabilities, fraud, poor controls, conjuring, and so on, than it is to assume that a mysterious, unknown and undesirable force exists that invalidates many of the central principles of several areas of science.

When we consider the vast range of phenomena, we note a characteristic disorderliness. There is no general agreement on what constitutes core knowledge, or even on how to define basic constructs. There are no articulated theories and, after a century of research, no clearly demonstrable phenomena (Alcock, 1981).

The existence of the paranormal is by no means decided upon by such problems, but these difficulties should be taken into account when judging its validity. It appears that the validity of the paranormal reels under the blows of criticisms made on the basis of these four principles of science and scientific method.

The predictive validity of the findings of research into the paranormal is important, since one of the aims of the scientist is to predict. Accurate prediction can have practical value, as when weather or success in a course of training is predicted, and prediction affords a test of understanding. That is, when accurate predictions of outcomes can be logically deduced from explanatory principles, the validity of those principles is supported.

Validity of predictions is checked by follow up. How do follow-up psi experiments correlate with previous ones? This question is of course related to the previous discussion on replicability. Alcock (1984) categorically states that it is still impossible to predict when ESP should or will occur.

Conclusion

In conclusion then, obviously not all anomalous experiences can be regarded as “paranormal”. Normal perceptual, memory, learning and cognitive processes should be expected to produce occasional “anomalous” experiences, and should be controlled for when investigating psi.

Parapsychologists seem singularly disinterested in normal mental functioning. The demonstrated human disinclination to accept coincidence as an explanation predisposes people to see covariation and impute causality where neither exists. People have a very strong propensity to ignore negative instances. Logic and rationality are not innate, but learned, and magical or superstitious beliefs and practices develop in both

the individual and society in response to the need for reduction of anxiety or fear. Consequently, the same degree of critical scrutiny is often not applied.

All such naturalistic processes need to be accounted for in psychical research if we are to be sure we are measuring what we are supposed to be measuring (the principle question of validity).

Those who wish to believe in the existence of a spiritual realm as an explanation for truly paranormal events (assuming they exist) will hear no argument from me, but those who claim to have scientific evidence for psi can expect to be faced with the wrath of methodological criticism.

Validity of research was discussed in terms of four important preconditions for valid experimentation: replicability, falsifiability, the principle of parsimony and intersubjective verifiability. Major criticisms of research into the paranormal were found to exist on the basis of these four important preconditions.

There appears to be no experiment or demonstration which can be replicated by, or in the presence of, a competent, though sceptical, scientist. It was also pointed out that all failures to produce evidence for psi can be explained away - psi phenomena are non-falsifiable.

There has been no increase in theoretical clarity, and these has always existed a characteristic disorderliness to the phenomena. Also, psychics have never seemed to be able to demonstrate their powers under conditions approved not only by the proponents of the paranormal, but also by sceptics.

These problems, of course, do not eliminate the possibility of the existence of truly paranormal phenomena. However, there is no evidence that would lead the cautious observer to believe that parapsychologists and parapsychicists are on the track of a real phenomenon, a real energy or power that has so far escaped the attention of those engaged in “normal” science.

References

- Alcock, J.E., (1981). *Parapsychology: Science or Magic?* Exeter: A. eaton.
- Broad, C.D., (1962). *Lectures on Psychical Research*. London: Routledge & Kegan Paul.
- Evans, J.D., (1985). *Invitation to Psychological Research*. New York: Holt, Reinhart & Winston.
- Gould, S., (1978). The finagle factor, *Human Nature*, 1(7), 80-87.
- Holroyd, S., (1977). *Psi and the Consciousness Explosion*. London: *The Bodley Head*.
- Klass, P., (1974). *UFOs Explained*. New York: Random House.
- Kaufman, L. & Rock, I., (1962). *The moon illusion*.

Scientific American, 207(I),120-131.

Langer, E.J., (1975). *The illusion of control*. *Journal of Personality and Social Psychology*, 32(2),311-328.

Ludwig, K.M., (1966). Altered states of consciousness. *Archives of General Psychiatry* 15,225-234.

McConnell, R.A., (1977). The resolution of conflicting beliefs about the ESP evidence. *Journal of Parapsychology*, 4I,198-214.

Michotte, J.,(1946). *Perception and Causality*. Paris:?

Ornstein, R.E., (1976). The Techniques of Meditation and Their Implications for Modern Psychology; in C. Naranjo & R.E. Ornstein, *On the Psychology of Meditation*. New York: Viking Penguin.

Pratt, J.G., (1974). In Search of a Consistent Scorer. In J. Beloff (ed), *New Directions in Parapsychology*. London: Etek Sciences.

Pratt, J.G., (1981). Some Notes for the Future Einstein of Parapsychology. In R.A. McConnell (ed), *Encounters with Parapsychology*. Biological Science Dept, University of Pittsburgh.

Pratt, J.G., Rhine, J.B., Smith, B.M., Stuart, C.E., & Greenwood, S.A., (1966). *Extra-sensory Perception after 60 Years*. Boston: Bruce Humphries (originally published 1940).

Price, G.R., (1955). *Science and the Supernatural*. *Science*, 122, 359-367.

Randi, J., (1979). Examination of the claims of Suzie Cottrell. *The Skeptical Inquirer*, Spring, 3(3), 16-21.

Rao, K.R., (1979). On "The scientific credibility of ESP". *Perceptual and Motor Skills*, 49,415-429.

Rothman, R.A., (1978). The new perpetual motion. *The Humanist*, XXXVIII(4),42-45.

Thouless, R.H., (1963). *Experimental Psychological Research*. Harmondsworth: Penguin.

Thouless, R.H., (1972). *From Anecdote to Experiment in Psychological Research*. London: Routledge & Kegan Paul.

Tversky, A. & Kahneman, D., (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5, 207-232.

Tversky, A. & Kahneman, D., (1974). Judgement under uncertainty: *Heuristics and biases*. *Science*, 185(4157),1124-1131.

Zusne, L. & Jones, W.H., (1982). *Anomalistic Psychology: A Study of Extraordinary Phenomena of Ordinary Behaviour and Experience*. New York: Lawrence Erlbaum.

Australia's Credulity Rating: Bad or Worse?

William Grey

The Saulwick poll which surveyed the level of belief in paranormal phenomena in a number of categories in Australia, reported in *the Skeptic* (Vol 8, No 3, p5) provides an interesting contrast with the results of the National Social Science Survey conducted by the Australian National University.

Both surveys are based on a reasonably significant sample size, with each having over 1000 respondents across Australia. Yet Saulwick found a 32% level of belief in astrology, in comparison to the NSSS finding of 16% - exactly half the Saulwick figure. Who (if anyone) is right?

We probably need more work from our social scientists to sort this out. I suspect that determining a respondent's real level of commitment to occult or paranormal beliefs is a complex and difficult task. I repeat the hope, expressed in my paper ("Paranormal Belief in Australia", *the Skeptic*, Vol 8 No 2, pp18-22), that the NSSS will address these issues in future surveys.

There were two astrology questions included in the NSSS, viz "The stars and planets affect our lives in ways not known by science" and "I believe in astrology". Both these questions gave closely similar results. however, for convenience, I chose the second and simpler question ("I believe in astrology") when writing up the result of the survey.

It is extremely interesting to note that the respondents to the Saulwick poll, which provided the results so conspicuously at variance with NSSS, were asked, *inter alia*, a question ("Could you tell me whether you believe in it [astrology] or not") which is almost identical to my second question - the one on which my write-up of the NSSS was based.

There is nevertheless the following major differences. NSSS provided their respondents with a five category response. I reduced it to three by combining the "strongly agree" with the "agree" and the "strongly disagree" with the "disagree" categories. The crucial difference, however, was that the NSSS included a "don't know" category and the Saulwick poll did not. In this respect, Saulwick was less searching than NSSS. It was a "quick and dirty" survey.

My own hunch is that the 16% reached by NSSS is a firm figure for "serious" support for astrology in the Australian community. However, if you attempt to polarise the results by trying to force the "don't know" to come down on one side or the other, I suspect that



you would probably get something close to the Saulwick figures. (Though perhaps not quite close enough: it works well for the male figures; however to get the Saulwick figure of 40% of support for astrology among women, you have to split the NSSS "don't knows" 4:1 in favour of astrology. This does not seem very plausible.)

Both surveys agree that women are nearly twice as likely as men to believe in astrology.

If I am right that the Saulwick poll exaggerates the extent of belief in astrology, it is reasonable to suppose that the same holds true for the other categories (telepathy, life after death, UFOs, faith healing, reincarnation, palm reading and tarot cards) and that support for these categories of belief is similarly overstated.

There are alternative hypotheses, for example that national credulity underwent a sudden and dramatic increase between 1987 and 1988. I hope that that is not the case.

Nevertheless, the Saulwick data certainly make me much more hesitant about accepting (without a much more careful evaluation) the international comparisons which I advanced. Before accepting the US levels of belief in astrology, for example, we would need to know some more detail about exactly what questions were asked, and what categories of response were available.



Book Review

"Extraordinary Popular Delusions and the Madness of Crowds"

by Charles Mackay, LLD

(Published by Farrar, Strauss & Giroux, undated - pbk reprint of 1932 edition?)

This fascinating book would make a welcome addition to any Skeptic's library. Originally published in 1841, the author in his preface says that his object "has been to collect the most remarkable instances of those moral epidemics which have been excited, sometimes by one cause and sometimes by another, and to show how easily the masses have been led astray." The book, he says,

"may be considered more a miscellany than a history. Interspersed are sketches of some lighter matters - amusing instances of the imitiveness and wrongheadedness of the people, rather than examples of folly and delusion."

He variously covers such scams as the South Sea Bubble, the Mississippi Scheme of John Law, a craze for tulips, and historical relics (religious or otherwise). He also covers such classics of paranormal scepticism as alchemy, apocalyptic prophecy, fortune telling (astrology and divination), Mesmer and the "magnetisers", haunted houses and more.

On fortune telling, he says

"An undue opinion of our own importance in the scale of creation is at the bottom of all our unwarrantable notions in this respect. How flattering to the pride of man to think that the stars in their courses watch over him..."

On the magnetisers, he begins with

"The wonderful influence of imagination in the cure of diseases is well known. A motion of the hand, or a glance of the eye, will throw a weak and credulous patient into a fit; and a pill made of bread, if taken with sufficient faith, will operate a cure better than all the drugs in the pharmacopoeia."

Do not be put off by the date of original publication - the style is not heavy Victorian or overly moralising. Rather Mackay retells in a fairly straightforward if slightly mannered way the curious histories of a wide range of delusions, passing briefly over Nostradamus, Cagliostro, Paracelsus and many other lesser known but equally fascinating identities as he traces the movement of popular fantasies.

His 19th century vantage point gives an interesting comparison with our own, for it is amusing to see what took people in many years ago, and depressing to realise that many of these practices are still with us today.

However, as long as we can read the thoughts of sceptics of the past like Charles Mackay, we can learn from them. As he says about ghosts and haunted houses, "If they are not yet altogether exploded, it is the fault, not so much of the ignorant people, as of the law and the government that have neglected to enlighten them."

A limited number of copies of this book is available direct from the Melbourne University Bookroom, PO Box 278, Carlton South 3053.

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Numerology - it just don't add up!

Sir Jim R. Wallaby

Talking the other day to the Skeptics' Ace Investigative Reporter, Harry Edwards, about his expose of a numerological get-rich-quick scheme, I pondered on just what numerology is all about.

The name suggests that it should be about the study of numbers, but, as is usual in these occult matters, names can be deceptive. After all, astrology should be about the study of stars and it clearly is not.

Combing through my sceptical library for some learned dissertation on the subject, I was astonished to discover that no-one appears to have seriously investigated this popular pseudoscientific belief. Most investigators appear to mention numerology, if at all, only in passing, as yet another sad example of human gullibility.

Undaunted, and with visions dancing in my head of being recognised as the author of the definitive work on the topic, I turned to the works of believers to seek some insights. Enlightenment was not long in coming. Numerology is a belief of such stupefying banality as to make astrology look like an exact science.

We Wallabys did not get where we are today by refusing challenges just because of their utter pointlessness, so herewith the ultimate and definitive work on the ancient art of numerology (Nobel Prize Committee please note).

What is Numerology?

"Numerology is the art of predicting by numbers and can provide an extremely interesting and accurate insight into character and personality. It requires no extrasensory powers but is simply worked out mathematically", or so Ann Petrie, in *Your Psychic World A-Z* would have us believe. That appears to be a fairly accurate and simple consensus of the position of other works consulted. (They are all simple - there is nothing complex about numerology.)

They usually contain references to Pythagoras and to the Jewish Kabala, a fairly standard practice among modern proponents of pseudoscience, the assumption being that association with ancient scholarship coming to grips with the nature of the real world somehow lends antiquity, and thus validity, to beliefs that have failed to measure up to any rational test.

How Does It Work?

The whole universe is governed by numbers and the numbers that count, numerology-wise, are the integers 1-9 inclusive. Everyone can be reduced to a single digit number. To determine your "birth number" (inherent characteristics), you need to know your date of birth (at least with astrology you need to know the time and place as well!).

Calculation of your "name" number is much more complex. You not only need to know how to spell your name, you also need to be able to numerify it by application of an extremely complicated formula (Figure 1). Those readers who dropped mathematics after kindergarten should skip the next bit.

Figure 1

1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	

Now the maths gets really complicated. We have to reduce all of these figures to single digits. This process is shown in Figure 2. For the purpose of the exercise, I will use the data for Albert Einstein and Isaac Newton.

Figure 2

Einstein:

Birth number

$$1+4+3+1+8+7+9=36=3+6=9$$

Name number

$$\begin{aligned} &A L B E R T E I N S T E I N \\ &1+3+2+5+9+2+5+9+5+1+2+5+9+5 \\ &= 63 = 6+3 = 9 \end{aligned}$$

Newton:

Birth number

$$\begin{aligned} &2+5+1+2+1+6+4+2=23 \\ &= 2+3=5 \end{aligned}$$

Name number

$$\begin{aligned} &I S A A C N E W T O N \\ &9+1+1+1+3+5+5+5+2+6+5=43=7 \end{aligned}$$

Nine is supposed to represent the characteristics of activity and determination, accident proneness and quarrelsomeness, and as Einstein has two nines, these allegedly reinforce each other.

Five is the number for lively, impulsive, quick thinking and quick tempered people, while seven is for introverted, philosophical or spiritual types. As Newton has both numbers, they are supposed to modify each other.

It is by no means certain that those descriptions match the individuals concerned, but it doesn't matter to the numerologist.

Other characteristics can be deduced by the calculation of the vowels in the name, and the title of the job or profession. Hat sizes and phone numbers are not mentioned in any of the references I consulted, but there seems to be no reason why they should not have an effect.

One important modifier seems to be that one is measured by the name by which one is generally known, not by one's full name (if they differ). Thus, if Newton was generally known as Ike, he becomes an 8, and if Einstein answered to Albie, he becomes a 7.

The idea seems to be "use what numbers you like to make the facts fit your preconceptions". The Federal Treasurer seems to use the same system.

Each number attracts importance to itself by its connection with other factors, i.e. 3 because it represents the Christian Trinity (or the number of wickets for a hat trick or coins in the fountain), 4 for the points of the compass, seasons of the year or the sides of a square (quarts in a gallon, years in an American Presidential term, Harry Edwards IQ, throw them all in, they may add significance).

If you think all this is pretty esoteric, look what Ann Petrie says about 8: "This is the number of materialism and represents all that is solid and complete. WHEN HALVED, ITS PARTS ARE EQUAL." Surely a statement that rates up there with $E=MC^2$ as a triumph of the human intellect.

The chart shown in Fig 1 is not the only method of calculating your name number. Some charts use only the numbers 1-8, while even others rely on the old Hebrew alphabet of 22 letters. As one proponent puts it, "do not be surprised if two readings give different results as each may be using a different chart". This equates with "If your fire won't light and you have fuel, heat and oxygen, then start believing in the phlogiston principle, and it might light up!"

The reason numerologists believe that numbers control our lives is that they believe that the universe is made up of a variety of vibrations. This is quite in accord with modern physics, although it probably

originates in the old "Music of the Spheres" concept. Where numerologists depart from rational thinking is when they seek to ascribe meanings to such arbitrarily human designated concepts as dates and words. At this level, numerology falls back into magic.

The Calendar

Dates have no intrinsic meaning and are merely useful measures of divisions of our lives. Some of the components of a date can be associated with natural phenomena, the day with the rotation of the Earth and the year with its revolution around the Sun.

Ignoring the fact there are a number of definitions of the day, solar, sidereal and civil, let us use the civil day of exactly 24 hours (the other two are three or four minutes either side - if you want to know why, look them up; I'm not doing all the work). The year is even worse, with sidereal, tropical, anomalistic, lunar and eclipse years, all of different lengths.

The year we use in our calendar is based on the solar year, which has a length of 365 days, 5 hours, 48 minutes and 46 seconds. To make things easier for the calendar makers, we have the system of three years at 365 days and every fourth year having 366 days. There is still some discrepancy, much of which is removed making only every centesimal year a leap year (2000 will be a leap year, 1900 was not though normal leap year rules indicate that it should be).

As a result of all this, every 400 years the calendar is approximately 2.88 hours short of 400 solar years. All of which is fine for human affairs, as we have methods of making adjustments, but it seems to be a fairly slipshod sort of accuracy for those vibrations that form the basis of numerology. (The length of the year also appears to be a good circumstantial argument against Special Creation, as it happens.)

The next part of the date that is important for numerological calculations is the month. While the calendar year and day are accurate to within better than 0.2%, months can deviate from the mean by more than 5%. That certainly adds a large margin for error into any calculation.

Months are loosely based on the cycles of the moon, or to be precise, the synodic period, or the mean time, between new moons. This is equal to 29.5305882 days. Now we all know that no month in our calendar has 29.53 etc days, which is probably a good thing for school teachers. Imagine teaching children a mnemonic that said 29.5305882 days hath September, October, November, December, etc.

If we did insist on months that were exact, then we would have 12.36... months in a year, which would play havoc with holidays, bills, etc. So we have a year

with four months of 30 days, seven with 31 and February with 28 or 29 depending upon whether it is a leap year. Other calendars, which we will mention later, are based on lunar phases.

Messing with the Calendar

The calendar I have been referring to is the one which is the most widely accepted throughout the world and is known as the Gregorian Calendar. It is the descendant of the old Roman calendar which had 12 months alternating between 29 and 30 days, making 354 and an additional month added every three years to get the sun back in synch with the calendar.

This rather complicated system, which is still used in some places, was revised by Julius Caesar in 46 BC, which incidentally had 445 days to bring things back into line. Julius C. decided on the Leap Year system we still observe but had alternating 31 and 30 day months, with February having 29 or 30 depending on the Leap Year.

For his good work, Julius had a month named in his honour after his death. Augustus made only one contribution to the calendar; he named August after himself and stole the extra day from February so his month could be the same length as Julius'. This day was known as the August Bank Holiday, after the banks of the Tiber on which Rome was built (this is a lie).

This calendar, which calculated the year as exactly 365 days, 6 hours, toddled along, quietly losing 11 minutes a year, until a British monk, the Venerable Bede, in 730 CE calculated a more accurate length for the year and suggested that a day was being lost every 128 years. This information was referred to an interdepartmental select committee, and barely 852 years later something was done about it.

Pope Gregory XIII decreed that the day following October 4, 1582 would be October 15, and that only each fourth centesimal year would be a leap year. This decree caused a great deal of consternation. People whose birthdays fell on the missing days were peeved; the unions demanded double time for the missing 10 days and the Orthodox and Protestant countries refused to be told what to do by some Pope.

In the long run, all Christian countries accepted the Gregorian calendar, the British in 1752, Russia in 1918 and Greece and other Orthodox countries in 1923. Many non-Christian countries have also accepted the Gregorian calendar, largely for commercial reasons. Incidentally, the Gregorian calendar and the sun are so well tuned that there will only be one day discrepancy by the year 5000 CE.

There are a few other relevant facts about the

calendar that I will briefly cover.

The Roman year originally began on March 1, but this was changed to January 1 in 153 BC. The English New Year began on December 25 until the 14th Century, when it was changed to March 25 and finally to January 1 in 1752, at the time when the Gregorian calendar was accepted. Scotland has used January 1 since 1600.

The Muslim calendar dates from the Hegira (Mohammed's flight from Mecca) in 622 CE. The Muslim calendar is a lunar system of twelve 29 and 30 day months alternately, with some years having an extra day tacked onto the last month. There are 19 ordinary years and 11 extra day years in every 30 year cycle, to keep the calendar in step with the moon. The Jewish calendar is also a lunar system, fixed according to the Metonic cycle of 19 years. The Jewish New Year falls between September 5 and October 5. (The Metonic cycle is when the phases of the moon occur on the same day of the year. 19 years [6939.6 days] almost equals 235 lunar months [6939.69 days].) The Christian calendar dates from a mistaken post facto idea of the date of the birth of Christ.

The Roman calendar dates from the founding of Rome in 753 BC, and the Greek from the establishment of the Olympic register in 776 BC.

There are of course many other calendars, all different and all starting at different times. None of them mark their beginning from any naturally occurring event, but from some historically important human event.

One other method of counting time is the system invented by a Frenchman, Joseph Scaliger, in 1582. This system counts days from noon, January 1, 4713 BC. The start date is quite arbitrary and enables astronomers to calculate the time, in days, between astronomical events without going through all the conversions necessitated by all the changing calendars. To throw just a little more confusion into the story, this system is known as the Julian Period, which was not named for the famous Julius Caesar but for M. Scaliger's father, who was named Julius Caesar Scaliger. Confusing, ain't it. Australia Day 1989, at noon, marked the beginning of Julian Day 2,447,553.

Now the purpose of this rather long winded digression into the arcana of calendric inventivity is to show just how meaningless birth dates are to the vibrations of the universe. It would be different of course, if we could determine just when the first day occurred. If one is a Creationist, that is easy; it was October 23, 4004 BC. But I am talking about real people. Even numerologists are not that dumb.

There is no way of measuring when the first day happened, nor when the measurement of years or months should begin. Scientists may discover, fairly accurately, just when the sun turned on, when the Earth accreted out of the dust cloud and when the moon got there, but it is asking a but much to determine these events with an accuracy of +/- 12 hours.

That being the case, we are asked to believe that the addition of digits, which are calculated from any one of dozens of arbitrarily designed calendars, will produce a result that has an intrinsic meaning.

Name numbers

Now let us consider the other, and what many numerologists consider to be the more important, aspect of numerology, that of the number which can be deduced from our names. After all, there is not much that one can do about one's birth date, apart from using a different calendar, or converting to Islam or Judaism.

When we get to name numbers, we can easily change our name and thus change our number. This would seem to be the numerologists' version of free will. It may be the reason why so many early film stars changed their names, Hollywood always being at the forefront of any crackpot belief.

Everything that has been said about calendars and their arbitrary nature can be repeated about alphabets, only more so. Calendars at least must make some reference to some natural phenomena. Alphabets are merely arbitrary symbols that refer to some of the almost infinite number of sounds of which the human voice is capable, and many languages exist that have no alphabet at all. Japanese and Chinese written languages are ideographic, where the symbol represents an idea or concept rather than a word. These symbols are not in any fixed order, so how can you hope to attribute a number to a name.

Add to this the fact that many older written languages used letters as numbers, and the system becomes even more confusing. Take the hypothetical Scottish mystic, McLiv. Numerologically his reduces to 5; however, in Roman numeration, his name is 1154, which reduces to 2 - a schizophrenic Scot no doubt. You could of course translate the name into English and use our Roman alphabet to do the job, but why should you? What is vibrationally sacred about our language? To suggest that something is, is to indulge in a rather repugnant ethnocentrism.

To take a prominent example, let us consider the late Chinese dictator, Chairman Mao. In his own ideographic language, he should have been numerologically unclassifiable. We in the west, using a linguistic convention, wrote his name as Mao Tse

Tung, which produces for him a number 9. Some years ago, the western convention in translating Chinese names was changed to a new convention (one that rather more accurately reflected the Chinese pronunciation) and he became Mao Zedong, a 1. The characteristics attributed to 9s and 1s are quite different, so by the stroke of an academic pen, Mao's character was changed, which was interesting because he was dead at the time.

This nonsensical contention is magnified considerably when you multiply it by the one billion Chinese. Did the characteristics of 20% of the Earth's population change because some Western academics designed a different method of spelling their names?

To illustrate my point, I have numerified some well known names, just to see if any pattern emerges. As we live in a society that forces us to take some notice of politicians, let us see how some of our leaders shape up in the numerical stakes.

The Prime Minister is widely and generally known as Bob Hawke and probably thinks of himself that way (remember this is supposed to be important). He is a 4 and might find some pleasure in being associated with some other 4s who showed leadership potential. Alexander the Great, Napoleon Bonaparte and Julius Caesar are all 4s. He is less likely to be enamoured of some others: Pol Pot, Genghis Khan, Joseph Stalin and Attila the Hun. I don't think that even the staunchest Liberal would suggest that Mr Hawke would feel at home with that bloodthirsty crew. He would probably feel a few qualms about Margaret Thatcher and Mike Ahearn, but would obviously be delighted with Greg Norman. He may be pleased with John Milton, Buddha and Pythagoras, but Al Capone would give him pause, and Mickey Mouse is most unlikely prime ministerial material.

John Howard is an 8, which should give him a stand up start in any contest, as he shares that number with God. He would have few misgivings about being associated with George Bush, but would deny having much in common with Benito Mussolini or Heinrich Himmler. Despite the numerological connection, Mr Howard and Karl Marx would seem to have little in common, nor would Bugs Bunny seem to be a political ally. The leader of the Opposition also shares his number with Wolfgang Amadeus Mozart, Banjo Patterson and George Bernard Shaw, although he has never publicly admitted to skills in music, poetry or literature. He also would appear to have little in common with Uri Geller, Erich von Dñniken and the Luton Girls Choir.

A curious political coalition would seem to be indicated by the fact that Ian Sinclair, Janine Haines

and Fred Nile are all 1s. Would their political philosophy reflect that of Winston Churchill, Mao Zedong or Vladimir Illyich Lenin? Would their science policy reflect the views of Robyn Williams or Shirley Maclaine? W. G. Grace would be a natural for Minister for Sport, but would Robin Hood be a good Social Security Minister, and would Robert Trimbole be an appropriate Attorney General? Defence would be safe in the hands of Conan the Barbarian and Frankenstein.

7 is alleged to be the number associated with spiritual leadership and the fact that Jesus Christ, Jehovah and Allah are 7s would seem to support this. The trouble is, these names come from other languages and are probably not 7s in those languages. The only one that seems to fit the bill in English is L. Ron Hubbard. A trio of top names in the 7 ranks are William Shakespeare, Isaac Newton and Giuseppe Verdi, arguably the greatest playwright, scientist and operatic composer in history.

James Joyce may fit in here, but do Sherlock Holmes and Ned Kelly have much in common? The connection between Miss Piggy and Ramtha is obvious.

It seems to be odd that the inventor of Ramtha, J. Z. Knight, should have a different number, but perhaps changing your voice changes your personality. Knight is a 6, as is Skeptics Patron Dick Smith, who would be more comfortable with Australian of the Year Kay Cottee than with Ms Knight. Other prominent 6s are Abraham Lincoln, Martin Luther, John Cleese, George Negus, Edna Everage, Clive Robertson and Dracula.

Skeptic Patron Phillip Adams (3) is a natural to share with Tut Ankh Amon and Santa Claus (if you can imagine Santa dressed in black), however if he shares the musical talent of Ludwig von Beethoven and Giacomo Puccini, he has never made it public. How such a sports hater can be bracketed with Allan Border and Dennis Lillie is one of those mysteries concealed in the universal vibrations. Phillip's skeptical connection is revealed by the reduction of the Australian Skeptics' phone number to 3.

The oddest 3 is undoubtedly Jeanne d'Arc, who in the English translation of her name Joan of Arc, is a 2, a number she shares with Ronald Reagan, Richard Nixon, Leonardo da Vinci, James Cook, Bob Menzies, Kermit the Frog, Spike Milligan, Adolf Hitler and the

new Governor General, Bill Hayden.

9 is represented by Albert Einstein, Woody Allen, Paul Keating, Phar Lap, Joh Bjelke Petersen, Gough Whitlam, Malcolm Fraser, Mohammed, Bob Hope and Duane T. Gish - certainly a variegated group.

Which leaves us with 5. Mohendras Ghandi and Francis of Assisi sharing with Idi Amin and Jack the Ripper would seem to be incongruous, as does Hamlet with Jeff Fenech. I suppose Rembrandt and Don Bradman could both be considered old masters.

If anyone is planning to write in and suggest that four of the most bloodthirsty tyrants in history Genghis Khan, Attila the Hun, Pol Pot and Stalin are all together in the 4 list, let me suggest that none of those names were their real ones; they are all from different language groups all using different alphabets, and some possibly having no written language at all, and in at least one case, Attila, he could not have been known

by that name in his own life. "The" is an English word and Attila was dead long before the English language was invented. In any case, the number of the Tyrant is 1.

Presumably, if numbers have relevance to people, then they should also apply to publications. After all, paper vibrates too. With this in mind, I calculated the number for the Skeptic, 8, feeling sure it would match some other journal of record such as *The Times*, *The Age* or *The Sydney Morning Herald*. Imagine my chagrin when the only other well known publication which I could find to achieve an 8 was Pravda.

In all my research only one fact emerged that lent any credence to the accuracy of the central tenet of numerology, and that was the word itself, with the number 1, exactly matched the phrases puerile tripe, juvenile crap and feeble minded rubbish.

(Oh, by the way. Bo Derek was not a 10, she was only a 6.)



Quack Attack: Part II

Harry Edwards

Continuing the Skeptics' assessment, in collaboration with *People* magazine, of purveyors of the paranormal.

People magazine's Peter Holder picked one of Australia's more established clairvoyants, internationally known Winifred Crause, for his first reading.

During our discussion prior to the reading, he admitted to some scepticism, and says in his article in *People* (August 9, 1988), that "although I wasn't convinced that Ms Crause was psychic, she did make me think about parts of my life".

The following is a full transcript of the session (for the benefit and edification of those who have never experienced a reading), and my comments.

PH: Before the reading started, Ms Crause asked me to write: "Mary had a little lamb, its fleece was as white as snow"; my birth date (11/10/64) and the exact time. (*Yet at no time did Ms Crause use the latter for astrological calculations.*)

WC: I get a lot of Virgo in you (*October 11, PH's birthday, is actually within the dates ascribed to Librans, so she was hedging her bets*); you're a number 5, and you have lived a number of lifetimes before. (*Unsubstantiated New Age nonsense*). Being a number 5, you are in the right business; 5 is communication with others.

I find the unhappiest times in your life are associated with relationships. You have to be careful who you get involved with, because communication is so important..

That's why it is so important for number 5s to pick the right mate; it has to be someone they can communicate with.

The lucky days in your life are the 5th, 14th and the 23rd; Friday the 23rd is the luckiest day of the year, and that will happen in September and December this year. (*All those days whose digits total 51*)

Your other numbers are 32, 11 and 10 ... they will always be your numbers and they are not something that should only be used for Lotto. Number 1 is your year number for this year. Life goes in 9 year cycles and you are now in a 20 or 11 year.

This is an exciting year for you; it's like being on a roller-coaster, you don't know where it's taking you. Next year you are going into a three year, which the

book says is the year of confusion, but I don't agree. (*If there is no consensus with the interpretations in the manual, then the observations made are simply personal opinions.*) I always see the three year as lovely blue skies, flowers, harmony and happiness. It will be a good year for anything creative and social, but it's never a year for major decisions, just go along with it and enjoy it, OK?

Now I'm not an astrologer, but by my calculations (!), and they are pretty spot on (*has a familiar ring?!*), between the times of 6 and 8 at night, your rising sign is Taurus, but I also think there's a bit of Gemini there. You have the busy mind of a Gemini. (*PH is now a Libran with a bit of Virgo and a dash of Gemini.*)

Looking at your numbers, there's a possibility of an over-dominant or protective parent; you worry a little bit about the future; but Librans are like that. (*Apart from "possibility" not being an absolute, PH informs me that the statement is completely untrue.*)

You could have trouble around the lungs; do you smoke? (*Nicotine stained fingers; aroma on clothes or breath ?*)

PH: Yes, but I'm trying to give it up.

WC: What do you smoke?

PH: Cigarettes.

WC: Just be careful. I've drawn something psychic there, I see a bit of trouble in the lungs, especially the left one. It's nothing terrible, but you should give it away. (*The lung or smoking?*)

There are five numbers here for your health, ideally you should have excellent health, any health problems will be caused by getting yourself emotionally up tight, or by doing the wrong things to your body, so be sensible.

This also shows you have great skills in things you take on, and as I do this I get things psychically, I'll let them out as I go. (*Corsets?!*)

They are telling me that you should be careful with water; if you go near water. Have you had accidents with water?

PH: No.

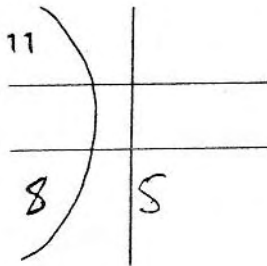
WC: I don't see muddy water but clear water. Do you go swimming?

PH: I swim, but not all the time.

WC: It's not in the surf; I see a pool ... Just be

careful of people who jump in and do foolish things. I can see you getting a bit of a fright, taking in a lot of water, but not drowning or anything like that. I always give warnings because it is important. If they do happen, you will say, why didn't she tell me? (*After you've drowned?*)

On a piece of paper, Ms Crause then drew a series of lines



WC: Now, when I draw this, I draw it psychically - see how strong I've drawn that line? See how curved this one is? That shows that you are a man of principles, but you're not narrow minded. You are adaptable to change in your life but you still stand by your own principles.

Now if you asked me to draw a straight line, I couldn't. (*Psychic's have their limitations.*) But it shows a little bit of chest weakness, but with those numbers you shouldn't really have any problems.

Ms Crause then studies the writing ("*Mary had a little lamb*" etc).

WC: Looking at your writing, it seems that you can solve other peoples' problems but you can't always solve your own. There's a curiosity about you, a need to look over the next hill. This indicates there will be quite a lot of travel. I'm not sure if there's anybody in your life that's had something to do with the seas (*Why not? After all, Ms Crause is psychic*), but you will be drawn by the sea. This might be coming from a past life, I can see a sailor and the silver buttons on his coat.

You're a person who puts up defences at times, but once you learn to trust a person those defences lessen. (*Many of these so-called 'psychic revelations', are variations of the stock cold reading spiel - see The Zetetic (Skeptical inquirer), Vol 1, No 2, "Cold Reading - How to convince strangers that you know all about them" by Ray Hyman.*)

Around September, be a little bit careful; there's somebody pulling against you; the plan could go your

way if you are willing to go with it and not become stubborn. (*Why can't Ms Crause identify that "somebody"?*)

Librans are very easy going people but when they are stubborn, they are very stubborn. Nobody's going to, tell them what to do. I like that, but in this case be a little bit sensible.

You don't seem as if you will put on a lot of weight. I also see you doing a lot of running, although I don't think jogging's such a good idea. You're going somewhere you will be walking a lot and make sure your shoes are comfortable because if they are not, you will get very sore feet. (And make sure you wear clean underwear.)

You are quite intuitive, but you put up barriers and don't listen sometimes, I quite like your writing; I often find the smaller the writing, the nicer the person. But it does show some indecision in life, but with these lines coming up so high, it proves you are never afraid to try.

Ms Crause then read the subject's palm.

WC: You have a very open, honest hand, a very Aquarian hand. (*PH is now a Libran with a bit of Virgo, a dash of Gemini and a touch of Aquarius.*) There's curiosity here, your little finger sticking out means you listen to what other people say but stick to your own judgement.

You also have a good mind if it interests you, but if it doesn't - forget it.

What I am getting here, it's a possibility, is a very strong early relationship or marriage later in life, the first one is nowhere near as strong as the second. There might be little relationships in between but they are the most important ones.

There is a possibility you'll have two children, and you may marry someone who either has a child or has had a miscarriage. I can definitely see a child in the background. (*Ms Crause's eyesight has improved over the last few paragraphs*)

The first child is very much your destiny child, and he has been with you through many of your lives. I don't know why I said "he" but I did, so take it as he. (*One guess is as good as another.*)

There's a tremendous amount of warmth on your hands, which means you can give out a tremendous amount of healing.

Very happy to see this line here because it shows you have a lot of love in your life. (*Sincere, honest and loving are the three attributes most people like to be told they possess; check the advertisements in the personal columns in any newspaper.*)

How old are you? (*She can't tell from his palm? and she has already forgotten that he wrote it down for her at the beginning of the session.*)

PH: 23 going on 24.

WC: Ideally you should have had an early relationship. There are quite a few emotional lines but your ideal time to settle down is about the age of 33; that would be the best possible time, because there's lots of love and happiness then. But with relationships before that there's quite a few emotional issues pulling against one another, so don't get married until then.

I've got a lot healing lines; you should also have a lot of animals around you because they are drawn to you. Do you have any animals? (*No indication in the palm, yet earlier Ms Crause could "see" a child.*)

PH: No, but many of my friends do.

WC: Well, you do like animals very much and when you settle down you will need them around you.

You were strongly influenced by your parents and there were family problems at the age of 10 or 11 and you might have rebelled at the time; seems to me you were going around in circles. (*PH says that this was incorrect.*)

Two lines show the signs of a writer, so you are in the right business, but there is another career. (*The first career she already knew, but although claiming to be psychic, WC does not say what the other career is.*)

I also see a family member with circulatory problems, but that's not to say this person will drop dead. (*If WC can see "a family member" so plainly, why not specify who it is?*)

You have a very long life line, so you'll be a very old man. (*sic*) Between the ages of 28 - 31 there is some uncertainty but after that it's all right and you know where you're heading.

You have a show business thumb, which shows that you are good with people. I like this thumb tucked under there; shows you're very good with money if you want to be.

Now is there someone in your life called Kay or Kate?*

PH: I have a good friend called Kate.

WC: There's going to be something in the way of studies or learning for her; is she studying now?

PH: No, she's not.

WC: Well, there's an opening for her, and it's important that she takes it; it's a marvellous opportunity for her. Do you know if she was born in August? (*How come Ms Crause can't tell?*)

PH: I couldn't tell you.

WC: Well, if she was not born in August then this door will open for her in August.

Ms Crause then took a pack of playing cards which PH had been holding from the beginning of the session, and placed them on a board. She then asked him to make a wish.

WC: You have success here but this card is standing in your way. Did you have trouble in making the wish?

PH: Yes. (*The element of surprise: out of the blue ask anyone to make a wish and note the difficulty they have in marshalling their priorities.*)

WC: Yes, it shows. There is some news coming to you in the next two months; there is also money coming but not a great fortune.

I get a lot of things which are symbolic. I see an elderly man. He's taking out a watch from his pocket and he's looking at it, closes it and puts it away. Now to me, unless you know an elderly man who does that, what I said about getting money, it will take time, it will happen when it's meant to. Anything around you at the moment involving a contract is very good.

You are going to be very irritable with someone around the home; I can see you walking around picking things up and putting them down; you'll be in a restless state of mind and I can see someone who rubs you off (*sic*) the wrong way. (*What Ms Crause did not see is that PH lives alone.*) I felt someone around you with a health problem in the lower part of the body, perhaps in the stomach. I see a hospital bed but nothing overly dramatic. I feel that towards the end of August there is going to be a change of direction for you; also money from an unexpected source.

Do you have an elderly relative? (*It's amazing how many people Ms Crause can "see" yet has to ask this question.*)

PH: Yes, a grandmother.

WC: She's going to give you something, giving you the boost you need. You will work with people who are not Australian, so you'll probably work overseas. I see an older man as your boss; he's dark. (*At the age of 23, the possibility of PH having a boss*

younger than himself is, to say the least, remote.)

Oh, I just noticed your watch (*which has Roman numerals*); remember how I saw the old man with the watch; well, his watch was just like yours. (*As WC has had something like three quarters of an hour to observe PH's watch, I don't find the coincidence particularly mind shattering but rather suspicious.*)

Do you want to travel? (*Know anyone who doesn't?*)

PH: Yes, I do.

WC: Well, that's coming through strongly. There are people who will be a great help to you. I can see a Libran, Taurus or Cancer. (*This brings the odds down to 4:1.*) What's your Mum?

PH: Taurus. (*Why did Ms Crause have to ask?*)

WC: Yes, it seems that she could be a great backstop to you. (*Like all Mums!*)

You are going to have a lot to do with Europe, but I can also see you doing things in America.

Do you feel restless at all? (*Ms Crause putting out a feeler?*)

PH: Not career wise, but yes, in a few relationships I do.

WC: When you feel like that, sometimes these people have been with you from other lives; you have got to learn to let go. (*People do tend to stare if they see you holding hands with a skeleton.*)

Do you have any questions?

PH: No, I think you've covered about everything.

End of session.

* If it were possible to deduce information about a third party from the creases in one's palm, why not a fourth, fifth, sixth, etc, and so on ad infinitum; its encyclopaedic capacity limited only by physical size and the number of persons met during one's lifetime!

Summary

If you feel that the editors of *The Skeptic* are taking your money under false pretences by printing this tedious monologue, spare a thought for those who pay between \$35 and \$50 for this unadulterated garbage. Now let's see what they really got for their money.

Ms Crause advertises herself as a psychic, has been

in business for 14 years, has appeared on radio and TV, and claims to be known internationally.

A psychic is one who is sensitive to those mental phenomena which cannot be explained by rational means, and who possess paranormal abilities such as clairvoyance.

This being so, Ms Crause, without asking questions of a client, and with no prior knowledge of the client, should be able to reveal past events in that person's life, and predict future events.

She should have no need to resort to using a mixture of numerology, astrology, palmistry and playing cards, but should have relied entirely on revelations which she claims come to her psychically. The gimmicks can therefore be dismissed as adjuncts to mystify and impress.

It should be noted that Ms Crause had prior knowledge of the client's profession (journalist), his date and time of birth, a handwriting sample, and asked more than 13 questions throughout the session.

Most of her statements fall into the categories of: false; self-evident; general; patronising; self-perceptive; and self-validators.

Ms Crause's first observation "that numerologically PH was a number 5" is hardly a revelation. This is obtained by adding the digits of one's birth date until reduced to a prime number (see articles elsewhere this issue). What does it prove?

The question about "someone in your life called Kay or Kate" was one of those lucky coincidences that psychics hope for and that leave clients in awe at their supernatural powers, even though it was a question and not a statement. Had she been wrong, she could have expanded the net to include all those names beginning with "K" or similar sounding names.

Generalities

"The unhappiest times of your life are associated with relationships, communication is important" - truisms.

"You worry a little bit about the future" - who doesn't at some time or another? In the case of PH however, he does not admit to any apprehension.

"You have a need to look over the hill; this indicates that there will be a lot of travel" - we all look for greener pastures, and most find the prospects of travel attractive.

"You put up defences at times, but once you learn to trust a person those defences lessen" - universal psychological behaviour.

"Your handwriting shows some indecision in life, but you are never afraid to try" - we all experience times of indecision, but unless one's handwriting fluctuates from English to Hebrew to Japanese, I doubt whether it could be perceived by calligraphy.

"Librans are easy going people, but when they are

stubborn they are very stubborn; nobody is going to tell them what to do” - tell that to anyone of any other sign and it’s just as valid.

“You are quite intuitive but put up barriers and don’t listen to people.”

“You listen to what other people say, but stick to your own judgement” - a contradictory confirmation or a confirmation of a contradiction?

“There is money coming but not a fortune” - happy thought, but don’t promise too much.

“Possibility of two children” - almost a universal average in Western societies.

“You may marry someone who either has a child or has had a miscarriage” -given a divorce rate of 1 in 4 and an equally high rate of abortion this is a statistical possibility.

Self-evident

“You have a busy mind” - a natural assumption when the client’s profession is known to involve research and writing.

“You could have trouble around the lungs” - every tobacco product carries a similar warning.

“Any health problems will be caused by getting yourself up tight, or doing things to your body, so be sensible” - unless Ms Crause knows of other ways of damaging one’s health besides mental and physical abuse, this is hardly a profound observation or invaluable advice.

“Be careful with water, be careful of people jumping in and doing foolish things” - Mama’s advice to a child?

“You can solve other people’s problems, but not always your own” - this is why we have counselling services; other people’s problems are easy to solve when you are not emotionally involved.

“There is a curiosity about you” - assuming this to mean a curious nature it would naturally go with the profession.

“You don’t seem as though you will put on weight” - a psychic observation?

“You will be walking a lot” - Ms Crause possibly associates reporting with street pounding.

“Make sure your shoes are comfortable otherwise you’ll get sore feet” -psychic advice or Mama again?

“Two lines on your hand show signs of a writer” - would she have said the same thing had she not known PH was a writer for People ?

Patronising, self-perception and self-validating

“ Number 5 is communication with others; you are in the right business” -the reader is already aware of the communicative ability of the subject.

“The smaller the handwriting the nicer the person” - sweetie.

“You have a long life line, so you’ll be a very old man” - would you tell a client that they are just about to drop dead?!

“You are very good with money, if you want to be” - a two way bet.

“You are good with people” - so we all like to think.

And finally, these three beauties:

“You are a man of principles.”

“You are not narrow minded.”

“You are adaptable to change, but stand by your principles.”

Who in this wide world would tell a client that they are unprincipled, narrow minded and intransigent?!

Conclusion

The reading by Ms Crause was a combination of homilies, simple (and often simplistic) advice, and self-evident statements, many of which were repeated several times using different words.

The only semblance of accuracy can be seen to have been based on prior knowledge of the client. In my opinion, Ms Crause exhibited nothing remotely resembling any form of psychic ability.

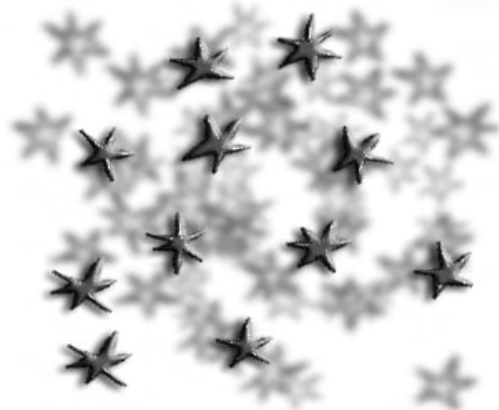
Winifred Crause’s response when shown my analysis?

“The role of people like Harry Edwards is to be negative about everything, and while he may not think I have psychic powers, my clients obviously do. I have been in this business for 14 years, and that speaks for itself. If I were a charlatan, I would have disappeared years ago.”

Personally, I would have thought the opposite, that the search for truth would indicate a positive attitude, and the truth to emerge here is that Ms Crause’s clients have never taken the time or trouble to analyse what she has (or has not) been telling them for the past fourteen years!

Part 3 of this series will be published next issue and will look at the prognostications of a Tarot card reader.

Footnote: Following publication of Part 1 of this series last issue, copies were sent to the two astrologers concerned for comment - so far there has been no response.



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Launching of 'Skeptical'

Emeritus Professor O. H. K. Spate

Professor Spate is one of the world's leading geographers and was one of the foundation academics at the Australian National University, Canberra. This presentation was made at the Fifth Australian Skeptics Convention, Canberra, March 1989.

I am very pleased that I have been asked to launch this little book - little but well-packed with nutritious food for thought. It might be described as an anthology of such beliefs, ancient and modern, as extra-terrestrial aliens, pyramidiocies, water-divining. I wish it could have run literally from A to Z to include the Zedetic Society of Flat-Earthers, but in this space age they have been superseded by more sophisticated pseudo-scientists, more plausible and hence more dangerous to rational thought.

As Colin Groves remarks of the search for Noah's Ark, a little lunacy now and then may be harmless in itself, but what all our specimens have in common is a resolute refusal to face facts; as J.B.S. Haldane says in *Fact and Faith*, it becomes a virtue to accept statements without adequate evidence, or even against the evidence; and that way the road lies open to quackery and worse, to intolerance and eventually persecution of dissidence. Examples are needless.

There is then matter for laughter in this book, but at bottom its theme is anything but a laughing matter. The Rushdie affair has brought this rudely home to us. In its great days, Islam sometimes produced rulers whose states set standards of tolerance far beyond those of medieval or early modern Christianity. When

we see the murderous hysteria which Rushdie has evoked, claiming to be the authentic voice of Islam, it is tempting to dismiss it as a fanaticism which we deplore, but which does not greatly concern our own culture. But we have our own fanatics, the born-again and the fundamentalists.

Seeking the Ark is closely linked to Creationists, which in this age is not likely to call, like the Ayatollah, for heretics to be murdered; but when and where it can it kills rational and independent thought; in other words it murders minds.

Obviously, some of the finest men and women in the world have been inspired by their religious beliefs, though it was probably in their natures to be good people regardless. I find much to admire in the teachings, if often less in practice, of those creeds with which I have had personal contact: Christianity, Islam, Hinduism, Buddhism, and I would add Animism, some aspects of which seem to me as sensible as

some doctrines of the self-styled 'Higher Religions'. It was exhilarating to meet, as I did in my first job in the University of Rangoon, a high culture in which everything did not go back to Plato and the Bible. Incidentally, the university had representatives of every creed from Anglicanism to Zoroasterism, it was riddled with personal and sectarian feuds and intrigues, and the only man in the place who approached Cardinal Newman's ideal of the Christian gentleman was named Ahmed Cassim.

But there is a dark side: wars, persecutions, a persistent resistance to measures of social amelioration. It is not so long since in England decent

honourable people seeking divorce were forced into perjury or to engage in totally fictitious adultery - it was quite an industry in seaside towns -and in any case were debarred from exercising Christian charity, for that was collusion. Lucretius had a word for it: "tantum religio potuit suadere malorum" - to such great evils religion leads. At the very least we should be sceptical of claims to monopoly rights in morality.



Skeptical

The enemy is fanaticism in whatever camp it may be found, professing whatever creed. To say this does not mean slipping into a bloodless neutralism and discounting the emotional side of human nature; it is perfectly consistent with compassion and empathy extending beyond our own species. The passion for a true understanding of our world, perhaps even more an understanding of our own nature, has sustained many men and women through long labours, frustrations, poverty and persecution. We Skeptics are heirs to a great tradition; in greater or lesser degree our forebears have stood in the front rank of the widening, the humanising, of the human spirit. Lucretius, Pelagius the first British author known by name, Ockham, Erasmus, Montaigne, Diderot, Voltaire, near our own day Samuel Butler, Ibsen, Wells, Shaw, Bertrand Russell - what a great roll-call it is, and far from complete. I am tempted to add Omar Khayyam.

We are children of the Enlightenment, which is often written off because that great movement of thought and feeling did not forthwith redeem the world. Peacock's Mr Flosky in *Nightmare Abbey*, who is Coleridge but might be Bill Mandel, "had hailed the dawn of the French Revolution as the promise of a day that was to banish war and slavery, and every form of vice and misery, from the face of the earth. Because all this was not done, he deduced that nothing was done" and retreated into reaction and obscurantism.

But I think we are entitled to return the reproach back upon our critics. The Enlightenment after all has had little over 200 years in which to do its work; the creeds, say, from 12 to 40 centuries, and where have they brought us? Christians killing Christians in Belfast, Muslims killing Muslims in Beirut . . .

Let us return to our book. It is a contribution, albeit modest in scale, to the unending struggle against obscurantism, a struggle vital to the health of the world, in an age which provides a fine germ culture for the breeding of dangerous nonsense, crudities and idiocies: think of the witches and vampires and occult phenomena of every sort which infest the popular press and stalk the TV screens. The articles in *Skeptical* are concise and lively; they are firm against demonstrable error and shoddy thinking, but they are not dogmatic; our authors do not claim, as pseudo-scientists do, to have all the answers down to the last jot and tittle. They would be poor Skeptics if they did. The book is also very entertaining: Aromatherapy, the Bermuda Triangle, Iridology, Numerology, Velikovsky, Von Daniken - they are all here, neatly pegged out like insects for your scrutiny.

Skeptical is excellent both as light and as serious

reading, and how better could one recommend a book.

***Skeptical* presents the Skeptical view on a wide range of paranormal and pseudoscientific subjects: UFOs, auras, aromatherapy, astrology, Atlantis, the Bermuda Triangle, channelling, Creationism, the Curse of the Pharaohs, divination, dolphins, ESP, the Mystic East, iridology, near death experiences, the New Age, Noah's Ark, numerology, palmistry, psychic surgery, psychokinesis, pyramids, reincarnation, Scientology, shamans and sorcerers, the Shroud of Turin, spontaneous human combustion, Tarot cards, unknown animals, Von Daniken, water divining and Velikovsky. It makes an ideal presentation to those who want to know what the Skeptics think of various subjects. It is especially suitable for school use.**



The Lamb and the Lion's Den

Tim Mendham

An important event which seems largely to have gone unnoticed by proponents of the paranormal occurred late last year at the 52nd IBM (that's International Brotherhood of Magicians - not the computer company) British Ring Convention held in Brighton, England.

David Berglas, a well-known British magician and long-term critic of magicians masquerading as psychics, was scheduled to introduce a 'surprise celebrity'. This session of the convention clashed with another on children's magic, a major source of income for British magicians and therefore limiting the numbers at Berglas' session. Had they known who the 'celebrity' would be, the numbers might have been swelled considerably.

In fact, the celebrity was a casually-dressed multi-millionaire who, as the weekly magical journal Goodliffe's *Abracadabra* reported, "had captured the world headlines for so many years and raised the blood pressure of more magicians than anyone else in history", who "talked of his beginnings, triumphs, occasional disappointments and general success". And the celebrity? None other than Uri Geller.

David Berglas had been particularly vituperative towards Geller for some time, but unbeknownst to most of his magical colleagues, Berglas had apparently been

in regular contact and in fact been close friends with the infamous spoonbender.

Geller's short appearance in what should have been a lion's den was greeted with an ovation as he admitted "to being pleased to have at last been accepted by many magicians as 'one of them', something he would never admit to during his long career".

So there we have it - Uri Geller was a magician all along, 'one of them'. "Geller came cap in hand . . . he left a hero". And so all parapsychological experimentation and theoretical pontification inspired by Geller's successful bending spoons and minds were in inspired by a self-confessed magician. Geller pulled the ultimate rabbit out of the ultimate hat, and has now retired to virtual squiredom in the English countryside, smug with knowledge that he fooled them all. Well, almost all . . .



Conference Keynote Address

Ian Warden

Well-known (dare we say, infamous) Canberra Times correspondent Ian Warden opened the Fifth Australian Skeptics Convention with a personal depiction of the birth of a skeptic, and its impact on the way he views life, the universe and politicians.

When I was asked to open your conference, the Skeptic who invited me thought that I might like to dwell, in my speech, on the origins of my own skepticism. I went away and gave those origins a little thought.

I wish that I could report that my first skeptical thoughts concerned matters of great profundity, but a rigorous devotion to the truth, a devotion which characterises all members of my calling (long and sustained laughter), obliges me to report that my first skeptical instincts were stirred by Gene Autry, the Singing Cowboy.

The Star...

For those of you who are too young to remember him, Autry was a star of cowboy movies in which he was a goodie, distinguished from other wrong-righting cowpokes by the fact that he sang, as, righting wrongs, he traipsed across the wild west. He had a dreadful voice and sang dreadful songs which, while they would have been bad enough in their own right, were made

worse by being yodel-enriched.

Autry movies dominated the Saturday afternoon picture shows when I was a pre-pubescent youth in Norfolk in England, and as Autry went singing about his business of freeing towns full of law-abiding folks from the corrupt gun-slingers who had taken over the towns, and as I looked about the cinema at the faces of my enraptured peers, I would be moved to think, skeptically, that in real life it would not have been at all obvious that the folks would have preferred being sung at by Autry to being bullied and terrorised by the tyrants.

We seldom saw clear night skies in overcast, stormy Norfolk, but there was one memorable July night when I was in my late teens. I had hitchhiked back to bucolic, other-worldly Norfolk after a sordid assignation in Sheffield and my rides petered out as soon as I left the major trunk routes and turned off into North Norfolk, largely because Norfolk was off the beaten track, but also because Norfolk people themselves were slow to adapt to and buy new-fangled horseless carriages.

As a balmy evening gave way to a balmy night, and still 40 miles from my destination of Crabtorture Bay, I resigned myself to a night under the stars and went to sleep in a cemetery of an ancient church among lichen-embossed headstones which carried carvings of skulls and crossbones and cheerful messages such as:

Amos Greygoose (1623-1689)

'As I am now so you will be
Prepare yourself to follow me.'

My choice of a place to sleep indicated, I suppose, a skeptical attitude to ectoplasmic ebullitions and I went to sleep quite readily only to be woken up, at about 2 am, by two pugnacious hares boxing beside me in the moonlight.

The Stars...

I spent the next four hours before the onset of daylight having my first long look at a clear night sky, a firmament of several billion stars, and noticing, shuddering, how indifferent the stars were to my existence and thinking how vain it was of my aunt, an earnest Scorpio, to imagine that the stars had the slightest thing to do with determining the personalities and the destinies of Earthlings. They were plainly going about their own business.

Since then, as a mad bushwalker who is often outdoors a long way from city lights and able to ogle the stars in Australia's pellucid skies, I have suffered that sensation again and again. Ogling Halley's Comet and the general firmament with my primitive binoculars,

I was of course able to see zillions of members of the firmament not dreamt of in the philosophies of those who, circa the second century AD, concocted the forerunner of modern astrology with what little they could see, and on the premise that the Earth was the centre of the universe. For centuries smug astrologers concocted what they were sure were accurate horoscopes, but did so without taking into account the influences of Uranus, Neptune and Pluto because they could not see them and hence did not know that they existed.

More about astrology in a moment, with reference to the eerie similarity between my personality and career, and the personality and career of my fellow Sagittarian the Prime Minister, but meanwhile I would like to say how timely this conference is, coming as it does while the votes cast in the last ACT elections are still being counted.

Conspiracies...

Those elections bristled with interest, but skeptics will be particularly interested in the fact that at least four of the parties involved in the elections have subscribed, at some stage of the campaign or its aftermath, to conspiracy theories, because experience and enlightened instinct tends to suggest that the more mundane the explanation for something, the more likely it is to be the correct one.

In the early stages of the campaign, one of the heroes of the anti-self-government campaign tried to persuade another anti-self-government bloc to join forces with his, arguing that the Labor Government's very inclination to bestow self-government upon the ACT was a part of a Soviet communist plot to take over Christendom and the Western world. But to be fair to this gentleman, a man who the people of Canberra, the most sophisticated electors in the world, have in their wisdom elected to the new legislature, he has some skeptical qualities. He has been known to distribute literature insisting that the Holocaust was a Jewish hoax, and so in a sense he is one of us. A skeptic. I have seen some of the literature alleging that the Holocaust was a hoax and it is intellectually stimulating in the extreme, arguing, for example, that not only were there no gas chambers at Auschwitz, but that the 'inmates' had an "inmates' brothel" and an "inmates' swimming pool".

Two other parties perceived elaborate conspiracies designed to deny them what they would have regarded as ample media coverage, with one of them convinced that The Canberra Times had taken an \$80 000 bribe

from the big parties to ignore the small ones, and with a spokesperson for the other party telling me, earnestly, that the conspiracy against her party went 'even higher' than the press barons whose organs, she thought, were showing a suspicious reluctance to report her party's every utterance. And then the president of the ACT Australian Democrats explained the chaos within her party and its wretched performance in the elections (a kind of near-death experience) as the result of 'infiltration' of the party 'because we became a significant threat to both the major parties and the interests who control them, the barons of the press, industry and organised crime'.

Conspiracy theories always flatter the importance of those who imagine they are being conspired against, but if it consoles the ACT Democrats (a nest of vipers) to imagine that they needed any outside help to destroy themselves, then perhaps it does no harm.

.. and more stars

Some weeks ago, after I had written a few skeptical paragraphs about astrology, a well-meaning reader from credulist-infested O'Connor wrote to my editor to point out that it was one of the proofs of the soundness of astrology that Sir Robert Menzies, Bob Hawke and this columnist were all Sagittarians and shared an uncanny similarity.

Of course, it is one of the attractions of astrology for the common people that a system that divides humanity up into 12 categories must bracket some common people with some great ones. This makes astrology very seductive and I will own-up to the fact that I think I can discern some similarities between myself and Sir Robert. There are some eerie similarities - once one puts aside such trifling differences as the fact that he loved England and the English to distraction and even encouraged them to test their atom bombs in this dispensable dominion, while I disliked England and the English so much that I emigrated to get away from them, and the fact that he drooled, indiscriminately, over the English Royal family while I think that they are mediocre parasites.

Yes, I can see that Sir Robert and I have a great deal in common but, tempting as it is to compare myself to our magnificent Prime Minister, I am afraid that a rigorous comparison of our two personalities dashes all hopes I might have had of comparing myself with him. It is with sadness that I examine some of the many ways in which Mr Hawke is different from and

utterly superior to me.

He has a statesmanlike desire to govern people and an admirable appetite for involvement in the affairs of the world whereas I, in my selfish introversion, have never even been a member of a political party and indeed have never been a member of any committee of any organisation and have never sought to serve a party, a society or the world. The several parties who tried to recruit me as a candidate for the late elections were told, truthfully, that I did not think I had the talent or the energy to serve them. My dull receptors do not detect any of the pheromones emitted by power and fame and the prospect of them, but Mr Hawke's career shows that his superior receptors seem always to have detected them.

Again, Mr Hawke has by his own admission an amazing rapport with all of his fellow Australians while I could only claim to have rapport with five of them. Then there is the ample evidence, in his litigiousness, that Mr Hawke is a deeply sensitive person. If he had not chosen to be a politician then his obvious capacity to feel deep, wounded personal anguish would have equipped him to be the author of several slim volumes of agonised verse. For my part, in my crass insensitivity, I cannot think of anything that anyone could write, publish or broadcast about me that would so pain my calloused and punch-drunk ego that I would want to take them to court.

And in very recent times I discover, alas, that in spite of being fellow Sagittarians we are even more different than I had dreamed. I wish it was true that Sagittarians were so alike that I was able to boast of an adultery-enriched sex life like Mr Hawke's, but the miserable truth is that this dull and sexually diffident Sagittarian has been almost oppressively faithful to his wife.

Dr Helen Caldicott, the paediatrician and anti-war activist tells the story (indeed she told it to a packed press club at a luncheon there) that while Mr Hawke was still bwana of the ACTU and a heavyweight in international labor organisations and hence a man in a position to help make the world a more nuclear-free place, she went to see him to ask him what he could do for his planet, only to find that, on the day, he was more interested in what he could do for and to Dr Caldicott.

It is a measure of how different Sagittarians can be, and an indication of some of the questions that astrologers have to answer, that when I found myself alone with Dr Caldicott such a thing did not occur to me.



Quack Attack: Part III

Harry Edwards

Continuing the Skeptics' assessment, in collaboration with *People* magazine, of purveyors of the paranormal. Previous articles covered astrologers and a clairvoyant.

People magazine's reporter next went to The Sydney New Age shop for a Tarot reading. The reader was Kris Fontaine, who, at the time of the reading, was also a part-time university student majoring in psychology.

As in the previous reading by 'clairvoyant' Winifred Crause, the reader was told of the client's occupation.

Peter Holder's summation includes the following observations.

"After shuffling the cards and thinking about my love-life, job, family and health, Ms Fontaine said that I was the sort of person that needed change, travel and freedom, and as a typical Libran, I was creative and always balancing things up." (The first three would either apply or appeal to most people, and the next two were no doubt assumptions based on prior knowledge of the client's occupation.)

"She also observed that I live for the present and don't care about the past or future. While I don't care about the past - I worry like hell about the future!"

Then, contrary to Ms Crause's health warning, Kris Fontaine said that PH was in excellent health, but hedged her bet by adding "be careful over the next 18 months". (Later in the reading she changes her mind.)

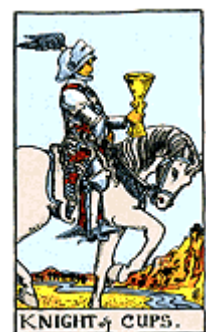
Before proceeding with the full transcript, let's look at a brief abstract of Tarot.

The pack consists of 56 picture cards of four suits (Wands, Pentacles, Swords and Cups) called the Minor Arcana, and 22 cards known as the Major Arcana.

To each card is attributed one or more meanings, and further interpretations are allocated to those cards that fall upside-down during the deal. For example, in the Rider Tarot pack the nine of Swords indicates death, failure, miscarriage, delay, deception, disappointment, despair; and reversed, imprisonment, suspicion, doubt, reasonable fear and shame.

There appears to be no consensus among Tarot readers as to these interpretations and they frequently use their own.

Basically, the reader uses intuition and imagination, aided by prior knowledge, guesswork and observation of the client, or cold reading, to weave a story around



the cards, ostensibly revealing a subject's past, present and future status and potential.

Free association of ideas, ambiguity, generalisations and credulity contribute to the impression of successful auguring.

As you labour through the following reiteration, console yourself with the thought that there are those who are willing to pay an average of \$40 for this type of 'revelation' and consider it to be value for money!

KF: "In the back of your mind, you have two alternatives which you are not consciously aware of. You feel bound for some reason but we'll talk about that later.

In the last couple of years, there's been a lot of changes in your attitude and the way you build up relationships.

There's been a break up of some kind, and it was you realising what you didn't want in your life; your needs and wants were changing dramatically.

You're really artistic, there's a creative side to you, you're weighing things up all the time, always balancing things up.

I also feel there's a side to you that needs freedom, change and travel.

You must be your own boss.

I think you are the sort of person who will try anything once, looking for that excitement, particularly in relationships.

We'll now look at the next 18 months, we'll take it step by step and then you can ask questions.

Once again the same two cards tell me there is a decision to make.

You sit on the fence, you procrastinate, before you say 'Right, this is the way I'm going to go'.

It's time now to make the decision - you have to be careful that you don't get out of a bad decision and into another, you have to accept these changes, anything that happens is meant to happen.

You're too scared to make a move at the moment, you feel the whole world will fall on top of you.

I can see you changing jobs or the way you work in the next three months; I also see you travelling in the next three months."

Up to this point, no questions have been asked of the client, so what has the card reader deduced from the cards and revealed in her assessment? I suggest nothing - only those things that could be reasonably associated with the client's known profession, and mundane general observations that would be applicable to most young single males. Note, however, the recurring reference to the client's alleged indecisive

state of mind.

More on that later.

KF: "Is there a woman in your life?' (*She couldn't tell from the cards?*)

PH: "Yes, a few actually."

KF: "Right, we'll look at that in a moment. There will be a woman around in the next 18 months and she'll be very important to you . . . either a Virgo or a Capricorn.

It's almost as though you are building up to total success. I see the ending of one chapter and the beginning of another. Will we start with your work?"

PH: "Yes, okay."

KF: "I want you to shuffle the cards and think about your work.

You definitely have to be doing something in the field of communication, it's part of you, and there is also the creative side." (*Repetition.*)

You're very good at looking at both sides of the fence. You also pay a lot of attention to detail. There are also times when you skim the surface." (*Again the observations are based on the self-evident, and finally a two-way bet.*)

Yeah, you also like a fair bit of prestige. There are some big changes for you at work. You seem to be putting in a lot of effort for little reward. You're working, working and getting no time to yourself. Is there any travelling in this work?" (*Again, the cards can't tell?*)

PH: "Yes, there is some involved."

KF: "Seven cards please. You're not happy, there is some grieving. (*The last observation is another repetition using different words.*)

PH: "What, in work?"

KF: "Yeah, there's something happening there. What it is saying is: yes, the job's going well, but over the next 18 months you're going to realise that there are other opportunities that you will take up.

I can also see you healing, not in medicine or alternative medicine, but I can see you helping people.





I think you will reach your lowest point possible in the next three months.” (A contradiction of her previous statement that “you are building up to total success.”.)

PH: “What sort of changes in my work?”

KF: “You have a lot of changes coming your way.” (*Casting the net wider to include other possibilities.*)

PH: “Within the job?”

KF: “No, without it. Within the job, maybe. Yes, probably within the job as well. I’m sorry I can’t be more specific (*why not, isn’t it in the cards?*) but these opportunities will be coming (*all readers, whether they be Tarot, palm or psychic, like to tell their clients that opportunities are coming their way.*) At the moment, stick with your job, because the changes will come with and without it.

What sort of work do you do?”

In view of the fact that the client introduced himself as a journalist from *People* magazine and KF has previously stated that he was definitely in the field of communication, the question is either superfluous or the reader has a very short memory.

PH: “I’m a journalist.”

KF: So you’re in communications (*surprise, surprise*). There’s two months which stand out, April and July. July is where I see a new work situation, October and November I can see a new love in your life. You’re moving in a new direction and you’re moving within yourself. You’re very scared of change but you also beckon it. (*Using different phrases, this is the third time change and indecision have been mentioned during the reading. It is simply bait to entice the client to open up about his problem which KF senses is to do with his work.*)

Okay, we’ll look at romance. Is there anyone in your life at the moment? (*This is the second time she has asked the question and is well aware of the client’s situation as far as romance is concerned.*)

PH: Well, yes...”

KF: “What’s her name?”

PH: “Amanda.”

KF: “She’s got a lot of things in coming up for her at the moment, she’s very busy, there are lots of people in her life. She’s changed jobs and she’s trying to find herself.

She’s very lonely, even though she has lots of people around her. There’s a lot of pain in the past and you always weigh that up in your personal life. You had a let-down which still haunts you. Your relationship with Amanda is still a drug. I don’t know if it’s sexual, but you keep coming back to it. I also see someone else coming along who is more suited to you. (*Another repetition.*) Let’s see what’s happening romantically. At the age of 29-30, I can see you settling down; how old are you?” (*While she does not specifically say “marriage”, it is inferred. Statistically, it is also close to the average marrying age of men in Australia.*)

PH: “23 going on 24.”

KF: “You’re basically saying you don’t care about the past or future, you’re living for the present.” (*Reiterating what has already been said.*)

Actually, what PH said was: he didn’t care about the past, lived for the present, and worried like hell about the future; a fairly common approach to life. One of the attributes of a good card reader is a good memory, a faculty KF seems to lack.

PH: “Will I behave myself?”

KF: “In the way you treat women?”

PH: “Yes.”

KF: “Oh sure, but you will do what you want to do. What else would you like me to look at?”

PH: “Family.”

KF: “Right, how many are there in your family? (*Remarkable how so much information was solicited from the cards about a girlfriend, yet they can’t provide the answer to a simple question like this!*)

PH: “A mother, sister, and a father who I don’t see any more.” (*Although I asked PH to be fairly tight-lipped, this is the sort of unsolicited clue clients drop and on which a canny reader will then build,*

although in this case not much advantage seems to have been taken of it.)

KF: “He was never on the scene emotionally?”

PH: “I wouldn’t say that.”

KF: “But not when you needed him.”

PH: “I’m not sure, perhaps during my teens.”

KF: “There’s a rejection factor there, so you looked to other men.”

PH: “Well, I don’t know; maybe I’m not consciously aware of it.”

KF: “Do you know your mother’s birth-date?” (*Earlier the cards were able to reveal that a female unknown to PH would be around in 18 months who would be either a Virgo or a Capricorn, yet a direct question had to be put in respect of his closest relation.*)

PH: “Yes, it’s the 27th April, 1932.”

KF: “There’s two distinct things about her; she likes change and variety, loves speaking to people, but wants security as well. She is also very creative. There’s also a cold side to her as well. She has trouble getting through the emotion, she wants to reach out to you but she can’t. Her father rejected her (*PH informs me that this was totally untrue*) and that’s why she has trouble.”

(Most of the above ‘revelations’ are applicable to many people, but where a specific observation was made the reader failed miserably.)

“She has just started something new. (*A very broad statement, and then she has to ask:*) Is it a job or a hobby?”

PH: “Could be a hobby.”

KF: “It’s going to be good for her. She also wants to travel, and there will be a new man in her life. She has also got to watch her health. (*The latter advice seems to be common to every reader whether it be cards, palms or a psychic*



consultation.) Now, your sister. She’s ending one chapter and beginning a new one. Would this involve a relationship?”

PH: “It might have more to do with her work.”

KF: “Very independent and loving, and she tends to think the world revolves around her. She can be her own worst enemy. She felt thwarted by her father, (*KF, the student psychologist, seems to have this fixation about unhappy father/daughter relationships*) but she’s not the same as she was a few years ago. (*I guess most of us change in some respects during the transition from adolescent to adult!*) She has the world at her feet in the next 18 months. She’ll have to weigh up the opportunities. There are heaps of decisions she’ll have to make regarding her work but she will feel fine about it. I see her taking up a new line of study. Has she spent time in the country?”

(The same predictions have now been made about the client, his mother and his sister, only the wording is different.)

PH: “No.”

KF: “Is she artistic?”

PH: “No, not really.”

KF: “Has there been a pregnancy around her?”

PH: “No.”

(Why all the questions? Have the cards lost their tongue?)

KF: “It’s telling me there’s something to do with nature and it’s important to her. I believe she’s had time in the country. It’s all happening to her; she’s been through the worst, but she seems scared of competition for some reason. Is there anything I haven’t picked up?”

PH: “She’s about to travel quite a bit.” (*How is it the reader could see PH travelling in the next three months, could tell that his mother wants to travel, and yet didn’t pick this up? Note also the recurring theme of indecision and anxiety in respect of PH, his mother and his sister.*)

KF: “Yes, I think she’ll get bored with that and come

back to work. But there's nothing wrong with her. You're the one who has to make the decisions. Shall we look at your health?"

PH: "Yes, okay."

KF: "You have to be careful with your back area. (*Winifred Crause, however, saw a problem with his lungs, remember, and so sure of herself, KF then has to ask*) Have you been sick lately?"

PH: "Nothing terrible."

KF: "Your health is excellent, but over the next 18 months you will have to be careful. (*Seems to be standard advice from all readers.*) It's always 18 months . . . I don't go any further than that.

Putting things in your body . . . cigarettes, drugs and alcohol . . . they're not good for you. (*Really! No doubt the Rev Fred Nile could have expanded the list a bit and moralised more persuasively.*) Just don't over-indulge. Your health is fine and will be fine. It's not a problem."

PH: "But no drugs or alcohol?"

KF: "Well, everything is fine so long as you do it in moderation. You tend to go overboard. Does that answer everything?"

PH: "Yes." (laughter)

KF: "Okay."

End of reading.

While typing out the transcript, I made a few comments. They were by no means comprehensive, and with closer scrutiny, readers could no doubt make further observations.

Now let's look at the psychology behind the reading, and further evidence that shows that the use of Tarot cards were an unnecessary adjunct in a guessing game. As with a psychic consultation and palmistry, etc., the principal should not, if any credence is to be had in their method of divination, resort to asking leading questions.

Ms Fontaine asked for information no less than *fifteen* times in an effort to get leads to follow up, but was not particularly adept as using them. She is, after all, only a part-time reader.

She was aware that her client was a journalist and during the course of the reading attributed to him those

skills one would normally associate with that profession - communication and creativity.

Like any other 'occult consultant', Ms Fontaine assumes that the client has a problem and has come for advice, hence the preliminary spiel which suggests that the client indeed does have a problem - that of making a decision - and feelers are put out to locate the area.

The opening gambit was "in the back of your mind you have two alternatives". The client would then sense that the consultant has latched onto his problem, perceives a sympathetic ear, and wants to co-operate. While watching for facial and body language reactions, the consultant continues "There have been a lot of changes in your attitude and the way you build up relationships. There has been a break-up of some kind." If the reader's assumption is correct, this narrows the field down to an emotional upset or a relationship problem.

Then, "I feel there's a side to you that needs freedom, change and travel". Any reaction to this could be seen as confirming job dissatisfaction, a desire for change, or prospective travel intentions.

It should be noted that in general peoples' problems can be categorised fairly simply into matters of a financial, emotional or business nature. The initial ploy is to determine which one is applicable to the client.

In this reading, it would appear that the Tarot reader was under the impression that the client was indecisive about something, homing in with "you are weighing things up all the time", "you sit on the fence", "you procrastinate", "you have to be careful that you don't get out of one bad decision into another" and "you are too scared to make a move at the moment".

All this fell on deaf ears, however, as the client in this case does not have a problem and is not there for advice.

There being no reaction or clues, the reader changes tack: "I can see you changing jobs or the way you work. I also see you travelling", then, in desperation to find a lead, a sudden switch and a direct question "Is there a woman in your life?"

The client answers in the affirmative, adding "quite a few actually", thus giving the reader her first break. She now deduces that there is no special emotional attachment and therefore no problem in that quarter, and goes on with "There will be a woman around in the next 18 months who will be important to you" - a distinct and obvious possibility for an unattached



bachelor of 23.

Having eliminated one possibility, Ms Fontaine now moves on to test out the work area: “You definitely have to be doing something in the field of communication”, an observation based on prior knowledge of the client’s occupation, followed by some subtle auto-suggestions: “there are some big changes for you at work”, “you get little reward for your effort”, and “you are not happy”. As many people feel they are overworked and underpaid, then it follows that they are also likely to be unhappy, but again the reader drew a blank.

Repeating herself with “there are a lot of changes coming your way”, PH asked whether they “were within the job?”. She replied, “No, without it”, then “yes, probably within the job as well, I’m sorry I can’t be more specific”.

Obviously confused due to the lack of feedback, she moved on to relationships with the family, and during this session asked a total of eleven questions in an effort to find a lead.

Now the consultation takes on a different aspect; whereas before, the client may have been accused of not being genuine and therefore had no problem to detect, in the case of his family it was simply a matter of whether or not the cards would or could reveal the truth.

Ms Fontaine told the client that his father was “never on the scene emotionally”, that “there was a rejection factor, so you looked to other men”, that his mother’s father rejected her, and that his sister “was thwarted by her father”.

She also asked whether his sister was artistic and whether there has been a pregnancy. All seven points were incorrect.

Finally, the client was advised “not to put things into his body -cigarettes, drugs and alcohol - they’re not good for you!”.

Conclusion

I conclude that Ms Fontaine deduced nothing from the Tarot cards, fished without success for leads, made the usual banal and general statements, and could have done as well (or as badly) using jam jar labels, bottle tops or nothing at all.

When asked to respond to my analysis, an infuriated Ms Fontaine defended her right to ask questions because she is not “a fortune teller”.

A perusal of the transcript shows, however, that she made several predictions for her client for the coming 18 months, as well as for his girlfriend, mother

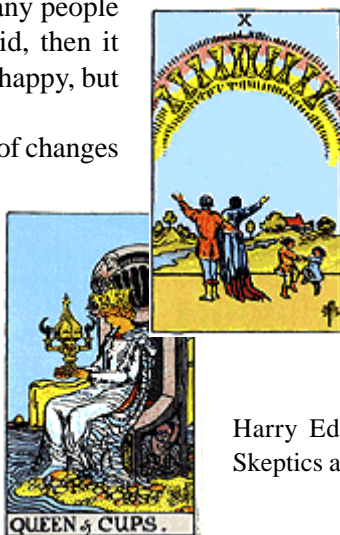
and sister.

If, as she claims, it is acceptable to ask so many leading questions to make an assessment, what purpose do the Tarot cards serve other than to create an illusion of occult divination?

A disquieting thought though. If and when Ms Fontaine graduates with a degree in psychology, will she still resort to this type of nonsense when treating her patients?

Finally, she ask, “How can he judge something that he has obviously only looked at from a very superficial level?”

I submit that far from being viewed superficially, a phrase-by-phrase examination as above allows one to make a very competent judgement - something which Ms Fontaine’s clients obviously have never done.



Harry Edwards is national secretary of Australian Skeptics and chief investigator.

Footnote to Quack Attack II:

Ms Winifred Crause, subject of the previous part of this series, was sent a copy of *the Skeptic* containing that article and invited to comment. She responded as follows:

Dear Mr Edwards,

Thank you for the right of reply. If you were expecting a debate on the subject, then I am sorry to disappoint you. I have no intention of arguing with closed one dimensional (sic) minds. Suffice it to say that my many, many regular clients have been satisfied with my abilities over the last fifteen years. As to the reference of me charging, of course I charge for my services and time. Doesn't everyone, including yourself? I feel you have paid me a backhanded complement (sic) by putting me in your little magazine.

Thank you,
Winifred Crause.

Any further comment by this closed (unpaid) one dimensional mind would be extrinsic to the purpose of this series of articles.



Has Our Science Education System Let Us Down?

Elizabeth Dangerfield

I will set the scene by describing a visit to a naturopath, to have acupuncture for RSI.

I was lying on the naturopath's couch and she had finished inserting those exquisitely fine needles into my arms. I am a terrible coward. I always squirm when she gives them their final twist. Two of the needles had been hooked up to an electrical stimulating gadget. The naturopath asked me to tell her when I could feel the stimulation. "Yes, I can feel it now, my fingers are tingling," was my response. "I haven't turned it on yet," was hers! "I've got a good imagination" was my sheepish reply.

Discrimination

Imagination is really the crux of the matter.

How to tell the difference between what is real and what we want to be real? I know that massage and acupuncture had a real benefit for me, and really, apart from the surgery suggested by the neurosurgeon, who told me I was behind the door when backs were given out, and wearing a neck brace to bed as I did for years, they were the only treatments that gave me permanent relief from constant headaches.

I could see a causal link between massage and better backs and acupuncture has been shown to provide short-term pain relief. However, because of my biology training I was able to reject my naturopath's assertion that a faulty gall bladder was the reason why my shoulder ached, or a blotch on my iris showed I had kidney stones, or I should bathe in red light to restore my health. While some Aussie Rules players might have a direct connection between their big toe and their brain, I was quite sure I didn't.

My naturopaths are very honest and very dedicated to helping other people. They are well-trained in their field, which they ardently believe in. They use a lot of medical-type terms, but their understanding of basic biology is limited and distorted. I went through a rebirthing process with them out of curiosity, where we were subjected to a long period of hyperventilation. This I believe was the reason for the sobbing hysteria of the person next to me rather than any revelation about past forgotten traumas.

With my training and scepticism I could be discerning about the choice of services offered by my naturopaths. But what about people without such a background? What about students? Everything seems so plausible. It's very easy to be a sheep - to believe.

An informal survey carried out by the Canberra Skeptics showed that there is evidence that belief in paranormal ideas is growing. The New Age and high-priced crystals indicates this.

How can students go through a science education and not end up with a fundamental belief in the effectiveness of science and with a healthy scepticism which should result from this? There are several reasons for this, I believe.

Teachers' Scepticism

To begin with, the development of scepticism is hampered when teachers don't show support for the scientific method when it conflicts with their religious beliefs. Quite a few science teachers are creationists. Last year at the college I taught at, three out of a staff of nine, I believe, were creationists, as was the lab assistant. Although the syllabuses of most states do not require the teaching of creationism and although most science teachers do not support creationism, there is need for vigilance.

Scientific Method

The teaching of scientific method can be improved. Often it is taught as a recipe you follow to do an experiment, the outcome of which is known beforehand. There is still a belief that all theories are equal and you can believe what you like because there is no absolute truth in science. This often leads students to believe that science is so uncertain as to be almost worthless. Wheeler points out that in America only 12-14% of adults have a reasonable understanding of scientific method.

This is changing, with a greater emphasis on teaching the processes involved in a science, not just the content. Anthony Wheeler of Queensland University and the Queensland Skeptics, author of *The Other Quote Book* which is so invaluable as a means of refuting creationist arguments, uses the pseudoscience as a means of teaching about scientific method. I like this, because it is rather like gathering up all the arrows the enemy has fired at you and flinging them back.

Using pseudoscience has a number of advantages. It is novel - the answer is not known with certainty, it has an element of real inquiry and discovery. Who wants to study scientific method by examining Semmelweis' germ theory when it's obvious that you should wash your hands before doing an operation. Students, however, are very curious about the pseudosciences. Wheeler gives quite a few examples of pseudoscience theories which can be tested in class. We need to have a greater understanding of scientific

method and be more prepared to defend its virtues while recognising its complexities. It is one of the most empowering areas of knowledge. An open mind doesn't mean an open sink down which everything can be poured.

Students in my class have critically examined pseudosciences in class and found them wanting. But the breakthrough in their thinking came initially, not through a deep understanding of scientific method, but by the following the realisation: most people are honest and therefore very easy to fool.

Children's Science

But one of the most powerful reasons why we don't produce hordes of Skeptics is children's science. It has proved extremely difficult to overcome the intuitive beliefs that children bring to the classroom. The science we teach them in the classroom is often added to their knowledge as a layer on top of what they already know and believe. They learn material for tests and then promptly discard it at the first opportunity. They have never really been convinced why their original view was incorrect.

I was convinced of the power of children's science, as these views are called, when I was enticed to experience the thrills of the Gravitron at Canberra Fair. It was a horrible experience. I felt my cheeks would part company with the rest of my face as they seemed to be pulled toward the walls of the giant spin dryer. What kept me glued to the outer walls so that I could hardly breathe?

A force of course - centrifugal force, but this doesn't really exist. There is no centrifugal motions outwards as most people assume but it feels that way. My stuck-to-the-wall experience was a combination of the circular motion of the Gravitron and my inertia, *always* a problem. Often our intuitive understandings are incorrect. Students need to see clearly why their views are erroneous before other views are imposed upon them.

I think quite a few adults would have some children's science beliefs. One would be that the standard of science education has dropped because of all the students who seem to come out of school without analytical skills, etc. I would challenge you by saying that this belief is probably due to your own experiences at school. The majority of students never came out of school with well-developed analytical skills and critical thinking, and a high level of scientific knowledge. A very small percentage of students had these skills and went on to university - somewhere

between 10 and 20%. Now the percentage of students going on to university, etc., is around 40%. I don't think the number of students who find science intrinsically fascinating has decreased very much.

Thinking Skills

Imagine teaching a person how to drive a car by teaching them all about the engine and gears and how they work and expect them to pick up on the way how to drive.

Yet rarely at school do we teach children how to think. There are few specialised courses on this vital ability. It is usually part of the hidden curriculum, a by-product of learning English or Science or Maths.

I believe it's a skill people pick up in an ad hoc fashion as they go through life. Some never reach high levels of competence. They still crunch the gears. Yet

I would suggest that being able to think rationally is a fundamental skill from which other skills develop, and is essential for the development of healthy scepticism.

Edward de Bono, of lateral thinking fame, produced some excellent materials to teach thinking skills, many of which concentrate on lateral thinking, creativity and co-operation. There are over 60 key concepts people need to understand about thinking.



Self-esteem

Another characteristic, I think, of developing scepticism is a high degree of self-esteem, where students have a belief in themselves and their ability to make choices and influence their lives. Many students and adults have a low self-esteem. Although increasing this is an aim of most schools, usually this is done on an ad hoc basis. How can a young person with low self-esteem be different from the rest of the group, be assertive with people seeking to convince them about the truth of the paranormal?

Fear of the Future

Furthermore, because we live in an age of increasing change, many people are searching for something to believe in, to change reality into something more pleasant. Students are often fearful and negative about the future. There are good reasons to believe in the paranormal.

Rejection of Science

Furthermore, science which traditionally has promoted scepticism is not popular with our young and adults alike. Many people reject science at their earliest

chance. Girls in particular reject science in general, and the physical sciences especially, which probably explains why females are less sceptical than males. Why do so many students react this way and in fact grow into adults with anti-science, anti-sceptical views?

The reasons are complex. One is that students see nothing relevant to themselves in the process. Traditional science is often detached from the real world. Many students see it as rather elite, impersonal and disconnected from the human social situation. One word can summarise how students often regard physics - boring. They see science as having a negative rather than positive effect on their world, being responsible for nuclear weapons and new polluting chemicals.

Science is traditionally considered a masculine subject, valuing the experiences that boys bring to class rather than those which girls bring. Traditionally, it values objects and detachment not creativity and personal perspective, or relevance. It is not surprising that girls turn away from physical science. Our rather narrow view of science encourages this.

Producing Sceptics

I don't know whether we produce a lot of sheep through our education system; I think we actually produce a range of individuals with a wide range of talents, but I don't think we produce very many sceptics.

To do that we have to place more emphasis on direct methods of teaching thinking and encouraging self-esteem. We need more sceptical science teachers. We need to turn science teaching around not just by promoting the teaching of process but by taking children's science into account, linking science to technology and society, putting science in the human context, teaching science in a way that is appropriate to both sexes, eg. through using group work and valuing creativity. This type of science can be as rigorous as the old science. If rigour means something which involves intellectual effort, attention to detail, an awareness of subtlety, an in-depth examination of a topic and an understanding of it in all its complexity, then rigour is not incompatible with this new approach to science.

As Ian Lowe of Griffith University in Queensland maintains, we don't need a return to basics in science, what is needed is a more dynamic and realistic picture of what science is all about, where there is room for personal qualities, values, changing ideas, where science is seen in the context of being a human endeavour.

Ruth Dircks, president of the Australian Science

Teachers Association, asked some parents what they thought should be included in a good science education. They responded: all the science we did at school - physics, chemistry, geology, biology - and then sex education, drug education, technology, the social impact of science, all the process skills such as observing, analysing, how to use a computer, all about science careers, knowledge about everyday things, high-tech, all the newest breakthroughs, etc. All this at a time when science teachers are losing status, they are not even regarded as experts in their field, when they have to be counsellors, agents of curriculum change and to take on more administrative roles, with less and less resources.

Perhaps the question should be not 'Has science education let us down?' but 'Have we let down science education?'

Elizabeth Dangerfield is ACT president of the Australian Science Teachers Association and a member of the committee of Canberra Skeptics. This article was presented as a paper at the Fifth Australian Skeptics Convention, Canberra, March 1989.

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The Bent Spoon Revisited

Tim Mendham

Most of the winners of the Australian Skeptics' annual Bent Spoon award receive that dubious honour for one off claims - Peter Brock for his Polariser, Ann Dankbaar for finding the Colossus of Rhodes (for which we are still waiting confirmation), the Melbourne Metropolitan Board of Works for employing a psychic archaeologist, etc.

However, this year's recipient, Diane McCann of the Adelaide branch of the motivational courses Money & You, continues to merit notice, as in fact does the entire organisation with which she is associated.

In the July 1989 issue of its newsletter, *Focus on Adding Value*, a number of claims which indicate a continued interest in matters paranormal are made.

Apart from comparing the movement's founder, Robert Kiyosaki, with Robert Kennedy (catch the significance of the shared initials), the issue also describes a visit by one the group's practitioners to the Berlin Wall, full of "a knowingness that the wall would disappear". Rosslyn Thomas visited the Wall at

2pm. “Across the world in New Zealand Ros had arranged for Robert Hoey who was in Wellington at Money & You, at midnight, to have all the assistants and receivers focus their energy on the wall. At 10 o’clock Australian time Jenette Youngman led a group in a meditation focussed on the wall. Ros left a message for the people at M&Y in Toronto also and there were ‘lots of people all over the place doing it’.” The result? Ms Thomas reports that “‘Now I know that with a group of people meditating or concentrating on the same area you can actually move things.’ Three days later there was an editorial in the paper saying the Hungarian government was tearing down the wall in Hungary.” Either they’re very bad shots, or this is a case of psychic missing (ie. fit the result to the action after the event). The Berlin Wall is still standing.

Andrew Wade, who wrote the report on Ms Thomas’ mural outrage, also writes a report on her visit to the Windstar project, jointly run by John Denver, designed to harness energy. “We landed at Colorado and about two hour drive from Windstar you can feel the energy as you get closer and closer. All the towns around are clean and the people are happy.”

A particularly interesting event took place on this trip. “On the way into Windstar we found a dead squirrel on the road so we decided to stop and have a kind of burial service. Twenty minutes further on we stopped again to take in a breathtaking view. Michael [Hibbert] and I got out of the car and a squirrel popped up by the side of the road and he just spoke to us. We both felt it. It was like time standing still. [A sensation with which we are all familiar. - Ed] I felt in total communication with him ... with the grass and the whole universe. The feeling was so global I thought I would burst. Then he left. I’m sure it was something to do with the energy we had created with the other one.... What I learned later at the Business School was to communicate with the whole planet on the same level I communicated with that squirrel.”

Ms McCann herself reports a number of interesting experiences. One was a consultation with American iridologist Denny Johnson, who interprets the eyes “from an emotional point of view.... Denny correlates the iris structure with personality factors. He can thus identify where you have been, and where you are going. When you are out of balance and not behaving according to your core structure you can learn from [the technique] Rayid how to focus your energies to bring you back into balance.”

During a workshop tour of Perth, she met a woman who “had a daughter who had just won an American scholarship to go to the US to study and she needed \$10,000 to support her. I talked about treasure maps

and she made one on the Monday and on the same day cut a competition out of a paper which had a prize of \$10,000. On June 27 she was given \$10,000.” Watch out Lotto ... your number’s up!

She ends her Adelaide report with a statement we regard as being a veiled reference to the Skeptics:

“Until next time, remember ‘For those who believe, no proof is necessary, for those who don’t, no proof is possible.’”

With reasoning and an attitude to the truth like that, is it any wonder Ms McCann thoroughly deserved to win the 1988 Bent Spoon award.



Spontaneous Human Combustion

Quantum, ABC-TV

July 19, 1989

Barry Williams

This program, made by the BBC, was an excellent example of how to demythologise one of the paranormal “wonders” of our time.

It investigated a number of recent British cases of mysterious burnings of human bodies in rooms that were otherwise mostly undamaged. Scientists from various disciplines explained exactly how a human being, in a closed room, would burn if his/her clothing was alight and tests done at a fire prevention laboratory showed that the “mysterious” events that occur in these cases are in fact what we should expect.

In every case shown in the program, and in every one that I have read about, there was a source of ignition present in the room - a fact often overlooked (or deliberately left out?) by the supporters of sensational explanations.

One line from the show that I will treasure was from the scientist who was explaining that bacterial action in the alimentary tract could not generate enough heat to cause ignition. This is the explanation for why haystacks sometimes spontaneously ignite and is often proposed by the more sensational authors as an explanation of why humans could also burst into flames. The scientist explained that there was simply not enough fuel in the human gut to allow sufficient heat to be generated by bacterial action. “If this was possible,” he said, “then I would expect to have heard of lots of cases of spontaneous cow combustion! As it happens, I have never heard of any.”



Quack Attack: Part IV

PALMISTRY & CRYSTALS

Harry Edwards

Concluding the Skeptics' assessment, in collaboration with *People* magazine, of purveyors of the paranormal.

Palmistry or chiromancy is an old and well established belief that an individual's character and the events in their life can be read by studying the creases and mounds in the palm of the hand. It is a method of divination dating back to ancient India and Egypt, and in modern times is traceable to the 16th century.

The three major lines are those of life, heart and head; these, together with a number of subsidiary lines, curvatures, lengths, depths and forks, etc, are explained in various ways to be the manifestation of the person's inner state, reflecting aspects of that person's personality, characteristics and physique.

The length of the life line is used to determine, among other things, the approximate date of an individual's death. According to one palmist, I died ten years ago! (in respect of brain death, some might concur!) Others foretell the number of children one can expect, future financial and social successes and romantic potential.

As in tarot reading, astrology and psychic consultations, the information passed on is usually solicited from the client in the first place, then relayed back mixed with vague, ambiguous and general observations; any perceived accuracy afforded a reading is brought about by the client's willingness to self-validate.

To critically evaluate a palm reading presents a problem. First, the study would have to span the lifetime of the individual, and second, it would be difficult to impose any controls over "self-fulfilling" prophecies where one takes a prediction so seriously as to cause it to come true.

Jogindar Singh Pradham, who advertises as Mr Jogi, describes himself as a "scientific palmist". For reasons best known to himself, he did not want the reporter to tape the session, preferring to write his observations down on paper.

None were made about the reporter's past or present, and the future was limited to the following:

- * Life would change for the better at age 26 and a half;
- * At 27 or 28, there would be great disappointment;
- * At 35, a stable life would be sought and found;
- * At 42 and 48, the best periods in life would be experienced;

* A comfortable life after the age of 63 will be enjoyed, and expectancy of life would be 78.

Unlike the previous prognosticators in this series, Mr Jogi makes no mention of bad back or lung problems, marriage or children. There are no comments on the subject's communication and creative abilities and nothing about his friends or family.

The "predictions", using a very liberal interpretation of the word, span a period of 55 years, and their vagueness hardly bears any further comment.

Mr Jogi does, however, supply his clients with a poorly typed biograph, full of spelling mistakes and couched in peculiar English, in which he makes some extraordinary claims.

He elevates himself to the status of a "scientific palmist"; scientific meaning "agreeing with the rules, principles or methods of science", a prerequisite of which is that to have any credence, a hypothesis must be supported by the facts.

Mr Jogi, far from using facts, refers to it planets having influences on Earth", without defining or substantiating the existence of those influences. He says that "different parts of the body are dominated by certain planets", but we are not told how, and that "certain adverse vibrations can be removed by prescribing a particular stone to be worn in a ring on the finger", again without any medical or scientific explanations.

All are, in fact, ancient beliefs undergoing a New Age revival.

Referring to himself in the third person singular, Mr Jogi goes on with the following verbatim quote:

"He has 35 yrs experience in Palmistry and Astronumerology. He can read palm and can tell past, present and future of any person keeping in view the main lines, tiny lines, mounts, signs and spots and also can describe the abilities, character and qualities of a person. He prescribe lucky and favourable stones to eliminate the bad effects of planets. Our sun light has seven colours representing seven planets having influence on Earth. As human being we observe heat and cold and also colours from the ray.

The body and hand is divided into seven parts and each portion is dominated by a certain planet. Mr Jogi can assess from the development of Hand, the deficit rays in the body causing various ailments, bad luck, incidents and accidents, disappointments and also benefits, good luck etc; He has also the concentration, increasing the Will Power and thus tuning up the MIND. His belief is "If the mind is tuned up, one can touch the highest peak of success in life". On numerology

he has created his own formulas clubbed with Astrology thus giving a clear view of the planets ruling at the time of birth. It helps in having adjustments in life as some times there is big conflict between numbers of name and date of birth. Since one cannot change the date of birth, one can make some amendments in the name. It also give help in finding if the life partner is being influenced by the favourable/ opponent planets and certain vibration like 4 & 8 can be removed by prescribing some particular stones. The stone must touch the skin in any finger as the rays will be penetrated through Nervous Pads (fingers) into the nervous system. Many people have tried Mr Jogi's theory and found helpful in controlling the emotions and ultimately removing the personal difficulties. Mr Jogi's vast experience having collected thousands of hand-prints and examining different diseases in, Hospitals and observing criminal hands in Jails. Now he is planning to write his findings in five volumes and also will write about his successful experiments about the effects of various stones on human body and mind. He has got arrangements of framing detailed Computerised HOROSCOPE giving each year's detail of life.

In his opinion every child and young person should have Horoscope to know the influence of planets on future life and thus getting planetary ad- for achievements. A correct Horoscope can be proved an assets of life."

Sic! Sic! Sic! I kid you not - can't wait to read the book!

It would appear from Mr Jogi's advertisements and the ultimate paragraph of his biography, that palmistry is secondary to the selling of "lucky stones" and horoscopes.

The reporter was offered a ring in which a red agate was set in such a fashion that it would touch the skin and which would allegedly send vibrations through the body to help him from being oversensitive. Cost - \$65.00.

Mr Jogi's response to my brief analysis was similar to the other subjects examined, that I had not properly studied the facts and that he could provide the names of 300 people who can say that he had been accurate in his observations.

In view of the *absence of facts*, it was difficult to be objective. In respect of the 300 satisfied clients, I can only conclude that Phineas T. Barnum was very conservative in his estimate that one is born every minute!

Crystals

Although crystals are not (yet!) being used for

divinatory readings, the People reporter interviewed Eftja White, proprietor of the Balmain occult shop "Mysteries" to find out something about them.

His interview, like those with the two astrologers, was omitted from the article which appeared in People magazine, but is included here to complete the series.

Ms White opened her shop after visiting Egypt in 1986 where, she claims, "she had a strange experience when she went into a pyramid and remained on a complete high for a long time after".

As well as crystals, Ms White sells voodoo dolls, love potions, masks used in tribal rituals, and books on astrology, herbal medicines, the occult and the supernatural in general.

Most intriguing are the various oil products which she alleges "draw money to you". Put some in your chequebook or wallet, on your hands or a Lotto ticket and the cash rolls in. Of course, you have to think positively about it, otherwise it won't work.

Crystals and their putative powers are a New Age fad, and if only a fraction of the alleged energies attributed to them had any substance, we could do away with doctors and medicine, close down our hospitals, and convert our coal fired power stations to run on pollution free crystal energy.

The claims made on their behalf range from projecting energy to storing it; and from protecting the owner from a range of illnesses to curing them. No matter how modest or outlandish the claims, no evidence, data or scientific evaluation is ever forthcoming in support. (Much to the contrary, however, as can be ascertained from Richard Chirgwin's article on the subject in *the Skeptic*, Vol 8, No 3.)

Interest in crystals, and the sales generated, originate with pseudo-scientific articles and books embellished with nonsensical New Age jargon, as in the following quote from a crystal book read by Ms White:

When the six faces of quartz join together to form a point, a terminated crystal is born. When both ends of a crystal join in this fashion, Double Terminated Crystals are created. These specialised crystals have the capacity to draw in as well as emanate out [sic] energy from either end of the crystal. By uniting the energies together [sic] in the central body of the crystal, a Double Terminated Crystal can then project that unified essence out from both ends. This blending of forces allows the Double Terminated Crystal to be used in specific meditations and advanced telepathic practices.

If you are scratching your head, I can assure you you're

not the only one.

Credence in the supposed "energies" emanating from crystals is based solely on the say-so of New Age protagonists, endorsed by anecdotal "evidence" by those who want to believe, and encouraged by those who have a vested financial interest.

While it cannot be denied that if one has sufficient faith in a belief system it can in rare cases have a beneficial effect on psychosomatic conditions, sticking a carrot in one's ear and chanting "What's up doc?" would have the same efficacy as sitting with a \$100 amethyst on one's head to cure a headache.

A successful salesperson would, I suggest, be expected to have some knowledge of the product they were selling. In Ms White's case, however, she appears to rely on the unsubstantiated claims of others, and relates the same fatuous argument put forward by astrologers - "I don't know why it works, but it does".

The truth is, of course, that it doesn't.

If something "works", then there are ways and meanings of demonstrating it. In the case of crystals, they are claimed to be able to "store energy", "project energy" and "heal". Where is the evidence?

The measure of Ms White's logic and rationalisations can be summed up in the following extract of interview:

Q. "Is it a case of the bigger the crystal the more power it has?"

A. "Not necessarily, but if you put a really small crystal against a large one there would be a difference." (*I find the profundity of this observation mind shattering.*)

Q. "A lot of people would say that they are attractive ornaments and nothing else."

A. "People have been able to come in here and tell which of my crystals came from South America and which ones come from Australia. One guy could tell by the vibrations - he was spot on - that indicates that there was something there."

It apparently did not occur to Ms White that by studying the structure, formation and colour of a mineral specimen, its geographical origin can in most instances be determined.

While it is unlikely that even the most enthusiastic New Age rock hound would carry with him a goniometer and a petrological microscope, he would no doubt know that as a general rule, Brazilian amethysts tend to be of a darker colour, smaller and with a more textured surface than Australian amethysts, and that their bases are often flat where they have been attached to basalt.

Prof Ian Plimer, head of the geology department at

the University of Newcastle, confirms this by saying "Any decent amateur or professional mineralogist can be handed a specimen and tell you what it is and where it is from, using crystal morphology, colour and association of adhering rock or other minerals". Based on Ms White's evidence, wine experts must also be picking up vibrations. Stick a bottle of chardonnay on your head next time you have a hangover.

If in fact crystals did "vibrate" (in a mechanical and physically experiential sense, as distinct from the spectrographic but physiologically non-detectable electromagnetic vibrations of light), then the residents around Thunder Bay in Canada would be suffering from terminal jitters, as the huge outcrops of amethysts I observed there during a vacation are so common that they are used to build walls around paddocks, foundations for houses, chimney breasts and retaining walls!

A true test of whether a crystal's origin can be determined by feeling the "vibrations" would be to conceal some specimens from sight so that only the tactile sense could be used to determine which was which.

By her own admission (which must also be the understatement of the year) Ms White said "I haven't had a lot to do with crystals". Yet with her limited and ill-informed knowledge, she extolls their "healing" qualities and sells them to the public.

When asked how they heal, Ms White told how she once held a quartz crystal to her head because she had a headache and had run out of Panadol, and the headache went away.

With anecdotal "evidence" such as this, it is interesting to speculate what the legal standing of a New Age crystal shop proprietor would be should a customer suffering headaches unknowingly caused by a brain tumour suffer a stroke and drop dead after trying to cure it by using a quartz crystal recommended by them, whether South American or Australian!

Series conclusion

Following the publication of the abbreviated article in *People*, I wrote to the magazine commenting on the absurd and irrelevant reactions of the participating psychics. My letter was not published. Perhaps why will become obvious after reading the following extract from a letter received from the erstwhile editor prior to the investigation and at a time when I was angling for a *Skeptics* column in that magazine. He now edits a new magazine called *The Picture*, modelled on *People*, in which his astro-psydkick, Garry Wiseman, officiates over the illusions and delusions department.

"While it is certainly in the public interest that a balanced view of the paranormal is presented, a sceptics' column would be too much of a downer, too negative for our readers. I'm sure most of our readers are naturally sceptical of the stories published in John Pinkney's column, but at the same time are fascinated and intrigued. A column as you suggest, telling them that UFOs and ghosts probably don't exist, would not help to sell this magazine."

Notwithstanding the lowly opinion of his readers, and contrary to what he says about their being sceptical, letters from them agreeing with and supporting some of John Pinkney's outrageous claims suggest otherwise.

However, he obviously considers, and no doubt with some justification, that there is more money in peddling boobs and balderdash than codifying the more esoteric canons of journalism.

A travesty perhaps? But then, that's life!

Footnotes: Mr Jogi ceased advertising following the publication of the article in *People*. Kim Fontaine, the Tarot reader discussed in Part III of this series, was asked to comment on my analysis. She has not responded.



Jack the Ripper & the Psychic Detective

'Whitechapel Jack's' Latest Victims - The Facts
Alan Lang

On April 2 and 3, 1989, Channel 7 presented a program titled *Jack the Ripper, Revealed*, which was promoted as a factual presentation which would finally reveal the identity of the 1888 Whitechapel killer.

The justification for the program was that after 100 years, patient research had now finally revealed the true identity of the Ripper.

For those who did not see this melodrama, the solution presented was that the Ripper was actually the distinguished physician, Sir William Gull, who committed the crimes during bouts of insanity. He was assisted in this activity by a sociopathic cab-driver John Netley.

With the assistance of a Robert Lees, a psychic, the police were able to apprehend Gull. However, the Establishment decided to suppress this in order to prevent a scandal.

Unfortunately, the program, although presented as

a "docu-drama", ie a basically factual recreation, was in reality a "faction", ie a fictitious story using real events to give a plausibility to cover its artistic shortcomings.

Some artistic (if that is the word) licence introduced by the producers was the portrayal of Inspector Abberline as a drunken cockney, possibly on the grounds that Michael Caine would have difficulty playing a sober Dorsetman.

There was also a wild Anarchis', George Lusk, head of a ravening mob called the Whitechapel Vigilante Committee. In reality the Whitechapel Vigilance (not Vigilante) Committee was closer to Neighbourhood Watch, and George Lusk was a local builder, not the blow-in agitator portrayed.

Also appearing was a red herring, Richard Mansfield, an American actor at the time playing Dr Jekyll/Mr Hyde on the London stage. He spent much of the time lurking suspiciously in Whitechapel as a possible candidate for the toff the Ripper was supposed to be. Mansfield's real connection to the Ripper case was ephemeral. During the Ripper murders, the great British public gave the police a huge number of names as candidates for the Ripper. One of the teeming millions, having seen Mansfield act out a frenzy on the stage, decided that he probably did real-life murders too, and gave this vital information to the police.

Although the program claimed to finally solve the mystery of the Ripper's identity with a startling new solution, the actual solution presented appears to have been formed merely by blending together two long-recognised hoaxes, the "Royal Coverup Conspiracy" and the "Mad Doctor found out by Psychic". Considerable dramatic licence had to be used in the program so that its conclusion could be made to seem plausible.

The Coverup

The Royal Coverup Conspiracy made its appearance in the 1970s. Briefly it is that in 1884, while visiting the studio of painter Walter Sickert at 15 Cleveland Street, Queen Victoria's grandson, Prince Albert Victor met a Roman Catholic shop girl named Anne Elizabeth Crook. They had an affair, a child, and a wedding. When the authorities found this out, Anne Crook (as was) was kidnapped, her brain was operated on by Sir Wm Gull to destroy her memory and she was confined to workhouses or infirmaries for the rest of her life. However, Mary Kelly, one of the witnesses to the marriage, attempted to blackmail the authorities and had to be silenced.

So Gull rode out through Whitechapel in John Netley's cab, searching for Kelly and slaughtering

anyone who could possibly talk about the scandal. There are a few things wrong with this scenario.

Sickert did not have a studio at 15 Cleveland Street in 1884 (or at any other time).

Anne Crook was not a Catholic. The father of her child was William Crook, probably Anne Crook's step-father, although it is not certain that William Crook and Anne Crook's mother were ever legally married. Gull was a physician, not a surgeon. An operation to destroy the memory would probably be beyond Victorian surgery.

While Anne Crook was in institutional care for the latter part of her life, this period of continual confinement did not begin until 1903, 15 years after the alleged abduction. Before this, her total time in public care was three weeks in 1885 (during when her daughter was born) and one day in 1889.

Gull was 70 and had already had a stroke, which forced him to retire from practice, which made him an unlikely choice for the Ripper.

The Mad Doctor & the Psychic

"Psychic reveals Mad Doctor to be Ripper" is the older legend. It is supposedly based on the memoirs of Robert James

Lees as revealed in a document given to his daughter, Eva, in 1931.

At least, this is the claimed provenance of the story as published in the London *Daily Express* of March 1931. The fact that Eva denied that such a document existed has not prevented the story being repeated many times since then.

The actual information in the *Daily Express* story was lifted from an earlier story which appeared in the Chicago *Sunday Times Herald* of April 28, 1895. This time the source is claimed to be one Dr Howard, a well-known London physician who was supposed to have sat on the Commission of Lunacy that declared the doctor-Ripper to be insane.

This story was denied by Dr Howard in 1896.

The details in both the 1895 and 1931 versions do not agree with any of the Ripper murders. For example, according to the legend, Lees was dining with friends when he became convinced that another murder had just been committed. They went immediately to Scotland Yard, only to find that news of the murder had not yet reached there. When the news arrived minutes later, the police were so impressed that they took Lees to the scene. Then, following his psychic nose, he led the police over London after the Ripper, eventually arriving at the house of a well-known doctor at 4 am, where the Ripper was apprehended.

However, Mary Jane Kelly, the final Ripper victim, was definitely alive at 2.30 am on Friday, November 30, and on medical evidence, probably killed between 3.30 and 4am, somewhat late for Lees to be dining. Furthermore, the body was only discovered at 10.45am.

The mad doctor of the story is clearly not Gull, but a far younger and more vigorous man.

The Ripper psychic, John Lees, was not cooperating with the investigation as portrayed by the TV program. His own diary reveals that he only went to the police on

October 2, after the penultimate murder, and was considered by the police "a fool and a lunatic".

Sometime after the events, Lees claimed that he had cornered the Ripper, a claim that, like the one that he was "Queen Victoria's personal psychic", is based solely on his unsupported word.

Was Gull the Lees Suspect?

While the Mad Doctor of the Lees legend is not Gull, and Gull was not the Ripper, it is just possible that there is a connection between Gull and Lees' psychic delusions.

In 1970, Dr Thomas Stowell revealed his theory that the Ripper was the Duke of Clarence, or Prince Albert Victor as he then was (although Stowell, in an



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attempt to avoid any possible posthumous lese-majeste, merely called the suspect "S" - nobody was fooled).

There were numerous holes in this theory and Ripper-conspiracy fans have abandoned it for the previously mentioned Gull as Ripper theory.

Stowell, who believed that Gull was merely covering up "S"'s guilt, claimed that Gull's daughter had told him that a psychic had come to Gull's home and impertinently questioned Gull's wife.

It is possible that Stowell's claim was based on his misunderstanding of the common Lees legend. Unfortunately, Stowell's papers were destroyed after his death and clarification is now unlikely (except by use of a medium).

In Stowell's version, the police are not present when Lees descends on Gull's home.

However, while the police did not give any credence to any claim that Lees made, he may have believed that Gull was the Ripper, and gone independently to Gull's home and made a few wild accusations and been a general pain in the neck.

If this happened, it would not be a unique case in the sordid history of psychic detection.

In 1979, the July 1 edition of Sunday People gave its front page to the Face of the Ripper, as seen by the late Doris Stokes.

Doris Stokes said that the Yorkshire Ripper had a name like Robbie or Johnny, last name beginning with M, live on Berwick Street in the Sunderland area and spoke with a Tyneside or Wearside accent. This description in no way resembled the actual Yorkshire Ripper, Peter Sutcliffe of Garden Lane, Bradford, who did not speak with a Geordie accent.

While Doris Stokes' "Ripper vision" was of no use in bringing Sutcliffe to justice, it was of considerable annoyance and a certain implied menace to a Mr Ronnie Metcalf of Berwick Avenue, Downhill, Sunderland.

Which brings us back to the TV entertainment. It will have given weight to the public perception that psychics have special knowledge in solving crimes. Given the reckless way with which psychics make accusations, this can only lead to suspicion being thrown onto entirely innocent people.

Alan Lang is editor of the South Australian Skeptics' journal, *The Southerm Skeptic*, from which this article is taken (July 1989 edition).

Miracles and alien stones

Harry Edwards

Harry Edwards, reports from the Philippines.

Quaffing San Miguel while awaiting the excitement of another military coup, I mused that nothing much had changed since I first backpacked through the Philippine archipelago fourteen years ago. The tyrant had gone, shoeshops continued to flourish, despite the loss of patronage from the Iron Butterfly and ninety five percent of the wealth of the nation was still concentrated in the hands of five percent of the people. The population had increased by an average of one million each year, poverty and pollution was evident everywhere and with unemployment running at 30-50%, the future looked far from rosy. Yet, despite the deprivations, the hardships and the absence of those comforts and conveniences that we westerners take for granted, there was still that wonderful warm hospitality, accompanied by the only asset most Filipinos can freely give - a big friendly smile.

Filipinos have nothing for which to thank 400 years of Spanish colonialism, only a faith that has resulted in a burgeoning population, condemned to live in the environment its dogmas inevitably create. Religious statues, paintings and icons are ever present, no matter how humble the home; the dashboards of cars, buses and jeepneys festooned with miniatures. Accompanying the religious beliefs - superstition and miracles.

Miracles

Prior to 1976, my only experience of things supernatural was at the onset of puberty when, suffering from a rare and embarrassing condition known as teenage acne, I went into a church, bathed my face in holy water and prayed for a Palmolive complexion. It worked! By the time I was nineteen, my pimples had gone. While this event is unlikely to cause Hume to rotate in his grave as he reconsiders his reasoning on miracles, it does demonstrate that a prerequisite of faith is patience. Unfortunately, in most cases, that patience needs to be infinite.

The Philippines provided my next encounter with the seemingly inexplicable when, during my first visit, I was invited to witness the miracle of psychic surgery.

At that time I had neither heard of nor had any idea what it implied but, out of curiosity, I went along.

In a modest suburban house I was introduced to the “surgeon” David Elizalde and his Australian assistant Helen Morgante and taken into the “operating theatre”, a small room that, to my untrained eye, seemed to be devoid of the sophisticated apparatus one normally associates with surgical venues, apart from a kitchen sink, a slop bucket and a sheet-covered table.

The patient was a tourist from a Russian cruise ship who, I was told, was suffering from a stomach ulcer. He was asked to strip to the waist and lie on his back on the table. From my position, immediately opposite the surgeon, I had a totally unobstructed view of the proceedings.

After a few words of prayer and the sign of the cross made on the patient’s forehead, the “surgeon” said, “I will now operate”, at which the patient sat bolt upright, apprehension plain on his face. Reassured that he would feel nothing, he lay down again and the “operation” commenced.

First, a karate chop across the abdomen in which the hand did not quite touch the skin, but from beneath which appeared a 15 cm line of blood. Then, deftly kneading the flesh, the “surgeon’s” fingers and hands seemed to disappear up to the wrists into the patient’s body. From within the folds of flesh, pinched together by his left hand, the “surgeon” removed a piece of bloody tissue, which he held up for all to see, before tossing it in the bucket. The blood swabbed off, the operation was now complete. No fee was charged, but it was suggested that a donation was in order to enable the “lord’s” work to be carried on.

While the explanation of this performance as illusion is well known to sceptics, and my common sense at the time told me not to be deceived by what my eyes perceived, I can now well understand why the credulous can so easily be taken in and why it is important to alert people to this fraudulent practice. Fourteen years later, psychic surgery and faith healing still flourish in the Philippines, ripping off those who can ill afford it and raising false hopes in those who can.

Touring the Philippines during my recent visit was evangelist Wanda Casper, whose glossy posters on every wall advertise a forthcoming “Healing Miracle Crusade”, during which she will perform ‘free miracles’ to enable the blind to see, the deaf to hear and the crippled to walk. That Ms Casper can perform

more miracles, on a regular schedule each evening, than Jesus Christ performed in his entire ministry, is to mind a real miracle. That she can travel the world, performing them ‘free’, is even more miraculous.

* * *

Mysterious alien stone

The following appeared verbatim in the Manila Bulletin, on February 21, 1990:

Mysterious stone stirs Ilocos folk

SAN FERNANDO, La Union - Rural folks of this remote town of Ilocos Sur were thrown into panic over the discovery of a mysterious stone which severely burned three school children in Barangay Pudoc East Monday morning.

Latest reports said that the mysterious object, as big as a child's fist, was found by Reynaldo Banzo, Roberta Banzo and Fredo Natividad while bathing in the river.

Senior citizens of this town fear that the stone, a dull red in colour, must have been dropped by an alien or could have probably come from a disintegrating satellite similar to the US Skylab or Cosmos 1990 of the Russians which hugged newspapers headlines in the past.

Police and military authorities and local government officials were also facing a blank wall as to the origin of the mysterious object which caused serious burns to Natividad who fell into unconsciousness after touching the stone.

Tagudin Mayor Ricardo de la Cruz ordered that the object be thoroughly examined for fear that it could be a radioactive material and poses grave danger to the health of the three children.

Dela Cruz said Natividad and the two other children were confined at Tagudin District Hospital for treatment of third degree burns.

Natividad, the reports said, picked up the stone which was illuminating on the riverbed and subsequently threw it resulting in the disintegration of the object. (Lulu Principe)

Have any of our readers any ideas on what this item was, considering that it **must** have been dropped by an alien, and **probably** came from a disintegrating satellite? Your explanation must explain how to hug headlines and explain, in language suitable for a family magazine, what is meant by serious burns. Anyone with a plausible explanation is assured of a position as sub-editor on the Manila Bulletin.



The Phineas T. Barnum effect:

Is there a sucker born every minute?

Student Essay

Matthew Rhys Rimmer

Abstract

This study has examined the so-called “Barnum Effect” - the acceptance of generalised statements from supposed experts like astrologers and graphologists.

Its main purpose has been to explore whether people’s gullibility or susceptibility to deception affected their acceptance of generalised statements. A comparison of acceptance in this deception-free study with other deceptive research revealed that this was not the case. The study’s secondary purpose was to examine other factors that could influence acceptance. The results indicated that acceptance was unaffected by the source of the statements: need for social approval; gender; age or education. People preferred positive to negative statements. Gullibility was not a sufficient cause for acceptance. An alternative explanation proposed was that acceptance is influenced by factors concerning the nature of the description, such as the favourability or length of the interpretation.

Introduction

Phineas T. Barnum’s circuses met with widespread approval among all classes of people. “A little something for everyone”, was this assured circus entertainer’s formula for success. This self-styled “Prince of Humbugs” also reputedly said, “There’s a sucker born every minute”. These sentiments may have been in the mind of Donald Paterson when he warned of “a personality description after the manner of P.T. Barnum” (cited in Meehl, 1956).

Subsequently Paul Meehl coined the phrase “Barnum Effect” to describe *people’s acceptance of generalised, horoscope-like descriptions about themselves*.

These descriptions usually come from an assessment of personal information by a supposed expert such as a graphologist or an astrologer.

These horoscope-like descriptions are comprised of generalised statements. Generalised statements are encountered frequently, particularly since about thirty per cent of the population believe in astrology (*the*

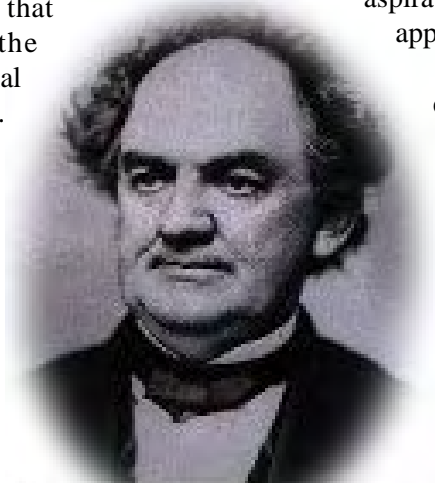
Skeptic, 1988). As they contain “a little something for everybody”, they are applicable to virtually the entire population. Another characteristic feature is their generality, vagueness and lack of specificity. For instance the generalised statement, “Most of your aspirations are very realistic”, fails to specify what aspirations are realistic. Frequently, generalised statements are hedged by qualifiers such as “occasionally” or “sometimes”. Also generalised statements are commonly “double-headed” by incorporating two opposite or mutually exclusive states. Such double-headedness is reflected in the description, “At times you are extroverted, affable and sociable while at other times you are introverted, wary and reserved”. Hedged by qualifiers and characterised by double-headedness, Barnum-like statements are short in length and focus on internal states, needs and aspirations. They are so vague they could apply to anyone.

The Barnum Effect should be examined further since generalised feedback may change or harm a person’s self esteem, self perceptions and self beliefs. This has been demonstrated by Petty and Brock (1979) who found that generalised statements influence subsequent behaviour. If subjects were given generalised statements such as, “It is clear you are an open minded person”, they would become more open minded than the norm in subsequent activities. Modification of behaviour by generalised

statements is also illustrated in a study by Halperin and Snyder (1979). Because of this finding that statements can change self-perceptions and beliefs, it is important to find out what factors influence people into accepting this feedback in the first place, by examining the nature of deception.

Deception

Psychologists have been examining the Barnum Effect for over forty years. Since Forer’s (1949) classic study, numerous researchers (e.g. Handelsman and Snyder, 1982; Snyder and Larson, 1972; Ulrich, Stachnik and Stainton, 1963) have demonstrated that people are prone to accepting generalised statements about themselves from presumed experts. Researchers have also examined factors influencing acceptance of generalised statements, using either “deceptive” or “deception-free” procedures.



PT Barnum

Most researchers have examined acceptance by using a “deceptive” procedure, in which all subjects receive identical generalised descriptions which supposedly come from an evaluation of personal information by an expert. In fact, these descriptions are bogus since they do not come from an expert’s evaluation but from the researcher’s standard list. Subjects are deceived into believing that the descriptions, which are identical for all participants, have been specifically prepared for them by the expert. To date, only Johnson *et al* (1985) and Layne (1978) have examined the Barnum Effect by using a “deception-free” procedure where the subjects are not deceived into believing that the descriptions are specifically for them, and know that their colleagues have received identical feedback.

Deceived people have been labelled “suckers” and “gullible” by researchers (e.g. Forer, 1949; Stagner, 1958; Snyder, Shenkel and Lowery, 1977; Snyder and Shenkel, 1975) because of their acceptance. If some subjects are vulnerable to being deceived, then it would follow that the more gullible would more willingly accept generalised statements. Yet, as Snyder, Shenkel and Lowery (1977) reported in their review of the Barnum Effect literature, there is no simple profile of a gullible acceptor. No demographic and few personality features have been found to be characteristic of a gullible person. Furthermore, there has been no evidence that deception actually has an influence on acceptance.

This poses the question, “Is there a sucker born every minute?” as P.T. Barnum implied, or does deception affect acceptance? This uncertainty could be answered by a comparison of acceptance of deception-free and deceptive research.

If deception has an effect on acceptance there should be a marked reduction in acceptance levels in deception-free studies.

As a means of avoiding moral and logistical problems, this study examined the Barnum Effect with a deception-free procedure. *A comparison of acceptance in this deception-free study and other, deceptive, research should highlight the effects of deception on people’s acceptance of generalised statements - the main purpose of the study.*

Influencing factors

Its secondary purpose was to investigate possible factors that influence or relate to people’s acceptance of generalised statements. The following six factors were examined:

Assessment source.

Past research (Snyder, 1974; Rosen, 1975; Snyder,

Larsen and Bloom, 1976) has found that there were trends towards a higher acceptance of generalised statements from psychologists¹ than from astrologers and graphologists, but no significant differences. Rosen (1975) noted that people perceive psychologists as being more reliable in assessing personality than astrologers. Consequently, people’s perceptions of their acceptance of statements from astrological analyses and personality tests could be examined in this deception-free investigation. Indeed, it is possible to test if people prefer to accept statements from credible psychologists than astrologers. Since this study used a deception-free procedure, subjects were asked to imagine that the generalised statements came from a particular source. A comparison of these two forms of assessment would be aided by the use of a control source where the statements were ‘made about them’. *Thus, the first aim was to investigate the effects of the source of assessment on acceptance of generalised statements.*

Social approval.

Snyder and Larson (1972) found that people who believed that their lives were controlled by external forces (e.g. fate, luck, powerful people) more readily accepted generalised statements than those who believed their lives were controlled by their own actions. Further, Snyder and Claire (1977) discovered that insecure people were more inclined to accept generalised statements than were others. Apart from these twofeatures, few other human attributes have been found to relate to acceptance. A possible motive for people’s acceptance, however, is that they have a need for social approval, and generalised statements fulfil this need. If this is so, people who exhibit a high need for social approval should accept generalised statements more than those who do not display such a need. *Therefore, the second aim was to investigate the relationship between people’s need for social approval and their acceptance of generalised statements.*

Favourability.

Thorne (cited in Snyder, Shenkel and Lowery, 1977) found that people more readily accept positive than negative feedback about themselves. He called this the “Pollyanna Principle”. The Pollyanna Principle has been found to apply to the Barnum Effect by numerous researchers (e.g. Sundberg, 1955; Snyder and Shenkel, 1976; Collins, Dmitruk and Ranney, 1977) who have consistently shown that the favourability of the generalised statement is a key factor in the Barnum Effect. Because favourability has been a constant

variable in Barnum Effect researched it was retained. Hence, the third aim was to investigate the effects of favourability on people's acceptance of generalised statements.

Demographic factors.

Finally, three demographic factors - gender, age and education - were also examined as variables in the Barnum Effect. Consequently, the fourth aim was to investigate the effects of gender, age and education on people's acceptance of generalised statements.

Method

Subjects

In this study two different subject classes were used. The first group comprised 80 (54 male and 26 female) Weston Creek High School students; their mean age on January 1, 1989 was 14.6 years and ranged from 13 to 16 years. The second group comprised 35 female students in the ACT Institute of Technical and Further Education (TAFE); their mean age on January 1, 1989 was 19.7 years and ranged from 17 to 40 years. As part of their course this group critically examined questionnaires and tests.

Measures

Two different measures were employed in this study:

(i) The main measure was an accuracy scale employed by Stagner (1958). This scale was used by the subjects to rate how accurate or inaccurate individual generalised statements were of them. The subject's judgment as to the accuracy of the statement was rated on a five-point scale:

A. amazingly accurate; B. rather good; C. about half and half; D. more wrong than right; and E. almost entirely wrong. This scale was used to rate eleven generalised statements taken from Forer (1949). These statements were taken from a newsstand astrology book by Forer and have been used in numerous other Barnum Effect studies (e.g. Ulrich, Strachnik and Stainton, 1963). The statements are all generalised, vague and applicable to most of the population. They have also been classified as positive and negative statements (Johnson *et al.*, 1985). The entire set of generalised statements is given in Table 1.

(ii) A questionnaire called the Marlowe-Crowne Social Desirability Scale (Crowne and Marlowe, 1960) was used to measure people's need for social approval. The test is a pen and paper questionnaire with thirty-

three true or false questions. Each subject's social approval score was determined by finding how many questions were answered in a sociably desirable way (e.g. an answer of FALSE to the statement 'I like to gossip at times' would be considered a sociably desirable answer since nearly everyone likes to gossip at times.)

Procedure

The subjects were randomly assigned to one of three assessment sources: a personality test from a psychologist; an astrological analysis from an astrologer; or a non-specific (a control) source. Each condition received a questionnaire which was composed of a series of generalised statements coming from one of the three sources, an accuracy scale, and the questions in the social approval test. In the first part of the questionnaire the subjects were given a review of methods used by their particular source to assess personality. The subjects were then asked to imagine that a series of statements were given to them following an assessment by their particular source. They were then required to rate how accurate each statement would be of them, if it came from their particular source. The generalised statements were identical for each condition. All conditions were then given the Marlowe-Crowne Social Desirability Scale to complete. Every subject was also asked to write down their gender, age and school.

Results

The accuracy ratings corresponded to numbers (5-amazingly accurate, 4-rather good, 3-half and half, 2-more wrong than right, 1-almost entirely wrong). Hence, a mean accuracy rating of 4.5 would be an average rating between amazingly accurate and rather good.

The average accuracy ratings for the eleven generalised statements (see Table 1) showed that the most popular descriptions were about extroversion and introversion for the Weston Creek subjects and security as a major goal for the TAFE subjects. The least popular statement for both groups was the negative statement: "Disciplined and self-controlled outside, you tend to be worrisome and insecure inside". The eleven accuracy ratings of the subjects were averaged for the further analysis of the results.

The main aims were analysed separately using one of three different statistical procedures (see Table 2). One factor ANOVA's conducted found that the assessment source, gender and education had no significant differences in accuracy ratings. Paired t-Tests indicated that there was a significantly higher

acceptance of positive rather than negative generalised statements. Correlations were performed between (a) social approval and mean accuracy and (b) age and mean accuracy. Neither proved to be significant.

Discussion

Despite being in a deception-free setting, subjects still had a high acceptance of the generalised statements with a typical accuracy rating between ‘half and half’ and ‘good’. In comparison with the studies using a deceptive procedure (see Table 3) the present results gave accuracy ratings in the range of ‘moderate’ to ‘good’ whereas the deceptive results typically fell in the ‘good’ category. The slight enhancement of acceptance in deceptive studies could be accounted for by people’s more ready acceptance of feedback prepared for themselves, such as in deceptive studies, rather than for feedback generally true of people, such as in deception-free studies (Johnson *et al.*, 1985). Johnson *et al.* (1985) showed that this feedback for the self and others occurs in both procedures. The results are similar and acceptance, therefore, still occurs when using a deception-free procedure.

If feeding subjects bogus information had affected acceptance there would be far larger acceptance in deceptive studies. The data failed to detect this: acceptance is unaffected by the presence or absence of deception. *The findings suggest that deception has had a minimal effect upon people’s acceptance of generalised statements.* The argument that people are gullible is also weak because it enjoys no empirical support. Indeed, the Barnum Effect consists of people rating accurate descriptions of themselves! Despite lacking specific information, generalised statements are accurate of most of the population. It would seem more rational than gullible to accept generalised statements such as ‘Security is one of the main goals in life’ because it is, in fact, an *accurate* description. It can be concluded that neither gullibility nor deception affects people’s acceptance of generalised statements.

Hence, an alternative explanation is required. Even if Table 3 suggests that deception enhances acceptance of generalised statements, it is not alone a sufficient cause. In attempting to establish possible causal factors of acceptance, an examination of other factors within the Barnum Effect is required. Some of these factors were examined in the study.

Causal factors

Assessment source.

There was no significant difference in acceptance of generalised statements from astrological analysis,

personality tests and a non-specific source. The source’s only effect is that there is less acceptance of feedback from a low-prestige assessor rather than from a medium or high-prestige assessor (Halperin *et al.*, 1976). *Thus, the assessment source has no significant effect upon acceptance of generalised statements.*

Social approval.

Acceptance of generalised statements was not related to need or desire for social approval. As Snyder, Shenkel and Lowery (1977) noted, there are few personality features unique to high acceptors of generalised statements. *Consequently, people who have a high need for social approval are not characterised by their greater acceptance of generalised statements.*

Favourability.

According to the results people have a penchant for positive rather than negative generalised statements. This is consistent with previous research (e.g. Sundberg, 1955; Weisberg, 1970; Halperin *et al.*, 1976; Snyder and Shenkel, 1976) into people’s acceptance of positive and negative statement. *Therefore, people more readily accept positive rather than negative generalised statements.*

Demographic factors.

Gender, age and education proved to have no significant effect on acceptance of generalised statements. Again, no demographic factors have been found which are characteristic of high acceptors of generalised statements. The only interesting trend to note was that the TAFE students had a bias against personality tests and had a low level of acceptance - a result possibly reflecting their critical examination of questionnaire techniques in their prescribed course. *Hence, gender, age and education were found to have no effect on people’s acceptance of generalised statements.*

Explanatory factors

If susceptibility to deception is to be discounted as the necessary and sufficient cause of acceptance of generalised statements, what factors could explain acceptance? This study found that acceptance of generalised statements was unaffected by the source of the feedback, desire for social approval, gender, age or education. Indeed, the most significant factor operating within the Barnum Effect was the *favourability* of the generalised statements (i.e. the actual nature of the description). Research by Johnson

et al., (1985) and Sundberg (1985) has also found another factor relating to the *nature* of the description. Both researchers note that *length* is a significant factor with a higher acceptance of shorter interpretations than longer ones. A study by Funder (1980) indirectly suggests that there is another factor: internal or hidden characteristics were found by people to be more applicable to themselves than external or visible ones. If acceptance is uninfluenced by people's susceptibility to deception then an alternative explanation would be that it is affected by factors concerning the nature of the generalised description. The finding by Johnson *et al.*, (1985) that people rate generalised statements as more applicable for themselves than for acquaintances also seems to be an important explanatory factor.

These explanations for acceptance are related to what occurs in modern day life. Astrologers, palm readers, graphologists and other fortune tellers frequently give their clients generalised descriptions which are favourable, short in length and focus on internal states and desires. Significantly, people prefer favourable rather than unfavourable feedback, shorter rather than longer interpretations and a focus on internal rather than external states. Indeed our preferences have been amply recognised by astrologers and fortune tellers who generate generalised statements using the very factors that elicit a high level of acceptance. Our error stems from an inability to recognize that the generalised statements have been manipulated to gain our acceptance. People who accept such generalised statements fail to appreciate that the statements they receive would be just as relevant to most of the population.

Future research into the Barnum Effect could examine influential

factors concerning the nature of generalised descriptions. It might usefully explore whether either mood or self-perception have a relationship with an acceptance of positive and negative statements. For example, would subjects, who have a poor self-concept, fail to show a 'rose-tinted' view of themselves and endorse negative generalised statements? A further examination could be made of people's more ready acceptance of shorter descriptions rather than longer descriptions. A new study could also explore Funder's (1980) internal (seen only by self) and external (visible to others) types of statements within a Barnum Effect context.

Conclusion

This inquiry has found that acceptance in deceptive and deception-free studies is surprisingly similar: susceptibility to deception is not a sufficient explanation to account for acceptance of generalised statements. Acceptance is not determined by Phineas T. Barnum's notion that there is a sucker born every minute. Approval of generalised statements is not affected by the source of the feedback, desire for social approval, gender, age or education. Rather, the Barnum Effect seems to be influenced by factors concerning the nature of those generalised, horoscope-like statements which have, as Phineas T. Barnum once said, "A little of something for everybody".

References

Editor's note: There is a large number of references associated with this article. For the sake of space, we have decided not to publish them here, but those readers who would like a copy of the full list of references should write to Australian Skeptics, PO Box 268, Roseville, NSW, 2069.

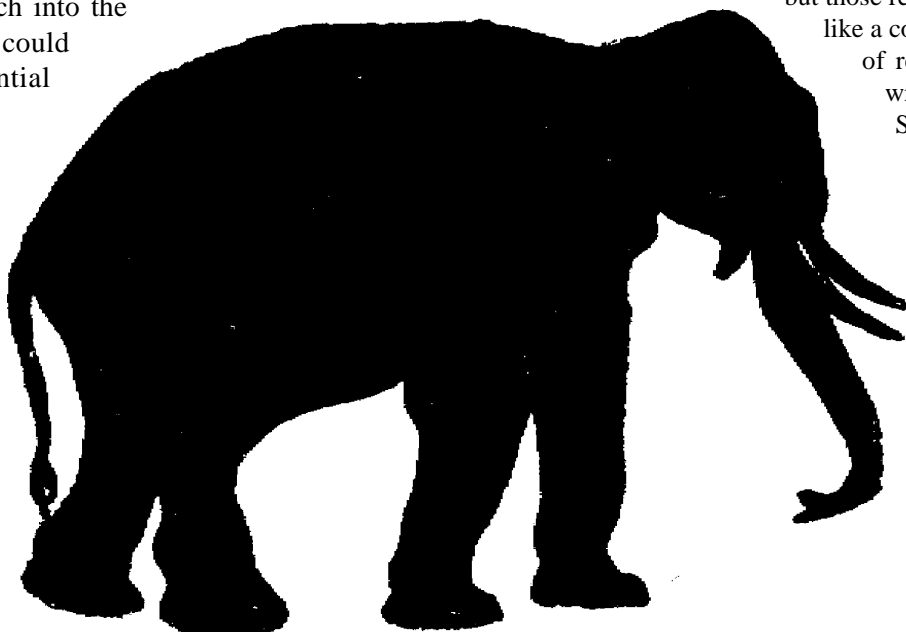


Table 1. Accuracy ratings of the eleven generalized statements

Generalized statement	Weston Ck. Mean accuracy	TAFE Mean accuracy
You have a great need for other people to like and admire you.*	3.36	3.26
You have a tendency to be critical of yourself. +	3.61	3.91
You have a great deal of unused capacity which you have not turned to your advantage. +	3.30	3.11
While you have some personality weaknesses you are generally able to compensate for them.*	3.36	3.49
Disciplined and self-controlled outside, you tend be worrisome and insecure inside. +	2.92	2.69
At times you have serious doubts as to whether you have made the right decision or done the right thing. +	3.72	3.43
You prefer a certain amount of change and variety and become dissatisfied when hemmed in by restrictions and limitations.*	3.74	3.46
You pride yourself as an independent thinker and do not accept others' statements without satisfactory proof. +	3.55	3.11
You have found it unwise to be too frank in revealing yourself to others. +	3.54	3.29
At times you are extroverted, affable, sociable while at other times you are introverted, wary and reserved.*	3.80	3.60
Security is one of your main goals in life.*	3.75	3.97
Mean accuracy of positive statements	3.60	3.55
Mean accuracy of negative statements	3.43	3.25
Mean accuracy of eleven statements	3.51	3.39

Note: * **Rated as a positive statement**
 + **Rated as a negative statement**

Table 2. Review of results

	Weston Ck. subjects		TAFE subjects	
	Mean accuracy	Statistic	Mean accuracy	Statistic
ANOVA's				
Assessment Source				
non-specific source	3.43	F= 1.16	3.41	F=2.07
personality test	3.57		3.22	
astrological analysis	3.53		3.53	
Gender				
male subjects	3.46	F= 1.16	n.a.	
female subjects	3.61		3.39	
Education				
Weston Ck subjects	3.51			F= 1.36
T.A.F.E. subjects			3.39	
t-TESTS				
Favourability				
positive statements	3.60	t= 2.34*	3.55	t= 3.20**
negative statements	3.43		3.25	
CORRELATIONS				
Social Approval				
social approval score vs. accuracy rating		r= .038		r= -.164
Age				
age in years vs. accuracy rating		r= -.008		r= -.109

Note. significance levels = *p < .05; **p < .01.
Results without asterisk have no significant differences.
n.a. = not applicable.

Table 3. Comparison between deceptive and deception-free studies.

	Deceptive studies	Deception-free studies
Number	16	2
Example Study	Snyder & Larson(1972)	Layne (1978), & current study
Accuracy scale	5-point	5-point
Average subjects	94.44	69.5
Total subjects	1511	139
Lowest mean accuracy	3.34	3.37
Highest mean accuracy	4.51	3.47
Mean accuracy a study	3.96	3.42
Mean accuracy a subject	3.88	3.49
Mean accuracy (verbal)	'good'	'half & half' to 'good'

Vol 10 No 3 - 1990

Rip-offs and Remedies

Nicholas Cowdery Q.C.

In “Quack Attack: Part IV” (*the Skeptic*, Vol 9, No3), Harry Edwards posed the question: “...it is interesting to speculate what the legal standing of a New Age crystal shop proprietor would be, should a customer suffering headaches, unknowingly caused by a brain tumour, suffer a stroke and drop dead after trying to cure (them) by using a quartz crystal recommended by him”.

Perhaps Mr Edwards sets law examination questions in his spare time, but it should be said that the answers are clear enough, depending on the many unstated variables which will inevitably exist. To identify those variables and modify the answers accordingly, anyone affected should see a solicitor.

If the customer is dead, having gone alone to purchase the crystal, and the proprietor has made no admission of making a representation, then unfortunately the practical result will be that no liability of any sort will be proved against the proprietor.

But let us suppose that the stroke did not prove fatal. Even (to be incurably optimistic) let us suppose that the tumour was medically diagnosed after a week of unsuccessful application of the crystal and successfully removed surgically.

The real question in both circumstances is: what potential liability do quacks and charlatans of any description incur?

The law has many remedies against them.

Trade Practices Law:

Part V, Division 1 of the Trade Practices Act (a Commonwealth law) provides civil sanctions against misleading or deceptive conduct by corporations engaged in trade or commerce, or conduct by them that is likely to mislead or deceive. For these provisions to be available, therefore, the crystal shop business would have to be conducted by a company. (There are constitutional reasons why the Commonwealth legislation is concerned with corporations.)

A claim that a crystal will cure headaches is false - we all know that and, what is more, it can be proved in court. Even qualified claims may be regarded as misleading or likely to mislead. The belief or intention of the seller provides no defence - the conduct is judged objectively. The remedies available could include

damages by way of compensation for harm caused by misrepresentations, an injunction to prevent them being repeated and even more severe orders (for example, destruction of the stock) if circumstances warranted it.

Division 1 of Part V also includes criminal sanctions (usually fines) for certain types of false or misleading representations: for example, a representation that goods have performance characteristics, uses or benefits they do not have. The belief or intention of the representer may be irrelevant.

Tort Law:

When a member of the community (be it a natural person or a corporation) does a wrong to another, which results in loss or damage, it is called a tort. The torts relevant to this question are trespass to the person, negligence, deceit and products liability.

1. Trespass to the person includes assault, battery, false imprisonment and the intentional infliction of nervous shock. If these are committed without consent and cause loss or damage, then the victim may sue.

(a) Assault consists in intentionally creating in another person an apprehension of imminent harmful or offensive contact.

(b) Battery is committed by intentionally bringing about a harmful or offensive contact with the person of another.

For these torts, usually but not necessarily combined as “assault and battery”, any striking, touching, depositing of something on another, etc. if without consent will be actionable. Damages may be recovered which include compensation for the fear or insult suffered.

(c) False imprisonment occurs when a person intentionally and without lawful justification subjects another to a total restraint of movement. The victim need not know of it (eg as when a door is locked and later unlocked without the occupant of the room knowing) - but in such circumstances the damages would be minimal.

(d) If a person by his conduct intends to terrify, frighten or alarm another, then provided the conduct is of a kind reasonably capable of terrifying a normal person (or was known or ought to have been known to him to be likely to terrify the victim for reasons special to him) then he will be liable for loss or damage caused. The conduct must really be calculated to, and does, cause mental damage of a very serious kind - not every trivial indignity will be actionable.

2. Negligence is the failure of a person (or corporation) to observe an appropriate standard of care in circumstances where a duty of care is owed. The loss

or damage must be the foreseeable consequence of such breach and the damage caused must not be too remote.

What all that means, in relation to this question, is that if a person holds himself out as having some special skill or competence (like being able to provide crystals that cure headaches) then he must act in accordance with the standard of skill and competence of an ordinary, reasonable crystal seller. (Wow!) He should not make such claims.

In effect, if a person holds himself out as having skills he does not have and causes damage, he will be liable for such damage as results from the victim's reliance on the assertion of those skills.

And if that is not clear, what are solicitors for?

In Mr Edwards' example, it might be argued that if the crystal seller claimed curative powers for the crystal, the customer made it clear that he would rely on that claim in preference to seeking medical attention and his condition deteriorated, then the seller would be liable for damages suffered by reason of that deterioration: but it is a grey area, illuminated by the specific facts of any particular case.

3. Whenever a person by a knowingly false statement (including an expression of opinion) intentionally induces another to act upon it to his detriment he commits a tort of deceit

The detriment may be financial, personal or to tangible property.

It is interesting to let the imagination roam through the pseudoscientific and paranormal world looking for possible instances of the commission of that wrong.

4. Products liability is a growing area where both manufacturer and vendor of faulty products may be liable for breaches of warranties or negligent manufacture and/or sale.

Beware of exploding crystals!

Contract Law:

The breach of a term (express or implied) in an agreement (written, oral or implied) between two or more parties may give rise to an action for damages.

In addition, the Sale of Goods Act imposes many obligations on vendors and provides remedies for purchasers in various circumstances. In brief, goods must be of merchantable quality, comply with their description and be fit for any specific purpose for which they are sold. Warranties must be complied with.

If the crystal will not cure headaches but was sold for that specific purpose, there has been a breach of the implied condition of fitness for purpose. It may be a rocky road to recovery (no pun intended) but the customer could at least recover the price paid.

Miscellaneous:

There are various Acts of State Parliaments enabling contracts to be reopened and set aside. One such is the Contracts Review Act (NSW) which enables a court to reopen a contract which was (or part of which was, unjust at the time it was made, and provide relief.

Such avenues might be open to persons who become bound, for example, to a long course of "treatment" for a large sum or payment by way of instalments.

Criminal Law:

The victim may in some circumstances enforce State criminal law. Section 178BA of the NSW Crimes Act makes it an offence for any person, by any deception, to dishonestly obtain for himself or another any financial advantage. (There are similar provisions in other State; and Territories)

The deception may be deliberate or reckless; but the offender must be proven to have acted dishonestly. Dishonesty is a somewhat elastic concept - it is judged by invoking what is thought to be the community standard; what reasonable and honest members of the community would regard as dishonest.

It is interesting to note, by way of illustration, that on 27 September, 1984 one Angela Makryllos was convicted of three such charges. The *Sunday Telegraph* of 30 September, 1984 reported:

"In the witness box, two women said that they had paid \$11,000 for black magic to bring back a lost boyfriend remove a disfiguring birthmark, break up an unacceptable romance and remove curses, which were unveiled when Makryllos read Tarot cards for them."

Makryllos promised to bring back the boyfriend for \$4,000, remove the birthmark for \$3,500 and terminate the romance for \$3,500, all by using what might best be described as Black Magic (involving artefacts of various kinds, pebbles under the carpet, pubic hair and a black kitten). None of it worked, not surprisingly.

Not very different from claims of crystal cures, perhaps....

However, to return specifically to Mr Edwards' question and the deceased customer: unless the crystal shop proprietor was also a medical practitioner, or holding himself out as one, then his contribution to the death of his customer would not be culpable. He would not have been, by act or omission, a knowing or negligent cause of the death: Not a knowing one, because the tumour had not been diagnosed (and nearly everybody gets headaches, tumours or not); not a

negligent one, because his only liability to the customer is that of a reasonable crystal shop proprietor (a contradiction in terms?) and not that of a reasonably competent medical practitioner.

The proprietor, ironically, is at greater risk if the customer lives!



Skeptics Challenge to Firewalkers

We continue to hear reports of people being invited to take part in “firewalking” seminars for a substantial fee. The message associated with this nonsensical and potentially dangerous practice is that some kind of mental conditioning, brought about as a result of the seminar, protects the participants from being burnt by coals with temperatures measured at between 600–1000 degrees C.

As has been practically demonstrated by a number of Skeptics groups throughout the world, the reason why people can walk on a bed of coals without being burnt is because coals are low in both heat capacity and thermal conductivity. It has nothing whatever to do with any mental conditioning, attitude, altered conscious or any other psychological factor. It is simply because of a well understood law of physics.

If any person walks briskly across a bed of coals, preferably with damp feet, they should come to no harm. Why anyone would want to walk across a bed of coals is another matter entirely. Nevertheless, there are potential physical dangers attendant upon walking on coals. Should a firewalker fall while walking, he is quite likely to be severely burnt and is very unlikely to be protected by any “mental preparation”.

Australian Skeptics therefore issues a public challenge to any promoter of firewalking seminars to take part in a public test of their claimed abilities.

In general terms, the test will consist of walking on a 10 metre long steel plate which will be heated to a temperature of no more than 250 degrees C. The firewalkers will be invited to walk the length of the steel plate, barefooted. They may use any mental techniques that they believe will protect them from harm. We will insist that each walker sign a form, absolving Australian Skeptics from any blame for any injuries he may incur during the tests.

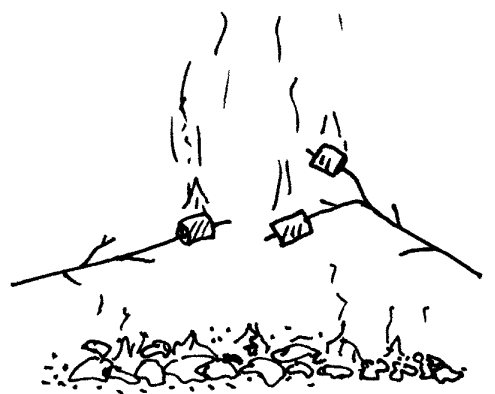
If a firewalking promoter can demonstrate that his mental control of his physical body allows him to

complete this test without harm, then Australian Skeptics will pay him \$20,000 and will widely publicise the fact that he has passed our test. If a firewalking promoter fails our test, we will also widely publicise this fact.

This offer is only open to those who promote firewalking seminars for a fee. Those people who have participated in firewalking after having paid a fee and who may believe that what they have learned will in fact protect them from harm might like to consider these facts. Our steel plate will be heated to no more than 25°C; this temperature is less than one third of that measured for the bed of coals on which you walked; in fact, this is approximately the temperature of the baking dish in which you cook your roast dinner. Do you believe that you could remove the hot baking dish from the oven with your bare hands? Probably not. Yet, the air in the oven is at the same temperature as the dish and that does not burn your arms when you are removing the roast. The reason for this is that air has low thermal capacity and conductivity, while the metal baking dish is high in both these attributes. The same physical law; apply in the case of coals and ashes, which also have low capacity and conductivity. In all these cases, it is not the temperature that is the problem, it is the heat content and the conductivity of the material. Mental training has nothing whatever to do with your ability to prevent yourself from being burnt in a fire walk. It only depends on what it is you are walking on.

Our readers, especially those who work in the new media, are requested to bring this challenge to the attention of anyone they know of who is offering firewalking seminars for a fee. The results of this challenge (if any) will be published in future issues of the Skeptic

Enquiries should be addressed to: PO Box 268, Roseville, NSW, 2069



**SKEPTICS FIND A GOOD
USE FOR HOT COALS!**

Vol 10 No 4 - 1990

The Skeptical Bent

Tim Mendham

In the pages of this journal of late there has been much discussion of philosophy and the sceptical attitude to religion, ethics and the like. It has often been suggested in the past that the Skeptics should devote less time to the investigation, if not debunking, of paranormal claims and more to an investigation of the reasons behind belief in the paranormal.

While there is much validity in this suggestion, I would hesitate to suggest that investigating the minutiae of astrology, psychic phenomena, UFOs or even corn circles should be dropped from the Skeptics' agenda. Creationism is a particular case in point, as creationists themselves seem to be disinclined to examine the psychological motivations which cause them to believe, with blind faith, that their religious myths have scientific validity. The toing and froing of debate with that group has almost entirely concentrated on specific, nit-picking claims and counter-argument about issues of little moment.

However, the discussion referred to at the start of the article prompted me to look back over past issues of this journal, to see just how much time and space had been spent investigating the philosophy of belief and the nature of scepticism itself.

One article intrigued me. In the February 1986 issue (Vol 6, No 1), Michael Hough of the (then) Australian Institute of Psychic Research made the following point: "Most of us conducting psychic research have had a personal experience of these phenomena. However, I do not offer this as proof. I only wish to show that a personal experience can be more impressive than a controlled experiment. Most skeptics have not had such experiences, otherwise they would not still be skeptics."

Is this the true reason why sceptics are so sceptical of paranormal phenomena? Is it that, like Ebenezer Scrooge, they have been deprived of the heartwarming experience, and thus go around declaring "Bah Humbug!" at the drop of a hat?

I once overheard a conversation in which someone suggested that the reason I was sceptical was because of some vague event in my youth. (Amateur Freudian psychology like this is what led to Scientology.) I was amused by this observation, coming as it did from a firm believer in UFOs who claimed to have had some

paranormal experiences, as it completely failed to take into account what my past experiences were. In fact, like a lot of sceptics, I used to put a lot of credence in the paranormal, more, I must admit, based on media support than on any in-depth investigation. I am not, therefore, a sceptic from birth.

It was only after reading a number of arguments countering paranormal claims and weighing those arguments against my own experience that I decided that those arguments had a deal of validity. This is not to say that I "saw the light" and became a hard and fast debunker of all things paranormal regardless of the arguments in their favour. It would not matter to me at all (though it would surprise me), if some or all of the claims of paranormalists were found to be correct; in fact, I would be fascinated as it would open up many new areas of investigation.

I have no emotional need to either believe or disbelieve in the paranormal, much as I have no emotional need for God, the supremacy of one particular race, or even for the notion that my country is the best country in the world. I do have other emotional needs, but as they do not come within the Skeptics' areas of concern I will save the reader the embarrassment of listing them. (**Anyone who would like a list should send a stamped addressed envelope to the editor. Ed**) On the other hand, I do believe that I have an intellectual need to think that the natural world should be comprehensible by the exercise of rational thought.

So, although it would be fatuous to suggest that in all cases, all sceptics are sceptical as a consequence of intellectual, rather than emotional, reasons, that should certainly be the standard we should strive for. Nor is this to deny that some sceptics have an almost pathological need to eschew the merest possibility that any paranormal or supernatural phenomenon could be real, which may well owe more to emotional rather than intellectual causes. Nor, indeed that most of us have that reaction to some issues, some of the time.

On the reverse side of the coin, those who believe that paranormal or supernatural causes are the best explanation of why things are the way they are, seem to have invested a great deal more of emotional, rather than intellectual, energy into achieving their positions.

Does this suggest that sceptics are always right? Or that they have no emotions? Or that they are always consistent? Of course it doesn't. Scepticism is no Euarantee of anYthing at all. It merely acts as a useful governor or modifier of the human tendency to take things at face value. It does not replace, but is an adjunct to, the need to think critically, to examine the

evidence and to inform oneself about facts.

An important aspect of scepticism is the recognition that it is not always essential, or even possible, to have a pat answer to every question. Sometimes, the only rational response to a question is “I don’t know”.

Therefore, I cannot agree with Michael Hough’s contention, that sceptics would not be sceptics if they had had a personal experience of a phenomenon. If anyone experiences a phenomenon to which they cannot ascribe a natural cause, then they should accept a paranormal or supernatural explanation only if there is sufficient evidence that those explanations are the only possible ones. In the absence of that evidence, the reasonable action is to suspend judgement and say, “I have no idea why it happened”.

The position of the sceptic is well summarised by the points raised by Paul Kurtz, chairman of CSICOP, at the CSICOP Conference in Washington D.C. in March 1990, as reported in *The Skeptical Inquirer* (Vol 15, No1).

** Problems must be carefully analysed and clarified before they can be solved.*

** Beliefs must be recognised as tentative hypotheses unless and until they are confirmed.*

** Evidence is central to judging and testing hypotheses.*

** Ideas are analysed using the methods of logical analysis and evaluated by whether or not they contradict other, well-established findings.*

** The quest for absolute certainty must be recognised as alien to the scientific attitude, since scientific knowledge is fallible, tentative and open to revision and modification.*

** An open mind, willing to consider daring and novel departures and thought, is required.*

I will keep an open mind about the possibility that an particular paranormal or supernatural claim is correct but I require much better evidence than that which is currently on offer before I decide that they are a better explanation of things than my reason can provide.

Sub-continental Skepticism

Harry Edwards

Having spent a considerable amount of time in impoverished and developing countries around the world, I did not rate India high on my list of travel priorities. Believing however that experience is the best teacher, and the time being opportune, a visit to the sub-continent became imminent.

With 834 million inhabitants and with an annual increase equal almost to the total population of Australia, India fulfils the worst fears of the demophobiac. More numerous than it is possible to imagine, people throng the streets, along with free ranging cows, pigs, goats and camels, dodging the auto-rickshaws and the ubiquitous bullock carts, oblivious to the honking horns of frustrated motorists. Add to this the generally poor conditions of the roads themselves, apparently designed by chiropractors with an eye to future business, and it’s not surprising that train travel is preferred by foreign visitors. The broad, tree-lined avenues of New Delhi are an exception to the rule, however, even here the sacred cows still have right of way.

India is an assault on the senses - a land of extremes, contradictions and anomalies, plagued with a religious culture which dominates the way of life to the detriment of social and economic advancement. Magnificent palaces -extravagant monuments to obscene self-indulgence, stand side by side with the most unimaginable examples of poverty and squalor; the all pervading odour of the open drains mingles with the fragrance of jasmine; brightly coloured deities, sculptured by long gone artisans, look down from their multitiered temples, appalled by the sight of their sacred walls being used as urinals and no doubt musing on the fact that, while livestock and children excrete wherever and whenever nature calls, the worshippers must tread the hot and dirty path barefoot.

The purpose of my visit however, was not, like a latter day James A Fitzpatrick, to gather material for a travelogue, but to meet with members of sceptical groups and to acquaint myself with the belief systems endemic to India and to observe their effects. The findings will be reported in greater detail in future issues of this journal.

My eight week stay was both productive and enjoyable and for this I am greatly indebted to B. Premanand, a prominent Indian rationalist and the convener of the Indian Committee for the Scientific Investigation of Claims of the Paranormal, and to his magician brother Dayanand who, in addition to their generous hospitality, prepared an itinerary and organised my tour through most of the Indian states.



Most of my audience expressed surprise at the extent of paranormal beliefs in Australia and the most frequently asked question was, “Why do people in an affluent and literate society, like Australia, hold such beliefs?” Positing that there was no correlation between intelligence and rational beliefs, I gave examples such as Sir Arthur Conan Doyle, who exhibited, through his fictional characters, deductive abilities, yet who had been convinced of the existence of fairies and who had consulted a spiritualist medium in an attempt to contact his dead son. Closer to home, I instanced a neurosurgeon I had met in Bangalore, who told me he had prayed for three days over a terminally ill patient who had subsequently recovered. When I asked him why, if the power of prayer was so efficacious, we needed neurosurgeons at all, there was no response. I concluded that perhaps a seed of doubt had been sown.

Other frequently asked questions centred on Nostradamus (even in India), ESP, astrology and the existence of the soul.

The prime concern expressed by the Indian Rationalists is the extent to which the godmen, babas, gurus and religious fundamentalists use alleged miracles to influence and exploit not only the uneducated but also the politicians, bureaucrats and judiciary, thus undermining efforts by the government of the Democratic Socialist Secular State to inculcate a more pragmatic and rational approach to the nation’s problems.

Typical is the current dispute over the alleged birthplace of Lord Ram Janmabhooli at Ayodhya, where the Hindus propose to build a multi-million dollar temple. Unfortunately for them, a small obstacle, in the form of a Muslim mosque, has stood on the site

since 1528. Whipped into a religious frenzy by the BJP fundamentalist party, seeking to use the dispute for political expediency, hundreds of people have lost their lives, thousands have been arrested, nationwide communal riots have become the order of the day, arson and destruction of property is commonplace, the public transport system is all but paralysed, and with the resignation of the Prime Minister, V.P.Singh, the government was almost toppled.

A bus on which we were travelling was attacked by a rock hurling mob and the driver was badly injured. Despite his broken arm and lacerated chest, he had the presence of mind to keep going. Had he not, this report may never have been written.

One friend in New Delhi, Supreme Court Advocate K.N.Balgopal, commented “The last thing we need in India is another temple”. How true, I thought -unlimited money for idol worship while Delhi’s six million inhabitants are restricted to two hour’s water supply per day.

Similar problems are evident in the neighbouring country of Pakistan, where holymen were telling their followers that a vote for Benazir Bhutto would preclude their entrance into heaven - she lost the election.

Despite the odds, the Indian Freethought groups have had their successes -godmen, miracle mongers, astrologers, palmists and firewalkers have all been exposed and prosecuted, rationalists taking advantage of consumer protection laws such as The Monopolies and Restrictive Trades Act and The Drugs and Magic Remedies (Objectionable Advertisements) Act. **(We could probably use one of those here. Ed)**

In Trichor, a challenge was issued to a local astrologer who claimed to be able to tell exactly how much money a person had in his pocket, to come along to my meeting to be tested. As I had on my person four different currencies in notes, coins and travellers cheques, he would indeed have had a claim to fame had he been successful. Needless to say, he didn’t turn up. Unlike most Western astrologers, who confine themselves to predictions, horoscopes and character assessments, their Indian counterparts also sell “lucky” charms and stones, claim to be able to cure disease, prevent pain and drive out evil spirits with yantras and mantras (techniques and chants).



While the main aim of sceptical groups around the world is basically the same - the encouragement of critical thinking - as can be seen by the examples I have given, the task in India is compounded by a deep seated and ages old traditional culture. Belief in the supernatural, miracles, omens, charms and idol worship is endemic and is unfortunately not confined to the peasant, trudging stoically behind his camel-drawn wooden plough, but permeates the whole fabric of Indian society. The spectacle of human beings humiliating themselves by genuflecting to two life sized and garishly dressed dolls in the sanctum sanctorum of a magnificent marble temple in Jaipur, while on the opposite side of the road their kinfolk fought just to exist in the indescribable filth of their hovels, emphasised the need for a more realistic approach to life. To me, the beneficent smiles painted on the faces of the idols had a twist of cynicism as they gazed on the priests guarding the huge padlocked donation chests, as if to ask why they, the omnipotent, needed cash and the protection of mere mortals.

Exploitation of the gullible in India, by the toleration and encouragement of untenable beliefs, is a corrosive disease which inhibits any improvement in the standard of living of those born in a resource rich country. The potential is there and to the Indian Rationalists it is self-evident that the situation is best addressed by exposure of the frauds, the self appointed godmen and by teaching scientific temper. To this end, the Indian government has awarded a fellowship to B. Premanand to make a series of video tapes exposing the miracle mongers and to lecture teachers who, in turn, can alert the villagers to fraudulent practices and enlighten them to more practical ways in which they can improve their lives.

During my eight week tour, I gave 20 lectures, spoke at two public meetings, attended four press conferences and was reported in ten newspapers in six different languages. If in any way, my small contribution has helped or encouraged the rationalist cause in India, then it is but small repayment for the unstinting kindness, hospitality, generosity and friendship shown to my family and myself by the many people I met during my trip. I will always remember them with warm affection.

You too can contribute - the Indian rationalist groups are eager to get hold of any overseas publications by freethought organisations. If you have any unwanted back issues, please send them to me and I will pass them on.

Through Wildest Britain

Tim Mendham

Even Skeptics' office bearers need a break sometimes, to get away from committee meetings, media calls and requests from the public for information, so it was with some pleasure that I recently took a holiday to see some of the world.

If I thought this would mean that I could be asceptical for a while, I had to think again - sceptical subjects just pop up everywhere without even trying, and the committed sceptic just can't help but take notice.

Ghosts

The first just event occurred during a visit to the theatre in London's West End. The play was a ghost story in classic English thriller style called "*The Woman in Black*". The program for the play carried a brief article on ghosts in the theatre, and as it said "London theatres have more than their fair share of spectres".

While the Fortune Theatre where the play was running did not have a ghost (probably to the chagrin of the producers), its neighbours had quite a heritage of thespian hauntings.

The Theatre Royal Drury Lane is "possibly the most ghost infested theatre in London" according to the article. Its best known is The Man in Grey (a relative of the Woman in Black?) who apparently appears in full seventeenth century costume, with knee breeches, frock coat and tricorne hat. He moves across the rear of the circle, and disappears through the wall. Tradition says that if he appears at the beginning of a run, the show will be a success. As he didn't appear for "*Miss Saigon*", the smash-hit musical by the authors of "*Les Miserables*", he must be losing his touch.

The program admits that the former general manager and now archivist for the theatre, George Hoare, who has been associated with the building for many years, has never seen the ghost, although most of the company for Ivor Novello's "*The Dancing Years*", gathered on stage for a photo call, did see him walk across the rear of the Upper Circle. The program suggests this may have been a member of staff having a prank.

Another ghost is said to appear in the mirror in a particular dressing room (details of which are not given in case the resident actor gets the willies). It is believed to be that of Dan Leno, known also to practice his dance steps in the dressing room with a strong smell of lavender and sometimes the sound of tapping feet. Michael Crawford, currently starring in the New York in (appropriately) "*Phantom of the Opera*", was said



to have been helped through a tricky situation on stage by an unseen hand, and things have been known to be lifted, dropped and moved.

Other theatres have their resident ghoulies, including Sadler's Wells. There, Lilian Baylis who built the theatre haunts the upper gallery, and a clown appears in one of the boxes at midnight, and is thought to be Grimaldi, a famous clown of the turn of the century.

The Duke of York theatre has unaccountable raps, thought to be from Violet Millenot who owned the building late last century, the Coliseum has an ill-fated World War I soldier who died soon after visiting the theatre, The Haymarket has John Bucktone, another harbinger of good luck for a show, and William Terris, a matinee idol who was stabbed to death by a jealous actor rival, is said to haunt the Adelphi.

The Fortune theatre does hold out hopes, though, of eventually having a ghost, as it is built on a site adjacent to what was once a plague pit.

Actors are notoriously superstitious, of course. One need only mention "the Scottish play" and they'll all run around in fits of horror. Whether this means they're more prone to ghostly sightings than your ordinary, every-day theatregoer is a moot point.

As an aside (a theatrical term), the Victorian Committee of Australian Skeptics did garner a lot of publicity not that long ago investigating a supposedly long-standing haunting in a Melbourne theatre, to no avail. Maybe they should travel to London.

As a further aside, the "*Woman in Black*" program also features an advertisement for Borthwick Castle, a 15th century building twelve miles from Edinburgh which, the ad says, is "guaranteed haunted"!

Which brings to mind that we also visited Dunnottar Castle in northern Scotland, which featured in a recent Scotch whisky commercial with a tipling headless ghost. While this is more likely an advertising agency's invention, if the ghost were to exist he should make sure he's wearing his winter woollies, as this magnificently-sited ruin is freezing!

Fakes

Another fascinating bit of sceptobilia was a visit to the British Museum, where there was a temporary exhibition on "*Fake: The Art of Deception*". Most of this concerned phony works of art designed to fool the keen but naive collector, but there was a section on scientific frauds which would thrill any good skeptic.

Here were collected the Piltdown skull and associated paraphernalia collected by Charles Dawson (presumed by many to be the chief hoaxer) over the years, the famous Crystal Skull, Cottingley fairy photos and drawings, the Vinland map, a full size photo-replica

of the Shroud of Turin, petrified mermaids, religious relics, a Griffon's claw, etc etc.

One of my favourites was a "fur-bearing trout". The catalogue describes it thus:

"The belief that the fauna of Canada included furry fish is said to date from the seventeenth century, when a Scotsman, who had written home about the abundance of 'furred animals and fish', was asked to send an example of the latter and obliged." A recent production using rabbit fur came with a text that "the great depth and extreme penetrating coldness of the water in which these fish live, has caused them to grow their dense coat of (usually) white fur".

The trout on display has a thick coating of woolly fur. It was brought to the Royal Scottish Museum in 1970 by an inquirer who thought it was genuine. The museum recognised it as a fake (there are real furry fish?) and didn't keep it. The story had got out, however, and public demand to see the fish was so strong that the museum had to recreate it, making the displayed specimen a fake twice over.

While some exhibits the British Museum admitted as being out and out fakes, such as the Piltdown man specimens and the Cottingley fairy photos, others it said still had question marks over them. The Rock-Crystal Skull purchased by Tiffany's of New York late last century was once thought to be from pre-Hispanic Mexico, and it has been used by legions of paranormalists to support ancient astronaut theories, as ancient central or south Americans could surely not have made such an item. Some carving of the teeth seem to indicate a modern jeweller's drill, and it is now thought that while the rock crystal itself might derive from Brazil, it has been suggested that it is the handiwork of a post-Hispanic Mexican craftsman designed to suit European tastes. However, a definite provenance cannot be given. The Turin Shroud is another case. The question mark here rests not on the date of the shroud material (radiocarbon dating has put that firmly in the period 1260-1390 AD, which equates well with the Shroud's known history), but on the method used to create the image. Readers might like to look up a number of articles in "Skeptical Inquirer" for suggestions as to how it may have been made, but the British Museum still considers that this remains an unknown.

Nessie

No visit to Scotland is complete without a trip to Loch Ness, home, of course, of the Loch Ness monster.

Actually this was my third trip there, and I am saddened to add that I am still to spot the beastie.

In 1977, there were few tourist facilities to promote the monster, unless you counted the roadside diner selling “Monster burgers” (enough to give every cryptozoologist nightmares)!

By 1987, the Loch Ness Monster Exhibition had opened with a scale model of the loch and a lot of photos supposedly showing Nessie’s appearances since 1930. This exhibition had no doubts that the monster existed - it was just a matter of persuading the sceptics.

In 1990, the exhibition has moved to swankier premises and features an audio-guided tour through various rooms, explaining the geographical formation of the loch and the history of sightings, including some of the craft used in monster searches. This exhibition admits (shock, horror!) that there have been a number of hoaxes perpetrated and even suggests more mundane explanations for some of the sightings. In fact, it is altogether more reasonable and, unfortunately, a lot less interesting or exciting than the previous exhibit, albeit better presented.

It does use the long-standing oral traditions of a “water horse” in the loch to add weight to its argument, conveniently forgetting, as any tourist around Scotland will learn, that virtually every body of water, regardless of size, has such traditions. It covers not only expeditions in Loch Ness but also those in Loch Moray, where another monster lives, but with similar success at finding it (ie, none).

Miscellanea

While London and Scotland took up the bulk of our holiday, other visits worth mentioning should include Mont St Michel in Brittany, France, which houses relics of St Michael, such as footprints. That Michael was an angel with no corporeal existence seems not to have bothered the monks who have occupied the site for most of its 1000 year history. But then again, the twentieth century is not lacking in spirits (or channels) who never existed.

The cathedral at Trier in Germany houses Christ’s

robe, although this has no paranormal faculties. The little brochure you can pick up there admits that it might be of 4th century manufacture, but as you can only see it on very rare occasions it probably doesn’t matter much.

One paranormal event I did miss was the broadcast on Channel 4 in England (remember Channel 4 - this was the serious, arty channel) on October 4 of a new series of “*The Astrology Show*”, in which presenter Laura Boomer demonstrates ‘the relevance of astrology in the Nineties’. The quotation marks are the TV guide’s own, perhaps indicating an element of doubt. The program only runs for 15 minutes, so perhaps there isn’t that much relevance.

Travellers’ tip

If these sights only serve to bring tourists to some of the lesser travelled areas of the world, then perhaps we can find some justification for them. The British Museum, Dunnottar Castle and Loch Ness are well worth the visit, regardless of any paranormal associations.

Anyone visiting the loch can’t help but be impressed by its beauty and location. If you do go there, try to carry out a circumnavigation of the loch. The monster exhibition is on the well-travelled north side, which has magnificent views of the loch and Urquhart Castle, but the southern side, away from tourist buses and the lines of cars, has even more magnificent views of the countryside, especially if you take the narrow tourist route through Foyers. It is this roadway, by the way, which was responsible for Tim Dinsdale’s film of the monster, as his supposed evidence was filmed from there, looking towards the aforementioned north road. But, monsters or not, it is truly a magic place and, in the words of Michelin, well worth a detour.



Tim Mendham and ‘friend’. Taken from the cover of Vol. 10 No. 4 - 1990 of *the Skeptic*.

